

2022

# MIMICRY

Zooming Expressions Unitary Study



Project number 2019-1-RO01-KA202-063954

Erasmus+



# TABLE OF CONTENTS



## I) Communication – General characteristics

1. Introduction to Communication .....	3
2. Efficient communication and communication 100% .....	21
3. Imaging communication .....	105
4. Speech-gesture communication .....	129
5. Interpretation of mimic-gestural indices .....	144
6. Electronic mediated communication .....	153
7. Facial expressions .....	169
8. Gestures .....	175
9. Posture .....	188
10. Proxemics .....	193
11. Gaze .....	198
12. Outfit .....	204
13. Accessories .....	210
14. Nonverbal non-visual .....	213
15. Paraverbal communication .....	219
16. Verbal communication .....	222
17. Attitude, charm, charisma .....	233

## II) Facial Communication – Mimicry

1. Preamble .....	240
2. Typologies of faces .....	242
3. Face architecture .....	253
4. Facial areas .....	256
5. Facial Action Units .....	262
6. Face anatomy .....	267
7. Movements of the face muscles .....	274
8. Facial expressions .....	279
9. Interpretation of facial expressions .....	483

10. Perception and rationalization of emotions .....	497
11. Integrating elements .....	504
12. Facial graphics .....	510
13. Microexpressions .....	518

### III) Transformational Communication – NLP

1. Neuro-Linguistic Programming .....	525
2. Emotional intelligence .....	539
3. Self-actualization .....	554

Bibliography .....	564
--------------------	-----



# I) COMMUNICATION GENERAL CHARACTERISTICS

## 1. Introduction to Communication

People, regardless of their social status and the historical eras in which they operated, are the beneficiaries of various systems of signs (verbal and non-verbal) used as means of communication.

The main stages of the development of human communication, considering that each of them had profound consequences on individual and collective social life, define humanity as an evolutionary process. These stages contributed to the establishment of social systems and the configuration of different cultures. 6 eras can be distinguished:

(1) *The Age of Signs and Signals*. It belongs to "pre-human" beings, incapable, from a physical point of view, of speech. In the beginning, human beings communicated through sounds (grunts, grunts, screams), hand signs, body movements and positions. Compared to today's primates, their communication was complex, but simple, in relation to the human one, and much slower, and the brain, not yet evolved, determined only a short-term memory.

(2) *The Age of Speech and Language*. This new era is placed in time about 40,000 thousand years ago, when Cro-Magnon people had the skull structure, tongue and larynx of modern humans. These anatomical peculiarities facilitated the formation of speech and language, thus giving them a significant advantage over Neanderthals. Language helped them organize their thinking, produce and transmit increasingly complex messages, so that people could plan and coordinate their activity (work, hunting, etc.) much more efficiently, they could defend themselves much better. It gave them the opportunity to pass on to their descendants the new inventions and ways of preparing and preserving food and everything that was related to survival in a harsh environment, therefore these people had a much better chance of survival. As people spread to other regions, ways of speaking developed and diversified.

(3) *The Age of Writing*. The history of writing is that of the evolution from conventional pictographic representations to phonetic systems, from the representation of *ideas* through stylized images or drawings, to the use of phonetic writing - *letters*. The pictographic system represented an *idea*, an *object*, a *being*, or a *concept* through a *general symbol*, which made it difficult to reproduce the specific features, that is, the *particularities*, the *nuances* of the reproduced objects. Phonetic writing represented a sound through a sign, and a set of sounds – through a complex of signs. The creation of the *alphabet* simplified the production and transmission of messages. Alphabetical writing is based on a system of signs (letters) in a conventional order, which reproduce the basic sounds of a language. The great progress of the age of writing was the liberation of the human mind from the need to memorize an enormous mass of information (data about historical facts, cultural values, etc. of peoples) and reproduce them in the consciousness of successive generations.

(4) *The Age of Printing*. Before the advent of the printing press, books were written by hand and were considered true works of art. It seems that the printing technique was known to the Chinese as early as the 10th century. The first book in the world was printed by the Chinese in 868 BC. In Europe, the spectacular invention belongs to Johann Gutenberg of Mainz, who, in 1456, completed the printing of the Latin Bible that had 42 lines on each page. The invention of printing represented a revolution in communication, making possible a much wider and faster diffusion of information, which contributed to the progress of thought and knowledge. The growing literacy of people has changed the very evolution of humanity.

(5) *The Age of Mass Media*. Once with 13th century, influenced and stimulated by the Great Discoveries and the spirit of the Renaissance, a truly universal information begins to develop, capable of supporting people's increased interest in news and knowledge. The act of birth of the periodical press is signed at the beginning of the 17th century through two circumstances: the improvement of the printing press and the organization of the mail as a regular service. Newspaper printing marked not only a turning point in the history of mass communication, but was also perceived as a socio-cultural innovation that influenced the entire human society. With the beginning of the 19th century, the newspaper was seconded by the telegraph and telephone, and at the beginning of the 20th, by radio and television.

(6) *The Era of Computerized Means of Communication*. What has changed over the centuries, and especially in recent decades, are the ways and extent to which information is produced, collected, processed, stored and disseminated. If we add to all this the creation of personal computers (1976), the application of computers in telecommunications, the emergence of the Internet (1990), we notice that communication is becoming dependent on an information society. Today, information systems are subject to important technological changes. Microelectronics has new ways and enormous amounts of data processing and storage, while telecommunications is moving towards canceling communication distances. The automation, informatization, computerization triad is in a permanent process of technological innovations. The Internet and computer-assisted means of communication are increasingly seen as defining a new era in the history of social communication.

At the end of the 20th century and at the beginning of the 21st century, communication has become a global phenomenon. Communication represents the field of interdisciplinary research (philosophical, psychological, culturological, biological, technical, linguistic, political, sociological), having as objects of investigation *informational processes* that are at the intersection with *semiosis* (the production and use of signs).

Among the basic terms of communication theories are "sign", "meaning", "message", "code" and "communication". Given that these terms have different interpretations both in communication theories and in those of various semiotics or semiologists, it is necessary to specify their content and scope of applicability, with the aim of formulating conclusions and concepts of maximum possible generality. So, a general view of the basic issues of semiotics and communication theories is necessary. Moreover, the terms of these sciences penetrated the numerous theories that even formed a new direction in the study of the phenomena and processes of social communication. This direction is called *communicology* or *communicative*.

## COMMUNICATION. MULTIDIMENSIONAL PHENOMENON.

Communication is an attribute of man as a rational social being (*zoon politicon*, as Aristotle said). It "represents one of the human activities that each of us can recognize, but few can satisfactorily define."

Specialists note that the term "communication" is polysemantic, imprecise ("volatile", "disturbed") because it has no content, well-determined meaning and scope, denoted, referent, etc. accurate; therefore, they say, no classical, *gender-specific difference* definition can be applied to this term.

American researchers Frank Dance and Carl Larson (1976) collected (limiting themselves to the most significant) 126 definitions of communication proposed by different authors from various fields (biology, sociology, information sciences, cybernetics, telecommunications, etc.). Here are some of the different existing definitions: "Human communication is a process by which an individual (the communicator) transmits stimulus with the aim of changing the behavior of other individuals (the audience)" (C. Hovland, I. Janis and H. Kelley).

"Communication is an action of an organism or a cell that alters the likely patterns of behavior of another organism or cell in an adaptive manner for one or both participants" (Edward Wilson).

"In the most general sense, we speak of communication every time a system, respectively a source, influences another system, in this case a recipient, by means of alternative signals that can be transmitted through the channel that connects them" (Charles Osgood).

Practically, none of the proposed definitions fit to satisfy all communication specialists.

Various models of communication (up to 60), theories, directions, orientations, etc. are analyzed in the specialized literature. For example, John Fiske highlights two major orientations ("schools") in the study of communication:

- (1) of the message transmission process;
- (2) of the production and exchange of meanings.

The first is concerned with the way communicators (sender and receiver) encode and decode messages, with the way transmitters use communication channels and means, which is understood as "the process by which one person influences the behavior or mental state of another".

The second orientation "concerns how messages or texts interact with people for the purpose of meaning production - that is, the role that texts play in our culture. This orientation uses terms such as meaning and does not consider misunderstandings to be necessarily evidence of communication failure – they may result from cultural differences between sender and receiver. For her, the study of communication is the study of text and culture. The main method of study is semiotics (the science of signs and meanings), this being the name by which we will identify that approach from now on".

## WHAT IS COMMUNICATION?

Communication is one of the human activities that each of us can recognize, but few can satisfactorily define. Communication is talking to someone, communication is also television, the dissemination of information, hairdressing, literary criticism - and the list can go on and on. This is one of the problems facing people who study it: can we properly apply the concept of "object of study" to something as diverse and multifaceted as human communication actually is?

The doubts behind these questions can give rise to the opinion that communication is not a subject, in the usual academic sense of the word, but an area of interdisciplinary studies. This opinion should state that what psychologists and sociologists have to say about human communication behaviors has little to do with what literary critics say about this subject.

This lack of agreement on the nature of communication studies is necessarily reflected in this book. What I tried to do was to give some coherence to the confusion, building my book on the following assumptions:

Suppose that we can make communication an object of study, but that we need a multitude of disciplinary approaches to be able to study it fully.

Assume that any communication involves signs and codes. Signs are artefacts or acts that refer to something other than themselves - they are, in other words, meaningful constructs. Codes are the systems in which the signs are organized and which determine how the signs relate to each other.

Also assume that these signs and codes are transmitted or made available to others, and the transmission or reception of signs/codes/communication is a practice of social relations.

Suppose again that, for our cultural life, communication is essential; without it, culture of any kind would die. Consequently, the study of communication involves the study of the culture in which it is integrated.

Underlying these assumptions is a general definition of communication as "social interaction through messages". The structure of this paper reflects the fact that there are two major orientations ("schools") in the study of communication.

The first of these sees communication as a way to transmit messages. This school is concerned with the way senders and receivers encode and decode messages, with the way transmitters use channels and means of communication – that is, with issues of efficiency and accuracy. Communication is understood as the process by which one person influences the behavior or mental state of another. If the effect is different or lower than the intended one, this school tends to talk about communication failure and analyze the phases of the communication process to find out where the failure occurred. For the sake of concession, we will refer to this orientation as the "process school".

The second school understands communication as the production and exchange of meanings. It is concerned with how messages or texts interact with people in order to produce meaning - that is, the role that texts play in our culture. This orientation uses terms such as "meaning" and does not consider misunderstandings to be necessarily an evidence of communication failure - they could result from cultural differences between sender and receiver. For this school, the study of communication represents the study of text and culture. The main method of study is semiotics (the science of signs and meanings), this being the name by which I will identify that approach from now on.

The process school is rather inspired by the social sciences and especially by psychology and sociology, tending to deal with acts of communication. The semiotic school is inspired by linguistics and the sphere of art, tending to deal with works of communication.

Each school interprets in its own way the definition we give to communication as social interaction through messages. The first defines social interaction as the process by which a person creates a connection with another person or affects their behavior, mental state or emotional reactions - and vice versa, of course. This view is close to the everyday, common sense use of the expression.

Semiotics, however, defines social interaction as that which constitutes the individual as a member of a certain culture or society. "I know that I am a member of Western, industrial society because, to provide only one of many sources of identification, I react to Shakespeare or Coronation Street in much the same way as other members of my culture do. I am also aware of cultural differences if, for example, I hear a Soviet critic consider King Lear a devastating attack on the Western ideal of the family as the basis of society, or argue that Coronation Street shows how the West holds its workers in check. Both readings are possible, but we want to emphasize that they do not belong to me as a typical member of my culture". By responding to Coronation Street in a somewhat more normal manner, I express my commonality with other members of my culture. Teenagers who appreciate a certain style of rock music also express their identity as members of a subculture and interact, even if only indirectly, with other members of society.

The two schools also differ from the perspective of understanding what constitutes a message. The process school sees the message as that which is transmitted through the communication process. Many of the followers of this orientation believe that intention is the essential factor in deciding what a message is. Thus, a gesture like touching the earlobe would not be a message unless it is done deliberately as a pre-arranged signal with, say, an auctioneer. The sender's intention may be stated or unspoken, conscious or unconscious, but it must be recoverable through analysis. The message is what a transmitter transmits, regardless of the medium used.

For semioticians, on the other hand, the message represents the construction of signs which, through the interaction with the other receptors, produces meanings. The sender, defined as the transmitter of the message, loses its importance. The focus shifts to the text and how it is "read". And reading is the process of discovering meanings, a process that occurs when the reader interacts with the text or negotiates it. This negotiation takes place as the reader brings certain aspects of his cultural experience to bear on the codes and signs that compose

the text. It also implies the existence of a certain common understanding of the subject of the text. We only need to look at how different the accounts that different newspapers give of the same event are to realize the importance of this understanding, of this vision of the world, that each newspaper shares with its readers. Thus, readers with different social experiences or belonging to different cultures can find different meanings in the same text. This does not necessarily represent, as I stated before, a proof of communication failure.

The message is therefore not something sent from A to B, but an element in a structured relationship whose other elements include external reality and the producer/reader. The production and reading of a text are seen as parallel, if not identical, processes in that they occupy the same place in this structured relationship. We could draw this structure as a triangle where the arrows represent constant interaction; the structure is not static, but represents a dynamic practice:

Through this book, we want to make students aware of the works of the main representatives of each school. We are also trying to show how one school can shed light or compensate for the gaps or weaknesses of the other, or, on the contrary, to show the points where the two schools argue, contradict or even undermine each other. Of course, I wanted to encourage students to take a critical stance in their studies - that is, to be critically aware of both their method of study and their subject of study - and to be able to articulate an answer to the question of why they are studying communication from that particular perspective.

So, we think that students need to rely on both schools to address the problem of communication. The reader who wishes to correctly identify the works of each school, as presented in this book, may find the following explanations of their structure useful.

### **CONCEPTUAL DELIMITATIONS.**

Communication. No definition structured in proximate gender and specific difference can encompass such a volatile term. Communication cannot be rigorously defined despite the inventories of definitions made by theorists, despite the delimitations of the categories of definitions of communication (Frank E.X. Dance, 1970), despite the efforts to describe the definition approach. Exchange, relationship, action, interests, influence, semiosis, interaction, information: none of these terms can cover an area bounded by a fluid entity, communication, always finding new solid forms (including mental structures) to copy. Only the word "sharing" can come close to the complex meaning of the concept of communication, notes Lucien Sfez:

«However, all these different aspects can be brought together by saying that «to communicate means to put or have something in common», without predetermining this «something» nor the ways that serve the transmission or the terms (individuals, groups, objects) that intervene in this communion."

For the purpose of an initial terminological delimitation, I used a fluid, dynamic definition, proposed by the theorist who first discussed a Critique of Communication. And etymologically the word "communication" is a derivative of the word "common" (belonging

to several or all) < lat. communis, originating from the Latin verb *communicare* (18th century), and being, in the Romanian language, a doublet (as a later loan) of rom. *sleepy Rum* also evolved from the same root. *common*, but through fr. *commune*, *communal* < fr. *communal*, *communism* < fr. *communist*, or *communicated*, *communication*, *communicable*, *communicative*, *communicating*, *communion*. Instead, the term *community*, with a common root, comes from a loan from lat. *communitas* (18th century) (Ciorănescu). From a semantic point of view, the Latin verb (probably influenced by gr. *κοινος* – *common*, from which they also derived *κοινοτικός* – *communal*, *κοινότης* – *commune*, *community*, but also *συμμιρῶ* – *to communicate*, *συγκοινωνία* – *communication* or *ανακοινωθέν* - *communicated*) found at the origin of the term *Roma. communication* also designated the action of doing something together and that of sharing.

The second meaning is at the origin of the current Romanian word and implies the interrelationship between individuals. By means of the late Latin term, the word penetrated into most Indo-European languages (as a neologism), being found equally in the Romance languages: sp. *comunicar* (v.), *comunicación* (s.), fr. *communiquer* (v.), *communication* (s.), it. *Comunicare* (v.), *comunicazione* (s.), as well as in the German ones: engl. *to communicate* (v.), *communication* (s.), germ: *kommunizieren* (v.), *Kommunikation* (s.) sau slave: rus. *коммуникация* (s.), pol. *komunikować* (v.), *komunikacja* (s.), scr. *комуницирати* (v.), *комуникација* (s.). Most languages keep both meanings from late Latin, both the one regarding the established relationship and the one regarding the informational transfer between people.

Researchers avoid settling on a specific definition, because their approaches aim at references to different points of view, originating from different disciplinary fields, or at least a review of these points of view. Those who, however, stop at the rigorous delimitation of the terms do so only for a restrictive approach, which responds to the purpose for which the study approach was designed. Besides, the term "communication" is not the only one that is in the situation of not being able to respond to a closure in a definition. Let's look at other examples: "language", "culture", "public opinion", for which compilations of definitions have been made. Referring to the inability to define "public opinion", as early as the past, in 1904, Hermann Oncken (Noelle-Neumann) stated that "changing things cannot be understood by simply closing them in a formula". The case of "communication" is similar. It is about a changing concept, a concept in continuous balance between the epistemic core and the symbolic form:

"Two external poles, one - the epistemic core - describable and legible by definition (from which we can escape through a "Criticism"), the other - the symbolic form, enveloping our thoughts and acts to such an extent that, theoretically, we cannot describe." (Sfez).

The symbolic form to which Sfez refers is, not conceptually but intuitively, from the meaning identified by the Romanian philosopher Constantin Noica:

«And yet communication is not everything; maybe not in cars, certainly not in people. Communication is for something, communication is in the heart of something for something. Communication must be, and in any case, be complete; commingling only takes place if there

is a residue, and the larger the residue area, the better. Communication is data, signals or even meanings and meanings; communication is by implication."

### **THEORETICAL APPROACHES REGARDING THE STUDY OF COMMUNICATION.**

What, then, would the study of communication entail? In the conditions of a diversity of theoretical approaches regarding the field of communication, can the dynamic area of the study of communication be condensed, in Popperian terms, into what is called "scientific theory"? Can a system of statements be created to be the basis of such a theory, can a logical relationship be determined between the propositions/statements of that system? Or, in the case of the constitution of one or more such theories, can we talk about an inclusion report, about the perception of older theories as particular cases of new theories, also in Karl Popper's terms? Certainly, the study of communication presupposes not only the inability of a conceptual delimitation, but also the existence of different approaches, grouped by researchers in schools, currents, theories, which certainly cannot respond to the Popperian principle of correspondence, the old theory cannot be justified as a particular case of the new one. There are also such relationships between models in particular cases, such as the correspondence between the symmetry theory of Newcomb (1953) and the approach of Westley and MacLean (1957). But even here we cannot discuss a general/particular relationship, because the Westley-MacLean model assumes the expansion of the study area to mass communication, while Newcomb's ABX model is adapted to this expanded area, abandoning the intention of maintaining/improving the symmetrical character of the relations between the communication actors and the object in the external environment to which they refer.

On the other hand, we operate with systems of statements originating from distinct theoretical areas, unable to submit to Popperian testing, determining, weighing the logical relationship (based on classical, Aristotelian logic) between the propositions of theory and those of observation (except for those originating from the proximity of the epistemic core). We operate with sets of statements that contradict themselves, instead, in the case of being situated in the proximity of the symbolic form (see Chomskyan generative grammar in relation to Sapir-Whorf's linguistic opacity hypothesis), or with differently defined concepts (to stick to Chomsky, see the definition of linguistic competence made by the American linguist, in relation to the communicative competence of the anthropologist and linguist Dell Hymes).

Given the fluctuation within the disciplinary area, the study of communication should, first of all, abandon reporting to the central concept of Popperian epistemology, that of theory. Moreover, the increasing role of communicative thinking, paradoxical thinking that, despite its ambiguous character, manages to integrate and articulate theories coming from different disciplinary areas or, within the same area, from distinct theoretical currents, leads to a different approach.

This approach is centered on Pierre Bourdieu's concept of the social field, as Bernard Miegue would also note: "What best defines communication is the concept of field, the one whose meaning was specified by Pierre Bourdieu in *Questions du Sociologie*: "For a field to work, he writes, there must be stakes and people ready to play the game, endowed with that habitus

involving the knowledge and recognition of the immanent laws of the game, of the stakes". Communicative thinking itself actively contributed to the formation of this field" (Miege).

In this sense, of accepting the study through the prism of a dynamic theoretical field, sociolinguistics, ethnolinguistics or anthropolinguistics cannot establish themselves as independent disciplines, by (re)constitution of borders in a purely modernist manner, specific to "strong thinking", but rather as perspective in the elaborate study of communication. Moreover, notes Lohisse, "by glorifying the analysis of communicative interactions and language as social activities, anthropologists have greatly contributed to the transformation of mechanistic conceptions into organicist conceptions. Some saw in it, as in the structural linguistics of its time, a general model for approaching communication phenomena. In 1980, Cicourel proposed the creation of an interdisciplinary alliance between sociology, anthropology, linguistics and philosophy, around an anthroposociology." (Lohisse)

This operating perspective can only oppose the excessive specialization of "hard thinking", the rigid "sectoral" approach. Communicational thinking, within a possible interdisciplinary alliance such as that proposed by Cicourel (1980), does not mean a simple "suture" at the epidermal level.

The concept that makes communication (or information) an element that transcends the divisions and boundaries between scientific disciplines, also relating to the material sciences of life and society, can be found in different currents of thought; in cybernetics, of course, in structuralism and, more recently, in approaches to complexity or "connectionism" and even in certain contemporary philosophies, of post-modernist or post-Heideggerian inspiration. As we will see, this tendency - or rather this temptation - aims not only to connect distinct fields of science, often not knowing each other, but also to propose a paradigm that allows them to "fertilize" and to give them a meaning" stated as early as 1976 Robert Escarpit, in *Théorie générale de l'information et de la communication* (Miege). Therefore, a Kuhnian epistemological approach would be more suitable to such a problem.

## **COMMUNICATIVE THINKING.**

Communication remains a cloudy concept, no matter how much we try to approach the perspective on the epistemic core - symbolic form poles. First, communication involves a different approach, through the prism of a way of thinking inappropriate to the mental schemes, guiding ideas and propositions of classical epistemology. This paradoxical way of thinking, atypical of rigid mental structures - in the spirit of Gianni Vattimo and Pier Aldo Rovatti (1989) - would be called communicative thinking: a working tool also undefined in the stable, rigid framework of modernist philosophies.

"The status of this communicative thinking is deeply undefined. It is the organizer of scientific, reflexive or professional practices, but at the same time, a response to the requirements emanating from the state and large organizations, as well as the inspirer of changes even in these organizations; finally, it causes or only accompanies changes and cultural practices or ways of spreading or acquiring knowledge." (Miege).

To operate in an ever-fluctuating disciplinary area, with terms oscillating as in the subquantum environment between the hard, epistemic core, and the continuously pulsating symbolic shell, on trajectories that cannot be demarcated by rigid instrumentation (taking into account the possible indeterminacy of invoice Heisenbergian) of "hard thinking", also requires making use of a different way of mental organization, of a weak, fluid, self-organized communicative thinking in the solid form of scientific theories.

Basically, is the scientific merit that of the rigorous organization of the contents, of the sets of statements in theories, or that of the discovery of fertile areas of knowledge? "The real merit of Copernicus or Darwin, notes Ludwig Wittgenstein (1994), was not the discovery of a true theory, but of a new aspect that is fertile." From this post-positivist perspective, communication sciences constitute the fertile field for the germination of knowledge in the horizon of a new paradigm.

### **OUTLINE OF A PARADIGM OF COMMUNICATION.**

And from this perspective, the issue must be given the appropriate interpretation framework. Despite the fact that through the first references to rhetoric in Greek antiquity, aspects currently studied in the disciplinary area of communication are discussed, or that, for example, through Aristotle's work, *On Interpretation* (1998), semantics is born, half of the last century it cannot be approached from the perspective of communication as a period characterized by construction on ancient foundations. The communication is not, therefore, within the descriptive limits of "normal science" defined by Kuhn (1970), referring to the theoretical support from ancient Greece or China, but presents itself as a simultaneous eruption, following extensive movements from deep, through several vents, like geysers. The problem of this disciplinary field arises, in its new structure, in the heart of other disciplines. Therefore, each distinct approach to communication, through specific sets of statements, also assumed the existence of distinct bodies of convictions, originating from the approach within the basic disciplinary area, thus also a situation on certain positions, and an orientation towards particular phenomena. Because of this, there are different descriptions and interpretations of the phenomenon, concentrated in the fifth and sixth decades of the last century.

The first attempt to synthesize these different approaches was made by Wilbur Schramm in the study *The Nature of Communication Between Humans* (1975), which, despite the fact that it does not visibly improve a perspective on communication, brings together the approaches of Shannon & Weaver, W. Johnson, Osgood, Newcomb, Westley & MacLean, Hovland, Lazarsfeld, Katz, Festinger or MacLuhan and outlines a trend. Only starting from this moment can we discuss the intention of consolidating a theory and, through this, a paradigm. Basically, Schramm's study announces, but does not outline, a paradigm. What happens in this effervescent period of the fifth and sixth decades can be included under the complex dome of the phrase "preparadigmatic stage" of the development of the disciplinary field and can, indeed, be characterized by the Kuhnian theory:

"These transitions to adulthood were rarely as instantaneous or unequivocal as my presentation suggests: inevitably schematic. But considered historically, they were neither

gradual nor coextensive, in step with the development of the fields in which they took place" (Kuhn).

The preparadigmatic stage is characterized by a burning of the stages, by superimposing the sets of statements consolidated into theories or models over the disciplinary body of the sciences/disciplinary areas of provenance. Practically, we cannot even talk about a time interval in which this stage extends, but rather about a burning time of certain stages or about a duration of maturation that depends on the degree in which the break with the disciplinary corpus of the base. Throughout this period of accumulation in which the theoretical fields were rather characterized by an axiomatic ideal of knowledge, in which a clear distinction could be made between the disciplines, and the interfering disciplines were configured with rigid boundaries, most of the theories and models of communication obeyed certain mechanistic norms.

Communication folds on the structural model of societies, characterized by the "machine metaphor". The study of mass communication, which originates in the preparadigmatic stage and in which the emphasis is gradually shifted from communication, through communication as a process of social influence to influence itself, is a good example. Moreover, the theories privileged in mass communication aim at inter-individual or intergroup interactions at the level of the exchange of opinions (and thereby, the exchange of attitudes and behavior), omitting, by the nature of the desired relationships, the exchange of ideas at the level of beliefs and beliefs. Theories of mass communication take shape in an "appendix" of the disciplinary field of communication, which is assimilated by the social sciences.

In the same decades of the last century, five and six, the disciplinary study of communication slipped towards practice, so as to articulate theories based on the support of tacit knowledge, in the terms of Michael Polanyi (1966/2009). Later, this orientation towards the concrete communication of the slippery knowledge that characterizes interdisciplinary alliances (Cicourel, 1980), towards communicative thinking (Miege, 1998), towards a model of societies characterized by the metaphor of the living organism. The whole society faced the crisis of the transfer to another level of organization. And this crisis of society, characterized by the upheaval of the old value systems, also led to the emergence of a crisis in the disciplinary field of communication. In the disciplinary field of communication, the crisis did not manifest atypically: there was no articulation or expansion of the old paradigm, but a reconstruction on organicist foundations, which led to the monism of Bateson (1979), to the circularity of Watzlawick et al. (1967), on the self-organization of von Foerster (1960/2003), Maturana and Varela (1980).

New schools and currents are born, such as the Palo Alto school, symbolic interactionism, ethnomethodology or ethnography of communication, with the aim of studying communication acts, and not the elaboration of communication models. We can speak, in Kuhn's terms, of the articulation of a paradigm of communication, but in the first sense that the American researcher gives to that phrase in *Postscriptum* (1969): "a whole constellation of beliefs, values, methods, etc. shared by the members of a given community" (Kuhn).

This explosion of knowledge in the field of communication was received differently by researchers in the field. In an attempt to structure theories and models in a unitary

conception, John Fiske distinguishes between two major "schools": the process school and the semiotic school:

"The first of these sees communication as a transmission of messages. It is concerned with the way senders and receivers encode and decode messages, with the way transmitters use channels and means of communication – that is, with issues of efficiency and accuracy. For the sake of brevity, we will refer to this orientation as the "process school". The second school understands communication as the production and exchange of meanings. She is concerned with how messages or textiles interact with people to produce meaning – that is, the role that texts play in our culture. The main method of study is semiotics (the science of signs and meanings), this being the name by which I will identify that approach from now on (Fiske)."

Most Romanian researchers take Fiske's structuring uncritically. Jean Lohisse (2002) differentiates between mechanistic currents and theories of communication as an interactive relationship and dynamic totality. Through this cataloging, the French professor intended an articulation of the disjoint points of view of knowledge and their reinstatement in the active circuit, but the positioning of Wiener's cybernetics (1948/1961) or Peirce's linguistic pragmatism (1990) within the theories of communication as a relationship interactive raises questions about the appropriateness of such a structure.

Lucien Sfez gives the study of communication to visions of the world, analyzing three attitudes rather than three theoretical orientations: the first, of representation, characterized by the discourse of reason and the "communication machine" metaphor, a second, of expression, presupposing flexibility and inclusion in functionalism organicist and a third one, of media confusion, as an extension of the first orientation, characterized by "tautism" - tautological autism (Sfez). Bernard Miegge proposes to attack the problem of communication by appealing to three founding currents: the cybernetic model, the empirical-functional approach to the means of mass communication and the structural methods of linguistic applications.

Alex Mucchielli believes that there are four psychological paradigms of communication: the structural-expressive one, close to the transmitter-receiver paradigm from information theory, having as its object of study "personality", understood as the internal organization of the psyche; the formal-transactional one, based on the theory-vehicle of transactional analysis and assuming the perception of three types of "realities", based on three fundamental states of emission/receptivity: a rational state, an affective state and a normative/moral state; the relational-systemic one, based on the idea that relationships between individuals constitute the main psychological phenomenon to be studied; respectively the phenomenological and praxeological aimed at clarifying the meanings expressed by the subjects, explanations that translate into visions of the world and which, shared, outline a shared common background (Mucchielli). However, we should not look for four sources of psychological support of inter-individual communication, four types of explanatory models, four frames of reference in which the study of communication must be framed.

Mucchielli believes, for example, that for the first two paradigms communication is based on a cognitive stake, serving to modify facts or hypotheses, respectively serving as a "valve for the problems of the psyche". Based on the last two paradigms, communication takes shape

as a way of sharing, of co-participation, of "mutual shaping of a common world by means of a joint action" (F. Varela).

Criticisms can be brought to each individual approach, to the same extent that each approach appeals to a certain degree of methodological relevance. But they all converge towards shaping a paradigm of communication. It is certain that a problem assuming such a high degree of complexity cannot be approached systematically, just as the attempt to unify communication theories cannot be successful. The perspective of a dynamic approach to a dynamic disciplinary field remains open. I limit myself to refer to the first principle of the Palo Alto School, "one cannot not communicate". This principle also implies the need for a dynamic approach, but also the need to establish an interdisciplinary alliance in order to transfer the meaning of the word "paradigm" explained previously in the much deeper meaning, which Kuhn appeals to, as an element of the constellation of beliefs, values and methods, of solutions concrete of some puzzles, which, "used as models or examples, can replace explicit rules as a basis for solving the other puzzles of normal science" (Kuhn).

### **FUNCTIONS OF COMMUNICATION.**

The difficulties of defining and interpreting communication are also determined by the fact that there are multiple relationships between individuals and human collectives, various functions of communication. For example, Gerard Wackenheim highlights, among the functions of communication in relation to the individual and the group, the following:

(1) *The function of integrating the individual into his environment*; it allows the individual alongside and together with others to take a position towards others, to adapt to new situations, to take into account the experience of others, to assimilate a part of it;

(2) *Disclosure and self-disclosure function*; through communication, the individual makes himself known to others, as well as himself, corrects a series of erroneous perceptions and attitudes, introspects and can understand himself better;

(3) *Valorizing function*; communication responds to the individual's need to be appreciated, through it the individual draws the attention of others to him, implicitly, asserting himself;

(4) *The regulatory function of the conduct of others*; by communicating with others, an individual can improve his position in the group hierarchy, can cause them to change their attitudes, creates conflicts or relaxed atmospheres during a conversation;

(5) *Therapeutic function*; communication is a curative means, testimony in this sense being, for example, psychoanalysis, psychotherapy;

(6) *Productive-efficient function*; it allows the accomplishment of tasks, especially when they involve a high degree of cooperation between group members, helps the "locomotion" of the group towards reaching the set goals;

(7) *Facilitating function of group cohesion*; through communication a group is born and activated; its termination or disruption results either in the disintegration of the group or in the appearance of serious dysfunctions;

(8) *Group valuation function*; it is almost identical to the one encountered at the level of the individual; through communication, the group affirms its presence, stands out, reveals its importance, originality, justifies its existence;

(9) *The problem-solving function of the group*; communication saves the honor of the group, and when it degrades, goes through difficult periods, it can be used as a therapeutic tool; sociodrama is perhaps the best example in supporting this function.

The first concerns related to the definition of communication functions arose in the context of ancient rhetoric. Aristotle, in his *Rhetoric* (theory of argumentation and persuasion), undertook a first classification of public communication that can fulfill one of three functions:

(1) *The deliberative function*, through which the discourse establishes the appropriateness or inappropriateness of a public action;

(2) *The judicial function*, which consists in arguing the justice of facts that have already happened, which he approves or incriminates;

(3) *The demonstrative function*, focused on praising or blaming some personalities, events, etc.

In modern speeches, the persuasive function (to persuade) is no longer predominant. The speech starts from an analysis of the components of the communication process and identifies its functions. Karl Bühler, in *The Theory of Language* (1934), defines the act of lingual communication by analogy with radio transmission (then fashionable), which led him to adopt, for the first time, the terms *transmitter*, *message* and *receiver*. He found that speech can be conceived as follows: *expression* (in relation to the sender), *representation* (in relation to the message) and *appeal* (in relation to the recipient). Consequently, he distinguishes *expressive*, *representative* and *appellative* functions.

In Jakobson's version, verbal communication also contains new functions. The 6 functions of verbal communication are schematically presented as follows:

(1) *The expressive (emotional) function* of communication consists in highlighting the internal states of the sender. Emotional values are rendered through interjections, expressions like "God forbid", "my sins", *epithets* and many other *stylistic means*, through which the reactions and emotional states of the sender are expressed, upon contact with a certain reality.

(2) *The conative function (persuasive or rhetorical)* is directed to the recipient of the communication, from whom it is intended to obtain a certain type of response. In addition to expressive interjections, there are other verb forms with conative function. The conative verb form is the imperative mood, which provides *orders*, *commands*, etc. The idea of conative function is not entirely new to communication theory. In its capacity as an art of persuasive

discourses, rhetoric specifically had in mind the valorization of the conative potential of interpersonal communication.

(3) *The poetic function* is centered on the message. In scientific language, the content of the message is emphasized, what is being talked about, and for poetic language, it is important *how* it is said. The scientific message emphasizes the idea, the content, the thought expressed in the message, *the signifier*, and the poetic one - the verbal aspect, the way of being expressed, *the signifier*.

The specifics (distinctions) of scientific and poetic texts are described by M. Dinu as follows: "Behind the words in a scientific text we can see the meanings they reveal to us, while the words of a poem are, to a large extent, opaque, they keeping the reader's attention on their concrete aspect, which makes any attempt to replace them with synonyms destroy the poetics of the text".

(4) *The referential function* covers the other side of "representation" (in Bühler's sense), but in addition to the reference of the message, it also covers (in Jakobson's conception) the situation in which its transmission takes place. The idea of treating these two aspects together arises from the intention to separate the *semantic* and *pragmatic* components of the message.

(5) *The metalinguistic function* manifests itself in those cases when, within communication, attention is drawn to the *code* used. The metalinguistic sphere includes: the explanations that intervene and specify the *meaning*, in which a term must be understood, the *gestures* that accompany the message, the *tone* (for example, benevolent or satirical) they are for the receiver a kind of *key*, through which the message can be *decoded*.

(6) *The phatic function* takes into account the characteristics of the communication *channel* and the control of its good functioning. For example, the "hello" and the "yes" during a telephone conversation only express the fact that one of the communicants is paying attention to what the other is saying and does not indicate anything regarding the interlocutors, the message or the code. They mark the opening of the channel, help to establish and maintain stable contact between the interlocutors.

Greeting gestures or formulas have a similar function. Multiple phatic signals accompany interpersonal communication. They represent verbal confirmations or through head movements ("yes during a conversation do not signify the receiver's agreement with the sender). An important phatic role is played by the "gaze game", through which the maintenance of contact is always reconfirmed.

The six functions defined by Jakobson practically coexist in any act of communication. Only their hierarchy of importance differs from case to case, the resulting stratification constituting a criterion for classifying verbal events. In this context, he emphasized: "Although we distinguish six fundamental aspects of language, we could hardly find verbal messages that fulfill only one function. The diversity consists not in the monopoly of one of these few functions, but in the different hierarchical order of the functions. The verbal structure of a message depends, first of all, on the predominant function".

One of the merits of this model of communication is that it has a universal character, it can be applied to all forms of communication and to non-verbal ones.

Unlike the aspects that were missing in Bühler (those related to channel control and the use of metalanguage), they gained in importance with the deepening of the study of non-verbality by the researchers of the *Institute of Mental Research*, founded in 1959, by the psychiatrists Paul Watzlawick and Don D. Jackson in the town of Palo Alto, located a few kilometers south of San Francisco.

### **AXIOMS OF COMMUNICATION.**

The Paloaltists organized their research on the coordinates fixed by Gregory Bateson. They started from the following idea: in order to deeply understand the mechanisms of communication processes, it is necessary to study the *pathological* communication situations, that is, in which they manifest *irregularities or blockages*. The research, which was undertaken by paloaltists in the field of schizophrenia, allowed them to formulate some important principles of interpersonal communication (nominalized by them as *axioms*), which will be presented below. For the name of the principles of communication proposed by paloaltists, we will render them in quotation marks, considering that for them the rigorous scientific meaning of the term *axiom* does not really fit.

**Axiom 1.** "*Communication is inevitable*" or, to put it another way, "*non-communication is impossible.*" We accept this principle in the sense that human beings cannot exist without communicating. However, we do not share the idea that any behavior has a certain communicative value, that the *indications* (the external state of people, perceived by anyone through the sense organs), in any situation, *communicate* (in the full sense of the term).

The position of the body, the coloring of the face, the brightness or opacity and the orientation of the gaze, the expression of the mouth and other indications, some almost imperceptible, give us the necessary indications to be able to decipher, in some cases, the real meaning of the mental state of a certain person. But this knowledge was obtained by those around them based on their cognitive practice, developed during their lifetime. Otherwise, for example, we could say that the Sun also "communicates" warmth to us, and the unshaven face of my neighbor (who, as a rule, I meet shaved) "communicates" to me that today he had no lessons at the university.

It is true, as M. Dinu states, that an attentive observer will not confuse an *admiring* silence with a *bored* one, the silence of the *meditative* with that of the *angry* one on the verge of exploding, the silence of the *embarrassed* one who does not know what to say, with the *stubborn*, defiant of the man who does not consider you worthy of an answer, the silence of the *first meeting with the one in the waiting room of the court*, before the pronouncement of the divorce, etc. But, we do not consider this to be the result of genuine communication. Everything that emits signals around, and these are perceived and processed by the sensory organs and analyzed by reason, does not communicate, in the full sense of the term "communication", but exists and acts on the environment, regardless of whether someone perceives these signals.

We also noted that *signs* and *indications*, on the one hand, and *meaning* and *signification*, on the other hand, are not identical. And the logical principle of identity forbids identifying diversity and diversifying identity. We only subscribe to Freud's words that "he who keeps his lips glued, also speaks with the tips of his fingers".

**Axiom 2.** "*Communication takes place on two levels: informational and relational, the second providing indications for interpreting the content of the first*". The same information can be conveyed in a kind or angry tone, but it is clear that the interaction between sender and receiver will not proceed in the same way in either situation. Speakers give decisive importance to the relational plan, and if informational misunderstandings can be smoothed out by referring to sources (books, dictionaries, competent people, etc.), those related to the relationship can often generate conflicts.

When the subordinate gives the boss a mean look, and the latter perceived it, it can have unpleasant consequences for the subordinate in the future. One of the findings of the Palo Alto researchers is precisely that strained relationships between interlocutors threaten communication. When the mechanisms of mutual understanding work well, then the perception and processing of information occurs faster and more effectively.

**Axiom 3.** "*Communication is a continuous process, which cannot be treated in terms of cause-effect or stimulus-response*". Some communication processes occur in the form of a "spiral". Watzlawick and his collaborators, through simple examples, show the meaning of this "axiom". For example, a boss excessively supervises his employees, arguing that otherwise they commit mistakes, while they complain that they make mistakes precisely because they are too insistently supervised. The effect of a communication depends on the content of previous communications. It communicates with the entire past and all the more, since there is also an intertextuality of communications.

**Axiom 4.** "*Communication takes either a digital or analog form.*" The terms come from cybernetics, where a system is considered digital when it operates with *binary* values ("1" or "0", "yes" or "no", a statue is equestrian, on horseback, or on foot) and *analog* when using a logic with an *infinity* of values. To, for example, the question of the colleague (who was absent from the lesson) "what was talked about in the lesson?", it is difficult to answer, using only phrases with alternatives of the type *yes* or *no*, *understood* or *not understood*, etc. Gestures are also predominantly analogical.

It is true that some of them transmit digital information (such as, for example, confirmation or denial through head movements), but even in such cases the connotations that accompany the basic meaning are rendered through highly graded variations of the movement parameters (amplitude, speed of execution, etc.), which plays here the role of intonation in the case of verbal communication.

**Axiom 5.** "*Communication is irreversible.*" Any communication, being received, produces an *irreversible* effect that cannot be repeated, under the same conditions, on the one who received it. If we recognize the ability of any communication to influence us, we will be able to say that, after each act of communication, the following messages addressed to us find a

different receiver in us than the previous one. Any act of communication is irreversible precisely in the sense that, once produced, it triggers a mechanism that cannot be reversed. Having offended the interlocutor, we vainly declare that we "retract our words." The effect of our words has been produced, and the apologies are late, as now they are no longer addressing the original discussion partner.

Here is the conclusion: let's not have the illusion that we will return to the messages sent, that we will be able to annihilate their effects. It is recommended to consider the following observation: *Repentance relieves the soul, but does not cancel the irreversible nature of communication.*

**Axiom 6.** "*Communication involves power relations and it involves symmetrical or complementary transactions.*" In principle, the equality of the participants in the interaction is one of the conditions for effective communication. Displaying superiority, not granting the right to reply, communication snobbery undermines the communication process and diminishes its social and human value. So, the achievement of true equality remains a wish, practically, unrealizable.

There are two main types of interactions: *transactional* and *personal*. First, the roles of the participants remain unchanged throughout the communication. For example, the teacher and the student (during the course), the doctor and the patient (during the consultation), the seller and the buyer (when negotiating the price), maintain fixed relationships with each other, which eliminates the possibility of achieving equality in communication.

Symmetric are the acts of communication in which the responses are of the same type as the stimuli: suspicion produces suspicion, generosity is followed by generosity, etc. The value of symmetry depends on the psychological parameters it refers to: it goes without saying that the communication between two calm people and that between two angry people will not look the same. The same can be said relative to complementarity: stimuli and responses are of opposite types. Communication is not helped by the fact that one of the participants speaks animatedly and the other is apathetic, but it can be positively influenced if the irritation is responded to tactfully and calmly.

**Axiom 7.** "*Communication involves processes of adjustment and accommodation*". I have specified that the meaning of the words is in the mind of the speaker, and the signifier (acoustic or optical signal) of the signified is just a simple sensory stimulus. It can be evoked to the receiver only to the extent that he already possessed it. The uniqueness of the life and verbal experience of each person brings with it the non-coincidence of the meanings that different speakers give to the same words. In order, however, to achieve understanding, an "adjustment" of meanings is necessary, the study of which is the object of *proxemics*, a linguistic discipline initiated by Robert Lafont.

It is known what place terminological disputes occupy in political negotiations, in confrontations between philosophers or theologians. Let's *tune* our instruments ("Accordons nos violons"), say the French, when they feel that everyone around them is speaking their own "language". The adjustment to which the "axiom" refers represents precisely this *tuning*

indispensable to true communication. It is all the more difficult to obtain, the less the interlocutor is known to us, the more essential differences exist between our "repertoires".

For example, the conflict between generations will probably remain, as long as the world, a constant of human existence. It depends on many factors, but one, not negligible, is the asymmetry in terms of life experience. You cannot improve communication if you do not take into account the differences between people, if you do not try to accommodate others' codes of expression, with their speaking skills, that is, in sociolinguistic terms, with their *idiolect*. The "break-in" (adjustment) in friendship and marital relations consists, among other things, in learning the communication behavior of the partner, with the respective implications arising from this (under verbal or non-verbal relationship).

## 2. Efficient communication and communication 100%

### TRANSMITTER. MESSAGE. RECEIVER.

The essence of communication consists in the transmission of information from one communicator (participant in this act) to the other. This is the case of dialogue between (two or more) people who, alternatively, play the role of transmitter and receiver. Other times (in the case of monologues, speeches, communication through the press, radio or television) the circulation of information can take place in one direction.

Therefore, communication is a process that, according to the science of communication, contains four elements: a transmitter, a channel, information and a receiver.

Communication does not end with the taking over or receiving of information, which can exert an effective influence on the opinions, ideas or behavior of those who receive it. The intention, the goal pursued in this process is called the effect of communication.

So, for the transfer of information to become communication, the sender must have the intention to cause some effect to the receiver. So, *communication can mean that process by which a transmitter, through a channel, transmits information with the aim of producing certain effects to the receiver*. Researchers from the University of Amsterdam believe that "*communication becomes a process by which a transmitter transmits information to a receiver through a channel, with the aim of producing certain effects on the receiver*".

Many specialists consider communication as a general informational phenomenon for living nature and human society. There are works devoted to the *language of animals, the speech of those who do not speak*. The authors of these studies are convinced, and try to convince others, that all animal species communicate in their world in the most varied ways and by various means. As an example, the information from the *Little encyclopedia of animal idiom*, published by Tudor Opreș, can serve.

Communication, viewed through the lens of a virtually unlimited number of works in this interdisciplinary field, presents itself to us as an extremely varied and complicated phenomenon. As mentioned above, various theories and numerous models of

communication are known from different sciences. For example, communication can be treated by psychologists, as a special type of behavior, by sociologists, as a decisive factor of socialization, by anthropologists, as a tool for establishing and spreading culture, by semioticians, as a process of configuring and reconfiguring the meanings of signs and so on

One of the most difficult problems is that we have no formal unitary criterion for determining indisputably the number and nature of the fundamental "parameters" of communication. But, despite this fact, most specialists operate with a limited number of fundamental "parameters" (basic factors) of communication as an ontic entity: the sender, the receiver, the message, the code, the situation (the repertoire of the communicators), the transmission channel, the interaction of the communicators or the reverse connection (feedback) etc. For example, Gheorghe-Ilie Fârte believes that the following six factors (variables) are necessary to investigate the communication process: the sender (or speaker), the receiver (or addressee), the message, the code, the situation and the transmission channel. He mentions that there are only "three findings, which seem to provide, however, sufficient motivation: none of the listed variables can be reduced to the others; there are no other variables that have a major impact on communication and that are not found, in one form or another, in the field of the six assumed variables; the inclusion of these variables in the analysis of communication allows obtaining some remarkable theoretical results".

The essence of the communication process, most specialists believe, consists in the circulation, the "transportation" of some "messages", information between two poles: the *sender* (the initiator of the communication) and the *receiver* (the recipient of the message). In the process of interpersonal communication, the receiver and the sender are two people. Some specialists believe that there is a similar type of communication in the animal world as well, between systems with artificial "intelligence".

#### **CANAL. WAYS OF COMMUNICATION. CODE.**

The other two important communication concepts we haven't discussed yet are channel and code. We cannot properly define them, however, except in relation to a term which Shannon and Weaver did not use, but which the authorities in the field who followed them found useful. This term is a means of communication.

*The channel* is the easiest to define of all three concepts. It is simply the physical medium through which the signal is transmitted. The main channels are light waves, sound waves, radio waves, telephone cables, the nervous system and the like.

*The means* of communication are mainly represented by the technical or physical means of converting the message into a signal capable of being transmitted through a channel. Means of communication means: the human voice, audiovisual transmission technology (in the case of radio and television), etc. The technical or physical properties of the means of communication are determined by the nature of the channel or channels available for use. These properties of the means of communication will then determine the range of codes that can be transmitted. We can divide the means of communication into three main categories:

(1) *Presentational means of communication*: voice, face, body. They use "natural" languages of spoken words, expressions, gestures. It requires the presence of a communicator, who will constitute a means of communication; they are restricted to the instance of communication "here and now", producing acts of communication.

(2) *Representational means of communication*: books, paintings, photographs, writings, architecture, interior decorations, gardening, etc. There are many means of communication that use cultural and aesthetic conventions to create a "text" of some kind. These are representational, creative. They can create a text that records messages created by the means of communication in the first category and that then exists independently of the communicator. In this way, works of communication are produced.

(3) *Mechanical means of communication*: telephone, radio, television, telex, internet. The main distinction between the categories is that the latter uses channels created by engineers and is thus subject to greater technological constraints.

But these categories intertwine and it might, at some point, be more convenient to merge with each other. Dividing into categories involves identifying the differences, but it is important to think about the similarities between the means of communication, not just the differences.

A good example of exploring the similarities and differences between means of communication is a study by Katz, Gurevitch and Hass (1973). They explain the interrelationships between the five main mass media through a circular model. The authors used a survey carried out on a wide audience to find out what makes people orient their preferences towards certain means of communication. They investigated the needs that people felt and their reasons for turning to certain means of communication to satisfy these needs. People's responses helped the researchers to arrange the mass media in a circular relationship. The audience felt that each means of communication was very similar to the two means of communication it adjoined in this scheme—or, in other words, they felt that if one of them were not available to them, its functions would be well fulfilled. of the means of communication to the left or right of the favorite one.

People tended to use the newspaper, radio and television to connect with society, and books and movies to escape from reality for a while. Those with better education tended to use print media; the less educated were inclined towards electronic and visual means of communication. Books were the most used means of communication to improve self-understanding.

## **THE EFFECTS OF THE ENVIRONMENT ON HUMAN COMMUNICATION.**

The features of the environment within which our interactions take place can exert a powerful influence on that interaction. Lighting, color schemes, furniture, and architecture, among other features, affect what we say and even how often we say it; sometimes we deliberately structure these features in order to obtain certain responses from others. It explores the way we affect and are affected by the space we have within communication environments, as a preface to discussing.

The behavior of the people who do the communicating is also important: „Every interior betrays the nonverbal skills of its inhabitants. The choice of materials, the distribution of space, the kind of objects that command attention or demand to be touched—as compared to those that intimidate or repel - have much to say about the preferred sensory modalities of their owners.”

When people communicate with one another, features of the surrounding environment always exert an influence on their interaction.

First, let us look at a familiar communication environment: the classroom. Modern architects' experiment with different designs, but many classes still take place in a rectangular room with straight rows of chairs for student seating. A row of windows along one side of the room may determine the direction students face, and consequently determine the front of the room. It is not uncommon for classroom seats to be permanently attached to the floor for ease of maintenance and tidiness.

Classrooms typically have some type of partition, often a desk or lectern, that serves as a boundary between the teacher and students. It is not hard for students and teachers to identify problems encountered in environments designed for learning: poor lighting and acoustics; inadequate climate control; external construction noises; inoperative or nonexistent electrical outlets; immovable seats; gloomy, dull, or distracting color schemes; unpleasant odors; and so on. Both students and teachers recognize that such problems impede the purpose for gathering in these rectangular rooms: to increase knowledge through effective student/teacher communication.

The influence of the classroom environment on student and teacher behavior remained relatively unexplored until Sommer (1967) took a closer look. He focused his attention on the influence of classroom design on student participation. Sommer selected several different types of classrooms for his study. He wanted to compare the amount of student participation in these classrooms and to analyze aspects of participatory behavior in each type. He selected seminar rooms with movable chairs, usually arranged in a horseshoe shape; laboratories - complete with Bunsen burners, bottles, and gas valves represented an extreme in straight-row seating; a windowless room; and a room with an entire wall of windows. Among other things, Sommer concluded the following from his studies:

(1) Students and teachers who dislike their learning environment will try to avoid it or change it.

(2) In general, the amount of student participation decreases as the number of students in the class increases. The length of a student's participation is also longer in smaller classes.

(3) The content of student participation in large classes is more likely to be devoted to questions of clarification or requests to repeat an idea rather than participation focused on the ideas themselves.

(4) Participation was most frequent among those students within range of the instructor's eye gaze. In a seminar room, the students sitting directly across from the instructor participated more. A follow-up study by Adams and Biddle (1970) found a zone of participation in the center of the room. This center zone is most likely to occur when the instructor stands in the middle of the room because it is highly dependent on the instructor's visual contact with the students. If the instructor moved to the side and maintained visual contact with the students in front of him or her, the zone of participation would no longer be in the center. But there is more to this story: Koneya (1973) found that when high-, moderate-, and low-participating students were given a chance to select any seat they desired, high participators were most likely to select seats in the central zone of participation.

We can conclude from this that student participation can be facilitated by visual contact with the instructor, but that students who are likely to participate tend to position themselves in seats that are close to the instructor or within the instructor's likely field of gaze. Also note that an instructor's gaze can be used to inhibit communication as well as facilitate it. When students feel they will be punished - or at least not rewarded - for participating, the zone of participation is inoperative.

(5) What happens when you take moderate- and low-participating students and deliberately seat them in the zone of participation? Koneya (1973) found that moderate participators increased their participation, but low participators remained low. This suggests that where students sit can alter their classroom participation, but this effect is less likely with low participators. Haber (1982) found that ethnic, racial, and religious minorities at five colleges tended to select seating peripheral to the zone of participation - even when they were a majority at a particular college.

From these studies, we can conclude that classroom seating is not random. Certain types of people gravitate toward seats that are close to the instructor and/or within his or her expected pattern of gaze. The instructor's gazing patterns create a zone where students are more likely to verbally participate, unless they are students who initially sought seating outside of this zone and were moved within it. Even then, we might find increased participation at some point if a teacher rewards and supports student participation.

The world of education has changed dramatically since the time of Sommer's research. Students take notes (and, of course, check their Facebook pages) on laptops, enroll in online classes, participate with other students in "discussion boards," meet with the instructor during his or her virtual office hours, and so on. For some who are shy in face-to-face settings, an online setting might afford them more opportunities to participate in a class. For those who need to see the instructor in person, an online format might be detrimental to the quality of their education.

Even though many classrooms have changed in form (to more technologically rich) or location (cyberspace), educators must still be aware of the setting in which students learn. For example, online classes should be designed to be user-friendly. A virtual classroom should be designed so as not to make one group, such as females, feel less welcome because it is more stereotypically masculine in appearance (Cheryan, Meltzoff, & Kim, 2011). Brooks (2011) examined the relationship between classroom design and student learning in a face-to-face

setting. Most of the participants in the study were first-year, first-semester students taking Principles of Biological Science with the same instructor. Some of these students were enrolled in a traditional classroom where they sat at tables facing the front of the classroom, which had a whiteboard, projection screen, and teacher's desk. The other students were enrolled in an active learning classroom that had round tables (which have been shown to promote greater collaborative and student-centered learning), laptop technology, an instructor station, and marker boards along the perimeter of the room. With respect to learning outcomes, the difference between actual grades and predicted grades based on college entrance exam scores was greater for those in the active learning classroom than it was for those in the traditional classroom. This meant that the active learning environment benefited students' performance to a greater extent than did the traditional classroom.

The preceding discussion of the classroom is an example of a specific context in which spatial relationships, architecture, and objects surrounding the participants influence the amount of interaction and learning that occur. We will examine other environmental factors that impinge on human communication behavior shortly. As a cautionary note, though, you should remember that the environment is only one element in structuring such behavior. If students, administrators, teachers, secretaries, and custodians want to run a school or university like a prison or a dehumanized bureaucracy, changes in the classroom structure will likely have little impact.

Throughout this chapter, we discuss a number of characteristics of environments. Let us initiate our exploration by examining the way we perceive our surroundings, because this can significantly influence the way we feel and the way we choose to communicate.

*Perceptions of our surroundings.* The number of places in which we communicate with others is limitless: buses, homes, apartments, restaurants, offices, parks, hotels, sports arenas, factories, libraries, movie theaters, museums, and so on. Despite their diversity, we probably evaluate these environments along similar dimensions.

Once we perceive our environment in a certain way, we may incorporate such perceptions in the development of the messages we send. And once these messages have been sent, the environmental perceptions of the other person have been altered. Thus, we influence and are influenced by our environments. How do we see our environments? We believe the following six dimensions are central to our perceptions and consequently to how we send and receive messages.

*Perceptions of formality.* One familiar dimension along which we can classify environments is a formal–informal continuum. Reactions may be based on the objects present, the people present, the functions performed, or any number of other variables. Individual offices may be more formal than a lounge in the same building; a year-end banquet takes on more formality than a “come as you are” party; an evening at home with one other couple may be more informal than an evening with 10 other couples. The greater the formality, the greater the chances that the communication behavior will be less relaxed and more superficial, hesitant, and stylized.

Of importance, what we expect to see along the formal - informal continuum in a particular setting matters. We expect to see less formal behavior and dress in informal settings and more formal behavior and dress in formal settings. Trouble can arise when these expectations go unmet. Consider the likely reactions of sunbathers at a beach to a group of men and women sitting on leather chairs and discussing corporate strategy in their business suits.

The problem was that several members of Northwestern University's championship lacrosse team wore flip-flops when they had their photo taken with President Bush at the White House ("NU's Lacrosse Team Sparks Flip-Flop-Flap at White House," 2005). To some people, flip-flops were disrespectful footwear in such a lofty setting.

*Perceptions of warmth.* Environments that make us feel psychologically warm encourage us to linger, relax, and feel comfortable. It may be some combination of the color of the drapes or walls, paneling, carpeting, texture of the furniture, softness of the chairs, soundproofing, and so on. Even the exterior of an environment can affect our anticipated feelings of comfort. Students viewed slides of 34 different medical facilities, and the expected quality of care and degree of comfort varied with different types of buildings (Devlin, 2008).

Fast-food chains try to exhibit enough warmth in their decor to seem inviting but enough coldness to encourage rapid turnover. Interestingly, environments that make us feel psychologically warm may also make us feel physically warmer. Students were asked to spend 2 hours studying or reading in a room with a neutral decor, similar to that of a classroom. Then they were asked to read or study in a room that resembled a walk-in meat cooler.

Nearly all the students felt the second room was cooler, even though the temperature was actually the same in both rooms. Then the meat cooler room was paneled, carpeted, and equipped with subdued lighting and other appointments. Another group of students was asked to read or study in each room. This time, the redesigned meat-cooler room was judged to have a higher temperature than the classroom. Again, actual temperatures were the same (Rohles, 1980).

*Perceptions of privacy.* Enclosed environments usually suggest greater privacy, particularly if they accommodate only a few people. If the possibility of other people's entering and/or overhearing our conversation is slight, even if we are outdoors, there is a greater feeling of privacy.

Personal items such as toilet articles, low or focused lighting, high-density situations, partitions, noise, and other environmental factors can affect perceptions of privacy (Buslig, 1999). With greater privacy, we will probably find close speaking distances and more personal messages designed and adapted for the specific other person rather than people in general.

*Perceptions of familiarity.* When we meet a new person or encounter an unfamiliar environment, our responses typically are cautious, deliberate, and conventional. Unfamiliar environments are laden with rituals and norms we do not yet know, so we are hesitant to move too quickly. We will probably go slowly until we can associate this unfamiliar environment with one we know.

One interpretation for the stereotyped structure of fast-food restaurants is that they allow us, in our mobile society, to readily find a familiar and predictable place that will guarantee minimal demands for active contact with strangers. In unfamiliar environments, the most likely initial topic of conversation will be the environment itself: Have you ever been here before? What is it like? Who comes here?

*Perceptions of constraint.* Part of our total reaction to our environment is based on our perception of whether, and how easily, we can leave it. Some students feel confined in their own homes during the school Christmas break. But consider the differences between this 2-week constraint and a permanent live-at-home arrangement.

The intensity of these perceptions of constraint is closely related to the space available to us as well as the privacy of this space during the time we are in the environment. Some environments seem to be only temporarily confining, such as an automobile during a long trip. Perceptions of confinement in other environments, such as prisons, spacecraft, or nursing homes, will likely seem more enduring.

*Perceptions of distance.* Sometimes our responses within a given environment are influenced by how close or far away we must conduct our communication with another. This may reflect actual physical distance - an office on a different floor, a house in another part of the city - or it may reflect psychological distance, with barriers clearly separating people who are fairly close physically. You may be seated close to someone and still not perceive it as a close environment: for example, interlocking chairs facing the same direction in an airport.

When the setting forces us into close quarters with other people not well known to us, such as elevators or crowded buses, we try to increase distance psychologically to reduce threatening feelings of intimacy. We can do this through less eye contact, body tenseness and immobility, cold silence, nervous laughter, jokes about the intimacy, and public conversation directed at all present.

The perceptions just described represent only some of the dimensions along which we can view communication settings. Generally, more intimate communication is associated with informal, unconstrained, private, familiar, close, and warm environments. In everyday situations, however, these dimensions combine in complex ways. The mixture of intimate and nonintimate factors can be seen in an elevator if it is perceived as close, familiar, and temporarily confining but also public, formal, and cold.

## **REACTING TO ENVIRONMENTS.**

Once these perceptions are made, how do they affect our reactions? Sometimes the impact of the environment will be slight, but it has the potential to play a significant role in affecting our behavior. In a study of 98 child-care classes for 3- and 4-year-olds, Maxwell (2007) concluded that perceptions of the physical environment were related to measures of the children's cognitive and social competency, especially for the 3-year-olds.

Mehrabian (1976) argued that we react emotionally to our surroundings. These emotional reactions can be accounted for in terms of:

- (1) how aroused the environment makes us feel,
- (2) how pleasurable we feel,
- (3) how dominant we feel.

Arousal refers to how active, stimulated, frenzied, or alert we are. Pleasure refers to feelings of joy, satisfaction, and happiness. Dominance refers to feelings of being in control, important, and free to act in a variety of ways.

Novel, surprising, and complex environments probably produce higher arousal. Those people less able to screen out unwanted information from the environment inevitably have to respond to more stimuli and, in turn, become more aroused. Although we all probably respond as screeners and nonscreeners on occasion, some people tend to respond habitually as one or the other. Nonscreeners are less selective in what they respond to in any environment. They see, hear, smell, and otherwise sense more stimuli. Screeners, in contrast, are selective in what they respond to. They impose a hierarchy of importance on various components in a complex situation. Nonscreeners not only become more aroused than screeners in novel, changing, and sudden situations, they also remain aroused longer—even after leaving the arousing environment. That is why nonscreeners are most attracted to environments that are both arousing and pleasurable.

Introversion-extraversion is another personality variable that influences how people respond to arousing environments. Research by Geen (1984) has shown that introverts require less stimulation to reach their optimal level of physiological arousal than do extraverts. This means that introverts could become overly aroused in an environment that is comfortable for extraverts. Knowing this, introverts and extraverts may choose some environments over others, avoiding those that will not be arousing enough or too arousing for them. In line with this, Campbell and Hawley (1982) found that introverted students preferred quiet, socially isolated settings when studying, whereas extraverts sought noisier settings where they could socialize with others.

Ambient aroma is an environmental factor that influences how people behave in an environment. Research by Baron (1997) has shown that pleasant odors increase our willingness to help members of the same sex. The increased helpfulness seems to be due to the pleasant odors making people feel better. It also appears that clean scents increase people's willingness to be charitable (Liljenquist, Zhong, & Galinsky, 2010). Importantly, these environmental effects are likely to be nonconscious in nature, suggesting that our behavior could, at times, be under the influence of the odors wafting through or lingering in the spaces we pass through.

*Perceptions of the time.* Time is also a part of the communicative environment. At first, it may seem strange to include something as seemingly intangible as time in the same environmental package as chairs, walls, noise, or even weather conditions. However, the human brain may be wired to encode time and place information after an event that is tragic or of momentous importance. Do you have a vivid memory of the events directly surrounding 9/11? What were you doing before, during, and after that news broke? Chances are that that information is burned into your memory, something psychologists refer to as a flashbulb memory.

In the United States, people treat time as something tangible, a commodity that can be divided up, saved, spent, and made. Furthermore, we often project temporal qualities onto objects within our environment: for example, a chair that looks like it has been there forever or an elevator that „never seems to be on time.”

Time is important to us. It governs when we eat and sleep, it often determines how much we get paid at work, and it sets limits on how much material students can learn in a given class period. Time plays a key role in social interaction as well. It influences our perceptions of people: for example, responsible people are on time, boring people talk too long, or a good romantic partner gives us some time to ourselves (Leonard, 1978; Werner & Baxter, 1994). A course in time management is a staple for anyone expecting to climb the corporate ladder in U.S. organizations.

Time plays such an important role in our lives that we often carry the date and time around with us on our wrist or on our cell phones. Most cars have clocks, and some of them even have devices for computing the time it will take to drive from one location to another. We are very much aware of the stress time can create in our lives. We think of a vacation as a retreat to a place where time matters less. Ironically, vacations are usually thought of as a set period of time.

Time is perceived very differently in other cultures (Hall, 1959). These varying orientations to time are often a central factor in misunderstandings among members of different cultures. Psychology professor Robert Levine gives this account of his teaching experience in Brazil:

“As I left home for my first day of class, I asked someone the time. It was 9:05 a.m., which allowed me time to relax and look around the campus before my 10 o’clock lecture. After what I judged to be half an hour, I glanced at the clock I was passing. It said 10:20! In a panic, I broke for the classroom, followed by gentle calls of cHola, professor” and “Tudo bem, professor?” from unhurried students, many of whom, I later realized, were my own. I arrived breathless to find an empty room. Frantically, I asked a passerby the time. “Nine forty-five” was the answer. No, that couldn’t be. I asked someone else. “Nine fifty-five.” Another said: “Exactly 9:43.” The clock in a nearby office read 3:15. I had learned my first lesson about Brazilians: Their timepieces are consistently inaccurate. And nobody minds. My class was scheduled from 10 until noon. Many students came late, some very late. None seemed terribly concerned about lateness. The real surprise came at noon. Only a few students left immediately. Others drifted out during the next fifteen minutes, and some continued asking me questions long after that.” (Levine & Wolff, 1985).

Biologically, our bodies seem to be programmed so that “internal clocks” regulate our physical, emotional, and intellectual functioning as well as our sense of time (Luce, 1971; Meissner & Wittmann, 2011). However, we can experience distortions in the perception of time; some of which are influenced by events, whereas others by personality variables.

We all know that “a watched pot doesn’t boil” and that the waiting room at a physician’s office is a fitting description. Examples of events that seem to slow time down - that is, the perceived duration is longer than the actual duration - include scary ones (skydiving for

novices) and seeing angry or fearful faces compared to neutral faces (Campbell & Bryant, 2007; Efron, Niedenthal, Gil, & Droit-Volet, 2006; Gil & Droit-Volet, 2011). On the other hand, highly exciting events can make time fly (Campbell & Bryant, 2007).

Individual differences in the perception of time have been linked to neurological and psychological differences (Westfall, Jasper, & Zelmanova, 2010; Zimbardo & Boyd, 1999). Regarding the latter, Zimbardo and Boyd (1999) believe in individual differences in people's attitudes toward time, something which can influence their decisions and judgments. These include the past-negative type (you view your past negatively, and your past still upsets you), the past-positive type (you have a nostalgic view of your past), the present-hedonistic type (you think more about partaking in pleasures of the present than consequences in the future), the present-fatalistic type (you feel stuck in the present and unable to change your future), and the future-focused type (you are focused on accomplishing goals important to your future).

These orientations may represent a long-term style or may be subject to change; for example, a present hedonistic type, who "lives for the moment" at one point in his or her life, might later adapt to a future-focused style that involves evaluating today's "moments" in terms of the long-range picture (Gonzalez & Zimbardo, 1985).

We devote the remainder of this chapter to the characteristics of environments that form the bases of the perceptions just outlined: perceptions of our surroundings and perceptions of time. Each environment has three major components:

*The natural environment.* Some of us live in densely populated urban areas, some in smaller towns, some in suburban areas on the outskirts of these cities and towns, and others in rural areas. Within these broad areas, we find other environmental features that affect the nature of human interaction and health: for example, apartment complexes, neighborhoods, high-rise buildings, and urban settings with forested areas. The places we live, play, and work are bound to have an impact on our behavior.

The number of people we communicate with can influence our interaction style, but perhaps more important is the number of different people for whom we have to adapt our messages. Some environments are very homogeneous and provide inhabitants with fewer experiences and fewer examples of diverse styles, behavior, and values. The pace of life and the time devoted to developing social and personal relationships may also vary as a function of where we live. In slums or ghettos in urban areas, we often find a social climate that encourages or fosters unconventional and deviant behavior or at least tolerates it. Thus, slum areas show a high incidence of juvenile delinquency, prostitution, alcohol and drug addiction, physical and mental disability, and crimes of violence (Krupat, 1985).

The natural environment that surrounds us on a day-to-day basis also comes with a host of weather-related phenomena. For instance, behavioral scientists have been interested in the effects of barometric pressure: High or rising barometric pressure has been associated with feelings of good health; low or falling barometric pressure is more likely to be linked to feelings of pain or depression. Optimum student behavior and performance have been observed when the barometer was high or rising and on cool days with little wind and

precipitation. Increase in positive air ions also seems to increase people's irritability and tension.

The changing seasons seem to have an impact on our behavior and mental health, too. Even in areas of the United States with minimal seasonal variations in temperature, national routines associated with changing seasons are still followed: for example, taking summer vacations and starting school in the fall. Some of the ways in which our behavior varies with the seasons include the following:

- (1) Suicide rates and admissions to public mental hospitals rise dramatically in the spring and peak in the summer.
- (2) College students tend to break up with their dating partners at the beginnings and endings of semesters (May/June, August/September, or December/ January).
- (3) During the summer, people tend to see their friends more often.
- (4) During the summer, crimes of assault and rape increase.
- (5) From July to November, people tend to report less happiness but more activity and less boredom.
- (6) U.S. females born during the fall are more likely to have symptoms related to eating disorders than females born during the other seasons (Javaras, Austin, & Field, 2011).
- (7) Although seasonal affective disorder (we describe this later in the chapter) can be triggered in spring, the onset is more likely to be during late fall and early winter.

Imagine entering an urban neighborhood with few people around. You pass by numerous buildings that have been vandalized (broken windows, graffiti on the outside walls, and litter all around). Do these represent clues to the existing norms of conduct operating in that environment? Do you think that the buildings are not monitored and that getting caught for littering or damaging property further is very unlikely?

Wilson and Kelling (1982) and others (Kelling & Coles, 1996) proposed the so-called broken windows theory to account for how the appearance and upkeep of an environment is one signal of the social norms there, the extent to which the setting is monitored, and whether criminal behavior occurs in that area. These, in turn, are relevant to the occurrence and prevention of some criminal activity.

In principle, one way to prevent petty criminal activity is to repair damaged property and not let trash accumulate because this lets would-be vandals know that the area is monitored and that vandalism will be detected and dealt with. On the other hand, the presence of litter, broken windows, and other signs of vandalism might not deter some individuals from engaging in similar petty or even serious criminal activity in the neighborhood. Furthermore, additional criminal activity can lead to a further deterioration of the appearance of the area, only making matters worse. For example, law-abiding citizens may decide to flee the area.

The broken windows theory has received some empirical support, but it has also been criticized. Survey research has shown that aspects of the theory have utility in explaining residents' concern about neighborhood safety as well as students' perceptions of social disorder in their school (Pitner, Yu, & Brown, 2012; Plank, Bradshaw, & Young, 2009). Experimental work has revealed that littering, trespassing, and stealing are greater when

there are signs that people are violating other rules; littering was greater, for example, when participants saw graffiti on a wall marked with a “no graffiti sign” than when that same wall had no graffiti on it (Keizer, Lindenberg, & Steg, 2008).

However, the research of Cialdini, Kallgren, and Reno (1991) suggests that it might be important for us to see another person behave in a way that is consistent with the existing norms in the environment. They found that participants were more likely to litter in a messy garage than a clean garage when they had first seen another person litter in that garage. Stated differently, the litterer brought the norm (“It’s okay to litter”) to participants’ awareness when they were in the messy garage.

As a theory, broken windows have been criticized on a number of fronts. First and foremost, it cannot explain the causes of serious criminal activity. Of course, most of the people who live in blighted urban areas do not turn to a life of violent crime. Moreover, a criminal may be little concerned with the upkeep of a street; a burglar, for instance, may case a luxury home in an exclusive neighborhood and ignore a modest home in a run-down neighborhood because the potential payoffs are greater with the former.

We recognize that seasons come and go gradually along with the weather that typically accompanies them-falling leaves eventually give way to falling snow. However, within seasons, the weather can change suddenly and drastically: for example, a sunny spring day can be followed by violent storm activity that night, with tornadoes touching down and ripping apart neighborhoods. Natural disasters can inflict great psychological damage on those who have experienced them, sometimes leading to post-traumatic stress disorder (Simpson, Weissbecker, & Sephton, 2011).

Temperature and the way it affects human responses is the climatic factor that has received the most scientific attention-specifically, the extent to which hot temperatures increase aggressive motivation and aggressive behavior.

Lengthy periods of extreme heat are often associated with discomfort, irritability, reduced work output, and unfavorable evaluations of strangers. In one study, hot temperatures increased aggressive horn-honking for drivers without air-conditioning (Kenrick & MacFarlane, 1986). Vrij, van der Steen, and Koppelaar (1994) studied the reactions of police officers to a simulated burglary in which the temperature varied from comfortably cool to hot. When the temperature was hot, officers reported more aggressive and threatening impressions of the suspect and were more likely to draw their weapon. As Anderson (2001) noted, uncomfortably warm temperatures seem to increase the likelihood that ambiguous social interactions will be viewed as aggressive.

A simple question such as “Is it really necessary that I do that?” may be taken as an aggressive challenge to personal authority that demands some form of retaliation.

An analysis of riots in India over a 22-year period found that most took place during the months when the temperature was between 80 and 90 degrees Fahrenheit (Berke & Wilson, 1951). Report of the National Advisory Commission on Civil Disorders (1968) on riots in the United States said that hot summer nights added to an already explosive situation that

eventually resulted in widespread rioting in ghetto areas: "In most instances, the temperature during the day on which the violence erupted was quite high" (Goranson & King, 1970). An analysis of 102 riots in the United States between 1967 and 1971 concluded that the most likely temperature-riot sequence was one in which the temperature rose to between 81 and 85 degrees Fahrenheit and remained within that range for about 7 days preceding the riot.

Rotton and Cohn (2003) conducted two studies, each covering 38 years or more, and found annual temperatures associated with various forms of criminal behavior such as assaults, rapes, robberies, burglaries, and larceny-but not murder.

Without any way to relieve the effects of high temperatures, criminal behavior is likely to decrease when extremely high temperatures persist. Very high temperatures lead people to seek ways to relieve their discomfort rather than engage in criminal activity. Riots were less likely to occur as temperatures climbed above 90 degrees Fahrenheit (Baron & Ransberger, 1978; Carlsmith & Anderson, 1979). Assaults in climate-controlled settings tend to increase when temperatures are extremely high but decrease in outdoor situations without climate controls (Rotton & Cohn, 2004).

You might be wondering why heat would lead to more aggression. According to Leonard Berkowitz (1989), the likely culprit is negative feelings. In short, high temperatures can produce negative feelings, and it is these feelings that can trigger anger and hostile thoughts and behaviors in people. This occurs because such thoughts and behaviors are linked to it in an associated network in memory. This model implies that other environmental stressors that arouse negative feelings in people-excessive noise, traffic jams, pollution, and so on-might also lead to more aggression under the right circumstance.

Obviously, the relationship between temperature, negative affect, and aggression is not simple. Probably a number of factors interact with the temperature to increase the chance of aggression: prior provocation; the presence of aggressive models; and negative affect experienced from sources other than temperature, such as poverty and unemployment, perceived ability to leave the environment, and the availability of sources to relieve any adverse effects of temperature. A thorough review of the literature, however, concludes the following:

"Clearly, hot temperatures produce increases in aggressive motives and tendencies. Hotter regions of the world yield more aggression; this is especially apparent when analyses are done within countries. Hotter years, quarters of years, seasons, months, and days all yield relatively more aggressive behaviors such as murders, rapes, assaults, riots, and wife beatings, among others. Finally, those concomitant temperature-aggression studies done in the field also yielded clear evidence that uncomfortably hot temperatures produce increases in aggressive motives and behaviors." (Anderson, 1989)

Note, however, that sometimes unpleasant environmental factors, such as heat or noise, can increase attraction for others. In such cases, the aversive stimulus may function as something both people have in common (Kenrick & Johnson, 1979; Schneider, Lesko, & Garrett, 1980). The extent to which heat and other environmental variables increase or decrease attraction

to others depends on how these interact with many other factors, such as interactants' personalities and the presence or absence of simultaneously occurring rewarding stimuli.

The effects of the moon and sunspots on human behavior have also been studied scientifically. Psychiatrist Arnold Lieber (1978) reasoned those human beings, like the earth, are subject to gravitational forces created by different positions of the moon. (Human beings, like the planet itself, are about 80 percent water and 20 percent solids.) He plotted the number of murders in relation to the position of the moon and concluded a strong relationship between the two. But considerable skepticism exists regarding Lieber's theory and similar work because research of this type shows how two things vary together, not that a particular moon position actually causes certain behaviors. Several other factors likely are interacting and affecting the two.

Two separate analyses of over 37 studies that purportedly linked moon positions and the frequency of psychiatric hospital admissions, suicides, homicides, traffic accidents, and changes in the stock market concluded that a spurious relationship exists between moon phases and these behaviors (Campbell & Beets, 1978; Rotton & Kelly, 1985). Furthermore, Schafer, Varano, Jarvis, and Cancino (2010) did not find a relationship between lunar cycles and reported criminal conduct in a more recent study on this topic.

Aside from the influence of high temperatures on aggressive tendencies, we do not have a lot of reliable and valid information on how the natural environment affects our communication behavior. It seems reasonable to believe that various aspects of the natural environment will have an influence, but the exact nature and degree of this influence is still unknown. Most people seem to believe the weather has less impact on their own behavior than it does on others' behavior, that it has less impact on behavior than it does on emotional states, and that it does not have more impact on negative states than on positive ones (Jorgenson, 1981).

Kraut and Johnston (1979) found that people walking on the sidewalk smiled more when the weather was sunny and pleasant than when it was rainy and overcast. This difference was much less significant than the effect of being with others; people smiled much more when in an interaction than when alone. Thus, compared to more social factors, climate and other environmental variables may have weak influences on our behavior.

*Other people in the environment.* We should examine the reactions of people to overpopulated environments. For now, we point out that people can be perceived as part of the environment and do have an effect on the behavior of others. These people may be perceived as active or passive participants, depending on the degree to which they are perceived as involved in conversations, either speaking or listening. In many situations, these people are seen as active, especially if they are able to overhear what is being said. In some situations, we grant another person or persons the dubious status of nonperson and behave accordingly.

This may occur in high-density situations, but it is also common with just one other person. Cab drivers, janitors, and children achieve nonperson status with regularity. The presence of nonpersons, of course, allows the uninhibited flow of interaction because as far as the active participants are concerned, they themselves are the only human interactants present.

Parents sometimes talk to others about personal aspects of their child while the child is playing nearby. For interactants, the child is perceived as “not there.” Any relevant verbal or nonverbal responses on the part of the nonperson that are picked up by interactants immediately strip the person of the nonperson role.

Research shows that the home team was usually the winner in sporting events (Jamieson, 2010). One study found this to be true 53 percent of the time in professional baseball, 58 percent in professional football, 60 percent in college football, 67 percent in professional basketball, and 64 percent in professional hockey. Possible reasons are the home team’s familiarity with the home field or the visiting team’s travel fatigue. However, an important factor contributing to the home team’s victories seems to be the spectators, who provide psychological support that improves performance. In contrast, unfriendly home crowds may increase performance errors (Schwartz & Barsky, 1977; Thirer & Rampey, 1979). Some analyses of home team performances before supportive fans have suggested a tendency for the home team to choke in championship games, but some studies have not shown this to be true for baseball or basketball (Schlenker, Phillips, Boniecki, & Schlenker, 1995).

The ways in which groups influence individual performance are too numerous and too large a topic to discuss here. Two examples illustrate the subtlety of some of these effects:

(1) In one of social psychology’s first experiments, boys wound line on fishing reels faster when others were present performing the same activity, even though there was no competition and no emphasis on speed. Many studies have since found this social facilitation effect whereby performance on simple and well-learned tasks, at least, is enhanced by the mere presence of others.

(2) If people feel others are working with them on a joint task, they often slack off without realizing it. This social loafing is strongest when people feel their own contributions cannot be tallied or evaluated (Harkins & Szymanski, 1987).

*Architectural design and movable objects.* Hall (1966) labeled the architecture and objects in our environment as either fixed feature space or semifixed feature space. Fixed feature space refers to space organized by unmoving boundaries, such as in rooms of houses; semifixed feature space refers to the arrangement of movable objects, such as tables or chairs. Both can have a strong impact on our communication behavior.

At one time in U.S. history, banks were deliberately designed to project an image of strength and security. The design frequently featured large marble pillars, an abundance of metal bars and doors, uncovered floors, and bare walls. This style generally projected a cold, impersonal image to visitors, yet oddly enough, it also gave customers some measure of comfort because in such a place their money would likely be safe.

Later, bankers perceived the need to change their environment, to create a friendly, warm, homey place where people would enjoy sitting down and discussing their financial needs and problems. Bank interiors began to change. Carpeting was added, wood replaced metal, cushioned chairs were added, and potted plants and art were brought in for additional warmth. This is only one example of the recognition that many times, the interior in which

interaction occurs can significantly influence the nature of the interaction. Some churches have tried to make their environments more inviting by having greeters, Power-Point presentations, musicians who sing and play guitars, and the like. Nightclub owners and restaurateurs have long been aware that dim lighting and sound absorbing surfaces—such as carpets, drapes, and padded ceilings—provide greater intimacy and cause patrons to linger longer than they would in an interior with high illumination and no soundproofing. And lastly, attention has been paid to how gamblers are influenced by the design and decor features of casinos (Finlay, Marmurek, Kanetkar, & Londerville, 2010).

The earliest studies to focus on the influence of interior decoration on human responses were conducted by Maslow and Mintz (1956) and Mintz (1956). They selected three rooms for study: One was an “ugly” room, designed to give the impression of a janitor’s storeroom in disheveled condition; one was a “beautiful” room, complete with attractive appointments that included carpeting and drapes; and one was an “average” room—a professor’s office. People sitting in these rooms were asked to rate a series of negative print photographs (to control for color, shading, etc.) of faces. The experimenters tried to keep all factors—time of day, odor, noise, type of seating, and experimenter—constant from room to room, so results could be attributed to the type of room.

Results showed that people in the beautiful room gave significantly higher ratings on “energy” and “well-being” to the faces than did participants in the ugly room. Experimenters and subjects alike engaged in various escape behaviors to avoid the ugly room, which was variously described as producing monotony, fatigue, headache, discontent, sleep, irritability, and hostility. The beautiful room, however, produced feelings of pleasure, comfort, enjoyment, importance, energy, and a desire to continue the activity. In this instance, we have a well-controlled study that offers some evidence of the impact of visual-aesthetic surroundings on the nature of human interaction. Similar studies found that students do better on tests, rate teachers higher, and solve problems more effectively in beautiful rooms than in ugly ones (Campbell, 1979; Wollin & Montagne, 1981).

Because at least one study did not find mood or evaluations of others to change with drastic changes in appointments and decor (Kasmar, Griffin, & Mauritzen, 1968), we are reminded that the impact of the environment is only one source of influence on our perceptions. Sometimes it is a powerful force, but sometimes the close relationship between the two parties, an understanding of or tolerance for clutter, positive behavior on the part of the other person, and other factors offset any negative effects emanating from an ugly environment.

Sometimes we get very definite person- or couple-related messages from home environments. The designation of places in the home for certain activities and not for others, the symbolism attached to various objects in the home, and ways of decorating the home may tell us a lot about the nature of a couple’s relationship (Altman, Brown, Staples, & Werner, 1992). Sometimes the way a home is decorated reveals whether the inhabitants decorated their home for themselves, for others, for conformity, for comfort, and so on (Sandalla, 1987).

It is easier to judge aspects of other people’s personalities when they feel that their home decor expresses their personality (Hâta, 2004).

Lohmann, Arriaga, and Goodfriend (2003) were able to use decorative objects in a home to determine the closeness of the inhabitants' relationship. They asked couples who were either married or living together in a romantic relationship to identify objects in their homes they most wanted visitors to notice and to specify their favorite objects. Each object was also identified as either individually acquired or jointly acquired. Couples completed questionnaires that measured their relationship commitment and closeness. The couples who had greater commitment and closer relationships were also couples who had a higher proportion of jointly acquired objects that they wanted visitors to notice and more jointly acquired favorite objects.

Researchers have explored individual differences in how people decorate their actual (e.g., bedrooms, offices) or virtual worlds (Graham, Sandy, & Gosling, 2011). For example, Gosling (2008), Gosling, Ko, Mannarelli, and Morris (2002), and Gosling, Gaddis, and Vazire (2008) were interested in whether personality characteristics could accurately be predicted from a person's office or bedroom.

Observers who experienced various offices and bedrooms firsthand indicated the extent to which the environment they saw reflected the person's extraversion, agreeableness, emotional stability, openness to experience, and conscientiousness. The personality profile of the people who worked in the offices and slept in the bedrooms was obtained from their own responses to personality measures. These types of environments seem to have enough signals associated with conscientiousness and openness to experience to enable observers to effectively judge inhabitants with those characteristics (e.g., a variety of reading material was linked to openness to experiences; being neat was linked to conscientiousness), but observers were not as successful in judging other personality characteristics.

We may not always be accurate in judging another person's personality characteristics from the way they construct their environment, but that does not stop us from making such judgments. People who judged the personality of characters in a story when the quality of their housekeeping was varied judged the housekeepers with a dirty environment as less agreeable, less conscientious, less intelligent, and less feminine but more open and more neurotic than the clean housekeepers. Whether the housekeeper was male or female did not affect the judgments (Harris & Sachau, 2005).

The way people decorate their rooms may also forecast future behavior. In one study, researchers took photographs of 83 first-year students' rooms. When the photographs of the rooms of students who had dropped out of school a year and a half later were analyzed, it was noted that the dropouts had more decorations reflecting high school and home and fewer related to the university community. Dropouts also seemed to have fewer ways to protect their privacy; their favorite way to combat unwanted noise was to override it with more noise of their own (Vinsel, Brown, Altman, & Foss, 1980).

## **COLOR.**

Researchers have been investigating how color affects our behavior, from how food tastes to us to how attractive we find others (Elliot & Niesta, 2008; Harrar, Piqueras-Fiszman, & Spence,

2011). First off, people believe that colors can affect behavior. In fact, some believe “prisoner mischief” will vary as a function of the colors surrounding prisoners. For example, the walls of the San Diego city jail were at one time reportedly painted pink, baby blue, and peach on the assumption that pastel colors would have a calming effect on the inmates.

In Salem, Oregon, the cell bars of Oregon’s correctional institution were painted soft greens, blues, and buffs; some cell doors were painted bright yellow, orange, green, and blue. In addition, the superintendent of the institution said the color schemes would be continually changed to keep it “an exciting place to work and live in.”

Initial studies of people exposed to environments painted Baker-Miller pink found decreasing heart rates, pulse, and respiration. Subsequent studies in adult and juvenile correctional facilities, psychiatric hospitals, and controlled laboratory studies with undergraduate students supported the belief that this pink color aided in suppressing violent and aggressive behaviors (Pelligrini & Schauss, 1980; Schauss, 1985). In 2005, the sheriff of Mason County, Texas, painted the bars and walls of his five-inmate jail pink and issued pink sheets, pink slippers, and pink jumpsuits to his prisoners. He claims it has led to a 70 percent decrease in repeated offenses (Phinney, 2006).

But not all experiences with pink have been so positive. The county jail in San Jose, California, reportedly painted two holding cells shocking pink in the belief that prisoner hostility would be reduced. Prisoners seemed less hostile for about 15 minutes, but soon the hostility reached a peak; after 3 hours, some prisoners were tearing the paint off the wall. This result is consistent with the research of Smith, Bell, and Fusco (1986) who found pink to be arousing rather than weakening. In fact, any color that is highly saturated and bright is likely to be more arousing and will garner more attention than paler colors (Camgoz, Yener, & Guvenc, 2004; Garber & Hyatt, 2003). When prisoners are allowed to paint their cells with colors they choose, it may have an aggression-reducing effect, but the effect may have more to do with the prisoner’s control over the choice of colors than the colors themselves. Nevertheless, the preceding reports show how various institutions have tried, with mixed results, to apply the findings from color research to affect the nature of human interaction in certain environments.

Colors are also believed to influence student learning. Colors that will facilitate, or at least not impede, learning are always a concern during classroom construction. In Munich, Germany, a group of researchers studied the impact of colors on mental growth and social relations (“Blue Is Beautiful,” 1973). Children tested in rooms they thought were beautiful scored about 12 points higher on an IQ test than those tested in rooms they thought were ugly. Blue, yellow, yellow, green, and orange were considered beautiful; white, black, and brown were considered ugly. The beautifully colored rooms also seemed to stimulate alertness and creativity. In the orange room, psychologists found that positive social reactions, such as friendly words and smiles, increased 53 percent, whereas negative reactions, such as irritability and hostility, decreased 12 percent.

Ball’s (1965) summary of the color research prior to 1965 found what others have found since then: that people associate serenity and calm with the colors blue and green, and that red and orange are perceived to be arousing and stimulating. The research of Wexner (1954) and

Murray and Deabler (1957) are representative of this tradition. Wexner (see Table 4-1) presented 8 colors and 11 mood-tones to 94 research participants. The results show that a single color is significantly related to some mood-tones; for others, two or more colors may be associated.

It is difficult to interpret this research. First, research participants were asked to judge colors outside of any context, even though the colors we respond to in daily life are perceived within a particular context. Separating color from the objects and forms that give it shape, the surrounding colors, and other contextual features may elicit some learned stereotypes about the relationship of mood and color, but each stereotype may or may not be relevant when given a context. Pink may be your favorite color, but you may still dislike pink hair.

Hines (1996) found that residents of four American cities believed red meant danger, warmth, love, strength, and safety, but when these same people were asked to think about red in terms of products, they said red meant Coca-Cola. Because the color red is associated with male dominance and testosterone levels in some nonhuman animals, Hill and Barton (2005) wondered whether the wearing of red would play a role in winning sporting contests. In the 2004 Olympic games, contestants in four combat sports - taekwondo, boxing, Greco-Roman wrestling, and freestyle wrestling - were randomly assigned red or blue outfits. In all four competitions, the contestants wearing red won significantly more fights. The researchers later compared the performances of five soccer teams that varied the color of their uniforms and found that they won significantly more games when wearing red. The researchers caution, however, that wearing red may only be a favorable factor in winning when the combatants are reasonably matched in skill: Wearing red will not overcome a lack of talent.

Studies suggest that the color red enhances the attractiveness of members of the other sex. In one experiment, young men saw the same black-and-white photo of a woman in one of two conditions: in either a red background or a white background. Men's ratings of the woman's attractiveness were higher when she was featured in the red as opposed to the white background (Elliot & Niesta, 2008). Similarly, Elliot et al. (2010) found that young women thought a man was more attractive when he was shown on a red background compared to a white one.

A series of studies on the color of uniforms worn by football and hockey players pinpointed the complex ways in which colors may affect behavior. Frank and Gilovich (1988) began by demonstrating that students rated black uniforms as connoting meanness and aggression more than other colors. Then they examined statistics from actual professional games and found that football and hockey teams wearing black uniforms were penalized more than teams wearing other colors. And when a team changed its color to black from some other color, it began getting more penalties! The researchers then asked whether the effect was caused by the players themselves-maybe they acted meaner and rougher wearing black- or by the stereotyped perceptions of referees.

The researchers made experimental films in which they varied the uniforms of players engaging in identical moves and then showed these to subjects acting as referees. These referees did find more instances of penalizable behavior among those suited in black, even though there actually were no differences. However, when the researchers put black

uniforms on students, they found evidence that wearing a black uniform produced more aggressive behavior in the wearer. More recent evidence, however, has called this effect into question. Caldwell and Burger (2011) did not find that hockey teams showed more aggression when the players wore a black or red jersey as opposed to their normal jersey color.

We cannot make any conclusive judgments about the impact of color on human interaction from the research to date, but common sense tells us that colors in our environment will affect the way we respond: We simply do not know how or how much. What we do know is that research in this area needs to continue, and that its scope must be broadened to new interaction environments. For instance, because many people visit Web sites on a daily basis, researchers should examine how color in those Web sites impacts visitors both within and across various cultures (Cyr, Head, & Larios, 2010).

## **SOUND.**

Types of sounds and their intensity also seem to affect our interpersonal behavior, task performance, and health. We may have very different reactions to the drone of several people's voices, the overpowering sound of a nearby jackhammer, or the soothing or stimulating sounds of music.

Most of us are aware of how music can affect our moods, and our selection of music may be designed to match or even change our moods. Depressing music can add to the intensity of an already gloomy mood; uplifting music can enhance a joyful feeling. Beginning with ideas like this, Honeycutt and Eidenmuller (2001) conducted an exploratory study in which they asked couples to work at resolving a source of conflict in their relationship while background music was playing.

Some couples experienced music rated as more positive and uplifting, and others experienced negative or dreary music. The results of this study suggest not only that the type of music can affect the verbal and nonverbal behavior of interactants (e.g., agitating music was more likely to be linked to arguments), but the intensity of the music can affect the intensity of the interaction. In a related study, uplifting or annoying music was played for users of a university gym. Following their workout, they were asked to sign up for a helping task that did not involve much effort or commitment or one that did. People exposed to both types of music signed up for the easy task, but significantly more people who heard the uplifting music signed up to help with the more difficult task (North, Tarrant, & Hargreaves, 2004).

Music can also affect consumer behavior. At one British restaurant, diners were exposed to classical, pop, or no music for 18 evenings. When dining to the sound of classical music, people spent significantly more money (North, Shilcock, & Hargreaves, 2003). Obviously, different types of music are suitable for different environments, and the music that is most effective for an environment is music that is compatible with perceptions of other environmental features. Scientists at the University of Leicester in England displayed four French and four German wines in a local supermarket. The wines from the two countries were similar in price, sweetness, and dryness. For 2 weeks, a tape deck on a nearby shelf alternated each day with either French accordion music or German beer-hall music. Placement of the wine on the shelves was alternated midway through the experiment.

Researchers found that sales were clearly linked to the type of music being played: When French music was played, French wines outsold German wines, but when German music was played, German wines outsold French wines. Only about 7 percent of those purchasing wines were willing to acknowledge that the music may have influenced their decision (North, Hargreaves, & McKendrick, 1997).

Concern has grown in the general public about the effects of music on young people's behavior. It is important to remember that the most of the young population listen to music (pop, rap, rock and roll, soul, country, etc.) containing lyrics. It is important to distinguish the impact of the music versus the lyrics is thus important. For example, it appears that violent lyrics contribute to aggressive thoughts and behaviors, prosocial lyrics contribute to helping behavior, and romantic lyrics contribute to romance-related behavior (namely, women's initial openness to having phone contact with a male) (Anderson, Carnagey, & Eubanks, 2003; Greitemeyer, 2009; Guéguen, Jacob, & Lamy, 2010; Mast & McAndrew, 2011).

More important, it seems that it is the lyrics and not the music per se that is responsible for the increase in aggressive thoughts and behavior. Here again, we see that co-occurring verbal cues must be taken into consideration when we evaluate the impact of a nonverbal cue, such as music. We also should not ignore individual differences. Huang and Shih (2011), for instance, found that music negatively affected workers' concentration when the music was either strongly liked or disliked by the worker.

Szalma and Hancock's (2011) review revealed that noise negatively impacts performance, including communication that is both oral and written. However, they noted that the extent to which noise hurts performance depends on a variety of factors, including noise intensity, whether the noise is intermittent or continuous, the type of noise, noise duration, and the type of task being done under noisy conditions. As an illustration of some of these factors, Glass and Singer (1973) conducted a series of studies on the impact of noise on performance.

People were asked to perform a variety of tasks varying in complexity while noises were manipulated by the experimenters. Noise levels were varied: Some noise followed a predictable pattern, and some did not. Various noise sources were tested, including typewriters, machinery, and people speaking a foreign language. Although noise alone did not seem to have a substantial effect on performance, deterioration was observed when noise interacted with other factors; for instance, performance decreased when the workload was high and the noise was uncontrollable and unpredictable. Other factors that determine whether noise is a problem or a pleasure include the type of noise-for example, music versus people talking-the volume, the length of time it lasts, and whether the listener is accustomed to it or not.

Obviously, some individuals are more influenced by noise than others. Noisesensitive incoming college students perceived more noise than other students, and these perceptions increased after 7 months into the school year. The noise-sensitive students also received lower grades, felt less secure in their social interactions, and had a greater desire for privacy than did their peers who were less sensitive to noise (Weinstein, 1978).

Noise can also have short- and long-term effects on learning, motivation, behavior, and health. Ryan and Mendel (2010) reported that the noise levels surrounding physical education settings (gymnasium) are too high for Florida school-aged children (elementary, middle, and high school), which could be detrimental to their learning. Jahncke, Hygge, Halin, Green, and Dimberg (2011) noted that participants were less motivated and felt more tired when working in an open-plan office space that had high- versus low-noise conditions.

The distraction caused by noise may be key to understanding the short-term effects of noise on behavior, including increased alcohol consumption (Stafford, Fernandes, & Agobiani, 2012). If negative feelings from hot temperatures can lead to aggression under the right circumstances, then noise, which also can produce negative feelings in people, should lead to aggression at times, too. This is indeed the case (Geen & McCown, 1984).

Lastly, with respect to hearing health, a study in Michigan found that 70 percent of participants were exposed to typical noise levels that exceeded Environmental Protection Agency guidelines; such exposure levels could negatively impact their hearing over the long term (Flamme, 2012).

## **LIGHTING.**

Lighting also helps structure our perceptions of an environment, and these perceptions may influence the type of messages we send. If we enter a dimly lit or candlelit room, we may talk more softly, sit closer together, and presume that more personal communication will take place (Meer, 1985). When dimly lit university counseling rooms were compared with those that had brighter lighting, students reported feeling more relaxed in the dimly lit rooms. The dimly lit counseling rooms also elicited more self-disclosure from the students and higher ratings of the counselors in those rooms (Miwa & Hanyu, 2006).

When a dimly lit environment is suddenly brightened, it tends to invite less intimate interaction. For example, the flashing of bright lights in nightclubs that previously maintained dim lighting is often a signal that closing time is near, and this allows patrons some time to make the transition from one mood to another. Carr and Dabbs (1974) found that the use of intimate questions in dim lighting with nonintimates caused a significant hesitancy in responding, a significant decrease in eye gaze, and a decrease in the average length of gaze. All of these nonverbal behaviors appear to be efforts to create more psychological distance and decrease the perceived inappropriateness of the intimacy created by the lighting and questions.

The absence of light seems to be a central problem for people who suffer from seasonal affective disorder, a form of depression particularly acute in winter months (Rosenthal, 1993). Therapists have successfully treated those who suffer from seasonal affective disorder by exposing them to extremely bright light for several hours each morning.

Artificial lighting that provides a full-range light spectrum, like that of the sun, is most effective in this therapy (Lewy, 1998). In view of this need for sunlight, it has been postulated that cities with the lowest amount of annual sunlight might also have the highest suicide rates, but findings do not provide support for this hypothesis (Lester, 1988).

## **MOVABLE OBJECTS.**

If we know that the arrangement of certain objects in our environment can help structure communication, it is not surprising that we often try to manipulate objects to elicit specific responses. Politicians and government officials do this routinely, when choosing backdrops for their speeches. Manipulating objects in the environment to communicate particular messages also occurs in personal living spaces. In preparation for an intimate evening at home, a person may light candles; play soft, romantic music; fluff the pillows on the couch; and hide the dirty dishes, clothes, and other unpleasant reminders of daily living.

Employees often use objects to personalize their offices. These signs of personal identity make them feel more satisfied with their work life and provide visitors with information to initiate a conversation. Because the company also wants to communicate its identity, the amount and kinds of personal objects employees display must also be consistent with the image the company wants to project. Objects in our work environment can also be arranged to reflect certain role relationships, to demarcate boundaries, or to encourage greater affiliation.

The interior of an executive suite may clearly indicate the perceived status of the inhabitant; for example, expensive paintings, a large desk, plush sofas and chairs, and drapes display success (Monk, 1994). Such an atmosphere may be inappropriate for a personal counseling situation, but it can be rearranged to make it more conducive to such a purpose. Of course, we sometimes are able to communicate well in seemingly inappropriate settings by blocking out the messages being sent by the environment, as when lovers intimately say good-bye in relatively cold and public airport terminals.

Desks seem to be important objects in the conduct of interpersonal communication. An early experiment in this area, set in a doctor's office, suggests that the presence or absence of a desk may significantly alter the patient's "at ease" state (White, 1953). With the desk separating doctor and patient, only 10 percent of the patients were perceived at ease, whereas removal of the desk increased the percentage of at-ease patients to 55 percent.

Student-to-student interaction in classrooms can be constrained by eliminating any possible movement of the student desks or seats. And student-teacher relationships can also be affected by desk placement (Zweigenhaft, 1976). Faculty members were asked to sketch the furniture arrangement of their offices. These sketches were collected and analyzed with other information obtained from the professors, and a schoolwide teacher evaluation was conducted. It was found that 24 of 33 senior faculty members put their desks between themselves and their students, but only 14 of 30 junior faculty members did so.

Furthermore, students rated the "unbarricaded" professors as more willing to "encourage the development of different viewpoints by students," ready to give "individual attention to students who need it," and less likely to show "undue favoritism." Because another study did not find the desk barrier related to undesirable experiences in student-professor interactions, we are reminded that other factors may neutralize or override the potentially troublesome effects of the desk barrier (Campbell & Herren, 1978).

For example, students expect greater formality in student–teacher relationships in some situations, and the basis for an effective working relationship may have been established outside the professor’s office, so the barrier is not perceived as such. The podium separating the president’s press secretary from the press during White House press briefings also has been perceived both as appropriate and as a barrier to effective communication. During the Nixon administration, press briefings were formal, and the press secretary stood behind a podium. Ron Nessen, President Ford’s press secretary, felt that the podium contributed to an unproductive “us and them” feeling, which prompted him to conduct briefings without the obstacle.

The arrangement of other furniture items can facilitate or inhibit communication. The location of the television set in a room will likely affect the placement of chairs and, in turn, the patterns of conversation in that room. Sommer and Ross (1958) found that some residents in a geriatric ward were apathetic and had few friends in spite of a generally cheerful and bright environment. They were able to double the frequency of resident conversations by rearranging the chairs so more of them faced each other. Even when conversational possibilities have been maximized, not everyone will talk to everyone else.

Without considering other factors, such as the relationship of the interactants or their knowledge of the subject, we would predict exchanges marked by the arrows to be most frequent. The four people seated on the couch, as well as the other two, will probably talk to each other less frequently. The four on one end are not likely to communicate very often with the four on the other end.

In some environments, people are not expected to linger, so chairs are deliberately designed without comfort in mind. Hotel owners and airport designers are well aware of the “too comfortable” phenomenon. You may have noticed the slightly uncomfortable nature of the 10 degree forward angle of chairs in some fast-food restaurants.

This feature encourages customers to eat and move along quickly to provide seats for others. The Port Authority Bus Terminal in New York replaced its old wooden seats with folding plastic seats only 8 inches deep that “require so much concentration to balance that sleeping or even sitting for long is impossible.” This was done to keep homeless people from sleeping in the terminal (Rimer, 1989).

## **STRUCTURE AND DESIGN.**

We pass much of our time in buildings. Most of us spend the day in a dwelling supposedly designed for effective performance of our work; in the evening, we enter another structure supposedly designed for the effective conduct of our personal and family life. The architecture of these buildings can go a long way toward determining who meets whom, where, and perhaps for how long.

The life of domestic animals is controlled through, among other things, the erection of fences, flap doors, litter boxes, or the placement of food and water in particular locations. Although verbal and nonverbal actions help control human situations, manipulation of barriers,

openings, and other physical arrangements is also helpful. Meeting places can be appropriately arranged to regulate human traffic and, to a certain extent, the network of communication.

U.S. office buildings often are constructed from a standard plan that reflects a pyramidal organization. A large number of people are under the direction of a few executives at the upper levels. These executives generally have the most space, the most privacy, and the most desirable office locations, usually on the highest floor of the structure. Achieving a height above the masses and occupying a significant amount of space are only two indications of power. Corner offices, large picture windows, and private elevators also are associated with status and power (Monk, 1994). An office next to an important executive may also be a formidable power base.

A similar pattern seems to exist in academic settings as well, with the high ranking professors normally accorded more space, windows, privacy, and choice of office location (Farrenkopf & Roth, 1980). The offices of top-level executives are often hard to reach, the assumption being that the more complicated the path to get to the executive, the more powerful he or she seems. To get to the office, the visitor must be screened by a receptionist and a private secretary and, in either or both places, may be asked to sit and wait.

So, although the status and power of an executive may be related to his or her inaccessibility, secretaries and receptionists may value open views that allow them to act as lookouts and defenders against unwanted intrusions. It is common for people on the lowest rungs of the organizational ladder to find themselves in a large, open "pit." These so-called offices-really only desks, sometimes encompassed by a temporary enclosure-have little or no privacy, and complaints are common. Although privacy is minimal, communication opportunities are plentiful.

Some dormitories are built from floor plans that resemble many office buildings and old hotels. It has been speculated that these corridor-type dorms tend to encourage bureaucratic management, which seems to fit the orderly and uniform structure. Rigid rules are easier to enforce in these structures, and interaction among the residents is discouraged. Compared with suite-type dorms, corridor-type dorms are perceived by residents as more crowded, less private, and more conducive to avoiding others (Baum & Valins, 1979). The sense of community and the resulting responsibility for the living space are difficult to achieve. Lounges are sometimes intended to facilitate such interaction, but their usefulness has been questioned by architects and behavioral scientists. Lounges, like other design features, must be integrated into the entire architectural plan developed from an analysis of human needs-not inserted in places where they fit nicely or look good for parents and visitors.

If you look carefully, you can see many environmental structures that inhibit or prohibit communication. Fences separating yards create obvious barriers, even if they are only waist high; locating laundry rooms in dark, isolated areas of apartment buildings and public housing discourages their use, particularly at night; providing access to patios only through a bedroom probably discourages their use; and so on.

Other environmental situations seem to facilitate interaction. Homes located in the middle of a block seem to draw more interpersonal exchanges than those located in other positions. Houses with adjacent driveways seem to have a built-in structure that draws the neighbors together and invites communication. The likelihood of interaction between strangers at a bar varies directly with the distance between them. As a rule, a span of three bar stools is the maximum distance over which patrons will attempt to initiate an encounter. Most bars are not designed for optimal interaction.

Some recent designs for housing the elderly have taken into consideration the need for social contact. In these apartment dwellings, the doors of the apartments on each floor open onto a common entranceway. This greatly increases the probability of social exchange compared to buildings where apartment doors are staggered on either side of a long hallway with no facing doorways. If you want a structure that encourages social interaction, you must have human paths that cross, but if you want people to interact, there must be something that encourages them to linger. Differences in interaction frequency are often related to the distances people must travel between activities. For example, consider this comparison made between two high schools: One was “centralized” with classrooms in one or two buildings and one was “campus style” with classrooms spread among several buildings.

The campus design prompted 5 to 10 percent more interactions in the halls, stairs, and lobbies but 7 to 10 percent fewer interactions in the classrooms than the centralized design. There also were 20 percent fewer interactions between students and teachers before and after class in the campus-style high school (Myrick & Marx, 1968). It is no secret that the architecture of a school can affect a student’s motivation to learn, a teacher’s motivation to teach, how much students and teachers talk to each other, how long they talk, and, to a certain extent, what they talk about. Older school designs were often based on how to maintain strict discipline, emphasize status differences between students and teachers, and minimize informal talking.

Architects and social scientists have even been experimenting with new prison designs. The older structures, which had linear tiers of steel cages, are being replaced with modular units that have fewer inmates and fewer barriers between them and their guards. These new designs, coupled with new ways of managing prisoners, seem to result in more positive behavior on the part of both guards and prisoners, provide more opportunities for rehabilitation, and reduce costs (Cronin, 1992).

Furthermore, an environment’s design may encourage or discourage certain types of communication; that is, the structure may determine how much interaction takes place and the general content of that interaction. Drew (1971) reports a study of three different designs for nursing stations within a mental hospital. In one, interaction had to take place by opening a door; in another, interaction was conducted through a glass-enclosed counter; and in the third, interaction took place over an open counter. Although substantially more patients entered the nursing station through the door, interactions occurred less frequently there than in the other two stations.

An average of only 1 interaction per each 15-minute observation period occurred with the door, 5.3 interactions occurred in the glass-enclosed counter, and 8.7 occurred with the open counter. Although interaction was higher for the open counter, the author noted a

preponderance of social conversation here; the door design seemed to encourage more item requests and permission interactions. In short, the more inaccessible setting decreased interaction frequency and increased task-oriented messages; the more accessible setting increased interaction frequency and increased the amount of small talk.

A more complete analysis of physical proximity and spatial distance appears in Chapter 5, but it is clearly relevant to this discussion on environments as well. Over 60 years ago, Stouffer (1940) made this observation, which holds true today:

«Whether one is seeking to explain why persons go to a particular place to get jobs, why they go to trade at a particular store, why they go to a particular neighborhood to commit a crime, or why they marry a particular spouse they choose, the factor of spatial distance is of obvious significance. »

Many studies have confirmed Stouffer's remark. Students tend to develop stronger friendships with students who share their classes, dormitories, and apartment buildings, or who sit near them than with others who are geographically distant. Workers tend to develop closer friendships with those who work near them. The effect of proximity seems to be stronger for employees with less status in the organization; managers, however, are more likely to choose their friends at the office according to their status rather than their proximity (Schutte & Light, 1978).

Some believe that increased proximity of ethnic groups will assist in reducing prejudice. Although close proximity may bring about positive attitude changes between different ethnic groups, we must exercise caution in generalizing. If the two groups are extremely polarized, or if they perceive no mutual problems or projects requiring cooperation, proximity may have little effect or may even magnify hostilities.

Several studies show an inverse relationship between the distance separating potential marriage partners and the number of marriages. Proximity allows us to obtain more information about the other person. Obviously, obtaining more information about someone may mean we soon learn that we are not attracted to the person, but more often than not, proximity breeds attraction and, in turn, attraction leads to a desire to be in close proximity.

A number of studies have shown how proximity influences friendships. In one study conducted in a townhouse development, most friendships occurred between people who lived within 100 feet of each other. Next-door neighbors became close friends 46 percent of the time; neighbors who lived two or three doors away became close friends 24 percent of the time; and people who lived three or four doors away became friends 13 percent of the time (Athanasίου & Yoshioka, 1973). Historically, the most famous study of proximity, friendship choice, and interpersonal contact was conducted by Festinger, Schachter, and Back (1950) in a housing development for married students.

Concern for what the authors called functional distance led to data clearly demonstrating that architects can have a tremendous influence on the social life of residents in these housing projects. Functional distance is determined by the number of contacts that position and design encourage; for example, factors such as which way apartments face, where exits and

entranceways are located, and location of stairways, mailboxes, and the like all have an impact.

The researchers asked the residents of 17 buildings which people they saw most often socially and what friendship choices they made. Among the findings from this study, the following are noteworthy:

- (1) There seemed to be a greater number of friendship choices for those physically close to one another, such as on the same floor or in the same building. It was rare to find a friendship between people separated by more than four or five houses.
- (2) People living in apartments 1 and 5 gave and received from the upper-floor residents more friendship choices than the people living in any other apartments on the lower floor.
- (3) Apartments 1 and 6 exchanged more friendship choices than apartments 2 and 7. Similarly, apartments 5 and 10 exchanged more friendship choices than apartments 4 and 9. Although this represented the same physical distance, functional distance differed.
- (4) Because of the mailboxes, apartment 5 chose more upper-level friends, more of those choices being apartments 9 and 10.

Making friends takes many forms these days. In the physical world, functional distance seems to be highly influential, and it is sometimes the result of architectural design. However, the importance of such factors may be diminishing in the age of the Internet. People start relationships with others through online services, such as Match.com and eHarmony. The number of people who get married to someone they met through online dating services is growing.

Because of physical distance or lack of opportunity to cross paths with each other, these couples might never have met in the pre-Internet days. Moreover, people can start and maintain friendships with others via their Facebook accounts. In modern classrooms, for example, college students can stay in touch with someone from their hometown while ignoring someone who is sitting nearby. By logging in to a Facebook account, the current design and structure of the setting the student is in, whether it is the dorm, classroom, or student lounge area, may not matter-he or she is in cyberspace.

## **REGULATING ENVIRONMENTS AND COMMUNICATION.**

It should be clear by now that our communication is often affected by the social and physical environment. And we have some control over structuring these environments; we can paint our walls a different color, substitute candles for electric lights, and so on. But our communication environments are influenced by others, too. Earlier in this chapter, we noted how architects and furniture designers affect our social interaction, but laws and government regulations also play an important role in creating the environments that affect our communicative behavior. It is important to conclude the chapter with this reminder because gaining control over the environment that affects our communication may mean becoming a community activist or leader.

Zoning laws, for example, determine whether a part of our environment will be used for industrial, commercial, or residential activity. Zoning laws also determine the population

density of an area by defining how many housing units per acre are allowed. Laws prohibiting adult bookstores from operating too close to churches are essentially saying the two environments generate quite different forms of communication and are not likely to happily share the same territory. When business hours of operation are regulated, it affects when streets are empty, when they are crowded, and what segment of the population occupies the street. Some communities have specific laws governing signs and billboards, where they can be placed, their size, materials, and colors that can be used, and so on. Obviously these and similar regulations governing parking areas, parks, display windows, and vending machines impact our social lives.

In addition, there are penal codes that punish loitering, smoking, drinking alcoholic beverages, and other behaviors. Smoking regulations have changed things such as where smokers are allowed to congregate. As a consequence, smokers today may have a greater feeling of us (namely, the in-group of smokers) versus them (namely, the out-group of nonsmokers) than did smokers of the past. Moreover, in places that prohibit smoking, including college campuses, smokers may be viewed as, and feel deviant for, the practice of lighting up. Thus, in an effort to safeguard the well-being of those who occupy it, an environment may be restructured both in a physical way (designated smoking areas) and in a psychological way (regulations that recast the behavior of smoking).

The environment in which people communicate frequently contributes to the overall outcome of their encounters. We have seen that both the frequency and the content of our messages are influenced by various aspects of the setting in which we communicate. We have seen how the environment influences our behavior, but we also know that we can alter environments to elicit certain types of responses. As our knowledge of environments increases, we may deliberately use them to help us obtain desired responses. In many respects, we are products of our environment, and if we want to change behavior, we need to learn to control the environment in which we interact.

We referred to a number of different types of environments: classrooms, dormitories, offices, prisons, fast-food restaurants, homes, and bars. We suggested several different ways of looking at environments. Mehrabian (1976), following research in other areas of human perception, commented that all environments could profitably be examined by looking at emotional reactions to them. These emotions or feelings, says Mehrabian, can be plotted on three dimensions: arousing–nonarousing, pleasant–unpleasant, and dominant–submissive. We suggested six perceptual bases for examining environments: formal–informal, warm–cold, private–public, familiar–unfamiliar, constraining–free, and distant–close. We also pointed out that people perceive temporal aspects of their environments: when things happen, how long they last, how much time exists between events, and the pattern or rhythm of events.

Each environment seems to have three major characteristics:

- (1) the natural environment,
- (2) the presence or absence of other people and
- (3) the architectural design and movable objects,

including lighting, sound, color, and general visual-aesthetic appeal. The quality and quantity of the research in each of these areas vary considerably, but it is clear that any analysis of human behavior must account for the influence of environmental features.

### **CODE.**

A code is a system of meaning shared by members of a culture or subculture. It consists of both signs (such as physical signals that 'stand' in place other than itself) and rules or conventions that determine how and in what context these signs are used and how they can be combined to form better messages. complex. How the culture codes from which they come are related and how they develop within is complex.

The simplest relationship is between code and channel. Certainly, the nature of the codes that the channel can transmit is determined by its characteristics. The phone is limited to verbal language and paralinguistic (codes of intonation, stress, volume, etc.). We have developed a number of secondary codes simply to make a particular already coded message transmittable through a particular channel. A message coded according to the primary code of verbal language can be recoded into a variety of secondary codes – Morse, semaphore, sign language for the deaf and dumb, handwriting, Braille, print.

All these secondary codes are determined by the physical properties of the channels or mechanical means of communication.

The relationship between media and code is not so easy to define. Television is a means of communication that uses sound and image channels. *Buscombe* (1975) notes that a program such as '*Match of the Day*' practices both channel and media specific codes. The channel specific codes are:

- (1) Visual channel – live action, studio shots and graphics;
- (2) Auditory channel – recorded noises, speech and music.

He then analyzes the codes specific to the means of communication of the video channel. These are the codes for lighting, color, speed, definition, framing, camera movements, camera placement, and editing. *Buscombe* demonstrates that, while the technical constraints of the media define the range of possible open code uses, their actual use is determined by the culture of which television producers are a part.

But if we take other means of communication (such as clothing), it will not be difficult to distinguish the code and the means of communication. Is it useful to talk about different dress codes or simply different messages sent through the same spoken code? The formal, agreed-upon meaning of a button or piece of material on a military uniform may differ in intensity, but not in terms of type of meaning; it differs in meaning only when compared with the formally disagreed meaning of a pair of jeans.

The means of communication and the code have the same limit, but the code is something that needs to be studied, and how it is meaningfully associated with the respective means of communication. All cultures and societies share the means of communication of clothing

(including nudists, who are defined by cultural absence): communication occurs through codes that are transmitted by the means of communication.

Clothing also has a non-communicative function – that of protecting the body. Most cultural artifacts have this dual function—one physical or technological and one communicative. Houses, automobiles, furniture are defined first by their technological function and only then, by design, by their communicative function. The constraints of the means of communication are technological: codes operate within them.

Codes therefore represent systems in which signs are organized. Semiotics is the science that studies signs, but its object of study is both signs themselves, as well as codes (systems of signs) and cultures (within which codes and signs operate). Within the codes we can discuss two systems of organization: a paradigmatic one, assuming the sets of signs used within the codes, and a syntagmatic one, assuming the rules/conventions for combining the paradigmatic units. Both paradigmatic units and syntagmatic rules are agreed upon by the members of a linguistic community.

Depending on the possibility of unequivocally distinguishing between the component units of the sign: the actual physical existence and the mental concept, the codes can be digital or analog. In the case of digital codes, there is a clear distinction between the components of the sign, between which an assignment relationship is established. These are easier to understand, due to the possibility to discriminate between paradigmatic units. Analog codes are arbitrary, their signs being harder to distinguish from each other. For example, verbal language is predominantly digital, while non-verbal language, especially the unintentional one, in accordance with the Paloaltist perspective, is predominantly analogical:

"So what is analog communication? The answer is relatively simple: it basically consists of all non-verbal communication. The term is misleading, however, as he often applied it only to bodily movements, hence kinesthetic behavior. In our opinion, the term analogical communication must cover posture, gesticulation, facial expression, vocal inflection, phrasing, rhythm and cadence of the words themselves, as well as any other non-verbal manifestation of which the body is capable, as well as communication cues constantly present in the context in which the interaction occurs» (Watzlawick et).

Starting from a distinction made within the comparative analysis of digital codes/analog codes, the one regarding the convention on the designation of meaning, we can discuss another taxonomy: logical codes/aesthetic codes. Logical codes assume a high degree of arbitrariness of the sign, the establishment of an explicit and clearly defined convention regarding the meaning

the sign, and the relationship between the physical sign and the mental concept is fixed and shared regardless of cultural affiliation. These codes operate with impersonal, static, strictly denotative paradigmatic elements.

An example of logical (or arbitrary) code is mathematical code. In contrast to these, aesthetic codes assume a vague definition and allow a negotiation of meaning in the relationship between the users of the sign and the sign. Aesthetic codes are expressive and are obtained as a result of an agreement on the part of the users regarding the shared cultural experience.

Depending on the belonging to a certain social class and the degree of training of those who use the codes, a distinction can be made between the restricted code and the developed code (Bernstein).

*The restricted code*, specific to members of restricted, traditional communities, is characterized by the fact that it requires a smaller vocabulary and a simpler syntax. The restricted code is also characterized by orality and a high degree of redundancy. It is used both to transmit information and to keep communication channels open. The restricted code is oriented towards social relations and facilitates the expression of group membership and cultural experience. Non-verbal language has a high weight within the expression through this code. The facts and objects that are referred to with the help of the restricted code are mostly from the field of the concrete.

*The developed code*, characteristic of educated people, assumes a high degree of complexity. The orality of the restricted code is replaced by the written/spoken ambivalence of the elaborated code. Through it, information with a high degree of abstraction and generalization is transmitted. The meanings expressed through the developed code are precise, and the call to non-verbal language is reduced precisely to maintain the high level of complexity and rigor in the explanation. Unlike narrow codes that depend on cultural experience, elaborate ones are acquired through learning.

The narrow code/elaborated code distinction, extended to mass communication, leads to a new typology: broadcast code/narrowcast code (Fiske).

*The broadcast code* is shared by members of the mass audience, regardless of social class or educational level. It is similar to the restricted code and has, in general, the same characteristics. Communication in broadcast code implies the approach of general problems in an easy form, adapted to the space and cultural experience in question.

*Narrowcast code* is intended for a clearly defined target audience and is similar to elaborated code. The narrowcast code involves informing and enriching knowledge, not just reconfirming membership in a social group or a cultural setting. By means of it, the differentiation is made not only by the nature of the training level, but also by the nature of the specialization. Delimiting the target audience can also be done according to passions and preferences, or belonging to a certain group.

## **LANGUAGE.**

If a British person has a chinwag (chat) with a person from the United States or Canada, he or she might feel knackered (exhausted) by how hard it is to share meaning, even within the same language. Sometimes you probably feel the same way when you're speaking with people much closer to home.

To begin understanding what's going on, let's first define some basic terms. A language is a collection of symbols governed by rules and used to convey messages between individuals. A dialect is a version of the same language that includes substantially different words and meanings. English includes dozens of dialects, as do the other 7,000 or so other languages of

the world. A closer look at the nature of language reveals why people often hear something different from what the speaker meant to say. In the end, language is powerful and indispensable, but it is also imprecise and constantly evolving.

Language is symbolic. There's nothing natural about calling your loyal, four-footed companion a dog or the object you're reading right now a book. These words, like virtually all language, are symbols-arbitrary constructions that represent a communicator's thoughts.

Not all linguistic symbols are spoken or written words. Sign language, as "spoken" by most Deaf people, is symbolic in nature and not the pantomime it might seem to nonsigners. There are hundreds of different sign languages spoken around the world. These distinct languages include American Sign Language, British Sign Language, French Sign Language, Danish Sign Language, Chinese Sign Language-even Australian Aboriginal and Mayan sign languages. Each has its own way of Can you name some rules that govern speech in your native representing ideas.

Symbols are more than just labels: They are the way we like to violate some of those rules? experience the world. You can prove this by trying a simple experiment. Work up some saliva in your mouth, and then spit it into a glass. Take a good look, and then drink it up. Most people find this process mildly disgusting. But ask yourself why this is so. After all, we swallow our own saliva all the time. The answer arises out of the symbolic labels we use. After the saliva is in the glass, we call it spit and think of it in a different way. In other words, our reaction is to the name, not the thing.

The naming process operates in virtually every situation. How you react to a stranger will depend on the symbols you use to categorize him or her: gay (or straight), religious (or not), attractive (or unattractive), and so on.

**Language:** a collection of symbols, governed by rules and used to convey messages between individuals.

**Dialect:** a version of the same language that includes substantially different words and meanings.

**Denotative meanings:** formally recognized definitions for words, as in those found in a dictionary.

**Connotative meanings:** informal, implied interpretations for words and phrases that reflect the people, culture, emotions, and situations involved.

Meanings are in people, not words. Ask a dozen people what the same symbol means, and you are likely to get 12 different answers. Does an American flag bring up associations of patriots giving their lives for their country? Fourth of July parades? Cultural imperialism? How about a cross: What does it represent? The message of Jesus Christ? Your childhood Sunday school? The necklace your sister always wears?

As with physical symbols, the place to look for meaning in language isn't in the words themselves but rather in the way people make sense of them. Linguistic theorists *C.K. Ogden* and *I.A. Richards* illustrated that meanings are social constructions in their well-known "*triangle of meaning*". This model shows that there's only an indirect relationship—indicated by a broken line—between a word and what it claims to represent. Some references are fairly clear, at least to members of the same speech community. In other cases, though, interpretations can be quite different. Consider abstract concepts such as feminism, environmentalism, and conservatism.

Part of the person-centered nature of language involves the difference between denotative and connotative meanings. Denotative meanings are formally recognized definitions of a term. Most of the time there's little confusion about the denotative meaning of a word, such as chair. But consider terms such as survivor and victim. In reference to violent assaults, these terms are synonymous—they have the same denotative meaning—but each has different connotations. Unlike denotation, the connotative meaning involves the associations, thoughts, and feelings that a statement generates. Ultimately, the meanings people associate with words have far more significance than do their dictionary definitions.

Matters can get even more confusing when you're not fluent in a language. During their Year Without English, *Scott Young* and *Vat Jaiswal* learned that calling someone a dog or a "son of a dog" in South Korea is a profane insult. Back home in North America, of course, close friends might call each other dog or dawg. All in all, understanding how language is used involves much more than vocabulary and grammar. Meaning isn't in words, it's in people and it can vary substantially depending on the people and situations involved.

Despite the potential for linguistic problems, the situation isn't hopeless. We do, after all, communicate with one another reasonably well most of the time. And with enough effort, we can clear up most of the misunderstandings that occur. The key to more accurate use of language is to avoid assuming that others interpret words the same way we do. In truth, successful communication occurs when we negotiate the meaning of a statement. As one French proverb puts it: *The spoken word belongs half to the one who speaks it and half to the one who hears.*

Languages contain several types of rules:

*Phonological rules* govern how words sound when pronounced. For instance, the words champagne, double, and occasion are spelled identically in French and English, but all are pronounced differently.

*Syntactic rules* govern the structure of language—the way symbols can be arranged. For example, correct English syntax requires that every word contain at least one vowel and prohibits sentences such as "Have you the cookies brought?," which is a perfectly acceptable word order in German. Although most of us aren't able to describe the syntactic rules that govern our language, it's easy to recognize their existence by noting how odd a statement that violates them appears.

Technology has spawned versions of English with their own syntactic rules. For example, people have devised a streamlined version of English for instant messages, texts, and tweets that speeds up typing in real-time communication (although it probably makes teachers of composition grind their teeth in anguish).

*Semantic rules* deal with the meaning of specific words. They make it possible for us to agree that bikes are for riding and books are for reading. Without semantic rules, communication would be impossible, because each of us would use symbols in unique ways, unintelligible to one another. Semantic misunderstandings occur when words can be interpreted in more than one way.

*Pragmatic rules* govern how people use language in everyday interactions, which communication theorists have characterized as a series of speech acts. You won't typically find these rules written down, but people familiar with the language and culture rely on them to make sense of what is going on. For example: Are two people kidding around or being serious? Are they complimenting each other or trading insults? The challenge is that even the people involved may not answer these questions the same way. Consider the example of a male boss saying, "You look very pretty today" to a female employee. He may interpret the statement very differently than she does based on a number of factors.

**Phonological rules:** linguistic rules governing how sounds are combined to form words.

**Syntactic rules:** rules that govern the ways in which symbols can be arranged as opposed to the meanings of those symbols.

**Semantic rules:** rules that govern the meaning of language as opposed to its structure.

**Pragmatic rules:** rules that govern how people use language in everyday interaction.

**Reappropriation:** the process by which members of a marginalized group reframe the meaning of a term that has historically been used in a derogatory way.

Pragmatic rules don't involve semantic issues, because the words themselves are clear. For example, it's common for Americans to ask new acquaintances, "What do you do for a living?" That question might cause offense in France, however, where it may be considered an indirect way of asking, "How much money do you make?" Conversely, Americans typically consider it rude to ask an older person his or her age, but it's more socially acceptable in Japan, where the oldest person in a conversation is typically given the most respect.

Pragmatic rules also govern language that some people find offensive but that others regard positively. For example, consider the word "queer." In earlier generations, this term was a slur directed against homosexual men. More recently, however, some gay people have adopted it as a proud expression of their sexual orientation. This is an example of reappropriation; a term researchers use to describe how members of marginalized groups sometimes reframe the meaning of a term that has historically been used in a derogatory way. As the photo on the previous page illustrates, the "n-word" is another example of a term that has been reappropriated by some-though by no means all-black people.

The use of profanity is another example of how pragmatic rules govern communication. How do you react when someone unexpectedly swears during normal conversation? Are you offended? Surprised? Intrigued? Like all verbal messages, swear words speak volumes beyond their literal meaning.

A semantic analysis doesn't reveal much about the meaning of most swear words. A closer look at when and how people use them reveals that pragmatic rules govern the use and interpretation of profanity. People who swear are more likely to do so in the company of those they know and trust, because doing so often indicates a level of comfort and acceptance. Swearing can also be a way to enhance solidarity between people. For example, research suggests that in some cases the swearing patterns of bosses and coworkers can help people feel connected on the job.

Of course, swear words may be bad form no matter where they are spoken, and no one appreciates profanity when children can hear it. But looking at the pragmatic rules governing profanity helps explain why some people are offended by language that others consider benign.

## **THE POWER OF LANGUAGE.**

On the most obvious level, language allows us to satisfy basic functions such as describing ideas, making requests, and solving problems. But beyond these functions, the way we use language also influences others and reflects our views in subtle ways, which we will examine now.

*Language Shapes Values, Attitudes, and Beliefs.* The power of language to shape ideas has been recognized throughout history. In the Bible, for example, Adam demonstrates his dominion over animals by naming them. As we will now see, our speech-sometimes consciously and sometimes not-shapes others' values, attitudes, and beliefs in a variety of ways.

*Naming.* "What's in a name?" Juliet asked rhetorically. A lot, it turns out. Research has demonstrated that names are more than just a simple means of identification: They shape the way others think of us, the way we view ourselves, and the way we act.

At the most fundamental level, some research suggests that even the phonetic sound of a person's name affects the way we regard him or her, at least when we don't have other information available. One study revealed that it's often possible to predict who will win an election based on the candidates' surnames. Voters tend to favor names that are simple, familiar, and easily pronounced. For example, in one series of local elections, candidates Sanders, Reilly, Grady, and Combs attracted more votes than Pekelis, Dellwo, Schumacher, and Bernsdorf. Names don't guarantee victory, but in 78 elections, 48 outcomes supported the value of having a more common name.

Names also play a role in shaping and reinforcing identity. They can create connections across generations, and they can make a statement about cultural identity. Some names may suggest

a "black" identity, whereas others sound more "white." The same could be said for Latino, feminine/masculine, Jewish, and other names.

Although names associated with particular groups may support a sense of shared identity, they are sometimes the basis for discrimination. In the United States, job applicants with names such as Mohammed and Lakisha typically receive fewer callbacks from employers than equally qualified candidates whose names sound more European. Because of this potential for discrimination, some people advocate for name-blind job applications.

*Credibility.* Speech style-and the credibility associated with it-also influences perception. Scholarly speaking is a good example: Even an impostor who sounds smart and speaks well may impress an audience.

Consider the case of *Myron L. Fox*, who delivered a talk on "*Mathematical Game Theory as Applied to Physical Education*." Questionnaires collected after the session indicated that the highly educated audience found the lecture clear and stimulating. Yet Fox was a complete fraud. He was a professional actor whom researchers had coached to deliver a bogus lecture-a patchwork of information from a *Scientific American* article mixed with jokes, illogical conclusions, contradictory statements, and meaningless references to unrelated topics. When wrapped in a linguistic package of high-level professional jargon, however, the presentation succeeded. In other words, the audience's reaction was based more on the credibility that arose from his use of impressive-sounding language than on the ideas he expressed.

*Status.* In the classic musical *My Fair Lady*, Professor Henry Higgins transforms Eliza Doolittle from a lowly flower girl into a high-society woman by helping her replace her cockney accent with an upper-crust speaking style. Decades of research have demonstrated the power of speech to influence status. Several factors combine to create positive or negative impressions: accent, choice of words, speech rate, and even the apparent age of a speaker. In most cases, speakers of standard dialect are rated higher than nonstandard speakers in a variety of ways: They are viewed as more competent and more self-confident, and the content of their messages is rated more favorably.

By contrast, the unwillingness or inability of a communicator to use the standard dialect fluently can have serious consequences. For instance, African American vernacular English is a distinctive dialect with its own accent, grammar, syntax, and semantic rules. Unfortunately, people sometimes assume that people who speak this vernacular are less intelligent, less professional, less capable, less socially acceptable, and less employable than people who speak what scholars call "standard English." Speakers with other nonstandard accents also can be stigmatized.

*Worldview.* Some scholars and travelers have observed a phenomenon known as linguistic relativism, which proposes that the language we speak shapes the way we view the world.

*Sexism and Racism.* By now it should be clear that the power of language to shape attitudes goes beyond individual cases and influences how we perceive entire groups of people. Children exposed to words such as *fireman* and *businessman* are typically less likely than

other children to think that women can pursue those occupations. This assumption is far less prevalent among children exposed to gender-neutral terms such as *firefighter* and business person. Based on evidence such as this, many people argue that gender-neutral language is not merely "politically correct," but is a powerful force in shaping opportunities and identities.

Some languages emphasize gender less than others. In Finnish, for example, the same pronoun *hiin* refers to both males and females. Finnish speakers sometimes puzzle over whether to call individuals *he* or *she* in English because they aren't accustomed to categorizing people that way.

The implications of such language differences are notable. Gender equality is greater in countries such as Finland, where language is nongendered, than in regions where the predominant language (such as Spanish, German, or Russian) attributes a gender to nearly every noun. In Spanish, a spoon (*la cuchara*) is feminine, a fork (*el tenedor*) is masculine, a napkin (*la servilleta*) is feminine, and so on. First names in those languages also tend to be distinctly masculine or feminine. English falls somewhere in the middle, in that people and animals are referred to as he and she, but groups of people and objects are described in gender-neutral terms such as they or it.

Although English is not entirely gender neutral, it's fairly easy to use nonsexist language. For example, the term mankind may be replaced by *humanity*, *human*, *beings*, *human race*, or *people*; *manmade* may be replaced by *artificial*, *manufactured*, and *synthetic*; *manpower* may be replaced by *human power*, *workers*, and *workforce*; and *manhood* may be replaced by *adulthood*.

The use of labels for racist purposes has a long and ugly past. Names have been used throughout history to stigmatize groups that other groups have disapproved of. By using derogatory terms to label some people, the out-group is set apart and pictured in an unfavorable light.

The power of racist language to shape attitudes is difficult to avoid, even when it's obviously offensive. In a classic study, even people who disapproved of a derogatory label used against a member of a minority group tended to think less of the group members after encountering the term. Not only did they rate the minority individual's competence lower when that person performed poorly, but they also found fault with others who associated socially with the minority person—even members of the participant's own ethnic group.

Research suggests that many people pass judgment on prospective workers simply on the basis of their first names. In one study, prospective employers rated applicants with common first names more highly than those with unique or unusual ones. This bias presents challenges for people with unique names and for those from cultures with different naming practices.

Sometimes naming biases reflect stereotypes about gender. People predict career success based on how closely a person's name matches the gender associated with his or her job. When college students were asked how people with various names were likely to do in their careers, they predicted that women with feminine names like Emma or Marta were more likely to be successful in traditionally female occupations such as nursing. By contrast, they

estimated that men with masculine names like Hank or Bruno would do better in traditionally male jobs such as plumbing.

Findings like this are worth noting if you hope to succeed in a field in which your identity doesn't match traditional expectations. For example, in the field of law, research suggests that your chances of success are greatest if you have a gender-neutral or traditionally male name. Researchers examined the relationship between the perceived masculinity of a person's name and his or her success in this field. They found that a woman named "Cameron" is roughly three times more likely to become a judge than one named "Sue." A female "Bruce" is five times more likely.

Most people aren't willing to change their name to further career goals. But it's possible to choose variants of a name that have a professional advantage. For example, Christina Jones might use her nickname, Chris, for gender neutrality on job applications. Someone with a hard-to-pronounce name might choose a nickname for work purposes. For example, it's customary in China for businesspeople and students of English to choose a Western name that is similar to theirs: Guanghai may go by Arthur and Junyuan by Joanna. In a competitive job market, little differences can mean a great deal.

If you feel that life would be a little bit different if you had these phrases in your vocabulary, score one for linguistic relativism, the notion that words influence the way we experience the world.

In one experiment, researchers asked English speakers and Himba speakers (from a region of southeast Africa) to distinguish between colors. The Himba speakers, whose language includes words for many shades of green, were able to distinguish between green hues that English speakers perceived as being all one color. Conversely, English speakers were able to distinguish between blue and green, whereas Himba speakers, who use the same word for both, often didn't see a difference.

People who doubt linguistic relativity argue that, when we don't have a specific word for something, we use others in its place. They also point out that perception is not strictly in vocabulary's cage. That is, people often invent things for which they previously had no words. Think Internet, microwave oven, and telephone.

Although the debate about language relativity isn't likely to be resolved any time soon, it reveals a great deal about the power and limitations of words. Keep this in mind the next time words fail you and you think of a witty comeback only after the moment has passed. The Germans have a word for that: *treppenwitz*.

**Linguistic relativism:** the notion that language influences the way we experience the world.

### **Language Reflects Values. Attitudes. Beliefs.**

Besides shaping the way we view ourselves and others, language reflects our values, attitudes, and beliefs. Feelings of control, attraction, commitment, responsibility—all these and more are reflected in the way we use language.

*Power.* Americans typically consider language powerful when it is clear, assertive, and direct. By contrast, language is often labeled powerless when it suggests that a speaker is uncertain, hesitant, intensely emotional, deferential, or nonassertive.

"Powerful" speech can be an important tool. In employment interviews, for example, people who seem confident and assertive usually fare better than those who stammer and seem unsure of themselves.

If you were the professor in this situation, which approach would you prefer? The first sounds tentative and not as fluent, which, on the face of it, seems powerless. In some situations, however, less assertive speakers seem friendlier, more sincere, and less coercive than more assertive ones. You might appreciate the second approach, which is more direct and "powerful," or you may find it presumptuous and disrespectful.

Your reaction to each approach is likely to reflect a number of factors: Do you know the student well? Is it typical for him or her to miss deadlines? Do you share the same cultural expectations? People in some cultures admire self-confidence and direct speech. However, in many cultures, helping others save face is a higher priority, so communicators tend to speak in ambiguous terms and use hedge words (e.g., maybe) and disclaimers. This is true in many Japanese and Korean cultures. Similarly, in traditional Mexican culture, it's considered polite, rather than powerless, to add "por favor?" ("if you please?") to the end of requests, such as when ordering food in a restaurant. By contrast, "powerful" declarative statements, such as "I'll have the fish," are likely to seem bossy, rude, and disrespectful.

As you have probably gathered, the terms powerful and powerless can be misnomers. In the United States, women's traditional speech patterns have often been described as less powerful than men's. However, there is considerable diversity among men and women. In addition, people who do not seem powerful in traditional or obvious ways may have a great deal of influence, such as through their relationships with others. Since we tend to trust and cooperate most with people who build supportive, friendly relationships with us, sharing power with others can be more effective than exercising power over them. The best communicators, both male and female, read situations well and combine elements of both "powerful" and "powerless" speech.

*Affiliation.* Power isn't the only way language reflects the status of relationships. Language can also be a way of building and demonstrating solidarity with others. During their Year Without English, Scott Young and Vat Jaiswal found that shared language was key to establishing relationships. Young reflects on conversations and relationships he would not have had otherwise: "Discussing mandatory military service over soju and salted fish. Sharing tea and talking politics with a tattooed Buddhist from Tibet."

An impressive body of research has demonstrated that communicators who want to show affiliation with one another adapt their speech in a variety of ways, including their choice of vocabulary, rate of talking, number and placement of pauses, and level of politeness. On an individual level, close friends and romantic partners often develop special terms that serve as a way of signifying their relationship. Using the same vocabulary sets these people apart from

others, reminding themselves and the rest of the world of their relationship. The same process works among members of larger groups, ranging from street gangs to military personnel. Communication researchers call this linguistic accommodation convergence.

Communicators can experience convergence online as well as in face-to-face interactions. Members of online communities often develop a shared language and conversational style, and their affiliation with one another can be seen in increased uses of the pronoun we. On a larger scale, instant message and email users create and use shortcuts that mark them as Internet-savvy. If you know what ILYSM, OOMF, and HMU mean, you're probably part of that group. (For the uninitiated, those acronyms mean "I like [or love] you so much," "one of my followers," and "hit me up" with a picture or message.)

When two or more people feel equally positive about one another, their linguistic convergence is likely to be mutual. But when communicators want or need the approval of others, they often adapt their speech to suit the others' style, trying to say the "right thing" or speak in a way that will help them fit in. For example, employees who seek advancement tend to speak more like their supervisors. In turn, supervisors tend to adopt the speech style of their bosses.

The principle of speech accommodation works in reverse, too. Communicators who want to set themselves apart from others adopt the strategy of divergence, speaking in a way that emphasizes their difference from others. For example, members of an ethnic group, even though fluent in the dominant language, might use their own dialect as a way of showing solidarity with one another—a sort of "us against them" strategy. Divergence also operates in other settings. A physician or attorney, for example, who wants to establish credibility with his or her client might speak formally and use professional jargon to create a sense of distance. The implicit message here is "I'm different from (and more knowledgeable than) you."

Convergence and divergence aren't the only ways to express affiliation. Linguistic intergroup bias reflects whether we regard others as part of our in-group. A positive bias leads us to describe the personality traits of in-group members in favorable terms and those of out-group members negatively.

For example, if an in-group member gives money to someone in need, we are likely to describe her as a generous person. If an out-group member (someone with whom we don't identify) gives to the same person in need, we are likely to describe the behavior as a one-time act of giving away money. The same in-group preferences are revealed when we describe undesirable behaviors. If an in-group member behaves poorly, we are likely to describe the behavior using a concrete action verb, such as "John cheated in the game." In contrast, if the person we are describing is an out-group member, we are more likely to use general disposition adjectives such as "John is a cheater." These selective language choices are so subtle and subconscious that when asked, people being studied reported that there were no differences in their descriptions. We tend to believe we are less biased than we are, but our language reveals the truth about our preferences.

*Attraction and Interest.* Social customs discourage us from expressing like or dislike in many situations. Only a careless person would respond to the question, "What do you think of the cake I baked for you?" by saying, "It's terrible." Bashful or cautious suitors might not admit their attraction to a potential partner. Even when people are reluctant to speak candidly, the language they use can suggest their degree of interest and attraction toward a person, object, or idea. Morton Weiner and Albert Mehrabian outline a number of linguistic clues that reveal these attitudes.

(1) Demonstrative pronoun choice. "These people want our help" (positive) versus "Those people want our help" (less positive).

(2) Negation. "It's good" (positive) versus "It's not bad" (less positive).

(3) Sequential placement. "Dick and Jane" (Dick is more important) versus "Jane and Dick" (Jane is more important). However, sequential placement isn't always significant. You may put "toilet bowl cleaner" at the top of your shopping list simply because of its location in the store.

*Responsibility.* In addition to suggesting liking and importance, language can reveal the speaker's willingness to accept responsibility for a message.

(1) "It" versus "I" statements. "It's not finished" (less responsible) versus "I didn't finish it" (more responsible).

(2) "You" versus "I" statements. "Sometimes you make me angry" (less responsible) versus "Sometimes I get angry when you do that" (more responsible). "I" statements are more likely to generate positive reactions from others as compared to accusatory ones.

(3) "But" statements. "It's a good idea, but it won't work." "You're really terrific, but I think we ought to spend less time together." (But cancels everything before it.)

(4) Questions versus statements. "Do you think we ought to do that?" (less responsible) versus "I don't think we ought to do that" (more responsible).

**Convergence:** accommodating one's speaking style to another person, usually a person who is desirable or has higher status.

**Divergence:** a linguistic strategy in which speakers emphasize differences between their communicative style and that of others to create distance.

**Linguistic intergroup bias:** the tendency to label people and behaviors in terms that reflect their in-group or outgroup status.

## **TROUBLESOME LANGUAGE.**

Besides being a blessing that enables us to live together, language can be something of a curse. We all have known the frustration of being misunderstood, and most of us have been baffled by another person's overreaction to an innocent comment. In the following pages we will look at several kinds of troublesome language, with the goal of helping you communicate in a way that makes matters better instead of worse.

*The Language of Misunderstandings.* The most obvious kind of language problems are semantic: We simply don't understand others completely or accurately. Most misunderstandings arise from some common problems that are easily remedied-after you recognize them.

*Equivocal Language.* Misunderstandings can occur when words are equivocal, meaning that they are open to more than one interpretation. For example, a nurse once told a patient that he "wouldn't be needing" the materials he requested from home. He interpreted the statement to mean he was near death, when the nurse meant he would be going home soon. Some equivocal misunderstandings can be embarrassing.

Some words are equivocal as a result of cultural or cocultural differences in language usage. While teaching in Ireland, an American friend of ours asked a male colleague if he would give her a ride to the pub. After a few chuckles, he said, "You mean a lift." Our friend was surprised to learn that the word "ride" has sexual connotations in Ireland.

Equivocal misunderstandings can have serious consequences. Equivocation at least partially explains why men may sometimes persist in attempts to become physically intimate when women have expressed unwillingness to do so. Interviews and focus groups with college students revealed that rather than saying "no" outright to a man's sexual advances, women often use ambiguous phrases such as, "I'm confused about this," "I'm not sure that we're ready for this yet," and "Are you sure you want to do this?" Whereas women viewed indirect statements as meaning "no," men were more likely to interpret them as meaning "maybe." As the researchers put it, "male/female misunderstandings are not so much a matter of males hearing resistance messages as 'go,' but rather their not hearing them as 'stop.'" Under the law, "no" means precisely that, and anyone who argues otherwise can be in for serious legal problems.

*Relative Words.* Is the school you attend large or small? This depends on what you compare it to: Alongside a campus like UCLA, with an enrollment of more than 40,000 students, it probably looks small, but compared to a smaller institution, it might seem quite large. Relative words gain their meaning by comparison. Other examples include *fast* and *slow*, *smart* and *stupid*, and *short* and *long*.

Some relative words are so common that we mistakenly assume that they have a clear meaning. For instance, if a new acquaintance says, "I'll call you soon," when can you expect to hear from him or her? In the same vein, how much is "a few," and how much is "a lot"? An inquisitive blogger received dozens of replies after posting these questions online. Definitions of "a few" varied from one to a dozen. Most people said "a lot" is at least 20. One respondent suggested that people use "a horde" to describe items that are more numerous than "a lot" but less plentiful than a "swarm" and far less than "zounds."

Using relative words without explaining them can lead to communication problems. Have you been disappointed to learn that classes you've heard were "easy" turned out to be hard, that trips you were told would be "short" were long, that "hilarious" movies were mediocre? The problem in each case came from failing to anchor the relative word to more precise measures for comparison.

*Slang and Jargon.* Most slang and jargon are related to specialized interests and activities. Slang is language used by a group of people whose members belong to a similar coculture or other group. For instance, cyclists who talk about "banking" are referring to running out of energy.

Other slang consists of *regionalisms* - terms that only people from a relatively small geographic area use and understand. This sort of use illustrates how slang defines insiders and outsiders, creating a sense of identity and solidarity. 54 Residents of the largest U.S. slate know that when a fellow Alaskan says, "I'm going outside," he or she is leaving the state. In the East End of London, cockney dialect uses rhyming words as substitutes for everyday expressions: "I haven't a scooby" means "I haven't a clue," derived from the detective canine Scooby Doo, whose name rhymes with clue. Examples such as these illustrate how slang can be used to identify insiders and outsiders. Insiders have no trouble making sense of them, but outsiders are likely to be mystified or to misunderstand.

Slang can also be age related. Your mother might be insulted if you said her dress was "sick," but other people you know may interpret this comment as a compliment.

Almost everyone uses some sort of jargon: the specialized vocabulary that functions as a kind of shorthand for people with common backgrounds and experience. Skateboarders and snowboarders have their own language to describe maneuvers: "ollie," "grind," and "shove it." Some jargon consists of acronyms initials of terms that are combined to form a word. Stock traders refer to the NASDAQ (pronounced "naz-dak") securities index, and military people label failure to serve at one's post as being AWOL (absent without leave). The digital age has spawned its own vocabulary of jargon. For instance, "UGC" refers to usergenerated content, and "tl;dr" means "too long; didn't read."

Jargon can be a valuable kind of shorthand for people who understand its use. The trauma team in a hospital emergency room can save time, and possibly lives, by speaking in shorthand, referring to "GSWs" (gunshot wounds), "chem 7" lab tests, and so on. But the same specialized vocabulary that works so well among insiders can bewilder and confuse a patient's family members, who don't understand the jargon. The same sort of misunderstandings can arise in less critical settings when insiders use their own language with people who don't share the same vocabulary.

*Overly Abstract Language.* Most objects, events, and ideas can be described with varying degrees of specificity.

In each case your description would be more and more specific. Semanticist S.I. Hayakawa created an abstraction ladder to describe this process. This ladder consists of a number of descriptions of the same thing. Lower items focus specifically on the person, object, or event, whereas higher terms are generalizations that include the subject as a member of a larger class. To talk about "college," for example, is more abstract than to talk about a particular school. Likewise, referring to "women" is more abstract than referring to "most of the women I know."

Higher-level abstractions are a useful tool, because without them language would be too cumbersome to be useful. It's faster, easier, and more useful to talk about Europe than to list all of the countries on that continent. In the same way, using relatively abstract terms like friendly or smart can make it easier to describe people than listing their specific actions.

*Understanding communication technology.* Actor Ralph Fiennes hit on a hot-button issue when he proclaimed that Twitter is dumbing down the English language. He wasn't the first to suggest such a notion. People have weighed in with millions of on line posts, some condemning and others applauding the truncated language some call *Twenglish* or *Twitterspeak*.

On one side of the debate are people who argue that English reduced to abbreviations and acronyms loses its luster and intelligence. One professor, for example, bemoans the influx of college admission essays with sentences that lack verbs and are speckled with shorthand symbols such as 4 and U.

Proponents of Twitterspeak argue that language is an art form that is meant to be used creatively. People invent and repurpose words because it's fun, because speaking the same language is a sign of group membership, and because they want to talk about phenomena that don't yet have names. Forbes writer Alex Knapp says he was a nonbeliever until he became an avid tweeter. Now he admires the artistry and discipline of expressing ideas in under two dozen words or so. "The 140 character restraint not only forces efficiency, but it also lends itself to some really, really fun wordplay," he says. Many people seem to agree. Twitter's stock dropped in 2016 when rumors surfaced that it would soon allow longer tweets.

Because Twenglish changes so rapidly, using it skillfully is both interesting and challenging. New terms arise and others disappear. "Totes jellie" (totally jealous) is passe, and 775 (kiss me) and LPC (lesbian power couple) are in-at least they were 5 minutes ago.

Would Shakespeare be aghast if he knew how drastically language has changed? Maybe not. The Bard was fond of wordplay himself. Words such as advertising, gossip, and swagger (among about 1,700 others) didn't exist until he invented them. Will formal English morph to be more Twitter-like? As one blogger puts it, we'll just have to W8 NC.

*Abstract language* is speech that refers to events or objects only vaguely serves a second, less obvious function. At times it allows us to avoid confrontations by deliberately being unclear. Suppose, for example, your boss is enthusiastic about a new approach to doing business that you think is a terrible idea. Telling the truth might seem too risky, but lying-saying, "I think it's a great idea" -wouldn't feel right either. In situations like this an abstract answer can hint at your true belief without a direct confrontation: "I don't know. It's sure unusual. It might work."

The same sort of abstract language can help you avoid embarrassing friends who ask for your opinion with questions like, "What do you think of my new haircut?" An abstract response like, "It's really different!" may be easier for you to deliver-and for your friend to receive-than the clear, brutal truth: "It's really ugly!" We will have more to say about this linguistic strategy of equivocation later in this chapter.

Although vagueness does have its uses, highly abstract language can cause several types of problems. The first is stereotyping. Consider claims such as, "All whites are bigots," "Men don't care about relationships," "The police are a bunch of pigs," or "Professors around here care more about their research than they do about students." Each of these claims ignores the very important fact that abstract descriptions are almost always too general; they say more than we really mean.

Besides creating stereotypical attitudes, abstract language can lead to the problem of confusing others.

The best way to avoid this sort of overly abstract language is to use behavioral descriptions instead. Behavioral descriptions move down the abstraction ladder to identify the specific, observable phenomenon being discussed.

Behavioral descriptions can improve communication in a wide range of situations, as *Table 4-2* illustrates. Research also supports the value of specific language. One study found that well-adjusted couples had just as many conflicts as poorly adjusted couples, but the way the well-adjusted couples handled their problems was significantly different. Instead of blaming each other, partners in well-adjusted couples expressed their complaints in behavioral terms. For instance, instead of saying, "You're a slob," an enlightened partner might say, "I wish you wouldn't leave your dishes in the sink."

*Disruptive Language.* Not all linguistic problems come from misunderstandings. Sometimes people understand one another perfectly and still end up in conflict. Of course, not all disagreements can, or should, be avoided. But eliminating three bad linguistic habits from your communication repertoire can minimize the kind of clashes that don't need to happen, allowing you to save your energy for the unavoidable and important struggles.

*Confusing Facts and Opinions.* Factual statements are claims that can be verified as true or false. By contrast, opinion statements are based on the speaker's beliefs. Unlike matters of fact, they can never be proved or disproved.

When factual statements and opinion statements are set side by side like this, the difference between them is clear. In everyday conversation, we often present our opinions as if they were facts, and in doing so we invite an unnecessary argument.

*Confusing Facts and Inferences.* Labeling your opinions can go a long way toward relational harmony, but developing this habit won't solve all linguistic problems. Difficulties also arise when we confuse factual statements with inferential statements - conclusions arrived at from an interpretation of evidence.

There's nothing wrong with making inferences as long as you identify them as such: "She stomped out and slammed the door. It looked to me as if she were furious." The danger comes when we confuse inferences with facts and make them sound like the absolute truth.

One way to avoid fact-inference confusion is to use the perception-checking skill described in Chapter 2 to test the accuracy of your inferences. Recall that a perception check has three parts: a description of the behavior being discussed, your interpretation of that behavior, and a request for verification. For instance, instead of saying, "Why are you laughing at me?" you could say, "When you laugh like that, I get the idea you think something I did was stupid. Are you making fun of me?"

*Emotive Language.* Are the words you use neutral or charged? Emotive language contains words that sound as if they're describing something when they are really announcing the speaker's attitude toward something. Do you like that old picture frame? If so, you would probably call it "an antique," but if you think it's ugly, you would likely describe it as "a piece of junk." Emotive words may sound like statements of fact but are always opinions.

When feelings run strong, it's easy to use emotive language instead of more objective speech. Problems occur when people use emotive words without labeling them as such. You might, for instance, have a long and bitter argument with a friend about whether a third person was "assertive" or "obnoxious," when a more accurate and peaceable way to handle the issue would be to acknowledge that one of you approves of the behavior and the other doesn't.

**Equivocal words:** words that have more than one dictionary definition.

**Relative words:** words that gain their meaning by comparison.

**Slang:** language used by a group of people whose members belong to similar coculture or other group.

**Jargon:** specialized vocabulary used as a kind of shorthand by people with common backgrounds and experience.

**Abstraction ladder:** a range of more to less-abstract terms describing an event or object.

**Abstract language:** Language that lacks specificity or does not refer to observable behavior or other sensory data.

**Behavioral description:** An account that refers only to observable phenomena.

**Factual statement:** a statement that can be verified as being true or false.

**Opinion statement:** A statement based on the speaker's beliefs.

**Inferential statement:** A conclusion arrived at from an interpretation of evidence.

**Emotive language:** Language that conveys an attitude rather than simply offering an objective description.

**Ethical challenge** - Euphemisms and Equivocations

*Evasive Language.* None of the troublesome language habits we have described so far is a deliberate strategy to mislead or antagonize others. Now, however, we'll consider euphemisms and equivocations, two types of language that speakers use by design to avoid communicating clearly. Although both of these have some very legitimate uses, they also can lead to frustration and confusion.

*Euphemisms.* From the Greek meaning "to use words of good omen," a euphemism is a mild or indirect term or expression substituted for a more direct but potentially less pleasant one. We are using euphemisms when we say "restroom" instead of "toilet" or "full-figured" instead of "overweight." There certainly are cases in which the euphemistic pulling of linguistic punches can be face saving. It's probably more constructive to question a possible "statistical misrepresentation" than to call someone a liar, for example. Likewise, it may be less disquieting to some to refer to people as "older adults" rather than as "old."

Like many businesses, the airline industry often uses euphemisms. For example, rather than saying "turbulence," pilots and flight attendants use the less frightening term "bumpy air." Likewise, they refer to thunderstorms as "rain showers," and fog as "mist" or "haze." And savvy flight personnel never use the words "your final destination."

*Equivocation.* It's 8:15 P.M., and you are already a half-hour late for your dinner reservation at the fanciest restaurant in town. Your partner has finally finished dressing and confronts you with the question, "How do I look?" To tell the truth, you hate your partner's outfit. You don't want to lie, but on the other hand you don't want to be hurtful. Just as important, you don't want to lose your table by waiting around for your date to choose something else to wear. You think for a moment and then reply, "You look amazing. I've never seen an outfit like that before. Where did you get it?"

Your response in this situation was an equivocation - a deliberately vague statement that can be interpreted in more than one way. Earlier in this chapter we talked about how unintentional equivocation can lead to misunderstandings. But our discussion here focuses on intentionally ambiguous speech that is used to avoid lying on one hand and telling a painful truth on the other. Equivocations have several advantages. They spare the receiver from the embarrassment that might come from a completely truthful answer, and it can be easier for the sender to equivocate than to suffer the discomfort of being honest.

As with euphemisms, high-level abstractions, and many other types of communication, it's impossible to say that equivocation is always helpful or harmful. As you learned in Chapter 1, competent communication behavior is situational. Your success in relating to others will depend on your ability to analyze yourself, the other person, and the situation when deciding whether to be equivocal or direct.

**Euphemism:** a mild or indirect term or expression used in place of a more direct but less pleasant one.

**Equivocation:** a deliberately vague statement that can be interpreted in more than one way.

## **DISRUPTIONS IN COMMUNICATION.**

The communication process can be disrupted by various phenomena. Among these, the most well-known are the following: *blocking, filtering, jamming and distortions*, determined by objective (material) or subjective (psychological, intellectual) causes.

*Blockage* is the situation when the communication channel is destroyed or broken. In this case, communication is interrupted completely or permanently.

Moving through the environment between the transmitter and the receiver (physical space, different channels), the signals are permanently affected by the action of disturbing factors that can distort the message by altering the quality of the signals. Along with the sources of sound pollution ("noise"), in interpersonal communication there are also other forms of disturbances - *visual jamming* (for example, clouds, fog or rain that prevent the driver of a vehicle from correctly "reading" traffic signs or to avoid obstacles in the way), *tactile* (at wine, perfume tasters) etc. which can significantly disrupt communication.

*Psychological self-jamming (lack of concentration)* often affects people's communicative interaction. It represents a *perceptive* barrier due to an ability, superior capacities of information *processing*, of *manufacturing* them and by no means of any *intellectual, organic or functional* limits of the human *reception* devices, *processing* of information received from the environment. This jamming is due to the difference between the ability of the human cerebral cortex to analyze a sound stream of 800 words per minute and the verbal rate (of a normal human) of 200 words per minute. In other words, we have the possibility to receive, process and interpret a much larger volume of information than the person we are talking to offers us. The difference of 600 words per minute can be used for other purposes. It represents a reserve for processing information, an advantage, but, at the same time, a shortcoming, even a potential danger: allowing itself to be carried away by other associations of ideas, thinking can move away from the subject of communication and cause the loss contact with him. Often, this happens when the pace of the sender's speech is very slow, rhythmic and monotonous, which favors the listener's psychological self-jamming.

It has been found that the situation of *double jamming* can also exist. For example, we are dealing with double jamming when we are talking to an important person, but while he is talking, we are preparing the answer in our mind and rehearsing it for the moment when we will say it. At the same time, we pay attention to what the second person is doing. In this case, we think about every word, we pay attention to every answer, every gesture we make, we correlate it with that of our interlocutor. But at the same time, we try that our answers, questions, discussion, gestures are also to the liking of the second person. This creates a conglomeration of disparate thoughts that we can no longer control and ultimately communication fails.

A shortcoming of communication is the *filtering* of messages, in the sense of avoiding what is disliked, does not agree or requires an effort of understanding that people are not willing to make. In reality, it is precisely the messages belonging to these types that should be listened to with more caution. In this context, the following ideas and advice deserve attention: "You can dispense with ideas that confirm your own convictions without losing much, while knowing the arguments of someone who thinks differently than you could substantially enrich your horizons."

It is not a question, of course, of necessarily accepting the interlocutor's opinions, but of taking them into account, possibly in order to combat them and strengthen yours, through a motivation based on a more solid reasoning. It is a real art to know how to learn even from someone who is deeply disliked, or to continue to listen carefully after the interlocutor has made a hostile remark, or used an expression that offended you. As a general rule, it should be remembered that there is no a priori uninteresting conversation, that something can be learned from any interaction with another person. Nothing more regrettable than the manifestations of communication snobbery by those who divide people into those who deserve and others who don't deserve to talk to".

Shannon-Weaver scheme, we must specify that jamming is neither the only nor the most important source or cause of the non-coincidence between the sent message and the one that reaches the recipient. Communication systems have means of mitigating the effects of jamming, the most effective of which is coding *redundancy* (difference between the optimal and the minimum level for a code to reach the recipient).

Much more serious and difficult to combat are the misunderstandings that occurred as a result of the alterity (non-identity) of the codes with which the transmitter, on the one hand, and the receiver, on the other, operate. Only a perfect symmetry between encoding and decoding would guarantee transmission fidelity, but in a large number of cases, this condition is not met.

In order to ensure the reversibility of the message-signal transformation, the code must be designed so that the "translations" it produces or mediates have a unique character, devoid of any ambiguity. For this reason, the rigorous definition of *coding* and *code* is required - notions that are often used in an imprecise manner.

We propose a basic minimum of knowledge to understand what *code* and *coding* mean. Given two sets of objects M (for example, different toys) and S (for example, children), we call any set of pairs of elements composed such that the first element of the pair belongs to the set M, and the second - of the set S. The relation that matches each element of a set M with, at most, one element of another set S is called a *function*. A function is said to be biunique when it also associates with each element of the set S, at most, one element of the set M. For example, when each toy in the set M will correspond to a single child of the class S and vice versa, then we will be dealing with a *bijective* function. Or another example. Monogamous marriage represents such a biunivocal function, since the set S (married women) uniquely corresponds to the set M (married men), since it prohibits both men from having multiple wives and women from having multiple husbands.

A code is, by definition, a biunique function established between a set M of messages and a set S of signals. The biunivocity condition is mandatory to ensure perfect reversibility between encoding and decoding.

Verbal communication involves a codification that matches the set M of concepts thought by the source, with the set of sequences constituted by the words of the language in which we express ourselves S. (In the case when we use a foreign language, continuing to think in our

mother tongue, between the moment of elaborating and that of formulating and issuing it, is interposed so that the message reaches the recipient unaltered, the code used must be, as said, rigorously unique. Only in this way would we have the guarantee that the decoding would present itself as a faithful image of the encoding, invariably realizing the intentions of the sender.

This is what happens, for example, when a text is transmitted by telegraph or telex. But this condition, obviously, is not respected, in the case of natural languages, considering, at least, such phenomena as synonymy or homonymy that disprove the biunivocity of the function relationship. If the same message can be expressed in two different ways, it means not only that the function is not biunivocal, but also that it is not a function at all in the sense of the definition of the term function. In addition, the possibility that the same sequence of signals represents two different messages, i.e. the existence of homonymy, creates, upon decoding, semantic alternatives incompatible with the idea of code, even if many of them can be resolved with the help of the context. But this is not the main obstacle to communicating with peers.

The definition, which I stated, links communication to the existence of a repertoire of signals shared by both the sender and the receiver, which would presuppose the consensus on the elementary messages that these signals encode. It is necessary to have a list of agreed equivalences between words and their meanings, complete, explicit and unanimously accepted.

The existence of explanatory dictionaries basically implies an affirmative answer. Broadly speaking, the dictionary presents itself as a list of correspondences that gives us the key to the lexical codification of notions. But, even excluding some isomorphisms or polymorphisms from the language system, such as synonymy and homonymy, we still cannot see in the dictionary the expression of a rigorous code, and in the language the practical, reliable and durable way of using it in all fields of communication interpersonal.

Obviously, the relationship between the dictionary and the spoken or written language is different from that of the "Morse code", with the telegrams coded and transmitted with its help. Spoken language is a living, creative dynamic system that cannot be formalized to the level of informational programming languages. In the case of "Morse code", the code is given a priori, known and respected exactly by the two communicators. Seen through the prism of the linguistic "code" of the language in the process of becoming, the dictionaries seem to speak to us, about a language that seems to no longer exist.

In the context of the above, we agree with the ideas of M. Dinu, that in fact "the problem of dictionaries, although interesting in itself, should not concern us here, since experience teaches us that they only record a linguistic use, failing, on the other hand, systematically when trying to impose it, that is, to effectively play the role of an instrument for codifying the speakers' thoughts".

The meanings of the vast majority of the words we use are not learned from dictionaries, but from a personal experience of communication, direct or mediated (by the readings of parents, grandparents or educators) with our fellow speakers. With the exception of some very specific

terms, whose referents can be shown "literally", the words gradually shape, in the child's mind, a meaning deduced from the linguistic and situational context in which they were heard.

Listening to others speak, we approximate the meaning of certain sound sequences, which made the idea we formed about the meaning of words depend on our own linguistic experience: "But this dowry belongs exclusively to us. No other individual has, by force of circumstances, had the opportunity to hear throughout his life exactly the same repertoire of phrases, and under the same circumstances, as another, which means that, at least at the connotative level, the meanings of the words it must differ from person to person. If there is some agreement on the content of the notions expressed by the lexical units, it is limited to the sphere of denotation, the only one, moreover, that the definitions in the dictionary try to circumscribe.

But the endless nuances in which words are colored as a result of the unrepeatable series of encounters with them by each speaker (and, above all, listener) in part constitute a non-transmissible heritage, an exclusive property, which our means of communication do not allow us to we transfer the minds and sensibilities of the interlocutors. Words are mere physical signals that do not carry meaning".

The words heard or read can only awaken a *meaning* in the receiver's consciousness, but only if the *meaning* is already there. Simply speaking, things go like this: the sender wants to communicate a thought, in the sense of S1, which he encodes, according to his personal linguistic experience, by combining words C. But for the recipient of the message, C may mean something else.

The received message is associated in the receiver's mind with an S2 meaning, which is, in turn, a result of a combination of individual meanings that come from his communicative past. The idiolect (the "individual" dialect), which sociolinguists tell us about, does not consist so much in the repertoire of linguistic means available to a particular speaker at a given moment in his life, as in the meanings he attributes to the words at that moment. We understand the meaning of the words *love*, *happiness*, *success* in different ways at 10, 20, 40 or 60 years old, due to the accumulation over time of experiences related to this complex of concepts, feelings, emotional experiences, etc. It is impossible that we will ever meet a person for whom these words mean the same thing as they do for us.

From this point of view, verbal communication still holds a privileged position. Despite the recorded difficulties, there are, however, accepted conventions that limit the degree of misunderstanding to much lower values than in the case of non-verbal communication. The very existence of dictionaries, which record the current, "standard" meanings of linguistic signs (words, phrases, etc.), shows that a minimal semantic "pact" is possible. A book, newspaper or scientific article "tells" all civilized people similar things.

Let's make a brief generalization of what was said above. The omnipresence of jamming and the non-coincidence between the code of the transmitter and that of the receiver considerably limit the possibilities of communication. Contrary to those learned in high school or college, according to which words have well-defined meanings, they are, in fact, devoid of

any intrinsic meaning. The sequence of sounds *cor, lac, lob, soc, toc, suc* mean different things for Romanian, French, Russian, Latin. None of these meanings is contained in the given word, although both ordinary speakers and linguists currently use formulas like "content of the word", "meaning of words", "meaning of the term", "meaning of the expression".

In fact, words are nothing "than simple physical signals, intended to re-actualize in the receiver's mind pre-existing concepts, ideas outlined and fixed in the past, based on the generalization of personal experience, both linguistic and extra-linguistic". Even if the messages (the suite of transmitted signals) reach the recipient intact, their decoding does not invariably occur, i.e. what the sender *said* and what the receiver *understood* are not identical.

### **BARRIERS IN COMMUNICATION.**

In the study of procedural communication, we operate with a term originally called noise, which implies the alteration of the transmitted signal at a technical or semantic level. Noise induces a disturbance/distortion of the message, making it difficult to transmit. Later, the term was extended to determine any distortion during the transmission of the message between the communication partners, regardless of whether it occurs during emission, reception or traversal of the communication channel.

A first typology of noises, starting from the canonical model of communication, assumes a distinction in relation to the element of the communication process that reinforces special ways of relating to the environment and, therefore, creates individual forms of signification" (Bernstein, 1971) to which it acts: mechanical noise – on the channel and semantic noise – on the message:

(1) *Mechanical noise* - channel noise; for example, microphonics on the radio, "fleas" on the television, distortions of announcements in train stations, stuttering or other speech problems.

(2) *Semantic noise* - that is, interference with the message, caused by dissonance of meaning; it is usually caused by social and cultural differences between the one who encodes the message and the one who decodes it. Jargon can be considered semantic noise (a jargon utterance can mean "aren't I smart?" or "aren't my subjects hard?" or "aren't I different from you?"), preventing correct decoding of the message as intended. A pompous tone of voice can turn into noise. (Fiske).

Later, the "noise" in the canonical model was replaced by communication barriers, an expression that designates any disturbance that can intervene in the communication process. The nature of disturbances and the moment of their appearance can differ, which is why communication barriers take various forms. There are numerous classes of barriers, analyzed especially in relation to communication efficiency, in organizational communication. For example, Koneru (2008) identifies physical, psychological, semantic, organizational and interpersonal barriers in professional communication.

(1) *Physical barrier* - noise, invisibility, physical, environmental discomfort, health condition, insufficient sound insulation, low brightness.

(2) *Psychological barrier* - prejudice, self-knowledge, selfishness, fatigue, anxiety, preconceived ideas, hierarchical differences between sender and receiver, rigidity in the thought process, disinterest, inattention, inability to perceive, unsatisfied curiosity, prior knowledge, cultural disparities.

(3) *Semantic barrier* - use of inappropriate words, incorrect formulation of sentences, comprehensive inability, lack of clarity, inattention to different meanings of words, inattention to polysemy of words.

(4) *Organizational barrier* - information from some number of people, delay in gathering information, message distortions caused by different sources.

(5) *Interpersonal barrier* - emotions, perceptions, ideas, perspectives, values, unshared opinions, different attitudes of sender and receiver, temporal inadequacy of message transmission, inability to listen, partial listening, noises.

In a first edition of the communication theory course, Romanian professors Vasile Tran and Irina Stănciugelu (2001) use a classification of the main types of communication barriers based on the projection made by Leonard Saules from the Grand School of Business, Columbia University. Based on this classification we can distinguish between the barriers that appear in relation to the communication actors (of design), those that affect the message on the channel (of the environment) and those that target the code (of language), each related subclasses.

During the elaboration or during the reception of the message, conception barriers may intervene, among them are the following:

(1) *Regarding the sender* - the existence of assumptions, the clumsy expression of the message, the routine in the communication process.

(2) *Regarding the receiver* - the existence of assumptions, lack of attention in receiving the message, hasty conclusions about the message, lack of interest in the message, routine in the communication process.

(3) *Regarding the position of the sender and the receiver in communication* - the different images that the communication partners have about themselves and each about the other, the different perspective they have on the object and context of communication, the different feelings and intentions.

Environmental barriers can intervene along the communication channel, which can be:

(1) *Of a technical nature* - high noise pollution or jamming in the transmission of signals, inadequate technical supports.

(2) *Of a psychosocial nature* - inappropriate work climate, fear of expression.

At the semantic level, language barriers are encountered, which can lead to the distortion of the message as a result of:

- (1) the different meanings associated with the words/expressions by the communication partners;
- (2) the different levels of training of the communication partners;
- (3) the emotional state of any of them;
- (4) preconceived ideas and routine;
- (5) difficulties of expression;
- (6) the use of confusing words and expressions;
- (7) prolix language.

Communication barriers are studied in particular when the question of communication efficiency within organizations or in the case of multi-/intercultural dialogue arises. In the latter case, dialogue involves taking into account a much larger set of disruptive factors, classified differently under numerous theories of intercultural communication and presented in mirror cultural interaction in relation to gender, physical appearance, clothing, artefacts, everyone's age, habits and rituals, non-verbal behavior, interpersonal projection, status of communication actors, their belief system, religion, ethical foundations, accepted/unaccepted behaviors, cultural conventions, personal goals of meeting, time, place/context of meeting, fear of interaction or fear of strangers, different attitudes, different perceptions of the other, history of previous encounters, expectations from others, personal/institutional power, etc. (Lago, 2006).

### **TRANSMISSION OF THE MESSAGE.**

Looking at communication from a procedural perspective, we can see the presence of elements indispensable for its configuration, such as:

- (1) actors of communication, generically called transmitter and receiver;
- (2) the message;
- (3) the transmission channel;
- (4) the code.

These elements are the result of the extension of the ternary emitter-message-receiver (E-M-R) model, developed in turn on the binary stimulus-response (S-R) structure of behaviorist thought, which "made a strong impression through the E-R scheme as a simple mechanical and behavioral link of type S-R". Later, the transmitter-receiver binomial, understood as an object of study in communication sciences, led to the variability of the subjects and to a

superior valorization of the interaction and the communication context in relation to the message, but, despite the departure from the initial projection of the S-R type, the transmitter and the receiver they remained marks of communicative engagement, in a process of continuous biunivocal construction.

The sender represents the entity that transmits the message and that, in most situations, produces them. This distinction is necessary because there are cases in which the sender communicates a message produced by another entity (which, in Cl. Shannon's study from 1948, we will find under the name of source). Despite this distinction, even if the sender's role is to transmit a message produced by a source, he contributes creatively to the transmission, if we also take into account the paralinguistic elements (voice timbre, rhythm, pauses, speech intensity, tone etc.) that accompany that message. Taking into account the fact that, regarding the originality of the message, ideas emitted in other contexts are actually transmitted, by third parties, contemporaries or not, the institution of the transmitter leaves open the possibility of interpreting the communication as a polyphonic broadcast (Dinu).

The receiver is the entity that receives the message. Based on a distinction similar to that made in the case of the sender, the receiver may or may not be the person to whom the message is intended. Shannon operates this differentiation starting from other reasonings, naming the person to whom the recipient message is addressed. The first theories and models of communication give a much more important role to the sender compared to the receiver, who is seen as a passive element, who receives a message and acts, verbally or factually, in accordance with what was transmitted to him. Later models and theories, especially interactionist ones, shift the focus to the receiver and negotiation with the message.

The message covers a complex territory within the communication process, constituting the "content" transmitted between the two communication actors. The message is the connecting element between them and can be studied according to their intentions. In the transmission of a message, either the informative side or the side regarding the ability to influence can take precedence. The latter side was the subject of important studies and experiments, starting with those conducted by Carl Hovland at Yale University in the 1950s and 1960s (Hovland, 1953; Sherif & Hovland, 1961), which concluded that messages through intended to influence cannot produce effects in the absence of attention, understanding and acceptance on the part of the receivers. To transmit a message, communication channels and common interpretation codes are necessary. Once encoded by the sender into signals, the message requires decoding by the receiver. What is actually transmitted between communication actors are sets of signals based on unanimously accepted codes, not the messages themselves.

The messages come into direct contact with each of the two communication partners, but from a semantic perspective, there are differences between the message sent and the message received as long as there are differences between the sender and the receiver (of experience, knowledge, emotional state, etc.)

The channel is the physical means by which the packet of signals resulting from the encoding of the message is transmitted to the receiver. The means of communication represent the physical medium for converting the message into signal packets so that they can be

transmitted through the channel. Depending on the spatial or temporal distance of the transmitter from the means of communication, they can be classified into three large categories (Fiske):

a) presentational means of communication, which assume the physical presence of the transmitter in the same place and at the same time; the channel is the air and the message is transmitted through the voice, face, body, etc. and leads to the production of the so-called acts of communication;

b) representational means of communication, which do not require the presence of the broadcaster; the message is coded and "recorded" based on some conventions, and the receivers can transmit it regardless of the sender; this results in works of communication, transmitted through forms of recording/storage specific to music, painting, architecture, literature, etc.;

c) mechanical means of communication, which differ from representational ones as a result of technical constraints; they assume the temporal co-presence of the communication actors and the spatial distance between them; mechanical means of communication are used to amplify, modulate, encode or transmit signals and include the loudspeaker, microphone, telephone, radio, television, computer networks, etc.

The code represents a system of signification specific to a social group or a culture and assumes, equally, a system of signs and a system of norms on the basis of which the respective signs are combined. The issue of this element of communication is complex and requires a different interpretation, by appealing to the perspective of the so-called semiotic school.

### **MESSAGE RECEIVING.**

"When you're listening, it shows". Good listeners have two main advantages. Because they are observant, they can learn how successful people communicate. And because they are tuned in, they are often the first to identify emerging needs and opportunities.

Although social media is the new trend, there is no substitute for face-to-face listening. Successful people don't just hear what others say, they "really, really listen." That is to say, they refrain from interrupting, and they pay attention to people's tone of voice, body language, and other cues as well as to their words. In an age dominated by social media, listening is as important as ever.

Really, really listening involves a level of discipline and skill few people stop to consider and even fewer master. Yet the payoffs are enormous, as you will see. Masterful listening can help you make wise decisions, make a positive impression on others, and enrich your relationships.

### **LISTENING.**

The need for good listening skills cannot be overemphasized. In *The 7 Habits of Highly Effective People*, Stephen Covey observes that most people only pretend to listen while they actually rehearse what they want to say themselves. Rare (and highly effective) is the person

who listens with the sincere desire to understand, observes Covey. An impressive body of evidence backs up this claim, as you will see in the following list of reasons to become a better listener:

(1) People with good listening skills are more likely than others to be successful. Experts have found that people who listen well have an edge over those who talk most of the time. Listening skills are also important professionally. Because good listeners are typically judged to be appealing and trustworthy, they are especially popular with employers and with customers and clients.

(2) Listening is a leadership skill. Leaders who are good listeners typically have more influence and stronger relationships with team members than less attentive leaders do. In fact, leaders' listening skills are even more influential than their talking skills.

(3) Good listeners are not easily fooled. People who listen carefully and weigh the merits of what they hear are more likely than others to spot what some researchers call "pseudo-profound superficial"-statements that sound smart but are actually misleading or nonsensical. Mindful listening is your best action.

(4) Asking for and listening to advice makes you look good. "Many people are reluctant to seek advice for fear of appearing incompetent," observes a research team who studied the issue. What they found was the opposite that people think more highly of people who ask them for guidance about challenging issues than those who muddle through on their own. Of course, that's just the first step. Making the most of that advice requires good listening skills and follow-through.

(5) Listening makes you a better communicator. Friends and partners who listen well are considered to be more supportive than those who don't. Effective listeners are sincerely interested and engaged.

Despite the importance of listening, experience shows that much of the listening we (and others) do is not very effective. We misunderstand others and are misunderstood in return. We become bored and feign attention while our minds wander. We engage in a battle of interruptions in which each person fights to speak without hearing the other's ideas. Some of this poor listening is inevitable, perhaps even justified. But in other cases we can be better receivers by learning a few basic listening skills.

*Hearing* is the process in which sound waves strike the eardrum and cause vibrations that are transmitted to the brain. By contrast, listening occurs only when the brain reconstructs these electrochemical impulses into a representation of the original sound and then gives them meaning.

We begin hearing sounds around us even before we're born. Barring illness, injury, or earplugs, hearing can't be stopped. As one neuroscientist put it, hearing is easy. You and every other vertebrate that hasn't suffered some genetic, developmental or environmental accident have been doing it for hundreds of millions of years. It's your life line, your alarm system, your way to escape danger and pass on your genes.

Although hearing is automatic, *listening* is another matter. Many times we hear but do not listen. Sometimes we deliberately tune out unwanted signals everything from a neighbor's lawn mower or the roar of nearby traffic to a friend's boring remarks or a boss's unwanted criticism.

A closer look at listening, at least the successful variety, shows that it consists of several stages. After hearing, the next stage is attending-the act of paying attention to a signal. An individual's needs, wants, desires and interests determine what is attended to or selected.

The next step in listening is understanding the process of making sense of a message. Communication researchers use the term listening fidelity to describe the degree of congruence between what a listener understands and what the message sender was attempting to communicate.

*Responding* to a message consists of giving observable feedback to the speaker. Offering feedback serves two important functions: it helps you clarify your understanding of a speaker's message, and it shows that you care about what that speaker is saying.

Listeners don't always respond visibly to a speaker-but research suggests that they should. When people are asked to evaluate the listening skills of people around them, the number-one trait they consider is whether the listener offers feedback. Feedback includes eye contact, appropriate facial expressions, asking questions and exchanging relevant ideas, sitting up straight, and facing the speaker. Conversely, it's easy to see how discouraging it is when audience members yawn, slump, or make bored expressions. Adding responsiveness to the listening model demonstrates the fact that communication is transactional in nature.

Listening isn't just a passive activity. As listeners, we are active participants in a communication transaction. While we receive messages, we also send them. For example, although some people insist, they are listening even when they seem distracted and unresponsive, their demeanor probably puts a damper on the conversation.

The final step in the listening process is remembering. It has long fascinated scientists that people remember every detail of some messages but very little of others. For example, you may remember many specifics about gossip you heard, but you may forget what your roommate asked you to buy at the store today. By some accounts, on average, people forget about half of what they hear immediately after hearing it, suggesting that they did not truly listen to and store the information.

Given the amount of information we process every day from instructors, friends, social media, TV, and other sources-it's no wonder that the *residual message* (what we remember) is a small fraction of what we hear. However, with effort, we can increase our ability to remember what is important to us. We'll explore ways of doing that later in the chapter.

**Hearing:** the process wherein sound waves strike the eardrum and cause vibrations that are transmitted to the brain.

**Listening:** the process wherein the brain reconstructs electrochemical impulses generated by hearing into representations of the original sound and gives them meaning.

**Attending:** the process of focusing on certain stimuli from the environment. Understanding the act of interpreting a message by following syntactic, semantic, and pragmatic rules.

**Listening fidelity:** the degree of congruence between what a listener understands and what the message sender was attempting to communicate.

**Responding:** providing observable feedback to another person's behavior or speech.

**Remembering:** the act of recalling previously introduced information. Recall drops off in two phases: short term and longterm.

**Residual message:** The part of a message a receiver can recall after short- and long-term memory loss.

Another common myth is that listening is like breathing, a natural activity that people usually do well. The truth is that listening is a skill much like speaking: everybody does it, though few people do it well.

In a classic study, 144 managers were asked to rate their listening skills. Astonishingly, not one of the managers described himself or herself as a "poor" or "very poor" listener. In fact, 94% rated themselves as "good" or "very good." The favorable self-ratings contrasted sharply with the perceptions of the managers' subordinates, many of whom said their boss's listening skills were weak.

Sometimes it's okay to be mindless about what we hear. Paying attention to every song on the radio or commercial on TV would distract us from more important matters. The problem is being lazy about listening to things that really matter.

*Mindful listening* involves being fully present with others paying close attention to their gestures, manner, and silences, as well as to what they say. It requires a commitment to understanding the other's perspectives without being judgmental or defensive. Consistent with the idea of mindful listening, the Chinese concept of *ting* describes listening with open ears and eyes as well as an open mind and open heart. This type of listening can be difficult, especially when we are busy or when we feel vulnerable ourselves, yet the investment is worthwhile.

Mindful listening takes effort, but it pays off in terms of self-awareness and stronger connections with others. Here are some tips for becoming a more mindful listener:

- (1) Commit to being fully present.
- (2) Minimize distractions, including extraneous thoughts and worries.
- (3) Listen for underlying messages as well as surface meanings.

(4) Pay attention to cues about how the speaker feels.

(5) Mentally acknowledge your own feelings.

(6) Acknowledge the other person's feelings.

(7) Ask questions and check your understanding.

(8) Be patient. Don't interrupt.

(9) Become comfortable with silence.

(10) Don't rush the speaker. The goal is to understand.

When two or more people are listening to a speaker, we tend to assume they all are hearing and understanding the same message. In fact, such uniform comprehension isn't the case. Physiological factors, social roles, cultural background, personal interests, and needs all shape and distort the raw data we hear into uniquely different messages.

**Mindful listening:** being fully present with people—paying close attention to their gestures, manner, and silences, as well as to what they say.

### **REASONS FOR POOR LISTENING.**

What causes people to listen poorly? There are several reasons, some of which can be avoided or overcome and others that are sad but inescapable facts of life.

*Message Overload.* The amount of information we hear every day makes careful listening to everything impossible. Along with the deluge of face-to-face messages, we are bombarded by phone calls, emails, tweets, texts, and instant messages. Besides those personal messages, we're awash in programming from the mass media. This deluge of communication has made the challenge of attending tougher than at any time in human history. Background noise typically reduces our ability to listen and to concentrate on cognitive tasks.

*Rapid Thought.* Listening carefully is also difficult for a physiological reason. Although we are capable of understanding speech at rates up to 600 words per minute, the average person speaks between 100 and 140 words per minute. <sup>35</sup> Thus, we have a great deal of mental "spare time" to spend while someone is talking. And the temptation is to use this time in ways that don't relate to the speaker's ideas, such as thinking about personal interests, daydreaming, planning a rebuttal, and so on. The trick is to use this spare time to understand the speaker's ideas better rather than to let your attention wander. Try to rephrase the speaker's ideas in your own words. Ask yourself how the ideas might be useful to you. Consider other angles that the speaker might not have mentioned.

*Psychological Noise.* Another reason why we don't always listen carefully is that we're often wrapped up in personal concerns that are of more immediate importance to us than the messages others are sending. It's hard to pay attention to someone else when you're

anticipating an upcoming test or thinking about the wonderful time you had last night with good friends. Yet we still feel we have to "listen" politely to others, and so we continue with our charade. It usually takes a conscious effort to set aside your personal concerns if you expect to give others' messages the attention they deserve.

Multitasking may be a fact of life on the job, but research suggests that dividing your attention has its costs. In one widely reported study, volunteers tried to carry out various problem-solving tasks while being deluged with phone calls and emails. Even though experimenters told the subjects to ignore these distractions, the average performance drop was equivalent to a 10-point decline in IQ. In other words, trying to work on a task while receiving messages about another matter can make you stupid.

You might expect that greater exposure to multiple messages would improve multitasking performance, but just the opposite seems to be the case. Heavy media multitaskers perform worse on task switching than light media multitaskers. Although chronic multitaskers believe they are competent at processing information, in fact they're worse than those who focus more on a single medium.

You may not be able to escape multiple demands at work, but don't hold any illusions about the cost of information overload. When the matter at hand is truly important, the most effective approach may be to turn off the phone, close down the email program or browser, and devote your attention to the single task before you.

*Physical Noise.* The world in which we live often presents distractions that make it hard to pay attention to others. The sound of traffic, music, others' speech, and the like interfere with our ability to hear well. Also, fatigue or other forms of discomfort can distract us from paying attention to a speaker's remarks. Consider, for example, how the efficiency of your listening decreases when you are seated in a crowded, hot, stuffy room that is surrounded by traffic and other noises. In such circumstances even the best intentions aren't enough to ensure clear understanding. You can often listen better by insulating yourself from outside distractions. This may involve removing the sources of noise: turning off the television, shutting the book you were reading, closing the window, and so on. In some cases, you and the speaker may need to find a more hospitable place to speak in order to make listening work.

*Hearing Problems.* Sometimes a person's listening ability suffers from a hearing problem—the most obvious sort of physiological noise.

One survey explored the feelings of adults who have spouses with hearing loss. Nearly two thirds of the respondents said they feel annoyed when their partner can't hear them clearly. Almost a quarter said that beyond just being annoyed, they felt ignored, hurt, or sad. Many of the respondents believe their spouses are in denial about their condition, which makes the problem even more frustrating.

Older people aren't the only ones affected. The number of young people with hearing loss is on the rise, in part because of earbuds and similar technology that make it possible to blast our eardrums with dangerously loud noise. Medical experts have found that 1 in 8 children

and teens and almost 1 in 5 adults have suffered permanent damage to their hearing from excessive exposure to noise.

*Cultural Differences.* The behaviors that define a good listener vary by culture. Americans are most impressed by listeners who ask questions and make supportive statements. By contrast, Iranians tend to judge people's listening skills based on more subtle indicators such as their posture and eye contact. This is probably because the Iranian culture relies more on context. Germans are most likely to think someone a good listener if he or she shows continuous attention to the speaker. One lesson is that, whereas people in some cultures may overlook a quick glance at a cell phone or TV screen, others may interpret that behavior as rudely inattentive.

*Media Influences.* A final challenge to serious listening is the influence of contemporary mass media, especially television and radio. Programming often consists of short segments: news items, commercials, music videos, and so on. This discourages the kind of focused attention that is necessary for careful listening, especially to complicated ideas and feelings.

**Pseudolistening:** an imitation of true listening.

**Selective listening:** a listening style in which the receiver responds only to messages that interest him or her.

**Defensive listening:** a response style in which the receiver perceives a speaker's comments as an attack.

**Ambushing:** a style in which the receiver listens carefully to gather information to use in an attack on the speaker.

**Insulated listening:** a style in which the receiver ignores undesirable information.

**Insensitive listening:** the failure to recognize the thoughts or feelings that are not directly expressed by a speaker, and instead accepting the speaker's words at face value.

**Conversational narcissists:** people who focus on themselves and their interests instead of listening to and encouraging others.

**Stage hogs:** people who are overly invested in being the center of attention.

## **TYPES OF LISTENING.**

Listening well isn't easy. As you'll read in the following pages, listening serves a number of goals. To see which of these are generally most important to you, take the Self-Assessment above before reading further. Each category in the instrument reflects a distinct reason for listening.

*Task-Oriented Listening.* The goal of task-oriented listening is to secure information necessary to get a job done. The situations that call for task-oriented listening are endless and varied:

following an instructor's comments in class, hearing a description of a new piece of merchandise or software that you're thinking about buying, getting tips from a coach on how to improve your athletic skill, taking directions from your boss-the list goes on and on.

Task-oriented listening is most concerned with efficiency. Task-oriented listeners view time as a scarce and valuable commodity, and they can grow impatient when they think others are wasting it.

A task orientation can be an asset when deadlines and other pressures demand fast action. It's most appropriate when taking care of business is the primary concern: such listeners keep a focus on the job at hand and encourage others to be organized and concise.

Despite its advantages, a task orientation can put off others when it seems to disregard their feelings. A no-nonsense task-oriented approach isn't always appreciated by speakers who-by virtue of culture or temperament-lack the skill or inclination to be clear and direct. Also, an excessive focus on getting things done quickly can hamper the kind of thoughtful deliberation that some jobs require. Finally, task-oriented listeners seem to minimize emotional issues and concerns, which may be an important part of business and personal transactions.

You can become more effective as an informational listener by approaching others with a constructive attitude and by using some simple but effective skills. When task-oriented listening is appropriate, the following guidelines will help you be more effective:

**Look for Key Ideas.** It's easy to lose patience with long-winded speakers who never seem to get to the point-or to have a point, for that matter. Nonetheless, most people do have a central idea in what they say. By using your ability to think more quickly than the speaker can talk, you may be able to extract the thesis from the surrounding mass of words you're hearing. If you can't figure out what the speaker is driving at, you can always ask in a tactful way by using the skills of questioning and paraphrasing, which we examine now.

**Ask Questions.** If you are heading to a friend's house for the first time, typical questions might be, "How is the traffic between here and there?" or "Is there anything you'd like me to bring?" In more emotional situations, questions could include, "Why do you think that bothers you so much?" or "You sound upset-is there something wrong?" Questioning involves asking for additional information to clarify your idea of the sender's message. One key element of these types of questions is that they ask the speaker to elaborate.

Not all questions are equally helpful, however. Whereas sincere questions are aimed at understanding others, counterfeit questions are not; they are often disguised attempts to send a message.

**Paraphrase.** Sincere questioning is often a valuable tool for increasing understanding. Sometimes, however, you need to take another step. Now consider another type of feedback-one that would help you confirm your understanding. This sort of feedback, termed paraphrasing, involves restating in your own words the message you thought the speaker had just sent.

In each case, the key to success is to restate the other person's comments in your own words as a way of cross-checking the information. If you simply repeat the speaker's comments verbatim, you will sound foolish-and you still might be misunderstanding what has been said and why.

**Take Notes.** Understanding others is crucial, of course, but it doesn't guarantee remembering. As you read earlier in this chapter, listeners usually forget about half of what they hear immediately afterward.

Sometimes recall isn't especially important. You don't need to retain many details of the vacation adventures recounted by a neighbor or the childhood stories told by a relative. At other times, though, remembering a message-even minute details-is important. The lectures you hear in class are an obvious example. Likewise, it can be important to remember the details of plans that involve you: the time of a future appointment, the name of a phone caller whose message you took, or the orders given by your boss at work.

At times like these it's smart to take notes instead of relying on your memory. Sometimes these notes may be simple and brief: a name and phone number jotted on a scrap of paper, or a list of things to pick up at the market. In other cases-a lecture, for example-your notes need to be much longer. See the checklist on the next page for note-taking strategies when the details are essential.

**Task-oriented listening:** a listening style that is primarily concerned with accomplishing the task at hand.

**Questioning:** an approach in which the receiver overtly seeks additional information from the sender.

**Sincere question:** a question posed with the genuine desire to learn from another person.

**Counterfeit question:** a question that is not truly a request for new information.

**Paraphrasing:** feedback in which the receiver rewords the speaker's thoughts and feelings.

**Relational listening:** a listening style that is driven primarily by the concern to build emotional closeness with the speaker.

*Relational Listening.* The goal of relational listening is to emotionally connect with others. Relationally oriented listeners are typically perceived to be extroverted, attentive, and friendly. They are more focused on understanding people than on trying to control them.

A relational orientation has obvious strengths. But it has some less obvious drawbacks. It's easy to become overly involved with others' feelings. Relational listeners may lose their detachment and ability to assess the quality of information others are giving in an effort to be congenial and supportive. Less relationally oriented communicators can view them as overly expressive, and even intrusive. Here are some strategies for being an effective relational listener.

**Take Time.** The goal of task-oriented listening is efficiency, but relational listening couldn't be more different. Encouraging others to share their thoughts and feelings can take time. If you're in a hurry, it may be best to reschedule relationally focused conversations for a better time. The gift of attention often speaks for itself, even when you don't know what to say. Medical studies show that, even when doctors cannot cure patients, patients' coping skills are positively linked to the amount of time their doctors spend listening to them.

In some situations, even brief interactions may have relational dimensions. To a harassed customer service rep you might sympathetically say, "*Busy day, huh?*" Or, you might thank an especially patient salesperson by saying, "*I really appreciate you taking time to explain this so patiently.*"

**Listen for Unexpressed Thoughts and Feelings.** People often don't say what's on their minds or in their hearts. There are lots of reasons why: Tact, confusion, lack of awareness, fear of being judged negatively.

When relationship building is the goal, it can be valuable to listen for unexpressed messages. When you consider exploring unexpressed feelings and thoughts, be careful not to pry. Proceed carefully, and phrase your hunches tentatively.

**Encourage Further Comments.** Even if you don't explore unexpressed messages, you can strengthen relationships simply by encouraging others to say more. Even if you're not a stage hog, it's easy to redirect a conversation back to yourself. Instead, try a simple experiment to prove the value of focusing on the speaker. In your next conversation, focus on drawing out the other person. If you express a sincere desire to learn more, you're likely to be surprised by the positive results. The speaker may be grateful that you have helped him or her work through a problem, when all you have really done is listen and ask questions. Great teachers harness this power regularly. They know that students often learn more when they are asked questions and encouraged to work through problems than when they are given the answers up front.

*Analytical Listening.* Whereas relational listening may enhance relationships, the goal of analytical listening is to understand the message. Analytical listeners explore an issue from a variety of perspectives in order to understand it as fully as possible.

Analytical listening is a good approach when your goal is to assess the quality of ideas, and when there is value in looking at issues from a wide range of perspectives. It's especially valuable when the issues at hand are complicated. On the other hand, a thorough analytical approach can be time consuming. So when a deadline is approaching, you may not respond as quickly as the other person would like.

When you want to listen analytically, follow these steps.

**Listen for Information Before Evaluating.** The principle of listening for information before evaluating seems almost too obvious to mention, yet all of us are guilty of judging a speaker's ideas before we completely understand them. The tendency to make premature judgments

is especially strong when the idea you are hearing conflicts with your own beliefs. As one writer put it, the right to speak is meaningless if no one will listen. It is simply not enough that we reject censorship, we have an affirmative responsibility to hear the argument before we disagree with it.

You can avoid the tendency to judge before understanding by following the simple rule of paraphrasing a speaker's ideas before responding to them. The effort required to translate the other person's ideas into your own words will keep you from arguing, and if your interpretation is mistaken, you'll know immediately.

**Separate the Message from the Speaker.** The first recorded cases of blaming the messenger for an unpleasant message occurred in ancient Greece. When messengers reported losses in battles, their generals sometimes responded to the bad news by having the messengers put to death.

This sort of irrational reaction is still common (though fortunately less violent) today. Consider a few situations in which there is a tendency to get angry with a communicator bearing unpleasant news: An instructor tries to explain why you did poorly on a major paper; a friend explains what you did to make a fool of yourself at the party last Saturday night; the boss points out how you could do your job better. At times like this, becoming irritated with the bearer of unpleasant information may not only cause you to miss important information but also harm your relationships.

There's a second way that confusing the message and the messenger can prevent you from understanding important ideas. At times you may mistakenly discount the value of a message because of the person who is presenting it. Even the most boring instructors, the most idiotic relatives, and the most demanding bosses occasionally make good points. If you write off everything a person says before you consider it, you may be cheating yourself out of some valuable information.

**Search for Value.** Even if you listen with an open mind, sooner or later you will end up hearing information that is either so unimportant or so badly delivered that you're tempted to tune out. Although making a quick escape from such tedious situations is sometimes the best thing to do, there are times when you can profit from paying close attention to apparently worthless communication. This is especially true when you're trapped in a situation in which the only alternatives to attentiveness are pseudolistening or downright rudeness.

Once you try, you probably can find some value in even the worst situations. Consider how you might listen opportunistically when you find yourself locked in a boring conversation with someone whose ideas are worthless. Rather than torture yourself until escape is possible, you could keep yourself amused-and perhaps learn something useful-by listening carefully.

Listening with a constructive attitude is important, but even the best intentions won't always help you understand others. The following skills can help you figure out messages that otherwise might be confusing, as well as help you see how those messages can make a difference in your life.

**Analytical listening:** listening in which the primary goal is to fully understand the message, prior to any evaluation.

**Critical listening:** listening in which the goal is to evaluate the quality or accuracy of the speaker's remarks.

*Critical Listening.* The goal of critical listening is to go beyond trying to understand and analyze the topic at hand, and instead, to assess its quality. At their best, critical listeners apply the tools of analytical listening to see whether an idea holds up under careful scrutiny.

Critical listening can be especially helpful when the goal is to investigate a problem. But people who are critical listeners can also frustrate others, who may think that they nitpick everything people say.

When critical listening is appropriate, follow these guidelines.

**Examine the Speaker's Evidence and Reasoning.** Speakers usually offer some kind of support to back up their statements. A car dealer who argues that domestic cars are just as reliable as imports might cite frequency-of-repair statistics from Consumer Reports or refer you to satisfied customers, for example; and a professor arguing that students don't work as hard as they used to might tell stories about then and now to back up the thesis.

Besides taking a close look at the evidence a speaker presents, a critical listener will also look at how that evidence is put together to prove a point. Logicians have identified a number of logical fallacies-errors in reasoning that can lead to false conclusions. In fact, logicians have identified more than 200 fallacies.

**Evaluate the Speaker's Credibility.** The acceptability of an idea often depends on its source. If your longtime family friend, the self-made millionaire, invited you to invest your life savings in jobba fruit futures, you might be grateful for the tip. If your deadbeat brother-in-law made the same offer, you would probably laugh off the suggestion.

**Examine Emotional Appeals.** Sometimes emotion alone may be enough reason to persuade you. You might lend your friend money for old times' sake even though you don't expect to see the money again soon. In other cases, it's a mistake to let yourself be swayed by emotion when the logic of a point isn't sound. The excitement or fun in an ad or the lure of low monthly payments probably isn't good enough reason to buy a product you can't afford.

As you read about task-oriented, relational, analytical, and critical approaches to listening, you may have noted that you habitually use some more than others. Researchers are still trying to determine how much we rely on different approaches-and how much we should. There's no question that you can control the way you listen to and use the styles that best suit the situation at hand. When your relationship with the speaker needs attention, adopt a relational approach.

When clarity is the issue, be an action-oriented listener. If analysis is called for, put on that style. And when efficiency is what matters most, become a model of task-oriented

orientation. You can also boost your effectiveness by assessing the listening preferences of your conversational partners and adapting your style to them.

### **SUPPORTIVE LISTENING.**

There's another type of listening and responding that might involve any of the approaches just described. In supportive listening, the primary aim is to help the speaker deal with personal dilemmas. Sometimes the problem is a big one: "I'm not sure this marriage is going to work" or "I can't decide whether to drop out of school." At other times the problem is more modest. A friend might be trying to decide what birthday gift to buy or where to spend a vacation. Supportive listeners are typically judged to be optimistic, honest, understanding, and encouraging.

There's no question about the value of receiving support when faced with personal problems. Research shows that supportive communication can reduce loneliness and stress and build self-esteem. There is even evidence that people with good support networks tend to live longer than others. And the benefits go both ways. People who provide social support often feel an enhanced sense of well-being themselves.

**Supportive listening:** the reception approach to use when others seek help for personal dilemmas.

### **ONLINE SOCIAL SUPPORT.**

Traditionally, most social support came from personal acquaintances: friends, family, coworkers, neighbors, and so on. However, in online communities, strangers can share interests and concerns and potentially gain support from one another.

Some online groups offer specialized support. Areas of focus include addiction, Asperger's syndrome, codependency, debt problems, domestic violence, eating disorders, gambling, infertility, miscarriage, sexual abuse, and suicide, to name just a few.

In some aspects, online help is similar to the face-to-face variety. The goals are to gain information and emotional support. In other ways, it differs. The most obvious difference is that many members of online communities have not met in person and may not even know each other's real names. This anonymity may be a plus in that it enables people to feel comfortable opening up, but it can also be a drawback, particularly if people are not supportive. The social networking site Reddit has been criticized for allowing users to post racist, sexist, and homophobic jokes and comments anonymously. Because they cannot be identified, some people may be more likely to say things online that they wouldn't say in person.

One difference between in-person and virtual support groups is that online groups often focus specifically on a single issue, whereas in traditional relationships, people are likely to cover a wide range of topics. Another difference involves the rate and amount of self-disclosure: In traditional relationships, people usually reveal personal information slowly and carefully, but with the anonymity of online support groups, they typically open up almost immediately.

## **GENDER AND SOCIAL SUPPORT.**

Men and women have traditionally defined supportive communication somewhat differently. Linguist Deborah Tannen, who is famous for her research about gender and communication, offers the example of telling one's troubles to another person.

When women share their troubles with other women the response is often a matching "me too" disclosure. For example, a woman might say, "I understand. My partner never remembers my birthday!" Such a response is usually understood between women as a sign of their connectedness and solidarity. Indeed, women may even dig deep to find a matching experience or emotion to share, which is one reason that happiness (as well as dissatisfaction) often feels contagious.

Men have traditionally been socialized to focus less on emotional connection and more on competition and emotional control. Consequently, if a woman responds to a man's troubles talk with a matching experience, it may feel to him like a one-up, as if she is implying "your problems are not so remarkable" or "mine are even worse." In short, what feels like empathy to her may feel like a put-down to him. And because men are often discouraged from expressing intense emotions, they may consider it supportive to offer a solution or a distraction such as *"Don't worry about it"* or *"Here's what you should do..."* As you might predict, women who are accustomed to a different style of social support may feel that men who respond this way are brushing off their concerns or belittling their problems.

Of course, we must be careful not to overgeneralize. Gender roles continually evolve, and a number of factors interact with gender to shape how people provide social support-including cultural background, personal goals, expressive style, and cognitive complexity. All the same, understanding traditional patterns and social mores may help us avoid the assumption that our way is the only way or the right way to offer comfort.

## **TYPES OF SUPPORTIVE RESPONSES.**

Whatever the relationship and topic, you can choose from several styles to respond supportively to another person's remarks. Each of these styles has advantages and disadvantages. As you read them, consider the best style for a particular situation.

**Advising.** When someone shares a concern with you, you might offer a solution, which scholars call an advising response. Although advice is sometimes valuable, often it isn't as helpful as you might think.

There are two main reasons why offering advice doesn't work especially well in general. First, it can be hard to tell when someone actually wants your opinion. Sometimes the request is clear: *"What do you think I should do?"* At other times, though, the speaker's intent isn't as clear. Statements such as *"What do you think of Jeff?"* *"Would that be an example of sexual harassment?"* and *"I'm really confused"* may be designed more to solicit information or announce a problem. People often don't want advice, even if they indicate they do. They may not be ready to accept it, needing instead simply to talk out their thoughts and feelings.

Even when someone with a problem asks for advice, offering it may not be helpful. Your suggestion may not offer the best course to follow, in which case it can even be harmful. There's often a temptation to tell others how we would behave in their place, but it's important to realize that what's right for one person may not be right for another. A related consequence of advising is that it often allows others to avoid responsibility for their decisions. A partner who follows a suggestion of yours that doesn't work out can always pin the blame on you.

Advice is most welcome when it has been clearly requested and when the advisor seems concerned with respecting the face needs of the recipient. Before offering advice, consider the checklist on this page.

**Judging.** A **judging response** evaluates the sender's thoughts or behaviors in some way. The judgment may be favorable ("That's a good idea" or "You're on the right track now") or unfavorable ("An attitude like that won't get you anywhere"). But in either case it implies that the person doing the judging is in some way qualified to pass judgment on the speaker's thoughts or behaviors.

Sometimes negative judgments are purely critical. How many times have you heard such responses as "*Well, you asked for it!*" or "*I told you so!*" or "*You're just feeling sorry for yourself?*" Although comments like these can sometimes serve as a verbal wake-up call, they usually make matters worse.

At other times negative judgments are less critical. These involve what we usually call constructive criticism, which is intended to help a person improve in the future. This is the sort of response given by friends about everything from the choice of clothing to jobs and to friends. Another common setting for constructive criticism occurs in school, where instructors evaluate students' work to help them master concepts and skills. But whether or not it's justified, even constructive criticism runs the risk of arousing defensiveness because it may threaten the self-concept of the person at whom it is directed.

Judgments have the best chance of being received when two conditions exist:

a. *The person with the problem has requested an evaluation from you.* Occasionally an unsolicited judgment may bring someone to his or her senses, but more often this sort of uninvited evaluation will trigger a defensive response.

b. *Your judgment is genuinely constructive and not designed as a put-down.* If you are tempted to use judgments as a weapon, don't fool yourself into thinking that you are being helpful. Often the statement "I'm telling you this for your own good" simply isn't true.

If you can remember to follow these two guidelines, your judgments will probably be less frequent and better received.

**Analyzing.** In an analyzing statement, the listener tries to help by offering an interpretation of a speaker's message. The motive here is different from the kind of analysis used, in which

the goal was to benefit you, the listener. In this case, the analysis is aimed at helping the other person.

Interpretations are often effective ways to help people with problems consider alternative meanings they would not have thought of without your help. Sometimes a clear analysis will make a confusing problem suddenly clear, either suggesting a solution or at least providing an understanding of what is occurring.

At other times, an analysis can create more problems than it solves. There are two problems with analyzing. First, your interpretation may not be correct, in which case the speaker may become even more confused by accepting it. Second, even if your interpretation is correct, saying it aloud might not be useful. There's a chance that it will arouse defensiveness (because analysis can imply superiority and judgment), and even if it doesn't, the person may not be able to understand your view of the problem without working it out personally.

How can you know when it's helpful to offer an analysis? The checklist on this page suggests several guidelines to follow.

**Questioning.** A few pages ago we talked about questioning as one way to understand others better. A questioning response can also be a way to help others think about their problems and understand them more clearly. For example, questioning can help a conversational partner define vague ideas more precisely. You might respond to a friend with a line of questioning: *"You said Greg has been acting 'differently' toward you lately. What has he been doing?"* Another example of a question that helps clarify is as follows: *"You told your roommates that you wanted them to be more helpful in keeping the place clean. What would you like them to do?"*

Questions can also encourage people to examine situations in more detail by talking either about what happened or about personal feelings—for example, "How did you feel when they turned you down? What did you do then?" This type of questioning is particularly helpful when you are dealing with someone who is quiet or is unwilling under the circumstances to talk about the problem very much.

Although questions have the potential to be helpful, they also risk confusing or distracting the person with the problem. The best questioning follows these principles:

(1) *Don't ask questions just to satisfy your own curiosity.* You might become so interested in the other person's story that you will want to hear more. *"What did he say then?"* you might be tempted to ask *"What happened next?"* Responding to questions like these might confuse the person with the problem, or even leave him or her more agitated than before.

(2) *Be sure your questions won't confuse or distract the person you're trying to help.* For instance, asking someone, *"When did the problem begin?"* might provide some clue about how to solve it—but it could also lead to a long digression that would only confuse matters. As with advice, it's important to be sure you're on the right track before asking questions.

(3) *Don't use questions to disguise your suggestions or criticism.* We've all been questioned by parents, teachers, or other figures who seemed to be trying to trap us or indirectly to guide us. In this way, questioning becomes a strategy that can imply that the questioner already has some idea of what direction the discussion should take but isn't willing to tell you directly.

**Comforting.** Sometimes comforting words often can be just what the other person needs. In other instances, though, this kind of comment isn't helpful at all; in fact, it can even make things worse. Telling a person who is obviously upset that everything is all right, or joking about a serious matter, can trivialize the problem. People might see your comments as a put-down, leaving them feeling worse than before.

As with the other styles we'll discuss, comforting can be helpful, but only in certain circumstances. For the occasions when comforting is an appropriate response, follow these guidelines:

(1) *Make sure your comforting remarks are sincere.* Phony agreement or encouragement is probably worse than no support at all, because it adds the insult of your dishonesty to the pain the other person is already feeling.

(2) *Be sure the other person can accept your support.* Sometimes we become so upset that we aren't ready or able to hear anything positive.

Even if your advice, judgments, and analysis are correct and your questions are sincere, and even if your support comes from the best motives, these responses often fail to help. For example, it's typically hurtful rather than helpful to say, "There are people worse off than you are" or "No one ever said life was fair." It may also be frustrating to hear "I understand how you feel" from people who can't really know what the person is going through. It is usually far more helpful to listen without judgment, acknowledge the person's feelings, and say that you care and will stand by the distressed individual through hard times.

**Prompting.** Advising, judging, analyzing, questioning, and comforting are all active approaches to helping that call for a great deal of input from the respondent. Another approach to problem solving is more passive. Prompting involves using silences and brief statements of encouragement to draw others out, and in so doing to help them solve their own problems.

Prompting works especially well when you can't help others make a decision. At times like this your presence can act like a catalyst to help others find their own answers. Prompting will work best when it's done sincerely. Your nonverbal behaviors—eye contact, posture, facial expression, tone of voice—must show that you are concerned with the other person's problem. Mechanical prompting is likely to irritate instead of help.

**Reflecting.** A few pages ago you read about the value of paraphrasing to understand others. The same approach can be used as a supportive response. We use the term reflecting to describe it here, to emphasize that the goal is not as much to clarify your understanding as to help the other person hear and think about the words he or she has just spoken. When you

use this approach, be sure to reflect both the *thoughts* and the *feelings* you hear being expressed.

Reflecting a speaker's ideas and feelings can be surprisingly helpful. First, reflecting helps the other person sort out the problem. The clarity that comes from this sort of perspective can make it possible to find solutions that weren't apparent before. Reflecting also helps the person to unload more of the concerns he or she has been carrying around, often leading to the relief that comes from catharsis. Finally, listeners who reflect the speaker's thoughts and feelings (instead of judging or analyzing, for example) show their involvement and concern. The checklist on this page suggests factors you should consider before you paraphrase while offering support.

**Advising response:** helping response in which the receiver offers suggestions about how the speaker should deal with a problem.

**Judging response:** a reaction in which the receiver evaluates the sender's message either favorably or unfavorably.

**Analyzing statement:** a helping style in which the listener offers an interpretation of a speaker's message.

**Comforting:** a response style in which a listener reassures, supports, or distracts the person seeking help.

**Prompting:** using silence and brief statements of encouragement to draw out a speaker.

**Reflecting:** Listening that helps the person speaking hear and think about the words just spoken.

You can boost the odds of choosing the best helping style in each situation by considering three factors.

(1) *The situation:* Sometimes people need your advice. At other times your encouragement and comforting will be most helpful, and at still other times your analysis or judgment may be truly useful. And, as you have seen, there are times when your prompting and reflecting can help others find their own answer.

(2) *The other person:* Some people are able to consider advice thoughtfully, whereas others use suggestions to avoid making their own decisions. Many communicators are extremely defensive and aren't capable of receiving analysis or judgments without lashing out. Still others aren't equipped to think through problems clearly.

(3) *Your own strengths and weaknesses:* You may be best at listening quietly, offering a prompt from time to time. Or perhaps you are especially insightful and can offer a truly useful analysis of the problem. Of course, it's also possible to rely on a response style that is unhelpful. You may be overly judgmental or too eager to advise, even when your suggestions aren't invited or productive.

In most cases, the best way to help is to use a combination of responses in a way that meets the needs of the occasion and suits your personal communication style.

## **SEMNIIFICATION.**

Saussurean theories of the paradigmatic or syntagmatic relations of the sign have, so far, led us to an understanding of how signs operate. Saussure was interested in the main linguistic system; secondly, the way this system relates to the reality it refers to, being almost uninterested in how it relates to the reader and his socio-cultural position. He was concerned with the complex ways in which a phrase could be constructed and how its form determined its meaning, but he was less interested in the fact that this phrase might mean different things to different people in different situations.

In other words, he did not see meaning as a process of negotiation between the producer/receiver of the text and the text. Saussure emphasized the text, and not how the signs in the text interact with the cultural and personal experience of the user (and here it is no longer important to distinguish between the producer of the text and its reader), nor how the conventions. from the text interacts with the conventions experienced and expected by the user. Roland Barthes, in Saussure's lineage, was the first to develop a systematic model by which this idea of negotiation, the idea of an interactive meaning, could be analyzed. At the heart of Barthes' theory is the idea of two levels of signification.

*The denotation.* The first level of signification is the one on which Saussure worked. This level describes the relationship between the signifier and the signified within the sign, as well as the relationship between the sign and its referent in external reality. Barthes calls this level that of denotation. This refers to the obvious meaning of the sign, the meaning at the level of common sense. A photograph of a street denotes that particular street; the word "street" denotes a city road, bordered by construction. But we can photograph the street in significantly different ways.

We can use color film, we can choose a pale sunny day, we can use low contrast between the elements of the frame, thus making the street appear as a happy, warm, indulgent community for the children who care to play there. Or we can use a black and white film, a high contrast of focus on the elements of the frame, so that the street appears welcoming, inhuman, inhospitable, a destructive environment for those children.

These two photos could be taken at the same time of day, the difference being only a few centimeters in the positioning of the camera. The denotative meanings of the two photos would be the same, but the difference would be in their connotation.

*Connotation* is the term Barthes uses to describe one of the three ways in which signs work at the second level of signification. It describes the interaction that occurs when the sign intersects with the feelings or emotions of its users and with the values of their culture. This happens when the meaning moves to the domain of the subjective or at least the intersubjective - that is, when the interpretant is influenced both by the interpretant and by the object or sign.

For Barthes, the essential factor in terms of connotation is the signifier from the first level of signification. The signifier of the first level is the sign of connotation. Our imaginary photos both represent the same street; the difference between them resides in the form, in the appearance of the photograph, that is, in the signifier. Barthes (1977) argues that, in the case of photography at least, the difference between denotation and connotation is clear.

Denotation is the mechanical reproduction on film of the object towards which the camera is pointed. Connotation is the human part of the process – it is the selection of what we will include in the frame, focus, aperture, camera angle, film quality, etc. Denotation is what we photograph; the connotation is the way we photograph.

We can expand this idea further. The tone of our voice, the way we speak connote feelings or values related to what we say; in music, the indication *allegro ma non troppo* is an instruction about how to play the notes, about the connotative or emotional values that we will convey. The choice of words is often the choice of a connotation - "dispute" or "strike", to "grease the axle" or "bribe". These examples show emotional or subjective connotations, although we should assume that other people in our culture share at least some of these connotations, which are thus intersubjective.

Other connotations can be somewhat more social and less personal. A frequently used example is the insignia of a superior officer's uniform. In a hierarchical society, which accentuates the distinctions between classes and ranks and which consequently values high social positions, these signs of rank connote high values. These insignia are usually made of gold, with a pattern of crowns or laurel branches, and the more there are, the higher the rank they denote.

In a society that does not value class distinction or hierarchies, officers' uniforms rarely show distinctive signs of subordinates that connote the superior value of rank. Fidel Castro's uniform and that of Chairman Mao differed almost nothing from those of the people they led. However, they denoted high rank as obviously as a 19th century Prussian officer who could not move under the weight of his uniform.

The connotation is, for the most part, arbitrary, specific to a particular culture, although it frequently assumes an iconic dimension. The way a photograph of a child taken with poor contrast in focus can connote nostalgia is only partially iconic. This type of focus is a motivated sign of the imprecise nature of memory, but also a motivated sign of the sentimental: weak focus = tenderness! But to decode it like this, we also need a conventional element to know that a focus of this type is a significant choice made by the photographer, and not a limitation due to the equipment. If all photos were taken like this, they would no longer connote nostalgia.

Because connotation operates on a subjective level, we are not always aware of it. The black and white image, with a strong contrast, inhuman of the street can be read too often from the perspective of its denotative meaning: the streets are like that. Sometimes it is easier to take connotative values as representing denotative facts. One of the main

purposes of semiotic analysis is to provide us with the analytical methods and the framework of thought to protect us from such a misreading.

*The myth.* The second of the three ways in which signs operate at the second level of signification is through myth. I wish Barthes (1973) had not used this term, as he usually refers to ideas that are false: "It is a myth..." or "The myth that Britain is still one of the great powers of the world". This normal use of the word is that of a person distrustful of an idea. Barthes uses it in the sense of something that can be believed in, the original meaning of the word.

A myth is a story through which a culture explains or understands certain aspects of reality or nature. Primitive myths are about life and death, men and gods, good and evil. Our sophisticated myths are about masculinity and femininity, family, success, the British police, science. A myth, for Barthes, represents the way of thinking about a problem in a culture, a way of conceptualizing and understanding the problem. Barthes believes that myth is a chain of concepts linked together. Thus, the traditional myth about British policemen includes concepts such as friendship, safety, solidity, non-aggressiveness, lack of firearms.

The photographic cliché of a burly, jovial policeman patting a little girl on the head is based, for the secondary meaning, on the fact that this myth of the police is common to that culture: it exists before the photograph, and the photograph activates the chain of concepts that constitute the myth. If the connotation represents the second degree meaning of the signifier, the myth is the second degree meaning of the signified.

But let's go back to our example with the street scene with which we illustrated the connotation. If they had been asked to photograph the scene with the children playing in the street for twenty different photographers, I can say that most of them would have taken a black and white, very clear, inhuman photo. This is because the respective connotations best match the most common myths through which we conceptualize the idea of children playing on the street.

Our dominant myth about childhood is that it is or should be a time of naturalness and freedom. Growing up means adapting to the demands of society, which involves the loss of naturalness and freedom. Usually, cities are seen as unnatural, artificial creations that provide children with a limited environment. There is a widely shared belief in our culture that a better place for children is in the countryside. We can contrast these myths with some belonging to other periods.

For example, the Elizabethans saw the child as an incomplete adult; the Augustans saw life in the country as uncivilized - human values were to be found in civilized cities, and life in the country was seen as pastoral, thus being made to fit the understanding of the townspeople.

Barthes argues that the main way in which myths operate is in the direction of naturalizing history. This indicates, in fact, that myths are the products of a social class that has acquired its dominance in the course of a certain history: the meanings that myths circulate must carry

this history with them, but their actions as myths make them try to deny this and present their meanings as natural, and not historical or social. Myths mystify or hide their origins and, thus, their political or social dimension. Mythologists reveal the history that is hidden behind them, but also the socio-political actions of myths, by "demystifying" them.

There is a myth that women are "naturally" more caring than men, so their natural place is in the home, where they take care of the children and care for the man, while he - just as "naturally", of course - he plays the role of the family breadwinner. These roles then structure the most "natural" social unit of all - the family. By presenting these meanings as part of nature, myths disguise their historical origins, which universalizes them and makes them appear not only unchangeable but also equitable: it makes them appear to serve the interests of men and women equally, hiding - and thus the political intentions.

The history that these myths turn into something natural tells us a very different story. These meanings of masculinity and femininity were developed to serve the interests of men belonging to the bourgeoisie in capitalism – they came to give meaning to social conditions produced by nineteenth-century industrialization. This required the workforce to leave their traditional rural communities and move to the new cities, where they would live on the streets and in houses designed to accommodate as many people as cheaply as possible. The extended family and relations with the traditional village community were left behind and the nuclear family appeared, created from husband, wife and children.

Working conditions in factories were not conducive for children to accompany their parents to work, as was the case in agriculture - and this, together with the absence of the extended family meant that the woman had to stay at home, while the man worked "from -the truth" and earn money. The chain of concepts that make up the related myths of masculinity, femininity and the family proliferated, but not randomly or naturally: the myths always served the interests of the economic system and the class that was advantaged - middle-class men.

This system required the nuclear family to be a "natural" fundamental social unit; it required femininity to gain its "natural" meanings related to childcare, domesticity, sensitivity, the need for protection, while masculinity was given the meanings of power, self-assertion, independence and the ability to operate in public space. Thus, they seem natural, but, in fact, from a historical perspective, men occupy a disproportionately large number of public positions in our society.

Of course, myths can most effectively naturalize meanings by linking them to certain aspects of nature itself. Thus, the fact that women give birth to children is used to naturalize meanings related to food preparation and domesticity (or "nest building"! ). Similarly, men's larger and more muscular bodies are used to naturalize men's social and political power (which, however, has nothing to do with physical power).

The changing role of women in society and the changing structure of the family means that these myths find their dominant position (and thus their natural status) challenged, so that the advertising industry and mass media producers must find ways to trigger new ones. myths of masculinity and femininity to develop to make room for the business woman, the

single parent and the new "sensitive" man. These myths, of course, do not completely reject the old ones, but they remove certain concepts from their chains, adding others - the transformation of myths is evolutionary, and not revolutionary.

No myth is universal in the culture of which it is a part. There are dominant myths, but there are also counter-myths. There are subcultures in our society that have myths about British police officers contrary to the dominant ones set out above. Also, there is a myth in the cities of the street as a community that supports itself, a kind of extended family that constitutes an extremely beneficial social environment for children. This is the kind of myth that would fit the connotations of our alternative street photography.

Science is a good example where counter-myths are strongly contested and challenged by the dominant myth. We live in a culture based on the principles of science. The dominant myth of science presents the ability of the human species to adapt nature to our needs, to improve our safety and standard of living, to celebrate our achievements. Science is seen as objective, true and good. But the counter-myth is also very strong. He sees science as an evil, proof of the distance between us and nature and the lack of understanding of it.

As scientists, we are the most selfish and limited people, in the pursuit of our materialistic goals. It is interesting to note that in popular culture both myths are well represented. The factual side of television, news, public affairs, documentaries tends to present the dominant myth more than the counter-myth; fictional television and cinema productions, on the other hand, change the proportions. There are more scientists who are geniuses of evil than of good, and science poses more problems than it solves.

For example, Gerbner (1973) shows us that scientists portrayed in fictional television shows were considered the most "lying", "cruel" and "incorrect" of all professional categories. He also cites a 1963 study by Gusfield and Schwarts, who also described an image of scientists created by fiction programs in which they appeared as "tough," "cold," "antisocial," "unbelievers" or "foreigners". Gerbner also found that scientific research resulted in murder in nearly half of the 25 films in which it was portrayed. An example would be a psychologist who hypnotizes gorillas to kill girls who reject him. A typical plot is that of the obsessed scientist, whose inventions get out of control and kill him, to the obvious relief of the rest of society and the audience.

The other aspect of myths that Barthes emphasizes is their dynamism. As I said above, they change, and some can change quickly to overlap with the changing needs and values of the culture they belong to. For example, the myth about the British policeman that I referred to earlier has become outdated and anachronistic today. His last major television appearance was in *Dixon of Dock Green*.

Connotation and myth represent the main ways in which signs function at the second level of signification, that is, the level at which the interaction between the sign and the user/culture is most active.

*The symbols.* But Barthes (1977) also refers to a third way of signification at this level, which he calls symbolic. An object becomes a symbol when it acquires, through convention and use,

a meaning that enables it to stand in place of something else. A Rolls-Royce is a symbol of wealth, and a scene in a play where a man is forced to sell his Rolls-Royce can symbolize the failure of his business and the loss of his fortune. Barthes uses the example of the scene in Ivan the Terrible, in which the young tsar is baptized among gold coins, as a symbolic scene, in that gold is a symbol of wealth, power and status.

Barthes's ideas about the symbol are developed somewhat less systematically than those about connotation and myth, being, therefore, less satisfactory. We might prefer the terms used by Peirce. The Rolls-Royce is an index of wealth, but a symbol (in the Peircian sense, and not Barthesian) of the social status of its owner. Gold is an index of wealth, but a symbol of power.

Or it might be useful to leave the Saussurean tradition of linguistics and turn to the other two concepts widely used to describe aspects of semiosis. These are metaphor and metonymy. Jakobson (Jakobson and Halle, 1956) believes that these two concepts identify the fundamental ways in which messages perform their referential function.

Metaphor. If we say that a ship plowed the waves, we are using a metaphor. We take the action of a plow to hold the test. What we do is to express the unfamiliar in terms of the familiar (the metaphor assumes that the action of the plow is familiar, while that of the ship is not). Jargon terms are "vehicle" for the familiar and "content" for the unfamiliar.

Another characteristic to note is that a metaphor simultaneously exploits similarity and difference. Thus, we can say that the metaphor operates paradigmatically, because the vehicle and the content must assume enough similarities to be placed in the same paradigm, but also enough differences for a comparison to have the necessary element of contrast. They represent units with distinctive features within the paradigm. Thus, the metaphor "furrowed" belongs to the paradigm of verbs with the meaning of "to split".

This is the traditional literary definition of metaphor. When we shift our attention from arbitrary signs to iconic ones, we run into a series of problems.

*Metaphors* are somewhat rarer in visual languages and we will understand why after we discuss metonymy (below). Suffice it to say here that the visual language that operates most frequently on metaphorical bases is that of advertising. Often an event or object is given as a metaphor for a product.

The Mustangs of the Wild West are a metaphor for Marlboro cigarettes; waterfalls and natural green areas are a metaphor for menthol cigarettes. These represent clear, manifest metaphors, in which both the vehicle (mustangs and waterfalls) and the content (cigarettes) are visually present. Even here, the difference is minimized, although it is obvious. But there is currently a current of surrealist advertising that comes much closer to verbal metaphors, in that the difference is exploited as much as the similarity. This is a visual version of the "It's raining cigarettes" metaphor.

But metaphors are not only literary tools: Lakoff and Johnson (1980) showed that they have a much more important, everyday function. They are part of the way we make sense of our everyday experiences. Let's take two examples.

When we speak of "high" morals, of "falling" asleep, or of the "lower" classes, we speak metaphorically, and we use the same metaphor each time: here, the UP/DOWN spatial difference is made to act as a vehicle for a great variety of social experiences. It is a concrete, physical difference, used to give meaning to a number of somewhat more abstract social experiences. This difference, although natural, is not neutral: we humans believe that one of the main distinctions between humans and other animals is that we stood on our hind legs as part of an evolutionary process of "righting".

Differences between social classes, for example, might be thought of horizontally, from left to right - in fact, they are thought of vertically, from high to low. Likewise, artistic tastes are referred to as 'highbrow' or 'lowbrow', where 'high' brows belong to the 'upper' classes (and vice versa), as does 'high income' or a 'high' social profile. UP is always associated with consciousness and health (we "get on our feet" when we get well, but "fall" into a deep sleep or "fall" sick in bed) and with the dominant system of morality - "high" morality

If we add the fact that the gods are "above", in the heavens, the devils - "below", and life itself is "above" (Christ "rose" from the dead), while death is "below", we will begin to understand how such everyday metaphors fundamentally influence the way we think.

We're just using this metaphor: UP vs. DOWN to make sense of a wide range of diverse social abstractions such as god, life, death, health, morality, social standing, income and artistic taste, and by the way she puts them together, she operates ideologically. There is nothing natural that links high social position, high income and high morals, but giving them meaning through the same metaphor is one of the ways in which dominant values are spread in society.

The second example is the use of money as a metaphor for time. When we talk about "earning" time or "wasting" time, or "investing" time in a project, we think of it as if it were money. Of course, time is very different from money - it cannot be saved, one man cannot accumulate more time than another; it cannot be invested to produce even more time. The use of money as a metaphor for time is typical of our social values that we call the "Protestant work ethic": the metaphor implies that time not tied to productive work (which includes the right, thus "earned", to leisure) is "badly spent" - especially time "wasted" doing nothing or for self-pleasure. This metaphor represents a way of disciplining our thinking in a way specific to the ideology of the capitalist society centered on work and of which, moreover, it is a part.

Both metaphors presented are examples of what Lévi-Strauss called "the logic of the concrete". He claims that all societies give meaning to abstractions that are important to them, metaphorically embodying them in concrete experiences. These concrete metaphors, such as SUS or MONEY, then become "tools with which we think": they form our understanding of those abstractions, thus enabling us to conceptually manipulate them in our everyday experiences.

Such metaphors of everyday life differ from literary metaphors in several ways. They do not draw attention to themselves - so they do not invite us to consciously decode them. They are, therefore, more insidious, and the meanings derived from them more easily become part of the "common sense" of society, that is, they become part of the assumptions not subject to attention, taken for granted, which are widespread in society. Such common sense seems to be natural, but it is not - it is always arbitrary, always socially produced. Finally, it is ideological - the power of the ruling classes is partially maintained to the extent that the ideas of these classes can be translated into precepts of common sense for all other classes.

It depends on the ideological common sense, for example, that the "blue collars" (workers) see their social position as "inferior" to the management. The same ideological common sense makes us believe that having fun is a waste of time. Everyday metaphors are more ideological and hidden than literary ones - because of this, we should be more attentive to them and to the "common" sense they create.

*Metonymy.* If metaphor operates by permuting qualities from one plane of reality to another plane, metonymy works by associating meanings within the same plane. It is basically defined as making a part of something "stand in" for/instead of a whole. If we talk about the "crowned heads" of Europe, we are using a metonymy. For Jakobson, metonymies represent the predominant mode of the novel, while metaphors are specific to poetry. The representation of reality inevitably involves a metonymy: we choose a part of "reality" to "stand" for a whole.

The urban settings in which the police television series take place are metonymic - a photographed street is not intended to stand as a sign of that street, but represents a metonymy of a certain kind of city life - be it the sordidness of the poor neighborhoods, the suburban respectability or the sophisticated life of center.

The selection of metonymies is obviously essential, because from them the unknown remains of reality will be built. In a recent television program, *The Editors*, two frames were shown with pickets of demonstrators; one was of an ordinary group of people standing in front of a business, the other was of a group of workers violently fighting the police. The idea is that both cadres represented the same picket, on the same day. The second frame, of course, was the one shown that evening on television.

The selection of the metonymy determines what will be the rest of the image about the event that we are building, and trade unions frequently protest, because the metonymies used in the news lead to the creation, in the viewer's mind, of a very subjective and incomplete image of trade union activities.

James Monaco (1977) shows us how metonymies are used in films. For example, a frame that shows us a woman's head crying on a pillow with a pile of bills next to it is a metonymy of prostitution; he sees a posture or a picture that someone takes as a metonymy of the emotion that posture expresses.

Metonymies are powerful bearers of reality, because they operate indexically. They are a part of the whole they represent. But they differ from "natural" cues like smoke for fire in that

they involve highly arbitrary selection. The arbitrariness of the selection is often disguised or at least ignored, and the metonymy is made to appear as a natural index, thus giving it the status of "real", i.e. "something not to be questioned". But all news footage is metonymy, all involving this arbitrary selection.

Only one of the frames with the demonstrators was broadcast on the news, and the choice of what was to be broadcast was made based on a set of criteria. The first of these would be that of the information value. Galtung and Ruge (1973) showed how the dominant information value in this country (Great Britain) is constructed in such a way that an event will be broadcast if: it relates to elite personalities, it is negative, it is recent and it is surprising.

The second set of criteria is that of cultural values or myths. Our dominant myth about trade unions is that they are subversive, aggressive, hostile to the general good of the nation, and generally negative. Obviously, the second frame best suited both the dominant myth and the informational value. So he had to be the one selected.

Fiske and Hartley (1978) showed in detail how myths operate in television news. Myths operate metonymically in that a single sign (for example, that of the jovial policeman) stimulates us to construct the rest of the chain of concepts that constitute the myth, just as metonymy stimulates us to construct the whole of which it is a part. Both are powerful ways of communicating because they are disguised cues that don't bother you.

They exploit the "truth factor" of a natural index and build from it, by disguising its indexical nature. We are aware that smoke is not fire, and black clouds are not storms; but we are not aware to the same extent that a group of demonstrators is not the same as all the demonstrators, and a frame representing a policeman is not the same as law enforcement. Disguise also extends to the arbitrariness of sign selection. Other signs chosen to represent a policeman or a group of demonstrators would activate other myths; other metonymies would create other images of reality. The main purpose of semiotic analysis is to reveal this disguise.

Metonymies, myths, and allusions operate in similar ways in that their signs and referents are on the same plane: they function by contiguity. There is no permutation like that involved in metaphors, nor any explicit arbitrariness, like in symbols. Hawkes (1977) suggests that metonymies operate syntagmatically. We could add myths and clues to these, insofar as all three categories require the reader to construct the rest of the sentence with the help of the part provided by the respective sign.

*Paradigms.* Jakobson supported the idea that metaphor represents the usual mode of poetry, while metonymy represents the mode of the realistic novel. The previous section showed why "realism" is necessarily a metonymic mode of communication and thus provided the reasons for the relative rarity of metaphor in the representational arts or photography, which are both realistic. The metaphor is not necessarily realistic, but imaginative: it is not delimited, on the principle of contiguity, in the same plane of meaning. Instead, it assumes, according to the association principle, that we will look for similarities

between manifestly different plans. It takes imagination to associate a plow with the movement of a ship in water.

Obscure, artistic metaphors require an even greater effort of imagination on the part of the reader. "I have measured my whole life in coffee spoons" requires considerable imagination, so that the reader associates the characteristics of coffee spoons with time measuring instruments: coffee spoons (metonyms of the act of drinking coffee as a social act, superficial) take on the associated ideas – regularity and repetitiveness, along with the feeling of being the most significant event in a person's life. Associating cigarettes with rain requires the same effort of imagination.

This principle of association involves the permutation of property values from one plane of reality or meanings to another. This permutation is carried out between units of a paradigm (for example, ships plow, cut, split, etc. or I measured my life in birthdays, winters, number of lost jobs, teaspoons of coffee, etc.) - thus, the metaphor operates paradigmatic. Exactly from this, the metaphor draws its poetic, imaginative effect, because normal paradigms can, through imagination, also include the new, the surprising, the "creative". Thus, the usual paradigm of "ways to measure time/life" can be extended to include "coffee spoons". Or we can, with the help of imagination, create a special paradigm that includes "cigarettes" and "raindrops": one made up of long, thin, rounded objects, usually seen in large numbers.

Other possible units of this paradigm could be matchsticks (too close to cigarettes to exploit the quality of difference necessary for this type of original metaphor); "logs waiting in the forest to be loaded for transport" or "heaps of plumbing pipes on a construction site". These last two variants could represent imaginative paradigmatic choices as metaphors for cigarettes.

So, metonymies operate syntagmatically to obtain the realistic effect, and metaphors operate paradigmatically for the surreal or imaginative effect. From this point of view, the connotations work metaphorically. To "read" a less clear photograph as romantic involves an imaginative permutation of properties from the plane of feelings to the plane of the construction of the signifier. The poor focus of the photo is a metaphor for the feeling. A poorly focused frame is a metaphor for the action of recall. Crown-shaped gold buttons and gilded braids are metaphors of high social position or the rank of a general. But these connotations are constructed rather than true metaphors, in that, although they involve an imaginative permutation of properties from one plane to another, they emphasize the similarities between the planes and minimize the difference between them.

### 3. Imaging communication

*Iconicity* abounds in all domains of human representation. Photographs, portraits, maps, Roman numerals such as I, II, and III are iconic forms designed or created to resemble their referents in a visual way. Onomatopoeic words such as *drip*, *plop*, *bang*, *screech* are vocal icons simulating the sounds that certain things, actions, or movements are perceived to make. Perfumes are olfactory icons imitating natural scents. Chemical food additives are gustatory icons simulating the taste of natural foods. A block with a letter of the alphabet carved into it

is a tactile icon allowing the user to figure out the letter's shape by touch. Peirce called the object of an icon the "immediate" object. He termed the actual referent, which lies outside the sign and may be represented in an infinite number of ways the "dynamical" object.

It is relevant to note that, before Peirce's use of the term to refer to a specific type of sign, icon was used in art to refer to the image of a religious figure or event. The word is still used with this meaning today. The icon is believed to be sacred in itself and, thus, to aid believers in contacting the represented figure. Few early painted icons survive, but a small group of sixth- and seventh-century encaustic paintings on wooden panels, from the Monastery of Saint Catherine on Mount Sinai, remains. Beginning in the eighth century, *iconoclasm*, a movement that condemned the worship of icons as idolatrous, contributed to the destruction of much religious art throughout the Byzantine Christian world. It was not until the next century that making of icons was restored to its former position of honor in religious observance.

Iconicity is evidence that human perception is highly attentive to recurrent patterns of color, shape, dimension, movement, sound, taste, etc. The first inscriptions, cave drawings, and pictographic signs of humanity indicate that iconicity has always played an important role in human development. The imitative hand movements used to portray shapes were transferred to a cave wall or to an object by means of some sharp cutting tool, constituting our first genuine works of art. The earliest of these goes back some 30,000 years. They took two main forms:

- (1) the vivid carvings of animals that cover the roofs and walls of caves, such as those at Lascaux in France and Altamira in Spain;
- (2) the small sculptures and relief carvings of animals and female figures found in caves throughout Europe.

As the hand movements used to make such works of art became more abbreviated, the figures became more condensed and abstract. This led to the invention of writing. The earliest form of writing was, thus, vastly different from the alphabetic or syllabic writing systems that we use today. The work of Schmandt-Besserat (1992) has shown, in fact, that the earliest precursors of modern writing systems were patternmaking forms, such as those found on clay tokens discovered in western Asia from the Neolithic era. The tokens were used as image-making objects.

Iconicity is also evident in childhood development. The relevant scientific literature makes it saliently obvious that children invariably pass through an initial stage of gesticulation and vocal sound imitation before they develop full language. Gestures used for practical purposes (e.g., pointing to something desired) and are probably reinforced by osmosis with adult gestures. It is relevant to note that, although vocal language eventually becomes the dominant form of communication among human beings, the gestural modality does not vanish completely.

It remains a functional subsystem of human communication that can always be utilized as a more generic form when vocal interaction is impossible or limited. This happens typically

when two interlocutors speak different languages. And, of course, for individuals with impaired vocal organs, gesture constitutes the only possible mode of communication.

Iconicity also shows up in the tendency of children to make scribbles and elemental drawings at about the same time that they utter their first words. If given drawing materials around the age of two or three, young children instinctively start scribbling on the drawing surface. As time passes, their scrawls become more and more controlled: geometrical shapes such as crude circles, crosses, and rectangles, at first accidentally produced, are repeated and gradually perfected. Although children, with adult prompting, may learn to label circles as "suns" or "faces," they do not seem inclined at first to draw anything in particular.

The act of making shapes appears to be pleasurable and satisfying in itself. Of course, shapes eventually suggest "things" to the child as his or her ability to use language for naming purposes develops, but in the beginning, the child seems to engage in drawing solely for the pleasure of it, without attaching explicit associations of meaning to it. It is truly an example of "art for art's sake."

In the adult world, icons serve a vast range of social functions. They are found on posters, on toilet doors indicating "male" and "female," and soon. In our digital world, the very term icon is used to designate a tiny picture on a computer screen. Each icon represents a command. The system of icons, pointer, and mouse is known as a graphical user interface (GUI), a system that provides a user-friendly way of interacting with a computer. Users can usually tell by the icons how to get the computer to do what they want. Without a GUI, the computer screen is black, and the only way to tell the computer what to do is to type in commands.

There is little doubt that GUIs contributed to the rise of the personal computer in the mid-1980s, starting in 1984 when the Apple Computer company introduced the Macintosh, the first personal computer to include a GUI. Because they make computers easy to use, GUI's quickly became standard throughout the computer industry. Today, most users encounter only GUI-based programs and never have to type in commands to control their computers.

*Symbolism.* A symbol stands for its referent in a conventional way. Words in general are symbols. But any signifier - an object, a sound, a figure, etc. - can be symbolic. A cross figure can stand for the concept "Christianity", a V-sign made with the index and middle fingers can stand for "peace", *white* can stand for "cleanliness", "purity", "innocence" and *dark* for "uncleanness", "impurity", "corruption" and the list could go on and on. These meanings are all established by social convention or through the channel of historical tradition.

Iconic, indexical and symbolic modes of representation often converge in the creation of a sign or text.

The signifier of this sign consists of two straight lines intersecting at right angles. The vertical line has an arrowhead. This cross figure is, clearly, iconic because its shape visually resembles a "crossroads". But since the cross figure could easily be used to represent a "church" or a "hospital" in other situations (without the arrowhead of course), it is also symbolic insofar as we need to know that it has been chosen, by convention, to constitute a particular type of

traffic sign. Finally, the sign is also an index because when it is placed near an actual crossroads it indicates that one is about to reach it physically, as indicated by the arrowhead.

Nowhere has symbolism borne more remarkable fruits than in mathematics and science. The science of geometry, for instance, has helped human beings solve engineering dilemmas since ancient times. Here is a simple demonstration of this. Suppose that a tunnel is to be dug right through the middle of a mountain. Since the length of the tunnel cannot be measured directly, the Pythagorean Theorem suggests a plan for doing so without direct measurement.

A point A on one side of the boulder and another point B on the other are chosen such that both points remain visible from a point C to the right. C is chosen so that angle ACB is a right angle (90°). Then, by aligning A with A' (the entrance to the mountain on one side) and B with B' (the entrance to the mountain on the other side) the required and "unmeasurable" length can be seen to be A'B':

How can A'B' be determined without actual measurement? First, we measure AC and BC. We plug the values into the equation  $AB^2 = AC^2 + BC^2$  the relevant Pythagorean equation in this case. This yields a measure for AB. Next, we measure the distances AA' and BB'. When we subtract these two distances from AB we get the length of A'B':  $AB - (AA' + BB') = A'B'$ . That is the length required to dig a tunnel through the mountain.

It is important to note, however, that even though the symbols used to represent the whole situation were based largely on conventional practices, the use of a diagram reveals a need to supplement symbolic reasoning with iconicity. Knowledge of how to represent a real-life physical situation in a symbolic way is a truly remarkable achievement of the human mind. It allows us to eliminate physical intervention through representations of the real world by means of symbols and diagrams that allow us, in turn, to experiment mentally with that very world to see what they yield.

Symbolism is everywhere. It plays, for instance, an important part in religious life - the cross symbolizes Christ's death and all Christian beliefs; the Star of David represents Jewish teachings, and so on. People throughout the world have agreed on certain symbols to serve as a shorthand system for recording and recalling information.

Every branch of science has its own system - astronomy uses a set of ancient symbols to identify the sun, the moon, the planets, and the stars; in mathematics, Greek letters and oilier symbols make up an abbreviated language; and so on and so forth. Specific kinds of symbols appear in such fields as commerce, engineering, medicine, packaging, and transportation. The chart on page 34 shows some common visual symbols used in various fields of human endeavor and enterprise:

All countries have official or unofficial national symbols. A flag or an anthem may symbolize a nation. Familiar symbols of the United States include Uncle Sam and the Statue of Liberty. Symbols for other countries include the maple leaf for Canada, John Bull for England, and the *fleur-de-lis* for France. Political parties also use symbols for identification. In the United States, a donkey symbolizes the Democratic Party, and an elephant represents the Republican Party.

Throughout early history, many people considered the swastika a good luck charm. But in 1920, the Nazi Party of Germany adopted it as its symbol. The swastika came to represent the Nazi attempt to conquer Europe. Today, it ranks as one of the most hated symbols of history.

*Culture.* The emergence of culture onto the evolutionary scene can be traced originally to the development within the human species of an extremely large brain. Humankind's ability and disposition to think and plan consciously, to transmit learned skills.

Evidence from the field of paleontology, the science of fossil interpretation, suggests that cultures have ancient origins. The fashioning of tools, the earmark of early cultures, was accomplished at least 2.5 million years ago. as was, probably, the use of gesture for communication. Gradually, planned hunting, fire-making, the weaving of cloth, and the ritualized burial of the dead became well-established characteristics of hominid groups.

By about 100,000 years ago, the making of art, communication by means of vocal language, and communally established systems of ethics became the distinctive attributes of the first human tribes. Since then Culture, in the sense of individuals living together, thinking and planning consciously, transmitting skills and systems of social relationships to each other through language, and working together to modify the environment, has become the defining attribute of the human species. Simply put, without culture human beings would have great difficulty surviving. Anthropologist Clifford Geertz (1973: 23) has perhaps best expressed the paradox of the human condition by stating wryly that without culture human beings would be "unworkable monstrosities, with few useful instincts, few- recognizable sentiments, and no intellect."

So, the question of what is culture is hardly a trivial one. To understand human nature is to unravel the *raison d'être* of culture. Although interest in culture is as old as human history', the first scientific definition of culture had to await the nineteenth century, when the British anthropologist Edward B. Tylor (1832-1917) defined it in his 1871 book *Primitive Culture* as "a complex whole including knowledge, belief, art, morals, law, custom, and any other capability or habit acquired by human beings as members of society."

Tylor's definition was also one of the first ever to differentiate qualitatively between culture and society. Although these terms continue to be used commonly as synonyms in many languages, in actual fact they refer to different things. Within a social collectivity, there can, and frequently does, exist more than one culture, in an opposite manner, several societies can be thought of as belonging to the same general culture - for example, European culture. Asian culture, African culture, etc. Societies are simultaneously the geographical and historical "reifications" (manifestations) of cultures: that is, they have existence in time and space.

General philosophical interest in the phenomenon of culture is as old as civilization itself. It can be seen, for instance, in the written descriptions of the first travelers of the ancient world who were captivated by the behavioral diversity that they saw among the peoples they visited. Those who have made it their objective to study culture have tended to do so by means of an essentially descriptive, or so-called ethnographic, method. This consists in chronicling first-hand the characteristics of each culture's language, artifacts, modes of dress, rites of passage, religious and mythological systems of belief, rituals, ceremonies, and

indigenous art forms. The starting point for the study of culture is the Greek historian Herodotus (c. 484-425 BC), who spent a large part of his life traveling through Asia, Babylon, Egypt, and Greece, noting and recording for posterity the differences he perceived (with respect to Athenian culture) in the language, dress, food, etiquette, legends, and rituals of the people he came across.

The annotations he made constitute the first significant accounts of the cultures of virtually the entire ancient Middle East, including those of the Scythians, Medes, Persians, Assyrians, and Egyptians. Inspired by Herodotus, other ancient historians, like the Roman Tacitus (c. AD 55- 117). also made it a point to describe systematically and comparatively the languages, character, manners, and geographical distribution of the peoples they visited.

In the nineteenth century, German social theorist Karl Marx (1818-1883) argued that new forms of culture emerged not as reflexes of genetic adaptations, but as consequences of individuals struggling to gain control over their personal and social lives. At the turn of the twentieth century, the American anthropologist Franz Boas (1858 -1942) argued that culture was so powerful that it shaped worldview. Boas's account came shortly thereafter to be known as cultural relativism. Among Boas's students at Columbia University in the 1920s and 1930s, Edward Sapir (1884-1939), Margaret Mead (1901-1978), and Ruth Benedict (1887-1948) became well-known cultural relativists.

Sapir (1921) devoted his career to determining the extent to which the language of a culture shaped the thought patterns of its users. Mead (1939, 1950) sought to unravel how child-rearing practices influenced the behavior and temperament of the maturing individual. Benedict (1934) was fascinated by the fact that every culture developed its own particular canons of morality and lifestyle that largely determined the choices individuals made throughout their life cycle. From the moment of birth, the customs into which an individual is born shape his or her behavior and worldview. By the time the child can talk, he or she has become a creature of his or her culture-its habits are his or her habits, its beliefs his or her beliefs, its challenges his or her challenges.

The Polish-born British anthropologist Bronislaw Malinowski (1884—1942) argued that cultures came about so that the human species could solve similar basic physical and moral problems the world over. Malinowski claimed that the symbols, codes, rituals, and institutions that humans created, no matter how strange they might at first seem, had universal structural properties that allowed people everywhere to solve similar life problems.

The British anthropologist Alfred Radcliffe-Brown (1881-1955) similarly noted that in a specific cultural context even a physical response like weeping could hardly be explained in purely biological terms. Among the Andaman Islanders, in the east Bay of Bengal, he found that it was not primarily an expression of joy or sorrow, but rather a response to social situations characterizing such meaningful events as peace-making, marriage, and the reunion of long-separated intimates. In crying together, the people renewed their ties of solidarity.

The basic question of the relation between Nature and Culture continues to bog down a lot of scholarship to this day. On the side of Nature today are so-called sociobiologists, who claim that Nature has Culture on a leash. The emergence of culture, sociobiologists assert, has taken

place as a survival strategy—the body's survival mechanisms have been gradually replaced by the survival formats provided by culture.

The sociobiological perspective has gained widespread popularity beyond academia in large part as a result of the publication of accessibly written books such as those by the contemporary British biologist Richard Dawkins, *The Selfish Gene* (1976), *The Blind Watchmaker* (1987), *River Out of Eden* (1995). With great rhetorical deftness and aplomb, Dawkins portrays cultures as collective adaptive systems that emerged in the human species to enhance its survivability and future progress by replacing the functions of genes with those of cultural units that he calls memes - a word he coined in direct imitation of the word genes.

Dawkins defines memes as replicating patterns of information (ideas, laws, clothing fashions, art works, etc.) and of behavior (marriage rites, love rituals, religious ceremonies, etc.) that people inherit directly from their cultures. Like genes, memes involve no intentionality on the part of the receiving human organism. Being part of culture, the human being takes them in unreflectively from birth, and then becomes part of a collective system that passes them on just as unreflectively to subsequent generations, which improve adaptively over preceding generations.

The memetic code is thus responsible for cultural progress, advancement, and betterment, having become the primary agent in the human species' evolutionary thrust forward. Dawkins's clever proposal poses an obvious challenge to virtually everything that has been written in traditional philosophy, theology, and the social sciences on human nature. If Dawkins is correct, then the search for meaning to existence beyond physical survival is essentially over. Any attempt to seek metaphysical meaning to life would be explained as one of the intellectual effects of culturally inherited memes such as soul, God, and afterlife. To sociobiologists, memes have arisen simply to help human beings cope with their particular form of consciousness, thus enhancing their collective survivability as a species-no more, no less.

In my opinion, Dawkins's case is, at its core, a deceptive metaphorical one. Genes can be identified and separated from organisms, and then studied, altered, and even cloned physically. All this is scientific fact. Memes, on the other hand, are figments of Dawkins's imagination. Only in a technological society that is being constantly exposed to the convincing discourse of evolutionary biology, to advancements in cloning and genetic engineering, is the portrayal of human ideas, information, and behavioral patterns as if they were genes a believable one. Indeed, even before Dawkins put forward his meme theory, the parallelism between ideas and genes was already a firmly entrenched one.

The key figure behind sociobiological theory and research is the American biologist E. O. Wilson (1929), known for his work on the effects of natural selection on insects. Since the mid-1950s, Wilson has constantly maintained that the psychological capacities and social behaviors that humans manifest are genetically based, enhancing reproductive success and survival. Thus, characteristics such as heroism and altruism, for instance, should be understood as evolutionary outcomes, not as the result of the particular psychic nature of humanity.

Moreover, he sees the creative capacities undergirding language, art, scientific thinking, etc., as originating in the same pool of genetic responses that have helped the human organism solve physical problems of survival and species continuity. But so far, all Wilson has produced is a theory. He has not produced any empirical evidence to substantiate any of his claims. Moreover, one can legitimately ask: What do such things as paintings, musical compositions, marriage rites, burial rites have to do with survival or reproductive success? To paraphrase the French philosopher Michel Foucault (1926-1984), human beings have, since their origins, sought to understand and define their identities and their states of consciousness. They have done so by ascribing them to Nature, human effort, or God. As others have done in the past, Wilson has simply placed most of his bets on Nature.

Finding hard scientific evidence to explain why culture emerged from the course of human evolution has proved to be a monumental challenge. So, scholars have understandably resorted to speculating or reasoning inferentially. What would happen if modern human beings were somehow forced to survive without culture? The best examples of this form of inferential thinking have, actually, come not from scientists or philosophers, but from writers of fiction - Daniel Defoe's novel *Robinson Crusoe* (1719) and William Golding's *Lord of the Flies* (1954), for instance, deal with intriguing fictional "test cases" of people forced to live outside culture, inferring what would happen to them because of it and how they would respond to it.

*Diagrams.* Saussure called symbols what Peirce called icons and Hjelmslev ranked diagrams and games among the 'symbolic systems', meaning by symbolic systems those which are interpretable but not biplanar. Thus, Hjelmslev listed among symbols those signs that are isomorphic with their interpretation, such as in:

"the case of pure games, in the interpretation of which there is an entity of content corresponding to each entity of expression (chesspiece or the like) so that if two planes are tentatively posited the functional net will be entirely the same in both. *Symbol* should be used only for entities that are isomorphic with their interpretation, entities that are depictions or emblems, like Thorvaldsen's Christ as a symbol for compassion, the hammer and the sickle as a symbol for Communism. There seems to be an essential affinity between the interpretable pieces of a game and isomorphic symbols, in that neither permits the further analysis into figures."

Saussure and Hjelmslev spoke in fact of signs ruled by *ratio difficilis* (Eco, 1976) where the expression maps, according to preestablished projection rules, some features of the corresponding content. In this sense one can call symbols those used by algebra and formal logic, at least insofar as their syntactic structure is concerned. They are such because every transformation performed upon the syntactical arrangement of the expression mirrors a possible rearrangement in the structure of their content. If, on a geographical map, one alters the borderline between France and Germany, one can forecast what would happen if in a possible world (the new content corresponding to the manipulated expression) the geopolitical definition of both countries were different. An algebraic formula and a map are diagrams. That is why in electrotechnics Seimetz and Kennelly (following Helmholtz) called 'symbolic' the method postulating biunivocal correspondence between the ensemble of sinusoidal functions of the same frequency (which incidentally are expressed by mere

conventional and by no means 'analogical' devices) and the ensemble of points upon an Arnauld-Gauss plane of rotating vectors. The rotation of a vector is a diagram that implies different sinusoidal functions.

It is, however, clear that there is a difference between diagrams and other phenomena labeled as symbols. Diagrams are based on precisely coded transformational and projective rules, in the same way in which in a musical score the 'symbolic' relation between rising points on the stave (spatial height) and frequency increments (phonic height) are ruled by a precise proportional criterion. On the contrary, many so-called symbols are characterized by the vagueness of their content and by the fact that the correlation is not precoded but invented at the same moment in which the expression is produced.

In Hjelmslev's definition the category of symbols encompasses both phenomena, without acknowledging the radical difference between the way in which the Christ of Thorwaldsen is a symbol for compassion and the way in which a move on the chessboard has a symbolic nature. A different chess move would imply different interpretations of the further course of the game, whereas we do not know how many manipulations the Christ of Thorwaldsen should undertake in order to stand for something other than compassion.

Moreover, a diagram such as the map of a subway is certainly ruled by ratio difficilis, but it is neither vague nor indirect: its meaning is a 'literal' one; one can extrapolate from one's operations upon the map a precise possible state of affairs. It could not be said that this possible state of affairs is a sort of 'second' sense that the map conveys. In the same way as one can interpret the world father by inferring that if there is a father there should be either a son or a daughter, thus, if one detects on the map that, for reaching the node C from the node A, one must pass through the node B, one can infer that, if A and C were tied by a direct connection, the B would be avoided. In both cases the word and the map tell what they tell as soon as they are correctly interpreted according to given cultural criteria.

Rather different, on the contrary, is the image of the serpent biting its own tail. It is defined as a symbol because there is the strong feeling that it not only represents a snake in an unusual position but that it also aims at communicating something more.

*Oneiric symbols.* In *The Interpretation of Dreams* (1899), Freud speaks of oneiric symbols. Dreams convey images which stand for something else, and Freud is interested in establishing how a "latent content" is organized by the oneiric labor into the form of a "manifest content." The latent content is transformed by the dream distortion and the dream is the disguised fulfillment of repressed wishes. Freud does not interpret (as the ancient oneiromancy used to do) dreams as organic allegories. Allegories do have a logic, whereas dreams do not. The psychoanalytic interpretation does not work upon organic oneiric discourses but upon fragments and their idiosyncratic mechanisms of substitution. Dreams work through condensation and displacement and (even though Freud does not say it explicitly), since they do not have a logic, they have a rhetoric. Condensation and displacement are modalities of tropic substitution.

In the dream of the botanical monography the botanic symbol condenses Gärtner, Flora, the forgotten flowers, the flowers loved by the author's wife, a university exam: "Each of the

elements of the dream's content turns out to have been 'overdetermined' - to have been represented in the dream-thoughts many times over".

Freud knows that the oneiric image is correlated to its content by a *son of ratio difficilis*, since it displays certain features that in some way map equivalent features of the latent content. But, as happens in all cases of *ratio difficilis*, the mapping relationship takes place between selected features of the expression and selected feature or the content. To decide which properties have to be selected, that is, which properties are co-textually pertinent, is exactly the typical labor performed by dreams, according to certain requirements of plasticity, immediacy, representability.

Freud knows that oneiric symbols are not 'stenographic' signs endowed with a preestablished meaning; however, he tries to anchor these expressions to an interpretable content. To find such an anchorage, Freud distinguishes between those oneiric symbols produced by idiosyncratic reasons, which must be interpreted by using the patient's associations as their idiolectal encyclopedia, and those whose symbolism "is not peculiar to dreams, but is characteristic of unconscious ideation, in particular among the people, and it is to be found in folklore, and in popular myths, legends, linguistic idioms, proverbial wisdom, and current jokes" (1899).

It is true that every dreamer shows a remarkable plasticity in employing the most disparate images for symbolic purposes, but Freud tries repeatedly to find out a symbolic code so as to explain the intersubjective (or cultural) meaning of umbrellas, sticks, railway travels, staircases, and so on.

To look for an oneiric code means to touch on the hypothesis of a collective unconscious, as Jung will do; but Freud understands that in doing so one risks going backward, to the very sources of human mental activity, where there will no longer be a code. On the other hand, a code is indispensable in order to speak intersubjectively of a semantics of dreams beyond the idiosyncratic attitudes of the dreaming subjects.

Thus Freud links the decoding of oneiric symbols to verbal puns, and in doing so he suggests that the knowledge of linguistic mechanisms can help one to understand the oneiric strategies of condensation and displacement. Freud suggests that the code can be reconstructed and that it is neither universal nor innate. but is historical, semiotic, and depends on the cultural encyclopedia of the dreamer.

This assumption is not, however, so unambiguous. The dream must be interpreted according to a linguistic and cultural competence (that is, according to a competence which is external to the world of dreams); nevertheless, every oneiric image can be polysemous, as Freud explicitly says, and must be referred to the idiolect of the dreamer as well as to the whole dream as its co-text. Notwithstanding these perplexities and contradictions. Freud is undoubtedly looking for 'correct' interpretations of dreams, and in this sense his oneiric symbols are not constitutively vague. Freud has thus elaborated on oneiric rhetoric, with its own rules for generating and for interpreting images.

## **ADVERTISING IMAGE.**

The analysis of an image is preceded by several steps:

- (1) Definition of objectives and methods of analysis;
- (2) Study of image function;
- (3) Presentation of the context in which the image was created/received.

A good analysis, in general, presupposes a correct delimitation of the problem, the hypotheses and the objectives, which in turn determine the working method and its conclusions. Analysis for the sake of analysis is not justified. It must serve a project and it will be the one that will give it orientation and that will allow the elaboration of its methodology.

It is obvious that there is no absolute and generally valid analysis. Instead, there are a variety of possibilities for approaching an object under research, possibilities that are discovered depending on the objectives that the respective analysis proposes.

Among the images that lend themselves best to semiotic analysis are advertising images that are almost a prototype of the media image or even of the image in general.

The advertising image was one of the first objects of study of semiotics in the 60s. Semiotics, in turn, has contributed to enriching the theoretical arsenal of advertising through concepts and methods of analysis.

Advertising is indeed a great consumer of theory, or, at least, of theoretical tools that allow the analysis of the reception of media forms and their way of representation and, implicitly, the understanding of the individual in his relationships with his own desires and motivations, in his interaction with other individuals in society. Advertising has resorted, since the beginning, to research from the social sciences, from applied psychology, to the methods of sociological investigation or statistical analysis.

The first behavioral research, inspired by behaviorism, did not allow finding an answer in the stimulus/response scheme. In order to get out of this first mechanistic view that risks blocking the study of consumer behavior, it was necessary to resort to the hierarchy models of learning based on the following three stages: cognitive, affective and behavioral. Then followed the research of motivations, which set as its goal the analysis of the pre-conscious and conscious needs of the consumer satisfied by the purchase of certain products (security, narcissism, identification with a certain social class, etc.). They used not only psychology, but also psychoanalysis, sociology and anthropology. Socio-cultural approaches allowed the measurement of public effectiveness by using ethnographic methods to analyze their own sociology.

All these practical and theoretical tools failed, however, to lead to the identification of a valid general method, a miraculous recipe to ensure the description of consumer behavior.

The theoretical study of image communication was initially focused on the field of video imaging and film. Regarding the still image, the first studies done in the 1970s still serve as elaborations of the current analysis grids, even if they are reshaped according to the particular objectives of the analysis. These researches had a special influence not only on the manufacturing/creation process of advertising images, but also for testing the degree of understanding of the messages, the way they are interpreted, therefore for the study of reception and, implicitly, of their effectiveness.

### **STATIC FUNCTIONAL IMAGE.**

According to the definition given by Claude Cossette in *La publicité de A à Z: dictionnaire technique français-anglais*, the image is:

(1) Any form of graphic representation of an object or concept used for illustration in advertising (graphics);

(2) A mental representation made from a set of external stimuli (picture).

After this general image definition, Cossette's dictionary discusses separately brand image, synthesis image and finally functional image.

The functional image is, according to Cossette, that image that has been made with the aim of conveying a precise message. Cossette gives the following examples of functional images: city plans, photo reports, microscopic images from medical research or telescopes made by astronomers, and finally, advertising images. All these images have in common the purpose for which they were created, which is to convey precise information, differentiating, in this way, from the (artistic) images that an author uses to express himself through projections of his imaginary universe.

The functional image is an image designed according to a code, consciously or intuitively, and made on a physical support with the aim of communicating certain information. Functional images can be used in pedagogy, in journalism, in the exact sciences, but also in advertising.

The four postulates that were the basis for the creation of static functional images came from the analysis of the effect these images can have on the receiver:

(1) *The aesthetic-perceptive postulate.* According to the followers of this postulate, the essential qualities of a message are represented by its ability to stimulate the receiver's perceptive system and the aesthetic qualities capable of moving it. A good message would therefore be equivalent to a beautiful and original message. This was the only postulate that governed the production of images until 1940. The producers of images were generally artists who had studied at high art schools and advertising images appeared in the form of advertising posters like those signed, in France, by Toulouse-Lautrec.

The aim of these artists was to strike the eye with aggressive or warm colors, with soft or sharp shapes. Their objective was to attract attention. The poster maker also had as his goal the creation of a work of art, considering himself, equally, an artist.

According to this first postulate, the emphasis of the message falls on the image, the text seeing only the identification of a brand or the proposal of a slogan. In this way, argumentation (visual or textual) was reduced to a simple form of expression. In the United States, messages appeared later in which beautiful images were replaced by realistic photos that responded to the following postulate.

(2) *The argumentative postulate.* The argumentative postulate dominated American advertising, being frequently used, starting in 1940, in the campaigns produced by the major international agencies.

Adherents of this postulate are convinced that a visual message can only convince if it proposes a sales argument named after the American advertising specialist Rosser Reeves (1960) a USP (Unique Selling Proposition). The text is the one that dominates the image and the image does not appear, in this case, except to illustrate what the title, theme, slogan, etc. say.

(3) *The motivational postulate.* The motivational postulate appears around the same time, also in the United States. According to this postulate, what matters for effective mass communication is neither the text nor the image, but the motivation contained in the message. Under these conditions, it becomes important to identify the type of request to which the intended recipients will react. In this case, communication is coordinated by psycho-sociologists, the image and the word serving only to give shape to their concepts.

The image must, therefore, be extremely suggestive either from a rational point of view (argumentationists) or from an affective point of view (motivationists), between these two directions a struggle will appear that will continue until around the 60s when Roland Barthes marks the appearance of the fourth postulate.

(4) *The semiological postulate.* According to the semiological postulate, the formal structure of signs - image or text - governs the content of persuasive messages. This postulate refers to the establishment of the necessary conditions for the effective transmission of the desired information in an affective and rational plan.

In order to create functional images that respond to this postulate (semantically saturated images) there is no need for artists, the aesthetic part of the message matters less from this perspective. The message-image will address the recipient's consciousness, engaging his perceptive, logical, aesthetic, motivational, etc. system. to convince.

#### **FROM SIGNIFICANT TO SIGNIFICANT.**

In 1964, in the *Rhetoric of the Image*, Roland Barthes aims to see if the image contains signs and builds his own method by which he can carry out the study.

Barthes postulates, to begin with, that images have the same structure as the linguistic sign. Then he considers that, if he starts from what he understands from the advertising message

he is analyzing, he starts from the signified. So, looking for the element or elements that cause these signifiers, it will associate signifiers with them and thus find full signs.

In this way, Barthes shows how the concept of Italianness, the signifier of an advertisement for Panzani pasta, is produced by different types of signifiers:

(1) *a linguistic signifier*: the Italian sonority of the proper noun Panzani;

(2) *a plastic signifier*: the green, white, red colors that evoke the Italian flag;

(3) *iconic signifiers*: represented by objects determined from a socio-cultural point of view: tomatoes, peppers, onions, pasta packages, box of sauce, cheese.

This analysis starts from the signified to find the signifiers and thus reconstructs the signs that make up the image. Barthes concludes that the image is made up of different types of signs: linguistic, iconic and plastic which, together, build a global and implicit meaning, integrating, in the case of Panzani pasta, the musicality of language, the idea of nation and that of Mediterranean cuisine.

If the objective of the analysis is to discover the implicit messages conveyed by an advertisement, or any other visual message, it will proceed in the opposite direction, starting from the signifiers in order to reconstruct the meaning of the message:

The inventory of the different types of signifiers present in the message can be made and, then, meanings can be found that are associated with them through a convention or through the usual way of use. The formulation of the synthesis of these meanings can be considered as representing the implicit message conveyed by the respective image. However, it should be noted that such an interpretation will be relativized depending on the context of sending and receiving the message and will become more plausible if it is carried out in a group, the common points of a collective analysis being those that can determine the limits of such an interpretation.

Researching the different elements that make up a message can be done through the classic switching process used in linguistics.

Indeed, any message, regardless of its form (visual or linguistic), develops along two axes. On the horizontal axis, called the syntagmatic axis, the elements that make up the message follow each other in time or space, combine with each other and contribute together to the construction of meaning. These elements can be permuted, that is, they can change their position, but they cannot be replaced by others or removed. On the vertical axis, called the paradigmatic axis, the elements that belong to the same class are written and from which those that will be used to construct the message are selected. On the paradigmatic axis, switches can be made, as a result of which an element is replaced by another element of the same class.

The switching principle allows replacing a unit, a relatively autonomous element, with another. This means that we must have at our disposal elements similar to those in the

message, but absent from it. Thus, the moment I see red in the message, I understand that I don't see green, nor blue, nor yellow, etc. I see curved lines and not straight lines. I see a triangle and not a square or a rectangle, etc. This type of mental association that allows the identification of the elements that make up the image (plastic signs: color, shapes) also extends to the identification of different classes of elements: I see a man and not a woman, or a child, or an animal, or I don't see no living thing; the clothes are country clothes, and not city or evening clothes (iconic signs: recognizable motifs); there is written text and it is black and not red, etc. (linguistic signs: text).

Although the segmentation of a visual language is a difficult operation and not always possible because it is not discontinuous, like language, but continuous, the mental exercise of switching has the merit of allowing the interpretation of colors, shapes, reasons for what they are, which is done relatively spontaneously, but mostly for what I am not. This method adds to the simple analysis of the present elements that of choosing certain elements instead of others, considerably enriching the understanding of the message.

### **CLASSICAL RHETORIC.**

A very old discipline dating back to ancient Greece, classical rhetoric has marked the entire Western culture. Etymologically taught until the middle of the 20th century, classical rhetoric goes through a renewal process in the 60s determined by formalism and modern linguistics, psychoanalysis and then structuralism.

The old fields of rhetoric were:

(1) *Inventio*: invention consists in finding topics, arguments and techniques of persuasion according to the chosen theme or cause (identification of ideas).

(2) *Dispositio*: corresponds to the realization of the important parts of the speech (the search for the most effective plan) which are then distributed in an order that follows from the genre addressed (the main idea of an essay is placed at the end of it, while the rest of it appears first in a newspaper article).

(3) *Elocutio*: corresponds to the choice of the right style, that is, the choice of words and their internal organization in the phrase, so of the figures of speech.

These figures can act at the syntagmatic level (figures of phrase) or at the paradigmatic level (figures of words, tropes). Figures of speech consist in manipulating the basic syntactic structure of the phrase by practicing, for example, inversion, ellipsis, repetition, litota, antithesis, exclamation, gradation, etc.

Tropes refer to the actual word choice. The most well-known tropes are metaphor (substitution by quantitative parallelism) and metonymy (substitution by contiguity), which consists in designating the content by the object that contains it, the user by the object/tool he uses, the cause by consequence, etc.

Classical rhetoric, however, had two more important components: memory (important, today, in the speeches of actors or lawyers) and actio or the way to pronounce a speech, the diction and the gestures used. The latter is rediscovered especially in visual communication

(television), but it can appear in any other form of communication, for example, in non-verbal communication. However, the rhetoric of figures constitutes the most important part of classical rhetoric and makes the majority of rhetoric studies today exclusively devoted to the figures above.

Rhetoric and Connotation. In the 60s, the innovations in literary theory, the penetration, in France, of Russian formalism and then structuralism, the borrowings made by linguists from different humanities (such as ethnology or psychoanalysis) allowed Barthes to analyze the mechanism of the functioning of the image in terms of rhetoric.

From the perspective of the image, Barthes understands rhetoric under two aspects: on the one hand as a way of persuasion and argumentation (*inventio*) and, on the other hand, from the point of view of figures (*style* or *elocutio*).

As for *inventio*, Barthes identifies in the image the specificity of connotation: a rhetoric of connotation, that is, of the faculty of provoking a secondary meaning starting from a primary meaning, from a full sign.

The photograph (the signifier) that allows the recognition of tomatoes, peppers and onions (the signified) in Barthes' example constitutes a full sign (a signifier linked to a signified).

However, this full sign continues its significant dynamic becoming the signifier of a second signified, "Mediterranean fruits and vegetables, Italy" etc.

In this way, Barthes conceptualized and formalized the symbolic reading of the image, and especially that of the advertising image. For him, this process of connotation is a constitutive element for any image, even for the most natural of them (photography) because, Barthes points out, there is no such thing as an "adamic" image.

Even if the engine of this second reading/interpretation is the ideology specific to a society or a given historical moment, what matters for Barthes is the fact that an image always wants to say something other than what it represents at the first level, at the level of denotation.

This rhetoric of connotation characterizes, in fact, any type of language, including the verbal one at the level of which a lot of connotations are agglutinated (example: the simple rigor of a message connotes the fact that it is a scientific message).

We can, therefore, affirm that any form of expression and communication is connotative and that the dynamic of the sign consists precisely in these permanent slippages of meaning. What the rhetoric of connotation shows is not the image quality of the visual message, but its sign quality, the fact that, although an object in its turn, the image develops a language different from that of the things represented.

Rhetoric and advertising. Rhetoric and advertising image is the title of a study published by Jacques Durand in 1970, a study that is still a benchmark for the relationship between rhetoric and advertising.

The most famous aspect of this research is the demonstration, through the study of more than a thousand advertisements, that advertising uses a whole panoply of rhetorical figures that were thought to be reserved for verbal language: figures of speech (at phrase level) and paradigm figures (at word level).

Durand proposes a table in which he classifies these figures according to language axes and according to the type of operations that give rise to them (addition, suppression, substitution, exchange) or according to the type of relationship between variants (identity, similarity, difference, opposition, false homology, double meaning, paradox).

Thus, visual metaphors are found in advertising through which characteristics of the promoted products are indirectly represented. For example, in the advertising image produced by Citroen to illustrate the Revolutionary slogan, a Chinese child is shown making the victory sign. With this direct reference to Mao's revolutionary China, Citroen not only shows its openness to the Chinese market, but metaphorically represents the concepts behind its campaign: innovation, progress, future, hope. In this way, the brand presents itself as a safe and rare value. By implicit comparison, the qualities of the represented visual sign are attributed to the product (absent from the image).

Visual hyperbole is also common in advertising (possibly accompanied by litota). By using it, one insists excessively on some visual aspects in order to highlight the qualities of the product or to capture the attention of the public through exaggerations that can shock.

Ellipses are another stylistic figure frequently used in advertising images. They appear when, for example, the product being advertised is not present in the image (this is the case with the Volkswagen Golf advertisement) or if an image is incompletely represented, and the viewer is going to reconstruct it himself.

Other figures are more related to the construction of the whole announcement by organizing and combining the elements that make it up: repetition, inversion, gradation, etc.

In order not to remain only an inventory that closes in on itself, the inventory of the rhetorical figures present in the image must be continued by analyzing their meaning, the effect they produce. Therefore, the meanings of the respective procedures must be sought in order to understand the mechanisms of interpretation they cause.

Durand demonstrated not only that the mechanisms of rhetorical figures are not reserved exclusively for verbal language, but also that the field of advertising is particularly rich in figures of speech.

Looking for the function associated with these figures in the advertising message and relying on Freud's theories, Durand demonstrated that the advertising image uses figures of speech to create a rhetoric of pleasure, a hedonistic rhetoric through which the viewer is invited to transgress the limits of the real and of the norm to enter the world of the dream, the fantastic, intimate desires, etc., in a world where, therefore, everything is possible. In the case of advertising, *elocutio* is, at the service of what rhetoric calls *inventio*, or, in other words, style at the service of a specific argumentation.

The study of the rhetoric of the image implies, in conclusion, the analysis of the game of forms and meanings present in the visual messages, the means used for the development of certain discursive strategies and the effects obtained at the moment of interaction with the target audience.

### **AESTHETICS OF BEAUTY.**

According to mythology, Zeus would have assigned a suitable measure and a proper limit to each creature; world domination coincides with a precise and quantifiable harmony, formulated in the four inscriptions on the walls of the temple in Delphi: "The most just is the most beautiful", "Respect the limit", "Hate hubris (arrogance)", "Nothing in excess". On these rules is founded the Greek common sense of Beauty, in consensus I a vision of the world that interprets order and harmony as something meant to put a stop to that "Chaos that cascading", from whose mouth, according to his Hesiod, the world broke loose outside. It is a vision placed under the spell of Apollo, who is also depicted among the Muses on the west pediment of the temple at Delphi.

But in the same temple (from the 4th century B.C.), on the opposite pediment from the east, Dionysos, the god of chaos and unbridled violation of any rule, is represented. The simultaneous presence of two antithetical divinities is not accidental, even if it was highlighted as a major theme only in the modern era, through the writings of Nietzsche. Broadly speaking, it refers to a possibility that is always present and that periodically proves itself: that of an eruption of chaos into the beautiful harmony. More precisely, several significant unresolved antitheses are thus expressed in the Greek conception of Beauty, a conception that proves to be much more complex and problematic than its simplified versions, elaborated by the classical tradition.

A first antithesis is that between Beauty and sensory perception. If Beauty is perceptible, but not integral, since not all its aspects can be manifested in a sensible form, then a dangerous gulf opens between Appearance and Beauty: a gulf that artists will try to keep as narrow as possible, but which a philosopher like Heraclitus will yawn it in its full extent, affirming that the harmonious Beauty of the world manifests itself as accidental disorder.

A second antithesis is that between sound and sight, the two senses privileged in the perception of the Greeks (probably because, unlike smell or taste, they can be correlated to measures and numerical orders): although music is recognized as having the privilege of giving expression of the soul, only visible forms are given the definition of "beautiful" (Kalòn) such as "something that pleases and attracts" Disorder and music thus manage to constitute a kind of dark side of harmonic and visible Apollinian Beauty, and as such risk falling again within Dionysus' sphere of action.

Such a difference is comprehensible if we consider that a statue was supposed to represent an "idea" (and therefore implied serene contemplation), while music was understood as something that evoked passions.

One aspect that derives from the antithesis between Apollo and Dionysus is regarding the duality of distance/closeness. Greek art and Western art in general, unlike some Eastern artistic forms, gave priority to a distant due to the work, the self that does not come into direct contact; a Japanese sculpture, on the contrary, is touched, just as a Tibetan mandala drawn on sand is interacted with. Greek beauty is thus conveyed through the senses that allow a distance to be maintained between the object and the observer: sight and hearing, rather than touch, taste, smell. But the forms that can be heard, such as music, for example, arouse restlessness, through the participation they arouse in the soul of the person present. The rhythm of the music refers to the eternal flow (and disharmonic, since it is without a bar) of everything that exists.

Beyond the naïveties of his young age (which the author also acknowledges) and some risky assumptions, rightfully criticized by philologists, this is broadly speaking the strength of Nietzsche's reading on the antithesis between Apollinian and Dionysian. Serene harmony, understood as order and measure, manifests itself in what Nietzsche defines as Apollonian Beauty. But this kind of Beauty is at the same time a screen that tries to obscure the presence of a Dionysian, ravaging Beauty, which makes itself known not through the forms of external manifestation, but through what is beyond them.

This is a joyous and dangerous Beauty, antithetical to reason and often represented as possession and madness: it is the nocturnal half of the gentle sky of Attica that fills with initiatory mysteries and obscure sacrificial rites, such as the Eleusinian mysteries and the rites Dionysian. This nocturnal and disturbing Beauty will remain hidden until the modern era (see ch. XIII), to transform later, through a gesture of revenge against the beautiful classical harmony, into that mysterious and vital source of contemporary manifestations of that Beauty .

*The number and the music.* Common sense makes us consider as beautiful a well-proportioned thing, this explains the fact that since Antiquity Beauty has been identified with proportion, even if it is appropriate to recall that, for the Greek and Latin world, the definition of Beauty always includes, along with proportion, and the reference to a pleasant color or light.

When in ancient Greece the so-called pre-Socratic philosophers of the 7th and 6th centuries B.C. (including Thales, Anaximander and Anaximenes) begin to discuss the primordial beginnings of things, indicating that everything that surrounds us has its origins in water, in the original infinity and in the air, they aim to define the world as a whole ordered and governed by a only law.

This also means that the world is thought of as a form, and the Greeks are very aware of the identity between Form and Beauty. However, the one who will state all these things explicitly, trying to unite in one knot cosmology, mathematics, natural sciences and aesthetics, will be Pythagoras and his school from the 6th century BC.

Pythagoras (who probably during his travels had come into contact with the mathematical reflections of the Egyptians) is the first to claim that the principle of all things is number. The

Pythagoreans are permeated by a kind of sacred terror towards the infinite and everything that cannot be contained between some limits, and that is why they look for the rule capable of limiting reality, giving it order and comprehensible character in numbers. Together with Pythagoras, an aesthetic-mathematical vision of the universe is born: all things exist because they reflect an order; and they are ordered because through them mathematical laws are manifested, which represent the condition of both existence and Beauty at the same time.

The followers of Pythagoras were the first to study the mathematical ratios that govern musical sounds, the proportions on which intervals are based, the ratio between the length of a string and the pitch of the sound. The idea of musical harmony is closely dependent on the rules that lead to the production of the Beautiful. This idea of proportion will cross the entire Antiquity and will be transmitted to the Middle Ages through the work of Boethius between the 4th and 5th centuries AD. Boethius recalls that Pythagoras observed that the hammers of a forger, striking the anvil, each made a different sound, and he would have realized that the ratio of the sounds of the range thus obtained was proportional to the weight of the hammers.

Boethius also notes that the Pythagoreans knew that various musical modes affect the individual's psychology differently; they spoke of harsh rhythms and tempered rhythms, rhythms suitable for a vigorous upbringing of children and slow and lascivious rhythms. Pythagoras had succeeded in making a drunken teenager calmer and more self-possessed by having him listen to a song sung in a Hypophrygian musical mode in spondaic rhythm (as the Phrygian scale agitated him beyond measure). The Pythagoreans, lulling their daily worries to sleep, had certain songs sung to them to fall asleep; as they awoke, they relieved themselves of the torpor of sleep by other musical modulations.

Architectural proportion. The ratios by which the dimensions of Greek temples, the intervals between columns, or the proportions between the different parts of the alphabet correspond to the same ratios by which musical intervals are ordered. The idea of moving from the arithmetic concept of number to the geometric-spatial concept of relating to different points is Pythagorean.

Tetraktys is the symbolic figure on which they take their oath, the figure in which the reducibility of number to space, of arithmetic to geometry is condensed perfectly and exemplarily. Each side of this triangle consists of four points, and in its center there is a single point, that of unity, from which all other numbers arise. The number four becomes synonymous with strength, justice and stability; the triangle formed by three series of four numbers remains the symbol of perfect equality. Summed up, the points that form the triangle add up to ten, and all possible numbers can be expressed with the first ten numbers.

If number is the essence of the universe, in a tetraktys is condensed all the wisdom of the universe, all numbers and all possible numerical operations. If we continue to establish the numbers according to the model of a tetraktys, by widening the base of the triangle, we obtain some numerical progressions in which the even numbers will alternate (symbols of infinity, since it is impossible to identify in them a point that divides the line of points into two equal parts) with the odd numbers (finite, since the line always has a central point that separates an equal number of points).

But to these arithmetical harmonies will correspond also geometrical harmonies, and the eye will be able permanently to unite these points in an indefinite and chained series of perfect equilateral triangles. This mathematical conception of the world is also found in Plato, especially in the dialogue *Timaeus*.

Between Humanism and the Renaissance, eras in which we witness a return of Platonism, the regular geometric bodies that Plato and his school speak of will be studied and glorified as ideal models by Leonardo, by Piero della Francesca in *De prospectiva pingendi*, by Luca Pacioli in *De divina proportione*, by Dürer in the treatise *On the symmetry of human bodies*. The divine proportion that Luca Pacioli talks about is the golden section, that ratio that is established starting from a segment AB when, noting a point C, separating the initial points, AB is related to AC just as AC is related to CB.

Through his work *De architectura* Vitruvius (1st century BC) will transmit to posterity both the Middle Ages and the Renaissance, important recommendations for achieving optimal architectural proportions. After the invention of printing, his work would appear in numerous editions, accompanied by increasingly rigorous diagrams and drawings. Renaissance theories in architecture will be inspired by Vitruvius' work, from Leon Battista Alberti's *De reaedificatoria* to Piero della Francesca, from Pacioli to Palladio's *Four Books on Architecture*.

The principle of proportion reappears in architectural practice and as a symbolic and mystical allusion. This is perhaps the way to understand the taste for pentagonal structures found in Gothic art, especially in the design of cathedral rosettes. In this spirit, the marks in the stone must also be interpreted, i.e. the personal mark that each cathedral builder placed on the most important stones of his construction, such as those of the vault keys.

## **THE AESTHETICS OF UGLY.**

Of the Greek world we usually have a stereotyped image, which springs from idealizations of that world produced during the neoclassical period. In our museums we see statues of Aphrodite or Apollo that, thanks to the whiteness of the marble, portray an idealized beauty. In the fourth century BC, Polyclitus created a statue that was to become known as the Canon because it embodies all the rules of ideal proportion, while Vitruvius was later to express correct bodily proportions as fractions of the entire figure: the face was to be one tenth of the total length, the head one eighth, the length of the torso one quarter, and so on.

So, in the light of this idea of beauty, it's natural that all beings who did not embody such proportions were thought of as ugly. The ancients had idealized beauty, but neoclassicism idealised the ancients, forgetting that they (often influenced by Oriental traditions) also bequeathed the Western tradition images of beings who were the very embodiment of disproportion, and the negation of all canons.

The Greek ideal of perfection was represented by the *kalokagathia*, a term deriving from the union of *kalos* (generically translated as 'beautiful') and *agathos* (which is usually translated as 'good' but covers a whole series of positive values). It has been pointed out that being *kalos* and *agathos* generically defines what the English world would later describe as a gentleman,

a person with a dignified air possessed of courage, style, ability, and proven sporting, military, and moral virtues. In view of this Ideal, Greek culture produced a vast literature on the relationship between physical ugliness and moral ugliness.

Nonetheless it is still not clear whether by beautiful the ancients meant everything that pleases, arouses admiration, draws the eye, and gratifies the senses thanks to its form, or a 'spiritual' beauty, a quality of the soul, which sometimes may not coincide with the beauty of the body. At bottom, the expedition to Troy was motivated by Helen's extraordinary beauty and paradoxically Gorgias had written an encomium on Helen. Yet Helen, the unfaithful wife of Menelaus, certainly could not be considered a model of virtue.

While Plato believed that the only reality was that of the world of Ideas, of which our material world is a shadow and imitation, then ugliness ought to have been identified with non-being, given that in the *Parmenides* he rejects the existence of ideas of foul or base things such as stains, mud or hairs. Ugliness exists, therefore, only in the sensible order, as an aspect of the imperfection of the physical universe compared to the ideal world. Later, Plotinus, who more radically defined matter as evil and an error, was to identify ugliness clearly with the material world.

For example, if we reread the *Symposium* and the Platonic dialogue dedicated to Eros (as love) and to beauty, we may identify many other nuances. In this dialogue, as in the others for that matter, and generally speaking in almost all philosophical disquisitions on beauty and ugliness, these values are named but never clarified through examples (hence the necessity, as I said in the Introduction, to compare philosophical discourses with the concrete creations of artists). It's hard to describe the beautiful things that arouse our desire.

As for the concept of good, in many respects the dialogue hinges on a celebration of pederasty, in the etymological sense of love of the beauty of young boys on the part of a wise, mature man. This behaviour was generally accepted in Greek society, but the dialogue itself reveals that the pederasty praised by Pausanias (carnal desire for the beauty of young men) and the sublimated (today we would say 'platonic') pederasty of Socrates are two different things.

Pausanias distinguishes the Eros of Aphrodite Pandemia, typical of men of little consequence for whom loving women and young men is all the same, and who love bodies more than souls, from the Eros of Aphrodite Urania, which is love solely for young men. Not with inexperienced little boys but with mature adolescents whose beards have begun to grow<sup>1</sup>.

But Pausanias himself admits that among young men one should love the noblest and most virtuous ('even if they are uglier than the others'), and so a lover who loves the body more than the soul is wicked. In this sense, while pederasty does not exclude a physical relationship, it is also a form of erotico-philosophical alliance established between the beloved (the young man who accepts the company of an older man who initiates him into both wisdom and adult life, and to whom in exchange he offers his favors) and the lover, the wise man enamored of the good looks and virtues of the young man.

After Pausanias, Aristophanes steps in to tell us how in the beginning there were three genders, male, female and androgyne, and only after Zeus had divided each into two, did there come along men who 'love to embrace other men', women 'with a propensity for other women' (and these two categories are uninterested in nuptials and the procreation of children, but are obliged to take an interest by law'), and those whom — today we would call heterosexuals. At this point Agathon comes into the dialogue. Agathon represented Eros as eternally young and handsome (thus returning to a recurrent theme in the Greek world, from Pindar onwards, whereby beauty is accompanied by youth and ugliness by old age).

But then Socrates (who expresses his own ideas by attributing them to a fictional priestess called Diotima) showed that if each of us desires what he does not have, Eros will be neither beautiful nor good, but a kind of ambiguous daimon striving towards ideal values that he forever fails to attain. Eros is the son of Penia (Lack, Poverty) and Poros (Expediency) and as such he has inherited his mother's wretched look (he is shaggy, barefoot and homeless), while from his father he has inherited the ability to stalk' and 'hunt for' that which is good.

In this sense, the desire to procreate, to satisfy the human desire for immortality, is typical of Eros. Nonetheless, apart from physical procreation there is the procreation of spiritual values, from poetry to philosophy, through which we obtain the immortality of glory. One might say that ordinary folk produce children while those who cultivate the aristocracy of the spirit produce beauty and wisdom.

In the light of this not only is the man who is kalos and agathos one who believes that 'the beauty of the soul is worth more than that of the body' and can look after a young man who has many qualities even though his body is not very beautiful, he is also one who will not stop at the beauty of one body. Through the experience of various beauties he will try to attain an understanding of Beauty-in-Itself hyperuranian Beauty, Beauty as Idea.

This is the love for young men to which Socrates devoted himself, and we understand this when the handsome Alcibiades, drunk, bursts into the banquet and says how, in his desire to share in the wisdom of Socrates, he had offered him his body several times, but Socrates had never wished to yield to carnal desire and had merely lain chastely at his side. It is in this context that Alcibiades makes his famous eulogy of the apparent ugliness of Socrates, whose outer aspect was that of a Silen but whose features concealed a profound inner beauty.

And so, in a single dialogue, different ideas of beauty and ugliness are contrasted, thus making the simplistic notion that ugliness is merely the opposite of kalokagathia rather more complex. Further, Greek culture had always been aware of this complexity, as is proven by a later eulogy to another ugly man but one of noble soul and great wisdom, Aesop.

The Greek world was shot through with other contradictions. In the Republic, Plato maintained that ugliness (understood as a lack of harmony) was the opposite of the goodness of the soul, and recommended that youngsters be spared the portrayal of ugly things. But he did admit that, at bottom, there exists a degree of beauty proper to all things, as long as they are suited to the corresponding idea. Consequently, you could say that a girl or a mare or a pot was beautiful, but that each of these was ugly with respect to the preceding one.

In the *Poetics*, Aristotle sanctioned a principle that was to remain universally accepted over the centuries, namely that it is possible to make beautiful imitations of ugly things-and right from earliest times people admired the way Homer made a fine portrayal of the physical and moral unattractiveness of Thersites.

Finally, we shall see, in Stoic circles, how Marcus Aurelius recognized that even ugliness, even imperfections such as the cracks in a loaf of bread, contribute to the agreeability of the whole. As we shall discover in the next chapter, this principle was to dominate the patristic and scholastic view in which ugliness is redeemed by context and contributes to the harmony of the universe.

Greek culture did not hold that the world was necessarily wholly beautiful. Its mythology tells of monstrosities and errors, and Plato thought that sensible reality was merely a poor imitation of the perfection of the world of ideas. On the other hand, in the gods artists saw the model of supreme beauty and this perfection was the aim of the statuary that represented the inhabitants of Olympus.

Paradoxically, with the advent of the Christian world this relationship - at least certain aspects of it - was inverted: from a theologico-metaphysical standpoint the entire universe is beautiful because it is a divine work and thanks to this total beauty even ugliness and evil are in some way redeemed.

By way of compensation, Christ, the human expression of divinity who suffered for us, is portrayed in the moment of his greatest humiliation. From the earliest centuries the Fathers of the Church talked constantly about the beauty of all being. From Genesis they learned that, at the end of the sixth day, God saw that all he had made was good and the Book of Wisdom said that the world was created by God according to number, weight and measure, in other words according to criteria of mathematical perfection.

Alongside the biblical tradition, classical philosophy contributed to reinforcing this aesthetic view of the universe. The beauty of the world as a reflection and an image of ideal beauty was a concept of Platonic origin; and in his *Commentary to the Timaeus* Calcidius (between the third and fourth century AD) spoke of the splendid world of beings of peerless beauty.

The medieval period was influenced by a work of a Neoplatonic stamp (fifth century AD), *On The Divine Names* by Pseudo-Dionysus the Areopagite. Here the universe appears as an inexhaustible source of splendor that radiates out to form a grandiose manifestation of the diffuse nature of primary beauty, a dazzling cascade of light: the Super-Essential beautiful is called Beauty because of the fairness that it dispenses to all beings each to his own measure, and because it is the cause of the harmony and splendor of all things. In the guise of light it showers all things with the outpourings of its natural rays, which make them beautiful, and calls to itself all things that we call Beauty - and within itself it contains all things.

Following the Areopagite, John Scotus Eriugena (ninth century) worked out a concept of the cosmos as the revelation of God and of his ineffable beauty through ideal and corporeal beauties and he expatiated on the beauty of all creation, on similar and dissimilar things, on the harmony of species and forms, and of the different orders of substantial and accidental

causes culminating in marvelous unity. All medieval authors returned to this theme of the pancalia or beauty of the entire universe.

For a traditional identification of the Beautiful and Good, saying that the entire universe was beautiful was tantamount to saying that it was also good - and vice versa. How to reconcile this pancalistic persuasion with the evident fact that Evil and deformity exist in that same universe?

The solution had been anticipated by St Augustine, who had made the justification of Evil in a world created by God one of his fundamental themes. In *De ordine* Augustine argued that, true, there seemed to be disharmony and an insult to the sight' when the parts of a building were erroneously arranged, but he pointed out that error too is a part of the general order. In the *Confessions* (VII) he tells us that evil and ugliness do not exist in the divine plan.

Corruption is a loss, but we talk of loss when a previous good has been diminished. If all that becomes corrupted is subjected to a loss of value, then it means that there was a positive value before corruption set in. If the loss of value is total, a thing would cease to exist.

Hence evil and ugliness in themselves could not exist, because they would be 'an absolute nothing'. In his polemic against the Manichaeans titled *De natura boni contra Manicheos* (XVII) Augustine says that not even what the ancients called hyle, in other words matter that is wholly unformed and devoid of quality, was an evil. Even timber that has yet to be worked lends itself those who work it, so that something may be got from it. If it could not accept the shape imposed upon it by a craftsman, it certainly could not be called matter.

So if a shape is a good, which is why all the things that draw some superiority from shape are called shapely, then there is no doubt that the capacity to be formed is also a good to some extent. If even formless matter is beautiful, then the same must hold even for beasts that some see as monstrous, like monkeys, because the proportion between their various members is correct. Augustine's reasoning crops up again in Scholastic philosophy, in which we find various examples of a justification of Ugliness within the framework of the overall beauty of the universe, where even deformity and evil acquire a value comparable to that of chiaroscuro, of the proportion between light and shadow in an image. In other words their presence reveals the harmony of the whole.

Some said that even monsters are beautiful because they are beings and as such contribute to the harmony of the whole and that, while sin certainly destroys the order of things, this order is re-established by punishment and hence the damned in hell are examples of a law of harmony. Others tried to attribute the impression of ugliness to flaws in our perceptions, and hence some may find something ugly because of poor light, because it was too close or too far away, because they saw it from an oblique angle, or because of the misty air that deforms the contours of things.

#### **4. Speech-gesture communication**

*Kinesics or the study of body movements.* The term "kinesics", derived from the Greek word for movement, is a linguistic invention due to the American anthropologist Ray L. Birdwhistell

(1918-1994), who first used it in *Introduction to Kinesics* (1952) and then in *Kinesics and Context* (1970), with the meaning of "the study of body movements in relation to the nonverbal aspects of interpersonal communication" (S. Jolly, 2000). The term as such has slowly entered the vocabulary of communication science.

In the *International Encyclopedia of Communications* (1989), Adam Kendon defines the term "kinesics" as "the study of the communicative function of body movements in face-to-face interactions". In Romanian, the term is found in specialized works or in scientific information literature under different transliterations: *kinesica*, *kinesica*, *kinetica*, *kinetica*. References to the science built by Ray L. Birdwhistell use the word "kinesics", and the analysis of signals transmitted by the body (gestures, posture) use the term "body movements". The terms "body language" or "body language" sometimes seem inappropriate to the scientific approach to nonverbal communication, as do the terms "language of space", "language of speech" or "language of clothes".

Ray L. Birdwhistell's theory is based on the assumption that communication through body movements is systemic and socially learned. The founder of kinesics understands by communication "structured dynamic processes related to the interconnection of living systems, a multichannel system emerging from (and regulating) the influenceable multisensory activities of living systems" (S. Jolly, 2000). Since body movements can be studied at different levels (physiological, psychological, cultural), Ray L. Birdwhistell divides kinesics into:

- (1) pre-kinesics (the study of the physiological bases of body movements),
- (2) micro-kinesics (the systematic study of kinemes grouped into morphological classes) and
- (3) social kinesics (the study of morphological constructs in relation to social interactions).

Taking inspiration from linguistics, Ray L. Birdwhistell tried to identify the smallest meaningful units of body movements, which he called "kinemes", by analogy with phonemes and morphemes.

Analyzing slow-motion films, the American anthropologist concluded that there are 50 to 60 universal kinemes in humans. Cultural differences in nonverbal communication would consist of the internal variation of kinemes, not the use of different kinemes. The use of kinemes is socially learned and no kineme works alone (it should be noted that Ray L. Birdwhistell did not give a very precise meaning to the term "kineme").

In the experiments carried out, Ray L. Birdwhistell tasked an actor or a student to perform different body movements, which the group of students had to notice. The experimenter would ask, "Does this man do anything different by this?" In connection with these experiments, Julius Fast (1970) notes two things: firstly, that the subjects (students) were not asked about the meaning of the gestures, but only if there was any difference in the body expression, and, secondly, that in the analysis body movements started from the "zero point", represented by the middle-class American population (the zero point means the initial position in relation to which differentiations are made).

Both critical remarks are justified: we are not interested in the visual acuity of the subjects, but the meaning of the different body movements; on the other hand, the extrapolation of the experimental results from the American students to the entire population of the Earth has neither statistical nor theoretical basis. The "zero point" of the Americans is different from the "zero point" of the Europeans or the Arabs. It is also different for the representatives of the big bourgeoisie and for those who live in poverty (Chelcea, 2004).

However, the founder of kinesiology has very significant contributions in the analysis of nonverbal communication. As Julius Fast (1970) appreciated, Ray L. Birdwhistell's conception of body movements has the main merit of revealing that no body signal has meaning apart from other signals and context. In his conception, communication through body movements is systemic, it being possible to describe it independently of the particular behavior of each person: "the problem is to describe the structure of body movements so that we can measure the significance of particular movements or complexes of movements in the communication process" (R.L. Birdwhistell, 1970, S. Jolly, 2000).

Stephen Jolly (2000) observes that the structuralist approach to non-verbal communication is forced. A. T. Dittman (1971) - quoted by Stephen Jolly (2000) - concludes: "the basic hypothesis of kinesics, according to which non-verbal communication has the same structure as verbal communication, is not viable", given the fact that there is no evidence that kinesic phenomena are linguistically structured, by virtue of independent structural relations".

More than half a century after the formulation of this principle, we find works on "body language" that have the structure of dictionaries. On one column the gestures are lined up, on another column, the meanings: hanging arms - nonchalance; arms apart, elbows close - concentration; arms apart - egocentric; raised head - pride; straight head - will to action; head bent sideways - sentimentality; bowed head - introversion; high and rounded forehead - power of abstraction; broad forehead - extension of intellectual faculties; narrow forehead - limited views; large gestures - exaltation; round gestures - affectivity; gestures to the right - extraversion; gestures to the left - introversion; upward gestures - ardor; downward gestures - inhibition, etc. (1996). "Such judgments are - Vera F. Birkenbihl (1979) opines - both "false" and "unhelpful to a better understanding of body language". We unreservedly subscribe to this opinion. Moreover, we affirm that such judgments are not only false and useless, they are downright harmful and dangerous in interpersonal communication, in establishing interpersonal relationships. It is placed outside of science (see the axioms of nonverbal communication).

*Ray L. Birdwhistell* is also credited with having imagined a system of pictograms by which body movements can be described. We reproduce from the work of Judee K. Burgoon, David B. Buller and W. Gill Woodall (1996) the symbols used by Ray L. Birdwhistell for facial kinemas.

Combining kineme symbols into kinemorphemes (similar to words) leads to the description of movements (to the formation of sentences).

The body movement scoring system imagined by Ray L. Birdwhistell also includes: "kinesic markers" (kinesic markers), which have the role of showing the syntactic arrangement of

kinemes in speech, designating pronouns, plurals, their verb forms, sentences and adverbs; "kinesic stress" (kinesic stress), with the function of organizing different linguistic combinations, such as phrases; "linking signs" (kinesic junctures), which serve to connect separate kinemes.

From what was shown, it was possible to notice, on the one hand, the author's effort to set up a system for quantifying expressive behaviors and, on the other hand, the difficulty of operating with it. Kinesics - we can say - represents a page in the history of the study of non-verbal communication. As a theory, Ray L. Birdwhistell's kinesics is inadequate.

Haptics or skin contact. The skin is a living organ, not a shell incapable of receiving and transmitting signals. It is part of our body, it does not just mark its limits, it is not just a tissue that covers the entire surface of the body, a "bag" in which other organs are thrown. The skin is an identity, it shows to which "race" or culture we belong, what social status we have, self-esteem, state of health, age, etc. The cosmetics industry and dermatology show how much importance society attaches to the "shell" of the human body.

The number of epithets attracted by the word "skin" also suggests social valorization. In Romanian - according to the Dictionary of Epithets prepared by Marian Bucă (1985) - 70 determinations with an artistic function are recorded. The skin can be slippery, beaten, tender, tender, shiny, young, etc., apart from the coloring: white, brown, brick, chocolate, yellowish, ocher, earthy, pink, resinous, rosy, black, bruised.

Depending on the anatomical-physiological structure, through the skin - as an analyzer - we receive signals related to pressure differences (tactile sensitivity), temperature (thermal sensitivity) and pain stimuli (pain sensitivity). Interpersonal relationships also depend on skin information. At the same time, skin contact often has an erotic meaning, and the term as such is used as a euphemism to denote intimate relationships. We will use the term "skin contact" (touch) in the broadest sense, that of "touching any parts of the bodies of two people" (O. Grusky, P. Bonacich and M. Peyrot, 1984).

The researches of H.F. Harlow (1959) on young *Macaca Mulatta*, a monkey species, highlighted the importance of skin contact in the organization of behaviors, even on a subhuman scale. H.F. Harlow made a distinction between the food need of the baby macaques and their need for contact (contact comfort). It was found that the attachment of the cubs to the female-mother is not determined only by the fact that she feeds them. Thus, after being fed on a "surrogate mother" made of breast and pieces of colored cloth, the baby macaques continued to cling to the surrogate mother, as happens in natural conditions, when they cling to the fur of the females- mother.

It has been observed that even just the presence of a "surrogate mother" in the living space of macaque cubs has positive effects on the organization of behavior. Monkeys deprived of the presence of their mother or "surrogate mother" tended to isolate themselves, being frightened by the appearance of new objects around them. When put in contact with other monkeys, also deprived of skin-to-skin contact with their mothers or with the "surrogate mother", they developed aggressive behavior, leading to fatal injuries.

The importance of human communication through the skin channel has concerned scientists interested in the socialization process of children, as well as those who tried to psychosociologically study love. Jacques Corraze (1980) reviews some of the most significant research on nonverbal communication through the skin channel. The beginnings are indicated: the observations of Erasmus Darwin, dated 1794. It is about the prehistory of nonverbal behavior research. Among the founders of the research field are cited L.K. Frank (1957), S.M. Jourard (1966), M.H. Klaus (1970), H.R. Scheffer and P.E. Emersdon (1964), A. Bomeo Williams (1966); among contemporaries, Hoffman and Teyber (1985), R. Heslin and D. Boss (1980), B. Major (1981), T. Nguyen, R. Heslin and M.L. Nguyen (1975).

Based on their scientific research, a series of interesting conclusions were reached. Skin-to-skin contact between the mother and the new-born child is made from the first moments of its life. Mothers start by touching the child's extremities with their hands, first of all the fingers, then the toes. The period when children's skin contact has the highest frequency is at the age of one or two years, girls being privileged over boys. Children's reactions to their mother's skin touches are not uniform. There are children who reject their mothers' hugs (non-cuddlers), children who want hugs (cuddlers) and, of course, an intermediate category.

The importance of physical contact between people is also revealed by isolation situations in case of contagious diseases. Not touching the body induces a stigma: it is, for example, the situation of people infected with HIV, based on the prejudice that the disease could be transmitted in another way than through blood or sperm.

With the transition from newborn to small child, then preschool, school, adolescent and youth, taboos are established in relation to touching the body. Sidney M. Jourard (1966) had the curiosity to find out from students what are the areas of skin contact allowed for parents, same-sex and opposite-sex friends. Analyzing the answers received from 168 male and 140 female students, a "map" of the male and female human body, respectively, resulted.

Conclusions emerge such as that women receive more skin messages than men, that most skin contacts are allowed to friends of the opposite sex, and that there are no gender differences in areas of skin contact with parents. The skin areas most frequently touched by other people are those of the hands, arms, shoulders and face.

But what is the emotional echo of these touches? Research has led to the conclusion that, in general, women agree more than men to skin contact.

As noted by W.S. Rogers (2003), a "map of the pleasure of their bodily touch" would have been reached if homosexual people had been included in the study.

The study carried out by Sidney M. Jourard undoubtedly has serious limitations (it is based on the statements of the interviewed subjects, it included a relatively small number of people, it took place only in the university environment), a fact for which the results cannot be generalized. Even in these conditions, he has the merit of being revealed that touching another's body is socially and culturally regulated, just like contemplating it.

Erving Goffman (1967) was among the first to note that people of higher status have the privilege of skin contact. A subordinate accepts that his direct boss puts his arm on his shoulder. If the person with lower social status tried to do the same to his superior, he would most likely react negatively.

In everyday life we can easily observe such situations. In 1973, Nancy M. Henley made systematic observations in various public places and found that women receive more skin signals from men than they emit: 42 percent skin signals from men to women and 25 percent from women to men. Nancy M. Henley (1977) specifies that these touches do not necessarily have a sexual connotation. The explanation he gives for this finding is part of the same paradigm of the difference in status, men enjoying a higher social status. According to the same paradigm, it was found that people with higher social status are the ones who most often initiate skin contact.

As B. Major (1981) concluded, "the act of bodily touch implies a power relationship" (J. Corraze, 1980).

The same conclusion was reached by Oscar Grusky, Phillip Bonacich and Mark Peyrot (1984) when they studied physical contact in the family. The three American sociologists set out to test the following hypotheses derived from the specialized literature regarding the meaning of skin touches in contexts other than the family one:

(1) within the family, members with higher social status initiate more physical contacts and receive fewer skin touches than people with lower status;

(2) preferred family members are more likely to receive skin touches than others. The data of their research strongly support the first hypothesis, finding that the initiation of skin contacts was more frequent in parents than in children, and the acceptance of their touch by parents from children was lower; and it was lower for fathers than for mothers, as well as for older children compared to younger ones. The second hypothesis was not confirmed.

Scientific research in this field is not numerous at all and was carried out almost exclusively in the Anglo-American space. The generalization of the results should be done with caution, knowing that bodily touches are strongly culturally and contextually regulated. Some findings, however, deserve to be taken into consideration:

(1) the initiation of skin contacts is asymmetrical, with men touching women more frequently than women touching men;

(2) the initiation of skin touching depends, apart from gender, on age, on the type of relationships between people, on the situational context and, last but not least, on social status;

(3) women, especially those of the third age, engage more frequently than men in physical touching of persons of the same sex;

(4) body touching between people of the same sex is more frequent than between people of the opposite sex (J.K. Burgoon, 1989).

In the public space, it is interesting to watch the visits of the heads of state live or on television. Here's an example: when Vladimir Putin, the president of the Russian Federation, visited George Bush Jr. at his farm in Texas in the summer of 2003, the US president greeted him in a friendly way, patting him on the back. With this, he expressed not only his feelings of friendship, but also the fact that he is the head of the only world superpower.

A month later, in similar circumstances, he shouldered Silvio Berlusconi, the Prime Minister of Italy and the President of the Council of Europe at that time. These skin signals were transmitted in front of the cameras: the viewers were able to clearly discern the power relations.

Bodily touches are strictly socially and culturally regulated. We present two behavioral sequences: in 2003, at the wedding of the son of the Prime Minister of Turkey, Recep Tayyip Erdogan, Silvio Berlusconi was also invited. After the ceremony, he congratulated the newlyweds, shaking hands with the groom and trying to do the same with the bride. She retreated a few steps. In Islamic culture, it is forbidden for strangers to touch women's bodies, as it is also forbidden to look at their faces (for which their faces are covered with a veil).

At the beginning of March 2004, the Queen of Great Britain paid a visit to France. The British press was outraged. What happened? The President of France, Jacques Chirac, leading the queen, in a moment of courtesy, touched her shoulders with his hand. Photographers captured this "gesture of guidance" and the British press exploded: the queen cannot be touched!

The guiding gesture is one of the 14 main types of gestures described by Desmond Morris. In reality, says the cited author, 457 types of body contact have been observed, but many of them are rarely encountered and have little importance in non-verbal communication. In the following we will refer only to some of the most common skin touches that Desmond Morris (1986) described.

*Shaking hands*, as a greeting or parting gesture, is a strongly socialized and long-studied type of cutaneous bodily touch. There are cultural and social rules that govern this specialized form of touching: who reaches out first, in what order hands are shaken (when a person is introduced to a group) and, above all, how to greet by shaking hands. In our country, as in many other European countries, people with higher social status, ladies, older people initiate the greeting by extending the hand.

When several people are together, they shake hands in turn: ladies with each other, ladies and gentlemen, gentlemen with each other (A. Marinescu, 2002). If these norms are violated, there can only be one conclusion: the person in question has not been fully socialized. But within the same culture there are different ways of extending and shaking hands, thus transmitting information about the identity of the person, about the relationships between people and about the feelings of the people who greet each other by shaking hands.

Because the model of greeting by shaking hands is culturally determined, individuals express their feelings by adding other signals: spatial proximity, prolonged eye contact, smiling, touching other parts of the body (forearm, shoulders) than hands.

Allan Pease (1981) appreciates that the position of my palm pointing up or down when we extend our hand to greet conveys information about our attitude towards the other: dominance, submission, equality. Extending the hand with the palm down could express the tendency to dominate the other. Proof: a study "undertaken on a number of 54 businessmen with management positions and with successes in their activity revealed that 42 of them not only had the initiative to shake hands, but also used it in the dominant version of to it". Extending your hand with the palm up means the exact opposite, accepting the superiority of the other.

The same Australian specialist in non-verbal communication and image creation, Allan Pease describes several ways of shaking hands: "glove", "dead fish", "vise", grasping the fingertips, wrist, elbow, arm or the shoulder.

Each way of shaking hands signifies something else: the "glove" manner, also called "politicians' handshake", expresses the wish of the one who initiates the gesture to be considered an honest man, worthy of trust, a good friend; the "dead fish" handshake causes a very unpleasant sensation and is an indication of energy deficit; "Vise" handshake, when it does not betray an aggressive nature, at least shows ignorance of social norms. And the other ways of shaking hands can communicate mental states, feelings, desires, the way we were socialized. Attention, however, the psychological and sociological interpretation of the handshake must take into account the information transmitted through the other information channels, the concrete situation and the verbal communication.

We will say, therefore, that shaking hands as a "tie-sign" voluntarily or involuntarily transmits information of a psychological, sociological and cultural nature. In some cultures (North American or European, for example), children are taught to look into the eyes of those they shake hands with. In other cultures (for example, in India), children learn the namaste rule (to look down, to bow to the other, to adopt a position of submission, even prayer. In Thailand, the same greeting ritual is practiced, under the name of wai (R.E. Axtell, 1998).

The Eskimos and the ancient populations of Samoa and the Philippine Islands greeted each other by touching their noses, a fact that would seem to make little sense if we did not know that olfactory signals also serve to recognize genetic similarity. The Maori population of New Zealand - assures us Roger E. Axtell (1991) - even today expresses the joy of meeting loved ones by rubbing their noses.

Herbert Spencer (1820-1903), one of the founders of sociology, remarked in *First Principles of Sociology* (1870) that touching their noses represents more than a gesture of greeting: through smell the persons in question identify and recognize each other as doing part of the same group.

*Kissing the hand.* In a famous historical anthropology text, Jacques Le Goff (1978) defines the vassal as "homme de bouche et de main" (man of mouth and hand). In the European Middle

Ages, the ritual of vassalage involves speech, gesture and objects. As for the gesture, encountered in the second phase of entering vassalage, this was the kiss.

Texts from the 13th century emphasize that the kiss was given as a sign of fidelity and faith. It is a gesture, probably of Spanish or Oriental origin. As a ritual, it is of pre-Christian origin. The Roman theologian Tertullian, who is credited with the formula *Credo quia absurdum* (I believe because it is absurd), condemned him as a pagan. The liturgical kiss appears at the time of Saint Paul - records Jacques Le Goff (1986).

Today, in our culture kissing the hand has remained an old-fashioned form of greeting, which can be offensive to both men and women: it symbolizes the vassalage of men and the consideration of women only as "love objects". In general, men who kiss women's hands, but especially those who do this gesture on the street or outdoors, far from showing - as Aurelia Marinescu (1995) believes - that they are very polite and well-bred, they only manage to it shows that I don't know what world I live in.

Like women who say "Thank you" after being kissed on the hand. Sketching a hug gesture by lightly touching the shoulders and bringing the lips to the cheeks fully expresses the joy of seeing each other, our appreciation. However, pay attention to the difference in social status and the type of culture (contact or non-contact). Kissing both cheeks as a sign of greeting has become a custom. In vain we try to stop Them by condemning Them in the code of good manners. Things are different when it comes to kissing on the mouth.

The kiss on the mouth. In Jacques Le Goff's (1978) interpretation, kissing on the mouth "seems to hold to beliefs that recommend the exchange of either breath or saliva. THEY invoke the exchange of blood in other types of very solemn contracts or alliances. The exchange of breath or of saliva, like that of blood, is made between equals or, more precisely, makes equal those who exchange them". For some primitive populations, for example the Miskito Indians of Honduras, our way of kissing on the mouth is disgusting, being seen as a milder form of cannibalism. The German ethnologist Julius E. Lips, from whose work *The Origin of Things* (1955) I took this information, further records that, in that population, when two people meet, they greet each other by rubbing their noses, and they kiss small children as well with his nose, saying he "listens to their smell".

Ethologists include the kiss on the mouth in the category of "relic-gestures", originating from the primitive practice (found in isolation even today) of feeding children by putting in their mouths the food chewed by the mother (O. Morris, 1977). Every age has its own way of kissing. At the age of passionate love, couples press their lips together for minutes on end; at the age of three, they hardly touch their lips for a fraction of a second: "love-passion" has turned into "love-comradeship". Interestingly, however, kissing on the mouth has moved from the private sphere to the public sphere. Let's not forget that a "sexual revolution" took place in the 60s of the last century.

*Hugs* are also signs of connection, often with sexual significance. When two people meet after a long time, they hug. The joy of seeing each other is expressed in this way. So do chimpanzees: "they can bow, kiss, hug, touch or caress" (J. van Lawick-Goodall, 1985). The author's conclusion is that:

"In fact, if we review the entire range of positional and gestural communication of chimpanzees, on the one hand, and that of humans, on the other, we will find strikingly similar cases. It would appear either that man and chimpanzee developed their gestures and posture in an obviously similar way, or that somewhere, in the mists of the very distant past, they had a common ancestor; an ancestor who communicated with his peers by kissing and hugging, touching and caressing, as well as holding hands. »

But man has developed his amazing capacity for verbal communication, so that gestures must always be interpreted by taking into account the verbal message as well. What do people say when they hug? And how honest are they? The incongruence of verbal and nonverbal messages, when it occurs, is most often resolved in favor of nonverbal communication. The type of culture and the concrete social situation must also be taken into account.

The embrace of partners on a dance floor and that of football players in the stadium have different meanings. Also, the mental health of the people must be taken into account: it is said about Adolf Hitler that he did not suffer either from being touched by another person, or from touching someone. His doctors declared that, because of this, it was very difficult for them to consult Him.

*Self-touching.* Rubbing the eye, of the lower eyelid at the end of her nose can mean: "I saw nothing bad", but also "the removal of the misrepresentation, the doubt or the lie that she sees" (Pease, 1993). With this gesture, a person avoids looking the interlocutor he is lying in the face. Similarly, touching the nose - as a disguised version of the gesture of covering the mouth - signifies the subconscious attempt to stop the lying words that a person begins to utter.

The origin of this last gesture may be of a physiological nature: it has been shown that, when a person lies, the nerve endings cause the sensation of smoking, which causes the person in question to rub his nose with his fingers. For the interpretation of this gesture, the concrete social context, as well as the content of the verbal communication, must be taken into account. Also, being known that men rub their eyes vigorously and that, as a rule, they lower them when they lie, and women do this gesture as a tender movement (following socialization, the code of good manners that forbids "robust gestures" or of the care not to spoil one's make-up), a "weighted skepticism" (Ch. U. Larson, 2003) is required in the reception of this non-verbal message, like any other message, be it verbal or non-verbal.

Touching the nose with the fingers has different meanings in different cultural areas (depending also on the fingers with which you make the respective movement). Roger E. Axtell (1998) shows that in Great Britain the gesture of touching the side of the nose with the index finger probably translates the intention of confidentiality, something like "Stay only between us!". In Italy, the same gesture, slightly different from one region to another, conveys a friendly warning: "Be careful!".

In our country, hitting the nose lightly and repeatedly with the index finger usually means "Shame on you!". Touching the nose with the index and middle fingers spread apart in a V shape, the palm being directed towards the face of the person doing the gesture, is an insult

in some countries (for example, Saudi Arabia, Mexico). The nose symbolizes the phallus, and the spread fingers, the labia (Axtell, 1998). Another insult, with the same symbolism, is the introduction of the nose into the circle formed by the index finger and the thumb (similar to the specific gesture for OK). In Colombia, this gesture shows a person with a stigmatized sexual orientation (homosexual) (Axtell, 1998).

Some nose touches have a universal meaning: for example, touching the tip of the nose with the thumb, while the other fingers are spread out as if playing the flute (Axtell, 1998). Children especially play this way, as a sign of mockery. Picking the nose with the tip of the thumb and forefinger is also, Roger E. Axtell believes, a universal gesture. It means "Something smells bad".

The mentioned author informs us that in Hollywood this gesture expresses a value judgement: "The movie watched is worthless". There is also self-touching of the nose found only in some countries or cultures. Rotating around the nose the circle formed by the thumb and forefinger is found only in France and signifies the desire or invitation to consume alcoholic beverages (Axtell, 1998). Also in France, Roger E. Axtell observed the gesture of touching the nostrils with the tip of the index finger and the thumb, signifying the ease of doing a certain thing (Axtell, 1998). In Japan, when a person talks about himself, he often touches the tip of his nose with the tip of his index finger.

Self-touching the cheek with the fingers also constitutes gestures with different meanings. In Iran, pointing to the mustache is equivalent to "hitting the cheek", as they say here. Why? Because - as I said before - the mustache, in his country, is a sign of masculinity. In the past, to strengthen the given word, a hair from the mustache was sent to the one to whom you made a commitment. This sealed the deal. In Italy, turning the index finger in the cheek is a gesture by which a macho signals the appearance of a very pretty young woman. The same gesture in Germany - observes Roger E. Axtell (1998) - conveys the message "He's crazy!".

Paul Ekman (1977) observes that in the interpretation of self-touch we must consider which parts of the body are being touched. Most often, the hands touch the other "geographic areas of the body". One means touching the head with the hand and another, touching the hip. In many cultures, putting the finger to the temple means "thinking", and caressing the hip with the hand conveys a sexual signal.

Desmond Morris (1977) calls "self-intimacy" this type of movement that unconsciously mimics skin contact with another person. We stroke our beards, probably, because we would like to be stroked by others. We run our tongues over our lips because we would like to be kissed.

## **SOMATOTYOLOGY.**

The body constitution is given to us from birth, even if we can intervene on this "raw material of the personality" to a small extent through diet, physical exercises, lifestyle or artifacts. In this chapter we will discuss the relationship between physical constitution and personality, but also about the social stereotypes that are the basis of "body prejudice".

The connection between the physical constitution and the psychological features of the person has been established since Antiquity. Over time, different biological typologies were developed and the observations regarding the correspondence between a certain physical constitution and the normal or pathological characteristics of the person were nuanced. Today, no specialist disputes that between the body - what Gordon W. Allport (1981) called "the raw material of personality" - and the psychological traits of people there is a "lateralized relationship of determination", in the sense that the predominant influence comes from biology towards psychology and only to a small extent and very slowly from psycho-socio-cultural factors towards the physical presence of people. We have in mind numerous human collectivities, large human ensembles, peoples and groups of peoples.

Hippocrates of Kos (460-375 BC) described the "temperamental types" sanguine, melancholic, choleric and phlegmatic according to the predominance in the human body of one of the humours (hormones): blood, black bile, yellow bile and phlegm. The mixture of these humors would ensure health. The concept of the father of medicine is based on the philosophical system of Empedocles (490-430 BC), according to which nature is composed of four uncreated, indestructible and immutable elements: air (hot and moist), earth (cold and dry), fire (hot and dry), water (cold and wet).

The theory of humoral temperaments, very widespread in early Antiquity, taken over and developed by the Greek physician Galenus (130-200 BC), who identified nine temperamental types, is questioned by modern science, but the names of the types (sanguine, melancholic, choleric, phlegmatic) has been preserved, characterizing - as demonstrated by the Russian scientist Ivan Petrovich Pavlov (1849-1936), laureate of the Nobel Prize for medicine (1904) - the types of higher nervous activity.

Paul Popescu-Neveanu (1978) showed that the general types of higher nervous activity discovered by Ivan Petrovici Pavlov "were established by taking as criteria the following properties of the fundamental nervous processes (excitation and inhibition):

(1) the strength of the nervous processes, which is manifested in the action and resistance capacity of the neural tissue and which is probably based on the ability of the neuron to store and use a greater or lesser amount of "functional substance";

(2) the mobility of nervous processes, manifested in the speed with which excitation and inhibition appear, interrupt or replace one another, based on the variable speed of the disaggregation of the "functional substance" in the neuron;

(3) the balance of nervous processes, consisting of the equal or unequal distribution of force (according to our research) and mobility between the two fundamental nervous processes".

Although there are no pure temperamental types (approximately 60 percent of us belong to intermediate and mixed types), at the level of everyday language we very easily characterize some as phlegmatic, others as melancholic, etc. We find the result of an experiment reported by Gordon W. Allport (1981) interesting: over 80 percent of the tested subjects recognized the representations of the four temperamental types.

The experiment cited by us shows that the perception of others is based on the stereotypes that we acquire by observing others. It's nothing bad, even if we don't realize what clues we took into account when we judged that someone belongs to one temperamental type or another. It's bad when the stereotype turns into prejudice: sanguine people are superior, melancholic people have no social value, they are incapable of performance, choleric people are placed in the antechamber of crime, etc.

In France, in the first decades of the last century, a series of doctors, such as Vincent Sigaud (1912), Marc Auliffe (1922) and F. Tissot (1935), linked psycho-moral characteristics to one or another of the great physiological systems, identifying four human types:

(1) the "digestive type", having the body and head like a pear, in terms of physical constitution, and a jovial nature, in terms of psychological characteristics;

(2) the "respiratory type", with a well-developed trunk, like a triangle with the base on the shoulders, characterized by energy and vitality;

(3) "muscular type", detectable by the rectangular shape of the head and body and by the placid and conciliatory nature;

(4) the "cerebral type", which is characterized by small stature, a large face, like a triangle with the apex downwards and, associated with these physical characteristics, the inclination towards abstract speculations and utopias (Descamps, 1993).

Without knowing this typology, many of us are willing to use labels like "Popescu is an intellectual type, Georgescu a digestive" etc. Thus, overgeneralizations are made that help us orient ourselves in the realm of interpersonal relationships, but in no case do they provide us with a solid basis for scientific knowledge of personality.

The German psychiatrist Ernest Kretschmer (1888-1964) published in 1921 the work *Structure of the body and character*, which enjoyed success. Based on clinical observations, Ernest Kretschmer determined that *picnic* people (gr. *pyknos*, fat) have a *cycloid* temperament, and *leptosoma* (gr. *leptosoma*, thin body) people have a *schizoid* temperament. Between the two extremes (*cycloid* - *schizoid*) is the intermediate temperamental type, with an athletic anatomical-morphological structure. From a psycho-moral point of view, *cyclothymics* would be "people of one piece", spontaneous, but unable to carry out several activities at the same time, having a poor distribution of attention. *Cyclothymics* have a concrete thinking, rich in plastic images, being very good storytellers. He expresses himself better orally than in writing. They are suggestible and easy to convince.

Altruism, generosity, warmth of soul, the feeling that "you have someone to rely on", the spontaneity of human contacts, the feeling of good mood recommend *cyclothymics* in interpersonal relationships. At the opposite pole, *schizotymics* would be characterized by originality, inclination towards abstract analyzes and rigorous systematization. They have widely distributive attention. *Schizophrenics* become original writers rather than brilliant orators. From a character point of view, *schizotymics* represent purity, passionate devotion, unlimited altruism, complete selflessness.

Even if Ernest Kretschmer's typology remained only as a moment in the evolution of attempts to establish somatypes, the similarity with the typology proposed by Carl Gustav Jung is amazing, in the sense that cyclothymics are, as a rule, extraverted, and schizothymics, in most cases, introverts.

The Swiss psychiatrist Carl Gustav Jung (1875-1961) classified people, as they relate to the environment, into two general types, extroverted and introverted, to which he naturally added an intermediate type. According to the Swiss psychiatrist, "those who think, feel and act or, in a word, live directly conforming to objective conditions and their requirements, both in a good and a bad sense, are extraverts" (C.G. Jung, 1994).

Unlike the extroverted type, the introverted type is not oriented mainly by the object, but by subjective factors. "Introverted thinking is primarily oriented towards the subjective factor. Therefore, it does not lead from concrete experience back to objective things, but to a subjective content" - says Carl Gustav Jung (1994).

For example, the Swiss psychiatrist refers to Charles Darwin, who "could represent the type of normal extroverted thinking; Immanuel Kant could be designated as the opposite type, as the type of normal introverted thinking. As the first evokes the facts, the second evokes the subjective factor. Darwin soars towards vast expanses of objective factual reality, while Kant dwells on the criticism of knowledge in general. If we take a Cuvier and oppose Nietzsche, we make the contrast even stronger."

Carl Gustav Jung's typology was developed by the German-born English psychologist Hans Jürgen Eysenck (1916-1997). The extrovert is a person oriented towards the outside world, avoids loneliness, seeks the initiative and assumes the role of leader in the group, is accepted by others. He faces the risk, he is optimistic, he loves the unpredictable life. The typical extrovert feels the need to communicate with others, has many friends, acts quickly, is ready to fight back, tends towards aggression and easily loses self-control and control of feelings. In opposition to him, the introvert is characterized by self-centeredness, self-orientation. Introverted people are contemplative, quiet, reserved towards others. Particularly sensitive, introverted people are inclined more towards the world of abstractions than towards practical life, they show shyness and lack of confidence in themselves. They constantly self-analyze their feelings, take things seriously and make plans for the future, avoiding action under the impulse of the moment, they lead an orderly life.

Gordon W. Allport (1961) shows some reservations about Ernest Kretschmer's typology, showing that the Swiss psychiatrist "had no reliable way of measuring physical constitution and neglected the age factor: schizophrenia tends to appear earlier in life than manic disorders -depressive and at a time when the physical constitution tends to be slim". Instead, he gives credit to the typology and work style of Professor William H. Sheldon, of Columbia University, and his collaborators, Stanley S. Stevens and William Boose.

William H. Sheldon (1889-1977), a doctor by profession, bases his typology of the body constitution on the dominance of one of the three blastoderm sheets: the "endomorph" has a "rounded" constitution, a large belly, and underdeveloped bones and muscles (similar to

the picnic in Ernest Kretschmer's typology); the "mesomorph" has a "square" physical constitution, with well-defined bones and muscles (similar to the "muscular" type); the "ectomorph" (asthenic), characterized by long arms and legs, poor muscle development and a linear constitution (similar to the leptosome type in Ernest Kretschmer's view). According to William H. Sheldon's theory, each constitutional type corresponds to a basic temperament.

William H. Sheldon also imagined a more precise way of measuring the human body, proposing to give a score from 1 to 7 for each of the characteristics of the endomorph, mesomorph and ectomorph types that can be identified in one and the same person. Thus, each individual received not one, but three grades. The extreme types marked with 7-7-7 or 1-1-1 are pure abstractions. In reality, different combinations are found, for example: more endomorph than mesomorph and even more than ectomorph. In addition, the different parts of the body can receive scores that will finally be added up: the torso can be almost perfect mesomorphic (scored with 6), the legs medium ectomorphic (scored with 4).

Such constitutional types were called "dysplastic types", corresponding to mixed temperamental types. William H. Sheldon observed that some men have physical similarities with women, and vice versa. He debunked gynandromorphy "the feminine constitution of men" and "the masculine constitution of women".

In the research carried out by William H. Sheldon and his collaborators (about 4,000 students were photographed, front, back and profile) a high correlation coefficient  $r$  ( $\rho$ ) was found (+80) between the constitutional types (out of 76) and temperamental types (he observed the students for a year and measured, on a seven-point scale, a number of 50 psychological characteristics).

The researches of William H. Sheldon and his collaborators, among whom Stanley S. Stevens (1906-1973) remained a reference name in the theory of psychological measurement, proved the unity between body and psyche: the body accurately expresses psycho-moral characteristics. It would seem that we have indubitable proof of this truth. However, other research (H. Winthrop, 1957; S. Diamond, 1967) found a moderate correlation or even a zero correlation (absence of any correlation).

In agreement with Gordon W. Allport (1981), we will also say that "there is something true in Sheldon's formula (a fact that only confirms our traditional belief in this physiognomic parallel)". Without pretending to touch the fundamental problem (the relationship between the physical constitution and the psychological characteristics of the person), Marc-Alain Descamps (1989) brings into discussion research that confirms that we tend to associate certain psycho-moral traits with constitutional types.

M. Bruchon-Schweitzer (1981) presented to a number of 40 adults 18 plates with silhouettes of the three types identified by William H. Sheldon (men and women, face, back and profile), asking them to make the psycho portrait - morale of the respective persons). The stereotype related to the way of attributing psycho-moral characteristics according to the mesomorph, endomorph and ectomorph types was highlighted. In his own research, Marc-Alain Descamps found that the mesomorphic constitutional type is preferred, that women are more severe in

terms of evaluating body volume, then young people, who evaluate muscular bodies more positively.

Numerous psychosociological researches (Cavior et al., 1975; Kagan, 1964; Jones, 1957; Mussen and Jones, 1957; Staffieri, 1967) have highlighted that "mesomorphism represents the cultural ideal for men", that men with a mesomorph body constitution are considered more sexually attractive and physically efficient (S.B. Kaiser, 1985). It also seems that men - at least the American ones, because the research was carried out in the United States of America, in the 80s of the recently ended century - appreciate mesomorphic somatotype women.

## 5. Interpretation of mimic-gestural indices

Interpreting body language is difficult because of the multitude of signifying systems that traverse the body and because of the varying degrees of conscious intentionality:

(1) Some gestures are intentionally intended for communication: there is a body language with clear communicative intentions, in which the gestures are made to be signs, such as, par excellence: the language of deaf-mutes. In the case of hand gestures and head signs, the intentionality is generally obvious. There is thus an explicit body language: clear, expressive gestures, which intentionally have the quality of symbols or signs.

For example: the gestural symbolism of the oriental greeting, or the gestural sign made by someone who rotates the palm to hurry up the speaker. The more voluntary and differentially mobile the part of the body that performs the respective gesture, the clearer the gestures have a character of body language. As the face is, through mimicry, primarily expressive - we can emblematically constitute different expressions only from the mouth, eyes and eyebrows. Therefore, in communicative, conscious intention, the most obvious and important are the gestures made with the palms and fingers.

(2) Then there are expressions that directly signify the subject's reaction in a given situation - surprise, joy, anger -, gestures that, less clear, can be interpreted as body language even in the absence of conscious communicative intent. In the case of facial expressions, the messages are obvious, even animals express attitudes through them. But people sometimes control these expressions, for they have discovered that they can smile at those they detest: "Machiavellian liars" (M. Argyle) can produce all the signs of sincerity in their body language and still lie.

(3) Finally, behaviors are interpretable, even the lack of any bodily activity, the "silence" of body language, the attitude of a statue. For example: Clinton, apologizing, speaks evenly, with a cold, tense face, with an even voice, without intonations, with clenched hands - experts diagnose precisely this "silence" in body language as "lying". Silence is always associated with a posture, attitude and often with certain gestures, therefore it can be interpreted.

Confronted with the polysemy of body language caused by the multitude of participating signifying systems and the gradation of conscious intentionality that places them in a wide

range between communication and signification, we must resort to interpretation not only to semiotics but also to hermeneutics. The general hermeneutic rules must be prior to the formulation of the specific rules for the interpretation of body language: its understanding is based on the movement from part to whole, it must be related to the context, and gestures must be seen as answering a question. The general principle of their interpretation is that body movements can only be understood depending on the context and the communication sequence of which they are part: there are no "(absolute) keys to gestures".

What we can introduce - and we will introduce in the following chapters - really specifically in the semiotics of body language are certain general explanatory principles to guide our interpretation starting from the principles of the genesis of the signs of this language. Otherwise, in the case of gestures, mimicry, postures, behavior, the principle of the inverse relationship between semiosis and interpretation works: the weaker the meaning, the more intense, the more unlimited the interpretation.

From the concretization of the general hermeneutic rules to the semiotics of body language, these specifications of interpretation result:

(1) Gestures must be interpreted as a group, following their sequence in time, not isolated one by one, with their meaning. A unique gesture - a handshake, caressing or wiping lips with fingers, etc. - would thus correspond to a word. A series of such gestures - either intentional, or unconscious, or mixed - linked together form a group of gestures, a "sentence". Darwin shows that the expression of emotions involves numerous signs, so that the inference from what is directly observable to what is underlying must consider the symptom, the combination of signs, not the isolated sign. A good mood, laughter, a smile is expressed by the cheeks and upper lip being very raised, by the fine transverse wrinkles on the skin of the bridge of the nose, by revealing the anterior teeth of the upper jaw, by the formation of a very pronounced nasolabial fold, which joins the wing of each nostril with the corner of the mouth, by the vivid and bright eyes and by the withdrawal of the corners of the mouth and the upper lip. Instead, grief is expressed by changing the position of the eyebrows in correlation with other signs: the face becomes pale, the muscles relax, the eyes drop, the head hangs on the contracted chest, the lips, cheeks and lower jaw all drop down under their own weight. All facial features are elongated; it can be said that a person who hears bad news makes a long face.

In addition, in order to be remembered and coded more easily, it is good to identify and analyze contrasting *peperchi* gestures - a certain gesture and the gesture with the opposite meaning.

(2) Gestures must be interpreted in context. "Interaction" (M. Argyle) or the communicative situation - differs from the perspective from which we consider body language, as an action or as communication; we privilege as soon as we interpret, communication - is made up of:

*Context* - the general situation in which a meeting, a communication takes place: the table, the cinema, the theater, the concert; if we are with a friend, a colleague, a girlfriend, someone with whom we are at the beginning of a relationship or we are old acquaintances. Gestures must be related to the status and social role, to the age and gender of those who make them, even to the differences in communicative styles - introverted or extraverted -, as a context.

*Text* (the "speech" of body language) - the gestures, attitudes, postures in that context - which can be, if necessary, recorded - but which, in themselves, remain insufficient to capture the subtle aspects of the meaning of communication or interaction.

*The subtext* - the hidden meaning that the "text" (gestures, attitudes, postures) can suggest to us through semiotic means (intonation, gestures, etc.). Here Mehrabian's formula of percentages can be justifiably quoted: intonation and gestures make, compared to verbal language, more than half of the amount of information we can obtain to understand a specific situation, on its relational dimension, especially if it is contradicted by verbal abuse.

(3) Gestures must be interpreted, just like verbal messages, from the perspective of the question they answer or the problem they solve. It is essential to take into account the fact that they often answer physiological problems/questions rather than meaningful ones, because they also have behavioral - adaptive functions, not only meaning, like words. Perhaps he is cold and the closing/defensive gesture is only an attempt to reduce body heat loss; perhaps he is irritated by an insect bite or the clothes he wears and the gestures with his hand at his neck have no other meaning, etc.

In most cases of bodily communication, gestures have relative and contextual meanings, which makes them so ambiguous. Gestures, as signs with autonomous meanings of body language, are specific to humans. They have, along with mimicry and partially different from behavior and postures, to the greatest extent a character of language - in the sense in which we are talking about a language of the deaf-mutes - because certain gestures and certain facial expressions have their meanings, supported symbolic and somewhat indifferent to the context.

But there is also a religious, alchemical and astrological symbolism of the body, that is, a cultural determination of gestures. For example, the Limbourg Brothers, in a miniature from the XV, in *Les très riches Heures du Duc de Berry*, from Chantilly, today at the Condé museum, presents a synthesis of the theory of the microcosm that mirrors the macrocosm: man becomes a celestial map - each zodiac sign corresponds to a part of the body.

The scheme of astrological symbolism is as follows: top of the head - ram; neck: bull; shoulders-arms: twins; upper chest: cancer; lower lion; middle: virgin; belly: scales; genital area: scorpion; thighs: sagittarius; knee: capricorn; thighs: vomiting; soles: fish. The meaning of gestures is shared from such culturally constructed symbolisms, at least to an equal extent, as well as from the correlation with language, with verbal discourse.

(1) Index finger: judgement, determination, balance, tranquility, self-control; the middle one: personality affirmation; the smallest: hidden desires, occult powers, divination (esoteric); ring: sexuality, pleasure; and the police: the sign of masculinity.

(2) Arm – strength, power, help given, distribution, hand of justice. Raised arms in the Christian liturgy: calling for grace, opening the soul to divine favors. In conflict situations: surrender, submission, call for clemency. Hand: activity, dominance, power.

(3) The difference between right and left is a symbolism imposed on the body and different according to cultures. In the West, the right is favorable, representing: strength, skill, masculinity, order, work, fidelity, authority, hierarchy, stability, tradition, self-satisfaction. Left is: ominous (sinister), feminine, nocturnal, satanic, disorder, uncertainty, dissatisfaction, movement, claim, search for progress, innovation, risk. In China: the opposition is not absolute, the left is the honorable, masculine side, represents the sky (yang), the right is the earth (yin) and belongs to women. In general, it is given with the left and received with the right. In Japan: the left is the side of wisdom, faith, instinct, in connection with the sun, the male element. The right is in relation to the moon, water, the female element.

(4) The eye is almost universally the symbol of intellectual perception. The look is the symbol of revelation.

(5) The nose, like the eye, is the symbol of clairvoyance, insight, discernment, but intuitive rather than rational.

(6) The face expresses thoughts and feelings and mirrors the person; the mystics beg God to show them his face: the promised reward of eternal life.

(7) The foot: symbol of connections, contacts, facilitates closeness.

Gestural symbolism is, as can be seen, closely related to a symbolism of the body. Rather, we are dealing with the invocation of preexisting symbolic and static signs. But body language is rather dynamic, it is a meaningful activity. As with physics, an evolution appears in the semiotics of body language when spatial and temporal quantifications are introduced.

### **TIME IN BODY LANGUAGE.**

Time in body language is less studied, because it requires recording and measuring equipment, the procedures are more laborious and interpretable through symmetry with space: making people wait, as well as keeping them spatially apart, serves to maintain the positions of the hierarchy. In the ritual of waiting, contempt for one's space becomes contempt for one's time: "the distribution of waiting time coincides with the distribution of power". Filmed experiment: When someone knocks on the door of an institution or company, the time between knocking on the door and entering and the time between knocking and answering are correlated with the position of power in the institution's hierarchy.

But the biggest complication with body language comes from the fact that it is a fast mode of communication: the response to body signals comes in 1/25 of a second! It is also the reason why it escapes, to the greatest extent, consciousness: body communication is like traffic on the highway: high speed - much higher than that of the transmission of the verbal message - and continuous in both directions - not discontinuous, when from the sender to receiver, when vice versa, as happens in the polite exchange of verbal messages where each partner listens to the other and speaks only afterwards!

Something can be understood either through the mechanism of the causes and conditions that produce it, or through the meaning it has and which warns us about the meanings in which we can take it. In the first case it is about the effects of an action, in the second about

the message/messages of a sign or signs. The problem that arises here is to decide what is and what is not a sign in the conditions where, in the presence of a consciousness, which interprets and understands, everything is a sign and becomes language.

Even more so in the case of human actions, for which the purpose rather than the cause is defining, and in which, in fact, the purpose is the cause. But what is effectively a sign is that which has insufficient substance or energy to perform something other than in meaning: the substantial or energetic paucity makes, from the material or energetic fragment, a signifier and from the respective entity a sign!

The difference between gestures and action is the difference between a bodily movement that, in principle, indicates something - it may even indicate an action or the intention of an action, as when one sketches the gesture of opening a package, in the idea of being approved by the one in front of which the scene takes place.

Explanation or interpretation? Probably interpretation because we are dealing with the meaning of an intention, that is, more precisely, an action without completion and even without the intention of completion. This is probably where the gesture is born, and above all, the possibility of the gesture as a sign appears!

This is how it happens that everywhere in the body language there is a symbolic - motivated mixture and that it can be understood from two perspectives: that of interpretation and that of explanation. We favor the interpretive perspective because, although more imprecise, it is more stable and reliable than the more frequently changing causal scientific explanations. It is based on the first interpretative grid that it proposes and which effectively emphasizes the symbolic and natural in the interpretation of gestures.

However, we will also add other interpretation grids that supplement the possible meanings and meanings through neuroscience explanations. It is about the grid of limbic reactions, proposed by FBI expert Joe Navaro and Dr. Marwin Karlins, the grid of synergology, proposed by Philippe Turchet and especially the grid of facial expressions of fundamental emotions initiated by Darwin and elaborated by Paul Ekman.

## **MIMICRY.**

Soul processes - and especially emotions - are expressed through mimicry. Aristotle still considered that man has the richest mimicry of all beings. Charles Darwin in *The Expression of Emotion in Man and Animals* (1872), noted the similarity of mimicry for the basic emotions - joy, sadness, anger - between humans and monkeys as well as between individuals of different races. His hypothesis is that the expression of emotions is innate, otherwise "the conventional expressions or gestures, acquired by the individual in the early period of life, would probably be different in the different races, just like the languages they speak".

From the fifth week, the child smiles in response to the mother's mimicry. Irenäus Eibl-Eibesfeldt established through observation that the facial expression is the same in blind children, but without finesse, it is like a grimace produced by the basic movements.

In 1938, the American psychologist Otto Klineberg contested the thesis of the universality of the facial expression of emotions, advancing the hypothesis of their cultural determination. The smile would express different emotions in the populations of the East, compared to those of the West. For a European, a smile means good mood, pleasure or irony. The smile of a Japanese person can also signify agreement with the punishment administered and the association with the indignation of the person administering the punishment. Otto Klineberg believes that expressions of emotions have a distinct cultural specificity.

In 1965, when Paul Ekman began to study facial expressions, most anthropologists were convinced that gestures and emotions have cultural foundations, that they are learned in the process of socialization. Paul Ekman started from the hypothesis that facial expressions are programmed as a natural part of emotions. Because all humans belong to the same species and all have the same number of facial muscles, it is expected that everywhere in the world, emotions are expressed in the same way, to be recognized as such.

A recent research, however, carried out by the Institute of Neuroscience and Psychology of the University of Glasgow, seems to contradict the general opinion, according to which man has six basic emotions - happiness, surprise, fear, disgust, anger and sadness. The subjects who interpreted the facial expressions generated by the computer could not distinguish the expression of anger from that of disgust, nor that of anger from that of surprise. Therefore, the basic emotions are only four – happiness, sadness, fear/surprise, anger/disgust. Only these can be read correctly on people's faces and they were essential for the survival of our species. The other interpretations appeared later, the delimitation between these emotions therefore having a cultural, not a biological, character.

This interpretation is probably closer to the truth. After all, like gestures, mime is an unfinished action and later modified by cultural refinement. People would widen their eyes when they were scared to get more visual information about an approaching danger. Likewise, in the case of disgust, they scrunched up their noses, this gesture being initially done to limit the inhalation of something that does harm. Perhaps mimicry also comes, at least partially, from the same biological foundation as the instinctive reactions - fight, run, pretend to be dead, respectively of acceptance or rejection -, located at the level of the sense organs. Now, however, these actions with a tempered and stylized finality have become forms of expression in interpersonal interactions.

Mimicry, facial movements are, as a rule, more controlled than gestures or voice inflections. The swelling of the nostrils, the old reaction to pleasant smells, ends up expressing exciting feelings, or annoyance and anger. "To turn up one's nose": dislike, aversion, perplexity. Open mouth: not tense - wonder, not understanding what is happening "open mouth"; tense: ready to take a position, ready to speak; closed, with pursed lips: asceticism, difficult problem, "tied mouth" or "ice silence". In general, a half-open mouth expresses a certain readiness. The person next to us is relaxed, ready to chat or be kissed. Sensual position: lips relaxed, slightly parted (possibly, more accentuated, fingers close to the mouth).

On the contrary, a firmly closed mouth evokes refusal, obstinacy, opposition, unavailability and repression of desires; with glued lips they do not communicate. An asymmetrical mouth shows discomfort and nervousness. The mouth opens under the effect of surprise, the lips

stretch under the action of joy, the upper lip rises as a sign of disgust, while the lower lip hangs down when we are dissatisfied or sulking. When an individual bites their lips, they can do it to prevent themselves from laughing, crying or talking, but also if they are angry or if they are thinking intensely.

Anger is often manifested by pursed lips, while sadness is revealed by drooping lips. Researchers from the University of California at Santa Barbara and Griffith University in Australia argue that anger has evolved to drive effective negotiation behavior during conflicts of interest. As a "negotiating emotion," the expression of anger not only signals the onset of a conflict but is intended to intimidate others, making the angry individual appear stronger by exaggerating traits associated with fighting ability and receiving a preferential treatment.

If the interlocutor tightens and purses his lips, we will know that he is confused, and if he remains with his mouth open, it means that we have aroused his admiration or caused him stupor. When the lips are pushed forward simultaneously, it can be an invitation to kiss or a grimace of refusal, doubt, suspicion. The individual who constantly moistens his lips betrays a dissimulating attitude: either he is lying or, at least, he is not telling the truth.

The color of the lips and their tonicity are also revealing: dark pink or red lips generally show a state of well-being and pronounced sensuality, while pale, almost white, often thinned lips are a sign of poor physical or mental health or of frustration. The tongue is out to accompany gestures that require great concentration: touching the teeth with the tongue is a sign of self-soothing. Showing it is, depending on the context, a sign of intimacy or aggression.

The eyes are the central point of the facial expression. The gaze has an important phatic function and regulates communication (hence the difficulty of communicating with someone who wears dark glasses). It also marks the duration of the conversation; expresses differences in social status; indicates positive or negative emotions; and supports credibility by maintaining eye contact. Erving Goffman drew attention to the fact that through the movement of the eyes we signal the recognition of the other's presence, even without aiming to enter into a relationship with him.

The gaze signals whether the interlocutors pay attention to each other, or unilaterally, or do not pay attention at all (they look somewhere other than the person they are talking to or they look at him and do not see him, passing over him with their eyes). Direct gaze opens the communication channel or keeps it open. The length of time our gaze meets the other's is significant - if we look at her 2/3, 60-70% of the time, it is a sign of either sympathy or aggression. According to Argyle's observations, two people look at each other about 30-60% of the time they spend together; passing time indicates strong feelings.

In certain contexts, prolonging eye contact can mean hostility and anger, in other contexts it is a sign of friendship, of love in general, of interest in the other person. Sympathy means making more eye contact.

In some cultures, looking into the other's eyes is considered a lack of respect, especially towards people with higher social positions. Research carried out in Nigeria, Puerto Rico, Thailand or Japan has shown that young children are not encouraged to make direct eye

contact with their teachers or in interactions with other adults. In Japan, looking someone in the eye is a sign of disrespect. It is recommended to look at the "Adam's apple".

Instead, Arabs use a lot of eye contact in interpersonal relationships, with a duration that could be embarrassing for individuals from other cultures. Blacks look at the interlocutors when they are addressed, whites when they listen to what they say, and in Arab countries, women are forbidden to look men in the eye.

And the direction of the gaze depends on the type of relationship that is established between the discussion partners, being greater if the partners are attracted to each other or are in a cooperative relationship than if they are in conflict. The orientation of the gaze is strictly related to the motivation of the need for affiliation and, along with body movements, determines a certain balance at the level of proximity between two people. Thus, the closer the individuals are placed to each other, the less visual contact, the shorter the glances. The effect of physical proximity is even stronger if the people are of the opposite sex. In order for there to be a balance of intimacy, the two people in contact proceed to a compromise situation. If intimacy increases, the individual will generate its reduction to normal levels either by redirecting the gaze or by increasing the physical distance from the interlocutor.

Averting the eyes, avoiding the gaze means distancing, avoiding communication. It is often that of a person who has something to hide or someone who is lying. Some people have great difficulties in looking their interlocutor in the eyes, and their glances are always short, sometimes with the corner of the eye or under the eyebrows. The shy person avoids eye contact for a long time. We avoid looking for fear of a refusal or fear of confronting the other's statements. Painful reports are made without looking at the interlocutor: that's why therapists sometimes sit out of sight. Watery eyes: symbolic washing of something bad.

Types of looks: looking with parallel eye axes, not focused on the object: reconciled soul, deep in one's own thoughts; direct, with open eyes: availability of direct and open communication; from top to bottom: arrogance, haughtiness, pride, contempt (if it is the result of the difference in height, it can be avoided by increasing the distance between the partners); from bottom to top: ambivalent – submission or adversity; towards the sky, the tendency to pose as a "saint", as a man who sacrifices himself, or a dreamer's, utopian's need to escape, indifference to the discussed topic.

The upward movement of the eyes accompanies the effort to remind us of something, and their lowering can express guilt, the hiding of true feelings, a state of psychological discomfort. When the speaker looks up, he thinks out loud, when he then looks at his partner he includes him in the dialogue, gives him permission to speak. To look away is to communicate to the other a lack of interest in what he is saying; the side gaze (observing without being observed), which sweeps the visual field: from curiosity to sadness. The sideways glance conveys mistrust, suspicion, hostility. Looking him in the eye expresses sincerity, but also a threat; fixed gaze: concentration, nervous tension, critical assessment of the interlocutor.

The fixed, hard look, which seems to be welded to yours and supports it, the look that pierces you, expresses aggression, hostility. The stare can also be of the one who is lying and who

tries in this way, to make you swallow his lie with the air that says: "You see I'm telling the truth, I'm just looking you in the eye." The drowsy, fixed, atonic gaze, directed towards you or elsewhere, with open eyes and motionless eyelids expresses fatigue, fatigue; boredom; depression; antipathy.

The mobile, unstable gaze, the one that wanders to the right and left, that stops here and there, returns to you, leaves again, hard to intercept, belongs to the fickle, unstable individual for whom there is always something interesting to see or hear elsewhere. It is often observed in people who want to put distance between themselves and their interlocutor or interlocutors.

The lowered gaze is a sign of tension, embarrassment, nervousness, shame; it can also be an attempt to mask the truth. The meaning of looking out of the corner of the eye depends on the position of the eyebrows and the movements of the mouth: accompanied by a raise of the eyebrows and a smile, it means either that person is trying to seduce you, or that you have aroused his curiosity, or that you amuse him; but if above this look, the eyebrows go down or frown, if the mouth thins into a bad rictus, with lowered corners, it signifies malice, nervousness, animosity. The side glance can also be ambivalent: courting (smile, slightly raised eyebrows), or hostile.

Brief glance (typical of those coming from opposite directions in an aisle and looking at each other only to avoid collision): usually a tendency to grab or attack - quick eye contact impresses, fixes or threatens the opponent ("to put eyes on someone"). The forms: from the rigid gaze to "looking through someone". However, the dominant look is the long look: when we look this way we show confidence, and the meaning of the words is amplified.

Eckard Hess noticed that the pupil dilates with emotion, not only with light. The dilated pupil expresses the individual's emotional and affective availability towards everything that surrounds him. Pleasure, desire can cause the pupil to increase in size up to four times its normal size. The negative state produces a contraction of the pupils - snake eyes -, the positive, excited state leads to the enlargement of the pupils - "bedroom" eyes. The significance of these body language cues has its starting point in well-known bodily reactions: pupil contraction is necessary for good spatial vision, necessary for conflict situations, which can lead to aggression and violence. Conversely, relaxing in a comfortable situation leads to disinterest in good spatial vision.

Equally clearly grounded in body reactions are the clues and meanings provided by the degree of eye opening:

- (1) stare - "swallows your eyes";
- (2) wide open – spiritual productivity, but also innocence (look used to lie);
- (3) open – normal interest, optimism;
- (4) half-open - reduced participation in what is happening around, "it's not even worth a look"; the situation is not perceived as real;
- (5) partially cover – cunning, selfishness, hidden;
- (6) tightly closed - self-protection, refusal to see. Closing the eyes shows that someone wants to take us out of sight, out of boredom, indifference or superiority;

- (7) closing one eye - secret understanding "I know you well, I don't have to look at you with both eyes";
- (8) relaxed closing of the eyes - abandonment, "overlook, do what you want";
- (9) repeated and short closing of the eyelids: the desire to break a visual contact.

Thanks to the combination of gaze with several facial cues, we all recognize a happy, smiling face. The smile is the most commonly used facial expression and is often a reflex response to greeting. The sincere smile is wide, round, symmetrical, takes shape slowly and fades slowly. The artificial smile - studied by Duchenne (1806-1875) - is usually limited to the mouth and does not reach the eyes. The insincere smile is crooked, asymmetrical, too long or ends too suddenly; the nervous one is too short and breaks off suddenly.

Paul Ekman cataloged several types of smiles that we can easily recognize:

- (1) The deliberate, manufactured, tortured smile with the corners of the mouth straight, lips straight and glued; appears and disappears quickly: can express embarrassment.
- (2) The sweet smile obtained by stretching and thinning the lips: accompanies the universal "yes".
- (3) The smile "under the mustache" with tense and glued lips: expresses will and restraint at the same time.
- (4) The derogatory smile with the corners of the mouth pulled down is displayed by blasé, ironic people: it can express disagreement and agreement at the same time.
- (5) The relaxed, tension-free smile: expresses joy, love, appreciation of the other.
- (6) Crooked smile with one corner of the mouth pulled down and the other up: it expresses a forced kindness, an internal conflict. (It is the smile of the subordinate forced to listen to an inappropriate joke of the boss.) Crooked smile - the 2 halves of the brain have different messages. An asymmetrical mouth shows discomfort and nervousness; the left side more pronounced than the right - in liars. Left visual field – emotion, right visual field, information.
- (7) The smile that expresses fear – the lips are drawn sideways and the mouth is slightly parted; the corners of the mouth are drawn towards the ears.
- (8) The condescending, resigned smile – the forward bending of the lower lip; it is often accompanied by tilting the head to the right and/or raising and shaking the shoulders.

## **6. Electronic mediated communication**

It is not possible to understand the central dynamics of network communication, or why the second media age thesis has become an orthodoxy, without understanding the nature of broadcast as a medium. In fact, as we shall see, the two communicative forms can be argued to be, in the contemporary period, mutually constitutive. That is, I argue, they are mutually

related in their practical reality and are also related therefore in how we should understand them.

Understanding broadcast and network as distinct communicative architectures also entails making some fundamental distinctions about the kinds of communication effects which are internal to them. The distinction between 'transmission' versus 'ritual' communication is one which provides a useful way of classifying the different kinds of perspectives on broadcast media which emerged in the twentieth century. These perspectives correspond to qualitatively different kinds of communicative processes which are evident in the mass media, and which broadly correspond to content versus form, respectively.

The transmission view is by far the predominant one, and is only recently being criticized from the point of view of its overstatement. Instructively, the impetus of this rebuttal is not to be found in the large body of critical writings<sup>1</sup> but can be found in the rise of new kinds of communicational realities which expose transmission views of broadcast as inadequate. The critical literature on 'transmission' views of community has been led in recent decades by a number of French theorists, exemplified by the work of Jacques Derrida.

What this and the next chapter aim to do is to introduce the main perspectives on broadcast and network cultures of communication respectively before going on to look at the way in which the perspectives on broadcast need to be critically reassessed. This will mean that shortcomings of instrumental perspectives will become apparent in light of an understanding of network communication, but, in later chapters, we shall also see how broadcast can be seen to carry very important forms of reciprocity and community, contra the claims of many of the second media age thinkers.

The massive changes wrought by the industrial revolutions that have unevenly transformed the developing world have represented important preconditions to the formations of populations living in conditions of density whilst at the same time connected by the framework of the nation-state. The sheer scale of population increases within modern nation-states combined with the migration of people from pastoral regions to cities has created metropolitan densities conducive to the maturing of so-called 'mass society'. Infrastructures necessary to service such growth have led to the mass production of transport and goods, the mass delivery of education and of course the 'mass media' (Giddens, 1990; Thompson, 1995).

In the period of the breakdown of traditional societies characterized by a high intensity of integration by religion, the fragmentation of nationally framed polities by way of urbanization, the separation of individuals from feudal means of production and the creation of labour-power as a commodity collectively gave rise to a range of perspectives on the 'massification' of society ranging from mass/elite frameworks to liberal-pluralist ones.

The mass/elite framework had its most salient beginnings from the 1930s onwards, which was also the time when the media were first 'mapped out as a field of study in a formal or academic sense' (Bennett, 1982). It was at this time that the co-emergence of cinema and radio combined with rising unemployment and mass armies of disposable workers which culminated in the Great Depression. What all of these frameworks have in common is the idea

that the masses once formed by the aforementioned disintegrations are, in late modernity, in need of a mechanism of incorporation for social integration to occur.

This may be politically, by way of the gradual enfranchisement of successive groups, or economically, by, for example, the law of value operating in the market to facilitate equivalence between labor-power and commodities. At the same time, however, the mass society framework of the 1930s gave rise to a concern for 'effects analysis' which focused on 'stimulus' and 'response' and the influence that 'the media', deemed to be somehow external to the formation of a person's identity, comes to exert over that identity and culture in general. These studies oscillated between celebrating the media as agents of the education of the masses to condemning them for hypodermically injecting audiences with 'propaganda'.

Most of the empirical research was concerned with what people 'think' as a result of being influenced by the media. On some rare occasions, the 'mass psychology' of the media was also studied, such as when, in 1938, H.G. Wells' famous novel *The War of the Worlds* was broadcast in radio form on CBS, resulting in the now difficult to understand apocalyptic hysteria over a Martian invasion.

The mass/elite model of society has been criticized by Marxist perspectives on communication and more recently within cultural studies. The Marxist critique labels mass/elite theory as an ideology of erasing a politics of class (neutralizing the realities of the ruling class versus the working class), whilst cultural studies is concerned with the way in which the framework treats audiences as 'passive'. Interestingly, the Marxist and cultural studies critiques dismiss 'mass society' perspectives insofar as they are deemed to be serious contenders for a sociological framework.

Tony Bennett argues, for example, that as a theory of society, it is generally imprecise, that its historical commitments are at best romantic and at worst vague, and that there is no account of the transition between periods of social integration (Bennett, 1982). Yet it is, of course, precisely because it developed in the period when broadcast media were in ascendance that this 'imprecise' theory came about. My own argument is that the mass society outlook, if thought about in relation to the media, is an entirely appropriate response to the embryonic dynamics of media constituted integration. I agree with the above critiques that it cannot be taken seriously as a sociological framework, but as a theoretical expression of, as well as response to, the way broadcast media are able to reconstitute social relations it provides some early conceptual tools for this – even if these are inadequate by today's standards.

For example, mass society theory is sometimes accused of homogenizing media forms themselves. As John Hartley suggests, 'it is difficult to encompass the diversity of what constitutes print, cinema, radio and television within one definition' (O'Sullivan, 1994). But this is only true if we are interested in the signifiatory properties of these media. Where these media do converge, however, is in the capacity to act as bearers of a homomorphic medium of communication, which produces audiences whose field of recognition is vertically constituted.

It is significant that it was only during the period of the massive rise of broadcast through television in the 1950s and 1960s that literature again began to appear dealing with the age of the masses (Bell, 1962; Kornhauser, 1960; Shils, 1957). This is the time when another, very different kind of mass society theory made its debut in the form of what Stuart Hall has called 'American Dream Sociology'.

This kind of sociology, represented by the writings of Daniel Bell, Seymour Lipset and Edward Shils, argued that the general liberalization of society, supposedly measured by the participation of the working class in politics and the growth of welfare, had solved earlier conflicts arising within civil society to the point where a new consensus had been achieved by which resources were at last being distributed according to a harmonious pluralist pragmatism. This thesis, known as the 'end of ideology' thesis, argued that the fundamental political problems of the industrial revolution have been solved: the workers have achieved industrial and political citizenship; the conservatives have accepted the welfare state; and the democratic left has recognized that increase in overall state power carried with it more dangers to freedom than solutions for economic problems (Lipset, 1963).

The 1950s renaissance of mass society theory was therefore one with 'the elite' subtracted from it where the masses had been redefined as the melting pot of democratic evolution. Shils was working earlier than the other theorists at revising the 1930s formulations in which the masses had achieved the long march from the outskirts of the social, cultural and political landscape to the democratized and pluralized community or universal speech. Such speech was, of course, guaranteed rather than truncated by the mass media. It is as if in fact such a democratization of the masses had not been possible without the rise of the media.

In this way, American Dream Sociology saw the media as simply a transparent extension of the democratic public sphere, a continuation of the social by other means, where the media act in service to the community. As Stuart Hall (1982) describes it, 'in its purest form, pluralism [American Dream Sociology] assured that no structural barriers or limits of class would obstruct this process of cultural absorption: for, as we all 'knew', America was no longer a class society. Nothing prevented the long day's journey of the American masses to the centre'.

Contrary to the way in which the presumed homogenizing function of the media was celebrated, several of the empirical studies of a behaviourist and positivist kind conducted at the height of this perspective confirmed the opposite effect, that audiences were in fact highly differentiated and heterogeneous (Lazarsfeld and Kendall, 1949). Such studies were effectively repositioned by Shils in yet another twist in the tale of mass society theory, as proof of the confirmation of the 'homogeneous' pluralistic tolerance of mediatized democracies.

What is characteristic of both the early and later versions of mass society theory is their adherence to empiricist and positivist epistemologies of the media. That is to say, in arguing that the media are able to extend the democratic process,<sup>8</sup> by circulating views, a number of metaphysical commitments are made which have since been critiqued by linguistic perspectives on the media (semiotic, structuralist and post-structuralist). The media are largely assumed capable of providing a transparent reflection of reality (language is transparent), whether this be as a reflection of events (the news), of culture (popular culture), or of morality

and art (film and literature). Secondly, the status of the individual is unproblematic for this model. For example, the position (qua perspective) from where a media product might be consumed is disregarded. Thirdly, all individuals (subjects) are deemed to have the same opportunity for observation.

*Cyberspace.* Throughout October 1999, concerts were held in London, New York and Geneva to launch 'NetAid', the Internet equivalent to the 'Live Aid' movement of the mid-1980s. The 'Live Aid' movement was comprised of a series of globally broadcast rolling concerts sponsored by corporations who received a moral injection to their advertising profile, as well as patrons at the gates who felt that they were doing something for needy people they had seen on TV.

The later version of empathy-at-a-distance is one in which, by sitting at Internet terminals, those people living in economically and informationally rich countries can do 'something to help'. The Secretary-General of the United Nations was on hand at the concert, to explain: 'Most people in needy countries have to get by on less than two US dollars per day; now, with the click of a mouse, everyone can help. There are no more excuses, let's bring on a new day.'

The heralding of the Internet as universalist and redemptive has, at the turn of the millennium, become a widespread discourse, in which the rhetoric of salvation through an electronic assembly has attained theological proportions. Whether by rhetoric or by clever marketing, the rate of growth of connection to the Internet network is astonishing.

*Cyberspace and virtual reality.* As suggested in the Introduction, the distinction between the first and second media age is a relative one, and is founded on a heightened contrast between the new network mediums and the structures of broadcast mediums. In this chapter we will explore this contrast by examining 'second media age' thinkers who contend that the growth of the Internet is a reaction to the restricted and unequal possibilities of broadcast. As we will see, there is a surprising degree of agreement from liberal, Marxist and postmodernist thinkers over the emancipatory qualities of the Internet. But before presenting this analysis, it is necessary to explain some of the technical and structural characteristics of new interactive media and assess the claims made for a second media age.

Whilst the term 'cyberspace', which first appeared in the prophetic fiction writing of William Gibson, is most frequently used today interchangeably with the Internet, some thinkers have pointed out that it can be applied in a much wider sense to include a range of technically constituted environments in which individuals experience a location not reducible to physical space (see Escobar, 1994; Ostwald, 1997).

By this definition, any medium which encloses human communication in an electronically generated space could be a form of cyberspace. A further distinction is also often made to designate that such a space may be very private or shared by others. For example, a personal music listening device with headphones, which Sony Corporation first made famous with the 'Walkman', qualifies as a medium of the enclosure of experience.

However, it falls short of the conditions necessary for cyberspace in that it disallows a shared appreciation of the one media 'event'. The event is personalized because its 'performance'

and the environment within which it is consumed are connected by an individual user. Thus, the distinction being drawn here can be recognized in a range of daily media habits. Meyrowitz (1985) notes: 'There is a big difference between listening to a cassette tape while driving in a car and listening to a radio station, in that the cassette tape cuts you off from the outside world, while the radio ties you into it'.

However, the difference between accessing shared media events and ones that are personally programmed tends to be overlooked by virtual reality theorists insofar as they are preoccupied with bandwidth as a leading marker of its definition. In general, virtual realities tend to require much broader quanta of bandwidth in order to achieve their simulational properties. Thus, virtual reality is regarded as having found a technological home in digital environments. However, just as personalization is not an exclusive feature of digital media or a 'second media age', neither is wide bandwidth.

Across the broadcast medium, significant differences exist between the virtual qualities of media. Consider the difference between television and cinema. Cinema offers almost double the bandwidth of TV. An average size television fills 5% of the visual field, whilst the other 95% is occupied by possible distractions in the room. Cinema engages 10% of the visual field, with the other 90% blacked out – eliminating distraction. Cinerama spans 25% of the visual field, whilst virtual screens fill 100% of the visual field as such screens receive their data from computer-generated images. But the technology of projection is merely an extension of broadcast technologies.

As I argue in the Introduction to *Virtual Politics* (Holmes, 1997), unlike virtual reality, cyberspace does not rely on a deception of the senses to create the illusion of an integral realism. Rather, it is by the construction of computer-mediated worlds in which (predominantly textbased) communication can occur that an objectivated reality is established which does not depend on a common deception of sense-impressions. As Ostwald argues, 'the critical component of any definition of cyberspace is the element of community', because he maintains that a single person does not exist in cyberspace, but in virtual reality (Ostwald, 1997).

According to James Carey (1995), and, later, Jon Stratton, the most primitive but original place to find the 'origins' of cyberspace is in 'nineteenth century attempts to speed up circulation time' (Stratton, 1997). Therefore, the most fruitful place to look, says Stratton, is to the advent of the telegraph in the first half of the nineteenth century. In the observation of James Carey: 'The simplest and most important point about the telegraph is that it marked the decisive separation of "transportation" and "communication"' (cited in Stratton, 1997).

Stratton contends that it is not the emergence of the computer and the microchip per se which inaugurates the production of cyberspace, 'but the increase in the speed of communication over distance to a point where the time taken for a message to traverse the distance reduces to a period experienced by the receiver, and sender, as negligible'. By Stratton's reading, therefore, the development of global telecommunication and of cyberspace is inextricably intertwined.

Among the major precursors of computer-mediated cyberspace technologies, the telephone can also be counted. As a twentieth-century innovation on the telegraph, the telephone exhibits virtual kinds of features as an electrically sustained low-bandwidth medium, whilst enabling a limited kind of electronic assembly. Such an assembly, whilst generally only mutual for a few persons at a time, nevertheless facilitates a sense of a meeting place, a place that is augmented by voice mail and answering machine services.

The telephone also exhibits a limited number of features of virtual reality insofar as it is semi-enclosed (a given conversation cannot be heard simultaneously by anyone other than the interlocutors) and it translates the voice into a 'meta-signal', electrical pulses which convey analogue sounds. With regard to this latter quality, one of the first theorizations of 'virtual reality' can be found in an early classic on telecommunication by Herbert and Proctor. The second edition of their work *Telephony* (1932) distinguishes electrical current and electrical voltage from what they name as a separate 'virtual' current and 'virtuvoltage'.

This distinction is an – albeit crude – attempt to signify the fact that a telephone exchange, in which individuals are jacked in to each other by way of operators or agents, purveys an environment that transcends the purely electrical. This other environment stands somewhere between the human voice and the electrical medium, but lacks the comprehensiveness of mediums which today earn the appellation of cyberspace.

*Cyberspace and the Internet.* The fact that cyberspace is so often conflated with the Internet belies the fact that there have long been other networks before the Internet which qualify as domains of the 'matrix' or cyberspace. The sum total of these networks is sometimes called Barlovian cyberspace, so named after John Perry Barlow (Grateful Dead band member), who applied Gibson's term to CMC as a more complex kind of a space than that which is engaged in a telephone conversation.

Today the Internet has consolidated into a 'network of networks'. Mostly originating from the USA, the major networks which have added themselves to the Internet include ARPANET (government-funded), Fidonet (alternative cooperative), Usenet, the WELL, the thousands of corporate and government intranets, and the World Wide Web. CMC systems that predated many of these networks, such as email, news groups and bulletin board systems, are now carried with the expanded Internet network.

One also needs to distinguish between commercial and domestic networks of CMC. Commercial networks have long predated the domestic, with IBM having its own global intranet some twenty years before the Internet properly began.

Certainly, in America, ARPANET was one of the most instrumental in pioneering the domestic conditions for today's Internet. Built by a Boston company under contract, 150 sites had been established across the USA by the late 1980s. It was designed from the start to allow remote log-in by passwords, a feature that co-developed with the accelerating speed of computer modems in the home.

Of surprise to many of the architects of ARPANET was the fact that one of the most popular sub-media to spring up was email. As Tim Jordan (1999) explains:

"The key point about email is that rather than people using ARPANET to communicate with computers, as the designers expected, people used it to communicate with other people. This was despite the fact that email was not programmed into the system but was added unofficially in an ad hoc way. Email emerged spontaneously as the basic resource provided by ARPANET and this has been true of virtually all computer networks. People connect to people using computers, which has given rise to the over-arching term computer-mediated communication."

However, CMC does not just have to be point-to-point, as what the various networks have allowed that was unachievable with pre-CMC communication is correspondence from the many to the many – multiple authors and readers for which there is no technical limitation. Such a form of communication achieves an efficiency impossible in embodied form. Three hundred people can more easily speak to each other in a list serve conference where each message is recorded in a linear sequence of when it was sent (an automatic queue for speech) than could the same three hundred trying to have themselves heard at an embodied conference.

A CMC conference is just one example, therefore, why we should be dissuaded from seeing cyberspace as merely an extension of social relations which occur outside of it, as clearly it is generative of new relations that were not previously possible.

*The Internet and its sub-media.* However, whilst 'cyberspace' brings about new possibilities of association, the form they take is conditioned by the various sub-media that are available by way of the Internet.

Too often, 'virtual communities' are simply tied to some generic power attributed to 'the Internet'. It is important to specify the various sub-media of the Internet and their implications. As is pointed out by a number of analysts, early fascination with MUDs and MOOs has declined substantially in proportion to the dominant uses of the Net. 'While chat rooms, news groups, and multi-purpose Internet conferences were meaningful for early Internet users, their quantitative and qualitative importance has dwindled with the spread of the Internet' (Castells, 2001).

For Castells, the Internet is not an amorphous ocean that individuals dive into, but a galaxy of regulated sub-media: 'The Internet has been appropriated by social practice, in all its diversity, although this appropriation does have specific effects on social practice itself. Drawing on empirical research, Castells concludes that the on-line identity-building forums available on the Internet are mostly concentrated among teenagers: 'It is teenagers who are in the process of discovering their identity, of experimenting with it, of finding out who they really are or would like to be'.

Castells' observation that virtual communities have an adolescent bell curve contradicts the speculative forecasts of the early 1990s that the Internet can facilitate the formation of very large-scale, so-called 'virtual communities'. These assume the form of voluntary spontaneity without control by a state apparatus as a result of the Internet's web-like structure, a

structure which is the legacy of a decentered system of sending information. The mere fact that it is decentered was argued to be the basis for the Internet's alluring emancipation.

*The attractions of Internet communication.* Of course, the ideological claim that the Internet sets information and its users 'free' was a powerful one in the early years, and was seen by many writers to be the foundation of a new frontier. The frontier image became the reigning metaphor of what David Silver has called 'popular cyberculture', which refers to that period of civic education of populations into the attractions of the Internet (Silver, 2000).

But the horizontal/acentric shape of Internet communication offers attractions that exceed other network architectures (namely, the telephone) – such as bandwidth, the capacity to convey complexity.

This capacity enables also the possibility of sophisticated reciprocity in a way which displaces modes of reciprocity in face-to-face, institutionally extended (where a third person becomes an agent of reciprocity) and electronically extended relations. In making possible more abstract modes of interchange than these other modes, digital reciprocity engenders the paradoxical quality of returning to the historically more unmediated of these modes – the face-to-face as its ideal model – whilst materially annulling this mode as a cultural ground (see the discussion of 're-tribalization' in the work of McLuhan below).

The distinctive features of optical fiber, which underpins this capacity, are advertised in its potential for computer, voice, graphics and video services, a more extensive host of media which can guarantee more 'convincing' high-fidelity realism to the user. Such complexity had never been available to analogue forms of electrical transmission, in a way which could be connected up in instantaneous, high-speed and multi-data networking. The instantaneousness of the reciprocity alone is one specific feature which makes possible the metaphorical reconstruction of intersubjective realism – hence the tendency to conflate 'cyberspace' with 'virtual' culture.

The production of what are essentially broadband kinds of interactive environments is qualitatively different from the networks of interchange based on the electric current alone. This is so because the time-worlds and space-worlds – the electronically reified environments – that optical fiber enables are more than merely metaphorical extensions of intersubjective relations but have the potential to replace and redefine the complexity of communication systems. Digitally platformed network communication cannot, like 'the media' (remediated or otherwise) that we explored in the previous chapter, be conceived as a continuation of a system of speech by other means or even a pretense of the same, in the sense that it enables constitutively new kinds of interaction that are arguably historically unique. In particular, the digital nature of this communication places it beyond the function of extension which analogue technologies are able to serve (see a longer discussion of this below).

Electrical-analogue time-worlds have never been adequate for the construction of intersubjective simulation systems. It is only by appropriating the quality of the speed of light, combined with the capacity to convey complexity, that so-called 'real-time' and near-instantaneous reciprocity are made possible in extended form.

These kinds of technical capacities are also, it is said, remaking the form and content of technologies traditionally associated with broadcast, like television. For example, Sherry Turkle (1995) argues that in the 'age of the Internet', television genres have become much more hyperactive in ways which resemble the random travelling which occurs in cyberspace: 'quick cuts, rapid transitions, changing camera angles, all heightened stimulation through editing' (238), a hyperactive style epitomized by MTV – television's answer to multi-media. This change in tolerance towards a level of franticness that has become acceptable to television viewers, and now commonplace in nearly every rapid-cycle television advertisement we watch, is mirrored by the fragmentation of the culture industry itself. As Tim Jordan (1999) points out:

"During the 1980s in the USA, the number of independent TV stations grew from sixty-two to 330, while the share of prime-time audience held by the three major networks dropped from 90 per cent to 65 per cent. From hand-held video cameras that allow the production of home entertainment to the creation of hundreds of different TV channels, the mass audience that once constituted the consumers of immaterial commodities has been shredded."

To the extent therefore that even traditionally well-defined broadcast technologies are, by convergence with interactive technologies or by diversification, becoming more personalized, more amenable to a sense of active and interactive control by audiences as well as remarkably expanded programming choice, it is argued by second media age writers that a second media age is able to absorb the first media age and reshape it.

However, as we shall see, what such an argument has to contend with is the difficulty of distinguishing between broadcast and interactivity as a purely technical distinction, rather than a distinction resting on forms of social integration.

*The second media age thesis – the Internet as emancipation from broadcast media.* The second media age thesis has become an orthodoxy in New Media theory, an orthodoxy which has been taken up almost by default, in many cases with little theoretical engagement or formulation of positions. In what follows I shall focus on the most cogent exponents of the thesis as a way of comparatively appraising its significance in relation to other perspectives.

In accordance with the above observations, the Internet stands out as a comprehensive technoscience world which exemplifies 'cyberspace'. With its large range of sub-media (MUDs, ICQs, email and WWW) and its ability to facilitate complexity, it offers a network medium unparalleled in its potential and scope.

The contention that the Internet and interactive technologies in general have embedded themselves so substantially in the daily existence of individuals living in information societies as to have all but usurped the power of broadcast media is one that is most forcefully put by second media age theorists.

«In film, radio and television, a small number of producers sent information to a large number of consumers. With the incipient introduction of the information 'superhighway' and the integration of satellite technology with television, computers and telephone, an alternative to the broadcast model, with its severe technical constraints, will very likely enable a system

of multiple producers/distributors/consumers, an entirely new configuration of communication relations in which the boundaries between those terms collapse. A second age of mass media is on the horizon. (Poster, 1995) »

As discussed in the Introduction, unlike theories of broadcast, which have been around for some time, theories of cybersociety or the second media age are, for the most part, very new. Because the Internet, as the most spectacular technology of electronic network communication, has only really globally existed in domestically available form since 1991, communication studies remains in a process of formalizing this new domain of research.

The array of theories, from journalistic to academic, has been burgeoning. Like the Internet Revolution itself, the rate of growth in literature about new communication technologies has been dramatic. And as with the pure acceleration of technological change, the literature is characterized by an urgent impulsiveness which produces many generalizations and knowledge claims which become redundant at about the same rate as information technologies themselves.

As noted in the Introduction, since 1991, we have seen a massive growth in computer-related literature. Prognoses of the paperless society and the end of the book have not materialized. Instead, book sales have, if anything, increased, with the weight on each shelf now redistributed to a flourishing computer section.

Apart from the very short history of cyberspace analysis, there is also a much larger body of theory relevant to the second media age from pre- Internet days – theories whose time, it could be argued, has arrived. Of the broadcast media thinkers, the most prominent to bridge the first and second media age are probably Marshall McLuhan, Harold Innis and Joshua Meyrowitz, discussed in the previous chapter. Because content is of far less importance in studying cyberspace, it is not surprising that the medium theorists are able to come to the fore.

On the linguistic side there is the work of Derrida, who, in my view, is the only thinker from the semiotic tradition, apart from Baudrillard, whose work lends itself to a medium theory. The import of the thought of these writers will be dealt with later in the present chapter. But first it is necessary to examine in more detail the claims of the second media age thinkers.

Theorists of the second media age argue that both broadcast and interactive communication apparatuses have together constituted the primary forms of cultural mediation in information societies since the Second World War. The important point here is that it is not possible, in this

view, to understand the second media age without understanding the first media age. Traditional media are, as we shall see, central to the distinction between the first and second media age. Writers such as George Gilder in *Life After Television* (1994), Sherry Turkle in *Life on the Screen* (1995) or Mark Poster in *The Second Media Age* (1995) understand the way in which the second media age has arisen on the back of the conditions produced by the first.

These conditions – the production of an indeterminate mass by broadcast, the separation of individuals from the means of producing their own contributions to public communication

and the disintegration of traditional community - are all hailed as being overcome by the Internet. But it is an exaggeration to suppose this overcoming is a permanent condition or that decentralized network communication simply annuls the power of centralized communication apparatuses. Rather, the power of the former is continuously and relatively parasitic on the power of the latter.

According to the second media age perspective, the tyranny that is attributed to broadcast lies in its hegemonic role in the determination of culture (the culture industry) as well as individual consciousnesses (the theory of hegemony) which derives from its predominantly vertical structure. This structure is one in which the individual is forced to look to the image and electronic means of communication to acquire a sense of assembly and common culture. The second media age, on the other hand, bypasses this 'institutional' kind of communication and facilitates – for the romantic variety of cyber-utopians, it 'restores' - instantaneous, less-mediated and two-way forms of communication.

At the level of interaction, the second media age utopians point to the *empirical* increase in the take-up of the Internet and other network technologies, and to the fact that empirically it is true that the Internet is mainly interaction and very little broadcast whilst television is mainly broadcast with very little interaction, as evidence for the 'ontological' nature of the second media age as a distinctive trend, movement and modality of social integration.

The importance of the fact that the many can interact with the many in cyberspace is almost exclusively related to the way it is said to break the 'lock-out' predicament which individuals face in broadcast interaction. The constraining walls on mediated activities that are erected by the power of broadcast rapidly disintegrate as a form of electronic communication is made available which is adequate in speed, form and complexity to encompass the abstractness of the social forms involved.

These 'media' walls are the result of the architecture of broadcast itself. As we saw with Debord in the previous chapter, the more the individual looks to the media so as to acquire a cultural identity, the less he or she looks 'sideways' for interaction. Conversely, the less the individual looks sideways for social solidarity and reciprocity, the more this mode of association becomes weak and de-normalized, and so the alternative dependence on a centralized apparatus of cultural production becomes imperative.

In the second media age, however, the walls separating individuals at a horizontal level are overcome, as the individual looks directly to others for a sense of milieu and association. As Poster (1995) explains:

"Subject constitution in the second media age occurs through the mechanism of interactivity. Interactivity has become, by dint of the advertising campaigns of telecommunication corporations, desirable as an end in itself, so that its usage can float and be applied in countless contexts having little to do with telecommunications. Yet the phenomena of communicating at a distance through one's computer, of sending and receiving digitally encoded messages, of being 'interactive', has been the most popular application of the Internet. Far more than making purchases or obtaining information electronically, communicating by computer claims the intense interest of countless thousands."

The Internet lifts individuals out of the isolation created by media walls - particularly as these walls are reinforced in urban contexts. In information societies, individuals increasingly interact with computer screens, developing face-to-screen relations rather than face-to-face relations, but this opposition is no longer significant, argues Sherry Turkle, when the larger cultural contexts of post-industrial societies are eroding the boundaries between the real and the virtual. It is not possible to think of the individual as alone with his or her computer, as Sherry Turkle explored in her 1984 text *The Second Self*; rather, as she more recently suggests: 'This is no longer the case. A rapidly expanding system of networks, collectively known as the Internet, links millions of people in new spaces that are changing the way we think, the nature of our sexuality, the form of our communities, our very identities' (Turkle, 1995).

What Turkle describes as the 'Age of the Internet' is synonymous with the opportunity to build virtual communities 'in which we participate with people from all over the world, people with whom we converse daily, people with whom we may have fairly intimate relationships but whom we may never physically meet'.

The extent to which the Internet is hailed as an overcoming of fragmentation and individualism is quite remarkable in recent literature. In some cases, it is attributed with an integrative function which is able to correct a tendency that is over two hundred years old.

As Dave Healy argues, 'the networked citizen is never alone'. To the degree that the Internet represents a 'culture of coherence', he argues, it serves as 'a corrective to the dangers of individualism' which Alexis de Tocqueville spoke of in his visit to America in the 1830s (Healy, 1997).

The message of redemption which is promoted in the second media age thesis, be this for public or private, is a resounding one, a message whose dreams of unity have theological undertones, to which I shall return in *Chapter 6*. But for the most part, the second media age thesis is derivative of a neo-liberalist broader faith in the emancipatory potential of new means of communication, regardless of the actual exchanges that are encouraged by such means. As Armand Mattelart (2000) has suggested, an 'ideology of limitless communication – but without social actors' has taken over from an 'ideology of limitless progress'.

*The computer-mediated communication (CMC) perspective.* There is an alternative account of electronically extended interactivity that significantly predates the second media age thesis, namely the computer mediated communication (CMC) perspective.

The CMC perspective overlaps with the second media age perspective but is distinctively concerned with the way in which computer communication extends and mediates face-to-face models of communication. In this perspective the computer is as much a tool as a window onto cyberspace. What it is that gets mediated in this perspective is face-to-face interaction, whether this be between two people or many as in a chat group. A symptom of this is the fact that CMC literature is often concerned with how individuals try to develop ways of substituting the absence of face-to-face relations on the Internet: for example, by observing netiquette (the idea that cyberspace demands forms of polite protocol one would expect in

embodied life), or by the growth of emoticons - the symbols used in email denoting facial expressions.

There are four major ways in which CMC literature differs from the second media age thesis. Firstly, it is focused on the uniqueness of the communication event in cyberspace. Secondly, it is concerned much more with *interaction* than with *integration*, that is, the myriad of individual interactions rather than the overall social contexts and rituals by which these interactions become meaningful. Thirdly, unlike 'media studies', some CMC frameworks are interested in how 'external factors' influence a communication event.

With broadcast analysis, very little exploration occurs of how outer contexts influence media content; rather, media content is assessed according to how it might reflect or express non-media realities. Finally, whilst not concerned with the kinds of social integration which might underpin CMC, it is concerned with information integration, the way in which communicating by way of computers is based in information processes that can be found in a burgeoning number of interactions mediated by computer. This latter point opens out the domains of cybernetics and the information society, fields of analysis which can be broadly collected together under the umbrella of information theory.

*Information theory.* The CMC perspective is a continuation of conduit models of communication first discussed in the 1950s. So before looking at the contemporary features of CMC it is worth sketching the main contours of information theory. Oddly, these theories were less relevant to broadcast than they are to dyadic reciprocity – be it face-to-face or electronically extended. The fact that they achieved some considerable influence in the United States during the height of broadcast defies the fact that they were never able to accommodate the phenomena of performativity, of spectacle, and reification examined in the previous chapter. Dyadic models of communication are not very helpful in explaining what happens when a few centers of cultural production send messages to an indeterminate mass.

The main elements of this outlook, some of which have been mentioned in the Introduction, are reducible to a process-driven 'positivist' model in which intersubjectivity, the communication event between two entities, becomes the ultimate yardstick with which to measure other communication processes. The embryo for this view is most commonly located in Shannon and Weaver's monograph *The Mathematical Theory of Communication* (1949).

Shannon and Weaver's theory is pure medium theory: they were interested in neither the content of messages, their meaning, the possibility of intentionality behind them, nor the social and psychological condition of their reception. Yet their theory became a standard departure point for 'information theory' as it was appropriated by other disciplines and perspectives, including structural linguistics (particularly Roman Jakobson) and media effects theory. The distinction of this theory is that it rapidly claimed for itself a universal applicability, whether the kind of communication being examined was between machines, biological entities or human institutions.

It is not surprising that Shannon and Weaver's physics of communication could easily synchronize with the co-emerging field of cybernetics (Shannon was a student of Norbert Wiener – the heralded founder of this discipline). Wiener's *Cybernetics: or Control and*

Communication in the Animal and Machine (1961) appeared the year before Shannon and Weaver's text. In this text, perhaps one of the first formalized understandings of 'information' as an ontological force in social life was presented.

The combination of utopianism and anxiety which is expressed there seemed futuristic in the 1940s and indeed is in many ways typical of cyberspace literature today. For example, the current fascination with chaos and complexity theory is anticipated in Wiener's discussion of entropy as the tendency for system-based organization to deteriorate without constant management by ever greater quantities of information.

For the latter condition to prevail, a state of perfect knowledge and perfect exchange should exist in communication infrastructures. Wiener would probably be very satisfied with the open and unconstrained character of computer-mediated communication on the Internet and Usenets. Together with the anthropologist Gregory Bateson, he promoted the circular realization of information flows containing feedback mechanisms, which for them was a necessary condition for communicative solidarity. Their critique of the mathematical theory was not a rejection of its positivism as much as the fact that, as a model designed by and for communications engineers, its unilinearity was unable to accommodate the social characteristics of communication processes.

Implicitly, of course, the schools influenced by cybernetics were at the same time critical of broadcast as an antisocial communication apparatus, consisting of unequal relations between senders and receivers, and a distortion of information that resulted directly from broadcast's technical sub-structure rather than from class or ideological biases.

However, whilst the cybernetic schools may have rejected unidirectional modelling, the idea of feedback does not necessarily make the unilinear model of communication redundant, as John Fiske (1982) has pointed out:

"Feedback has one main function. It helps the communicator adjust his message to the needs and responses of the receiver. Though feedback inserts a return loop from destination to source, it does not destroy the linearity of the model. It is there to make the process of transmitting messages more efficient."

So, by Fiske's account, the early cybernetic models added the fact that receivers were more actively a part of the communication process, but their role remained confined to a transmission model typical of the 'process schools'.

It was not until George Gerbner's (1956) attempt at a general model of communication that the process school was able to break out of some of its more positivist underpinnings (i.e. that a medium is a transparent carrier of messages, and that the content of messages is objectively given, waiting to be faithfully reproduced).

In his model, the meaning of any given message is culturally relative as individual perceptions will order and make sense of a communication event in different ways according to the most familiar cultural frameworks available. The other major departure from the hypodermic model of communication is in postulating what 'a message' actually is.

For Gerbner, a message never exists in some kind of raw state waiting to be coded, sent, then decoded. Rather, the practice of coding is itself part of what a message is. The revelation that accompanies this, however, is that the medium in which a message is sent is itself a part of the coding and therefore of the message - the means and control dimension of communication. The innovation which Gerbner makes therefore is in critiquing the idea that the medium or form of communication merely conveys, transports or transmits the message. Instead, the message is always already a part of the form.

In also making the listener, viewer or receiver more active in the process of communication, Gerbner introduces two new concepts: access and availability. The first refers to the social and technical conditions for access to a communication medium. In the second media age, not everyone can afford Internet access. First World ownership of television is high, but access to the transmission of messages is extremely low for most people. With the concept of availability, Gerbner points towards the closure of communication at the point of the production of a message.

Before the age of mass media, the availability of 'information' was confined to relatively privileged or cloistered groups of intellectuals who had the literacy skills denied to the majority. In totalitarian political regimes, the population may be entirely literate but the central organization of power is based around the dissemination of selective publications, which has earned the title of propaganda. Here the selectivity and lack of availability of alternative literature, rather than what it says, is what makes it propaganda. Critics of propaganda seldom appreciate this fact, putting the influence of the material down to its 'highly charged' ideological character. Paradoxically, the same publication, when disseminated in democracies offering free speech, can be heralded as positive proof of this speech rather than derided, as it might be elsewhere.

Gerbner's insights, in taking the hypodermic model to extended lengths, offer some revelations about media 'form' to which we can return later. Nevertheless, it should be pointed out that Gerbner still did not depart from the dyadic positions of the transmission models of communication.

The problem with positivist transmission models of communication is that they assume that all communication occurs in a vacuum without appreciation of the social and cultural contexts involved. For example, largely absent from transmission accounts is an appreciation that the 'success' of any particular communication depends on the degree to which interlocutors might share a common culture.

There are some limited exceptions to this in the models of Lasswell (1948) and Newcomb (1953). With Lasswell, the addressee is widened to include mass communication. Because of this fact, Lasswell's model has been a popular foundation paper for traditions in media studies, particularly the 'effects' tradition and audience studies. The fact that Lasswell insisted that mass communication needed a different methodological approach from personal communication makes his work useful for analyzing broadcast. Lasswell was interested in the influence of communication structures on society as a whole. His most general and famous adage was: Who says what, in which channel, to whom and with what effect? Lasswell's

framing of communication theory in this way proliferated into an array of sub-branches looking at content, control, audience and impact.

But his guiding principles came from functionalist sociology, which recognized communication institutions as important in the regulation of social relations, and therefore in need of monitoring, improvement and policy so as to avoid 'dysfunction'. These principles address the role that communication processes can play in social reproduction. Mass communication, in particular, provides an inventory of public messages which allow social values to be monitored. In large-scale settings of social integration, a media-generated consensus around social values enables better integration between society's institutions as well as maintenance of traditions and respect for the past.

Lasswell's work might be seen as articulating Durkheim's reference to communication, in the nineteenth century, as a material social fact which provides one of the ingredients of social solidarity and dynamic density: 'the number and nature of the elementary parts of which society is composed, the way they are arranged, the degree of coalescence they have attained, the distribution of population over the surface of the territory, the number and nature of channels of communication, the form of dwelling etc.' (Durkheim, 1982). Like Durkheim, Lasswell also continued the nineteenth-century sociological dichotomy of society versus the individual in which communication is treated entirely as a social fact, that is, 'a category of fact with distinctive characteristics: it consists of ways of acting, thinking, and feeling, external to the individual, and endowed with a power of coercion, by reason of which they control him' (Durkheim, 1982).

This dualism of society or 'system' versus the individual as the basic unit of the functionalist paradigm is successful to the degree to which 'media' are considered a continuation of social forms by technical means (see previous chapter), but it runs into difficulties when particular media are seen to be constitutive of new social forms (see the discussion of McLuhan below).

Whatever Lasswell's political aspirations as a reformer, his work has the merit of offering a general theory of communication that spans broadcast and network. Today the legacy of the Lasswellian approach, combined with the information thinkers, can be seen in the various discourses that try to grapple with CMC in the vast assortment of perspectives which are all nevertheless framed by process models: the user perspective, the content perspective, economic and political perspectives and control perspectives.

## **7. Facial expressions**

By mimicry we mean all the phenomena that we can observe on someone's face. By this we mean both facial features, eye contact and gaze direction, as well as psychosomatic processes, such as, for example, turning pale. Finally, we also refer to all head movements, such as, for example, nodding, tilting the head (the last manifestation can, of course, also be included in clothing, depending on the context).

In general, when it comes to signal appreciation, we mean congruence. As long as the facial expressions correspond to the verbal expressions, most of the time we don't even perceive

it. When the incongruity is accentuated, however, it jumps out even to the most inexperienced. But the experienced can notice a lot of forms of expression of mimicry, registering even the smallest disturbances or incipient incongruity (of course, the first signals of relief, approval, etc.). Often, only an almost imperceptible mustache shows that a joke is being made. Or it may be that a raised (questioning) eyebrow is the only indication of incongruity, when the other responds, "Yes, I understand exactly what you mean."

At this point, the question is often raised in the seminar, to what extent one could manipulate one's own non-verbal signals. To what extent would it be possible, for example, not to notice if something was understood or agreed to? Answer: Yes, everyone can learn to influence body language to a certain extent.

It is, however, particularly difficult to have control over the facial muscles. Thus, one can often see how one acts calmly outwardly to learn to control one's hands. However, an inner restlessness (if any) will come out, and that is, it will most likely be expressed on the face. Why is it so hard not to manipulate your facial muscles? The term "manipulate" includes the word "manus" (lat. hand). To be able to handle something skillfully, you need to know that thing well. We know too little about our facial muscles to be able to control them well. We generally don't know how we look, or what impression we make on others. Try it yourself (right now)! Check your own facial expression.

The science of the difficulties of manipulating our own facial expressions is important not only when we want to be in control of our facial expressions (where too much control, if successful, results in robotic, lifeless mine!), but also when we want to interpret the signals of others. As the other is as little conscious of his mimicry, we cannot generally trust well enough to the play of mimicry.

Moreover, the study of facial *expression* is divided into two areas, that of *mimicry* itself and that of physiognomy. The last field does not mean the momentary, constantly changing expression, but the features of the face, which I will present in general. I call this aspect "innate mimicry". When a man constantly expresses hopelessness, with pursed lips and the corners of his mouth pointing down, it is no wonder if, years later, the so-called wrinkles of hopelessness appear.

Physiognomy also includes the interpretation of the shape of the face and nose, although here it is not clearly separated from phrenology, founded by Gall. In this framework, we will not deal with either physiognomy or phrenology.

However, we cannot fail to register, for example, the deep lines of discouragement printed on the face when our perception is conscious. But even such a signal, if isolated, has no power of expression. Namely, the very formation of wrinkles is recorded unequivocally, so we know that the person in question must have pursed his lips and lowered the corners of his mouth often, but we don't know why this phenomenon happened. Of course, it is possible that the person in question is a "grump", who does not like anything. But just as well, the man may have suffered a serious illness or had an unfortunate fate. We think of people who have lost a loved one, of people who have spent many years in concentration camps, or of people who (as is still frequently the case in some corners of the world) have been tortured, etc.

### THREE AREAS OF THE FACE.

(1) *Forehead area* (including eyebrows).

2) *The middle of the face*, that is: the area of the eyes, nose and cheeks (in most authors, including the upper lip).

3) *The area of the mouth* (including the lower lip) and the chin.

*Forehead area.* It starts from the premise that the forehead, with its wrinkles and eyebrows, provides explanations for the processes of thought and analysis. However, in this case too, much-needed caution is required regarding the "scientific character" of such interpretations.

*The middle of the face.* The area of the eyes, nose and cheeks is also characterized as the sense of sight. Most authors also include the upper lip here, as they are making detailed statements. Usually we talk about the lips, about the mouth, so that in our discussion it is not so important where exactly the border should be fixed.

The sense of sight is said to give us clues about the reception of the outside world. This is evident, in part, because the eyes are the "windows to the world." But the eyes are rightfully called the "windows to the soul", so we deduce that information of the inner life can also be visible in this area. In addition, we must consider that the mouth also participates considerably in the processes of recording the surrounding world.

*Mouth and chin area.* The mouth developed from the primordial throat, which has a very simple structure. It represents the relationship with the surrounding world, the organism receiving and at the same time eliminating through it. In small children, you can clearly see that they put everything in their mouths to grasp. Therefore, it is not surprising that the mouth has an essential role, both when one does not want to "penetrate" information from the outside world, and when expression is not desired or allowed.

Furthermore, the area of the chin (including the lower lip) is attributed to the affective and instinctive life, as well as - especially to the chin - the ability to assert oneself. A man who intends to assert himself energetically will thrust his chin forward as a mimic signal. (While the appreciation of the shape of the chin with regard to the character trait of the capacity to impose oneself belongs, again, to the field of phrenology).

**Horizontal forehead wrinkles.** As a rule of thumb, we can say: horizontal forehead wrinkles express the fact that the attention is very tense. Undoubtedly, this concentration of attention can have many different aspects. Zeddies names, for example, the following:

- (1) Fright
- (2) Times
- (3) Inability to understand
- (4) Astonishment
- (5) Wonder
- (6) Confusion

## (7) Surprise

Again it is clear that isolated signals must be interpreted (most of the time) together with other signals. This is also true within a category such as mimicry.

Because the formation of forehead wrinkles automatically goes hand in hand with other facial muscle movements, which can then result in, among other things, gaping eyes (or a gaping mouth). Such a combination represents, for example, the following: horizontal wrinkles and gaping eyes. According to Zeddies, the two signals, interpreted together, mean the following: "The attitude of the soul is an attentive attitude, waiting for some given, which is offered to the conscious."

Another variant of combining two mimic signals would be, for example, the formation of horizontal wrinkles in combination with half-opened (slightly narrowed) eyes. This combination can be observed, for example, when someone takes the trouble to listen to something, respectively to pay attention to something; for those who are hard of hearing, for example, or in situations where the intensity of the transmitter's sound does not reach us (including sound sources such as a radio). In the people, this phenomenon is described by the expression "to prick the ears".

However, this formulation does not only make a "figurative" description, but also indicates physiological processes. Namely, when we prick our ears, we really move our ear muscles, very atrophied, reflexively, which is very obvious in dogs and cats, as well as in rabbits. Many times, we even try to "move our ears", additionally making other helpful gestures and/or changing our outfit. The gesture would consist of bringing the hand to the earlobe, to enlarge it and point it forward. (This gesture is absolutely analogous to the dog's pointed, pricked ear.)

The change in posture consists in leaning towards the "source of the sound", for example towards the speaker, whom we just want to understand better. Naturally, this bending of the position can also be observed towards mechanical sources of sound, such as, for example, a television.

Since the scope of our analysis, necessarily very vast, would be exceeded if a list were made of all possible combinations of two or more signals, we will limit ourselves to simple signals. The examples listed above are only intended to give us an idea of how detailed even scientific research taken "at large" can be.

You learn most about the forehead area if you learn to consciously register primary (main) signals, while through regular practice you develop an unconscious sense for secondary signals. It's easiest if, like a scientist, you learn to deliberately challenge others with the signals you want to study! Later, it might become clear to them that they were being used as "guinea pigs" (sorry, as boys) or maybe not, if you do it skillfully. One of the possibilities of a purposeful observation is provided by the following experiment, which you should repeat as often as possible.

**Vertical forehead wrinkles.** I said that vertical wrinkles indicate a great concentration of attention. What vertical wrinkles suggest is said in the following sentence: vertical forehead

wrinkles indicate that all attention is directed, with great concentration, to something (someone).

As with horizontal wrinkles, there are various interpretation possibilities for vertical ones as well. Concentration always means "compression". This can mean the compression, at one point, of both spiritual and physical force, so that vertical wrinkles can be registered both as a result of spiritual concentration and as a result of difficult, complicated or tiring physical activities. In exactly the same way, it will be possible to establish that firmness, as a secondary indication, is recognized by such wrinkles, while the primary indications will be in the area of the mouth and chin. Also, anger or irritation can be an occasion for the formation of vertical forehead folds. Even blowing your nose can cause these vertical lines to appear.

Only purposeful observation and conscious recording of forehead wrinkles lead (through repeated practice) to a simultaneous perception of other signals. And here we will present an experiment, which is suitable as an excellent joke told over a beer or a coffee.

**Eyebrow movements.** A large part of the movements of the eyebrows occur in relation to the formation of wrinkles or as a preparation for this phenomenon. If, however, it only rises from one eyebrow or from both, this is already a signal in the direction of those that are emitted more strongly when wrinkles are formed. Besides, in this framework we can only operate by simplifying things broadly.

Therefore, we will not do a detailed analysis of the possible movements of half a millimeter, however fascinating this undertaking may be. You learn most about eyebrows through purposeful observation. Let's do a mini-experiment: look once at the eyebrows of a person, whom you address (intentionally) by name, but with a slight frown on that name. Instead of Marco, say, for example, "Hey, Marco" or something like that.

**The eyes.** When we talk about the middle of the face we talk about the eyes. It is not unfairly said that man is an "animal with eyes", because he receives more than 80% of all stimuli through the eyes. At least, this is the "scientific" opinion, and some researchers believe that this percentage even exceeds 90%.

As can be deduced from recent research, for example from Ashley Montagu's excellent work, "*Touching*", there are more and more doubts about the above statement. It seems increasingly likely that an organism, especially a mammal, receives most information at the skin level. Anyway, very fine perceptions are also trained here which, in a discussion, are not very effective. That's why, in our context, the "old" approach seems (still) absolutely satisfactory.

As I mentioned before, the eye can be considered both a "window to the world" and a "window to the soul", that is, to the inner psychic processes. However, these processes are closely related to the inner soul and thought processes of man. Therefore, in our analysis, the information will not be discussed in detail. We don't want to practice telepathy, that is, to get close to it, but we just want to better understand the outwardly directed signals that are currently being emitted. Therefore, we will focus our attention more on these signals,

respectively only on those directed inwards, which refer to the reception of the environment, respectively to the non-reception, at the moment, of it.

**Mouth and chin.** As already briefly shown, the mouth developed from the primitive throat, which even very simple organisms have. This is their only connection with the outside world, since they have neither eyes, nor ears, nor extremities (with tactile corpuscles).

That is why, perhaps, it is not surprising when we observe that an acute will to perceive is often associated with a half- or fully open mouth. Conversely, you can see how our lips tighten when we don't want to perceive something. The frown around the mouth, which I have already mentioned, is a good example of this.

But a tight mouth can also indicate the fact that we don't want to let anything escape "outside", for example when someone doesn't want or isn't allowed to express himself or when someone is afraid to divulge a secret, respectively when someone "bite his lips", in order not to let any thought "escape" him.

If you do both forehead wrinkle experiments, you will perceive the mouth as a secondary feature. If, on the contrary, your attention is fixed on the position of the mouth, then the secondary features are the eyes and/or forehead signals.

**The corners of the mouth.** Among the essential features of facial expression are the corners of the mouth. No one can lower the corners of their mouth even a fraction of a millimeter without simultaneously moving other facial muscles.

A very happy and satisfied figure and a displeased and disapproving one differ enormously from the point of view of complex signals. That's why the information we give him next about the corners of the mouth means, automatically, that these signals are always "training" others.

**Tight mouth.** In one of his books, Eric Berne describes the following experiment, in which not only the muscles of the face, but also the muscles of the back work together with the corners of the mouth.

**Open mouth.** The "civilized" man hardly ever relaxes his mouth. Perhaps only in sleep, when this relaxation can go so far that the palatal veil itself becomes "free" and, as a result, the strangest noises can be produced.

Seen in this light the open mouth is always interpreted, from the point of view of body language, as an inner opening. Whether it is about "letting out" some information (for example, when we take a breath, in order to speak), or whether it is about "letting in" some information, so, for example, when listening something of interest. As possible mood-based attitudes, Zeddies lists, for example:

- (1) Wondering,
- (2) Fear,
- (3) Availability of communication,

(4) The receptive and agreeable state of mind.

**Chin.** Like ear, cheek, or nose cues, the mimic possibilities of the chin are limited and, for most observers, almost imperceptible, especially when looking at a figure from the front, rather than from a profile. In principle, it can be said: When trying to assert oneself energetically, one pushes the chin forward, while with passive resignation, the chin tends to pull back.

**Signals of the entire head.** Lowering the head, in a "closed" attitude in itself, is one of the signals. Other signals, such as shaking the head or tilting it, are (in our cultural area) clear enough to be understood.

Less clear is the interpretation of an oblique inclination of the head, because precisely here there are (even in the Western world) cultural differences. At this point, we will draw attention to the fact that lateral tilts of the head can be associated with hearing difficulties. Furthermore, we must note that tilting the head backwards or downwards can represent, especially for those who wear glasses, an attempt to see better (for example, with bifocal glasses). Just such signals could be misinterpreted, in the direction of "closed" or "open" attitude, when looking to take into account the secondary characteristics, respectively to execute the control of the result.

## 8. Gestures

Perhaps the best introduction to a discussion of gestures is etymology. The word as such comes from the Latin language (*gestus*). In the Romanian language, the word "gesture" denotes both the movements of the human body, especially of the hands and arms, as well as certain human behaviors and actions, in general, his behavior in society. The truth is that - as noted by Adam Kendon and Cornelia Müller in the editorial of the first issue of *Gesture* magazine (2001) - the term "gesture" is part of the category of "fuzzy concepts", whose semantic content is difficult to specify.

Desmond Morris (1986) defines gestures as "any action that transmits a visual signal to a spectator". From the definition given by the well-known British ethologist, which we adopt in our study, it follows that, whether intentional or not, the change of body position in space, the observable movement of the head, trunk, hands and feet fall into the category of gestures.

Moreover, this assumption is consonant with the first axiom of the Palo Alto School. Paul Watzlawick, Janet H. Beavin and Don D. Jackson (1997), analyzing the "simple properties of communication" - which play the role of "axioms" -, say: "If we admit that in an interaction any behavior has message value, that is, it is a communication, it follows that we cannot not communicate, whether we want to or not". Formulated briefly, the first axiom of the theory of communication is this: "It is impossible not to communicate".

We mention, however, that some researchers make a distinction between "signal" and "hint" (or "indicator" - we would say). Eric Buysens, Jeanne Martinet, Georges Mounin and Louis Prieto, cited by Mihai Dinu (1997), believed that intentionality is the defining note of gestures. In other words, the intentional smile is a gesture (signal), and the spontaneous one is an

indication (sign). Caroline Hummels and Pieter J. Stappers (1998) also consider that "intentionality is central to the definition of gestures". In disagreement with the current way of classifying gestures, the two previously cited authors propose a new classification, taking into account their referential: "gestures refer (simultaneously) to four aspects, namely space, information, symbols and emotions".

### **CLASSIFICATION OF GESTURES.**

Regarding the classification of gestures, several taxonomies are accepted. We will present them in the order of their development. Finally, we will approach the types of gestures depending on the parts of the body with which they are performed.

The classification proposed by Paul Ekman and Wallace V. Friesen in 1969 by the two American specialists grouped the elements of nonverbal communication into five classes, based on their origins, functions and coordination:

- (1) emblems;
- (2) illustrators;
- (3) facial expressions;
- (4) regulators;
- (5) adapters.

*Emblems* are "substitutive gestures" (H. Wespi, 1949). The term "emblem" was taken from David Efron's *Gesture and Environment* (1941). They take the place of words and can make up a language (for example, the language of deaf mutes). Such gestures are considered to represent a direct translation of words, sentences and phrases into signs, emblems being used especially when verbal communication is not possible, for example, in the case of workers working in a physical environment where the noise level is high. However, they are also used in ordinary conversations, when we want to be sure that the interlocutors have understood exactly what we want to say. In non-verbal communication, emblems emphasize and double words.

Emblems are non-verbal elements whose meaning is known by the majority of group members and are used intentionally to convey certain messages. Their intentional character is perceived by the receiver, who assigns responsibility to the transmitter for what is transmitted. Like the choice of words to express ourselves as elegantly or as convincingly as possible, we have almost complete control over the use of emblems. Interestingly, the emblems are a little dependent on the context, maintaining their meaning regardless of its variations. Paul Ekman and his collaborators from the University of California differentiated, according to the identity between the shape of the gesture and the shape of the designated object, "referential emblems", coded iconically, from "conventional emblems". The distinction between the two types of emblems is not easy to make.

As an example, Paul Ekman (1977) shows that the gestural expression of suicide describes the modality the most common way of suppressing one's own life: in medieval Japan the sword, in New Guinea the bow, in the United States the gun.

Touching the tip of the thumb with the tip of the index finger, forming a circle, keeping the other fingers straight and the palm facing the viewer, translates words *all correct*. OK - the initials of the wrong transcription of the words *all correct* or the name of the town *Old Kinderhook*, where one of the US presidents of the 19th century was born, who used these initials in his election campaign (A. Pease, 1993) - spread worldwide.

It is an expression of the "mcdonaldization" of nonverbal communication. And other gestures, for example the sign to stop a car on the highway, replace words. They are acquired in the process of socialization, sometimes the consciousness of explicit learning is rare. Their meaning is arbitrary and can be different from one culture to another or even from one period to another within the same culture.

In France or Laos, forming a "ring" from two fingers means "nothing" or simply "zero". In Japan, the same gesture suggests the word "money". In some Mediterranean countries, such as Greece or Turkey, the respective sign indicates "homosexuality" or a vulgar invitation to a sex party, and in Arab states it expresses hostility, it is an insult (if accompanied by showing the teeth).

Mihai Dinu (1997) discusses the emblems used in the sign language of the Aranda population in Australia, which uses over 500 signs made with fingers, hands, arms and the upper part of the body. It is interesting that the transition from the movement of the fingers to that of the hands, etc. it is dictated by the increase in the distance between those who communicate. Emblems are used when the distance between the sender and the recipient is great, when there is strong jamming, in the case of not knowing the other person's language, of the religious prohibition of certain words or in the case of artistic conventions (pantomime shows).

Paul Ekman shows that, regardless of culture, emblems have clearly defined functions: to insult; signaling distance in interpersonal relationships ("*come closer*", "*speak more slowly*"); appreciation of the activity or performance of others ("*very good*", "*excellent*"); separation signaling; signaling positive or negative responses to various requests; commenting on emotional or physical states.

Emblems are usually used in the breaks between conversations, at the beginning or end of an expression or accompanying certain words to emphasize them. They can be used both by the person speaking and by the person listening. A.T. Dittmann (1972) drew attention to the emblems used by listeners, which - sometimes accompanied by paralanguage (ahaa, mm-hmm, etc.) - express the desire to continue the discussion.

Certain socio-professional groups (business people, stewardesses, brokers) develop their own emblems, which facilitate communication and contribute to building the identity of group members. The analysis of these emblems can reveal communication patterns specific to the respective group. If the emblems are highly coded, it is possible that the members of the respective group build strong identities and the group is closed to outsiders.

Paul Ekman (1977) reported that the number of emblems differs from one culture to another. Fewer than a hundred emblems have been inventoried in middle-class culture in the US, but

several hundred substitution gestures have been identified in student culture in Israel. The language of emblems is learned faster than the verbal language, Paul Ekman believes, adding that in his cross-cultural research he has not found any universal emblem. However, the anatomical structure makes some emblems identical or nearly identical in different cultures (for example, leaning the head on the palm like a pillow and closing the eyes). The same author suggests that there are emblems that are used only by women when speaking to women or by adults when addressing children authoritatively.

*Illustrators* are non-verbal elements that accompany and complete the verbal message. And we have good control over the use of illustrators. The humorous definition of the concept of a gentleman, which circulated in the West at the beginning of the 60s of the last century, very clearly suggests what illustrators are: "a gentleman is a man who can depict Marilyn Monroe without using his hands" (M. Dinu, 1997).

We currently say, for example, "Let's go!" and perform a head or hand movement in the direction of walking. Or we want to emphasize that a certain object has a round shape and describe a circle with the hand. They are well taught and it is difficult to perform improper movements. We are only partially aware of illustrators, they seem natural, universal, with a less flexible meaning than emblems. Illustrators are not used independently of verbal language, being, thus, elements that unite verbal and non-verbal communication. Paul Ekman and Wallace V. Friesen (1972) identified eight types of hand-drawn illustrators:

- (1) sticks, movements by which certain words are emphasized;
- (2) ideographs, movements with the help of which the direction of thought is shown;
- (3) deictic movements, involving emphasizing what was said;
- (4) spatial movements, describing spatial relations;
- (5) rhythmic movements, which indicate the tempo of speech or other actions;
- (6) kinetographs, which show the functioning of the human body or the behaviors of animals;
- (7) pictographs, movements that describe an image;
- (8) underlining, movements that highlight a word, a sentence or a passage from the speech.

We can simplify, saying that there are illustrators who are linked to the rhythm of speech and illustrators linked to the content of speech (U. Hadar, 1989). We can also say that most illustrators involve the movements of the hands and arms, not excluding the training of other parts of the human body, for example, the head or the legs.

*Facial expressions* indicate to others a sense of our emotional state: they communicate joy, surprise, sadness, fatigue, etc.

The expressions of emotions can betray us when we want to present ourselves in a certain light, different from the inner one. Of course, we can consciously control emotional movements to a certain extent. The expression of emotions is less dependent on the verbal message, compared to illustrators, for example, and less controllable than emblems. Expressions of emotions can be unintentional (reflecting spontaneous emotional states) or intentional (when an individual aims to express certain emotional experiences or in theatrical art).

*The regulators* maintain and control the interaction with the interlocutors. When we listen to the words of others, we do not remain passive, but make a series of gestures: we nod our heads, look at the interlocutor, move our lips or use certain paralinguistic signals. These are culturally determined and provide feedback to the speaker, show what is expected of him. Such messages can translate verbal messages: "go on" "I don't think so", "it's impossible", "speak louder", "be more explicit". The speaker receives these nonverbal cues without being aware of them. Depending on the accuracy of the perception, the speaker will modify his speech in the direction required by the regulators.

*Adapters* represent stereotyped gestures that we perform in private or public spaces, in conditions of concentration or mental tension (for example, for women twisting a strand of hair or for men the rhythmic movement of the legs in a sitting position). These gestures have "the role of a valve through which the excess tension generated by the accommodation to a certain situation is consumed (we also include communication situations)" - according to Alina Coman and Claudiu Coman (2002). Through such gestures we satisfy our need for comfort, relax, maintain interpersonal communication or express status.

Some specialists (R.B. Adler and G. Rodman, 1997) call such gestures "manipulative" (for example, scratching the cheek or massaging the face, rubbing the palms or fingers, etc.). Paul Ekman and Wallace V. Friesen (1969) used the term "self-adaptors". In the kinesics research initiated by Ray L. Birdwhistell (1970), a distinction is made between "alter-adaptors" (manual work gestures), "auto-adaptors" (movements to satisfy biological needs) and "object adaptors" (movements that make use of objects, but not for the purpose for which they were made).

For example, when talking with our partners around the table or at the office, we sometimes turn the cup of coffee, but do not bring it to our mouth, bring it closer to us and then move the glass of water away, etc.). Regarding the object adaptors, the acceptance of some or others is determined depending on the cultural norms existing at a given time: smoking in public is an adapter accepted in the European space and increasingly blamed in the North American one. By contrast, chewing gum in public, a typical American gesture, casts a bad light on the individual in many European countries, especially in Germany (K.B. Judee, D.B. Buller and W.G. Woodall, 1996), Pipe blowing is an adaptive gesture encouraged in academic circles, even having identity functions.

Adaptation movements have differential characteristics in "stage" and "backstage" - according to Erving Goffman's terminology (1959). For example, when an individual is alone, he can scratch his head unhindered, raise his voice loudly or blow his nose forcefully. In public, he uses these adapters only partially and the amplitude of movements is diminished - if the person concerned is well-bred, using adapters in public has, par excellence, a cultural determination. It was found experimentally that people who intend to deceive others rub their hands more often than people who communicate honestly (B.F. Dooley, 1994); he scratches his nose more frequently.

Unlike emblems, which have a precise meaning, adapters convey vague, imprecise information. We can get an impression of a person by studying their adapters, but only

probabilistically. In general, adapters are interpreted as signals of discomfort, nervousness, mental tension. Desmond Morris divides primary gestures into six categories:

- (1) expressive;
- (2) mimics;
- (3) schematics;
- (4) symbolic;
- (5) technical;
- (6) coded.

*Expressive gestures* are those that bring the human species closer to the animal species and which, in Desmond Morris's conception, constitute the universals of human interactions. Their category includes facial expressions, which give meaning to our emotional states and escape voluntary control. The category of expressive gestures is similar to the one named by Paul Ekman and Wallace V. Friesen (1969). They are close to random gestures, but they do not fulfill a mechanical function, but a communicative one. Expressive gestures have evolved and diversified according to cultural influences and in accordance with the non-native context of which the individual is a part. In Japan, for example, women are not encouraged to smile widely, while in Western culture this type of smile is positively valued.

*Mimic gestures* are those in which the sender tries to imitate as accurately as possible a person, an object or an action. They are specifically human, although abilities to mimic certain behaviors are also found among primates. The category of mimed gestures includes:

**Social mimicry** - when, for example, we show a big smile when meeting a person we don't like to see at all;

**Theatrical mimicry** – the deliberate attempt to imitate certain actions, persons. In this case, the actor's performance is related either to the number of repetitions of visualizing the situation, the given person (the experience with the object), or to his empathic capacity, to the ease with which he can put himself in the skin of the character;

**Partial mimicry** - in which the performer tries to imitate objects, situations that are circumscribed in the situational framework as not conforming to reality - for example, when an individual mimes that he is flying. Partial mimicry gestures are mostly done with the hands: suggesting that we have a gun in our hand, suggesting an animal with the help of their palm or fingers are such gestures intended to indicate the shape of a certain object/situation that is known to the receiver;

**Empty mimicry** or in the absence of a relationship with a specific object - for example, when an individual mimics the feeling of hunger by bringing the hands to the level of the mouth and moving the lips slightly to suggest chewing food.

*Schematic gestures* are closely related to mimed gestures, representing shortened versions of them. They develop from the need to imitate several behaviors and actions in a short time. It is carried out by extraction, one element being retained, and the others, omitted or reduced in importance. The extraction must be done in such a way that the rest can still be understood,

but the process involves a set of local, cultural-geographical variations. For example, the gesture of an American Indian for signaling a horse consists of arranging two fingers of one hand parallel to the dissimilar ones of the other hand. For an Englishman, signaling a horse can be done by slightly bending the knees, like a rider, and handling imaginary reins.

*Symbolic gestures* signify an abstract quality. This category of gestures includes many cultural variations and sometimes their origin is obscure. For example (we take an example given by Desmond Morris), the image of the "horned" in Italy is signaled by symbolizing some horns at the level of the temples with the help of the index fingers or with the index and little finger of a hand. In this context, the horns symbolize the fact that the individual was deceived by the partner

*Technical gestures* are specific to a certain profession and have significance only within the respective activity. Seen by a non-specialist, they are meaningless, but their learning is part of the process of socializing the individual in accordance with the norms of the professional group he belongs to and adapting to role prescriptions. A number of professions use a technical language: policemen, firefighters, sailors, but also waiters, sellers, stockbrokers or drivers use technical gestures, which must be discreet, to communicate specific information quickly and in a timely manner. When a driver successively activates the light of the headlights, he transmits to other drivers on the same road the appearance of a radar detector nearby.

*Coded gestures* are similar to technical ones, because they are specific to some receptors that are part of a certain, approved category, but they differ from them in that they combine to form structures with meaning according to the model of spoken language.

The sign language of deaf-mutes (American Sign Language - Ameslan) is an example of codification of gestures. However, in the definition of non-verbal communication, certain authors do not include the language of deaf-mutes, considering it a derivative of the spoken language, and not a way of communication complementary to it. For example, as I said before, Jacques Corraze (2000) defines nonverbal communication as "the set of means of communication existing between individuals who do not use human language or its derivatives without sound: writing, deaf-mute language, etc."

J. B. Bavelas (1994) introduces a functionalist model for the analysis of gestures, in relation to their role in conversation, focusing on the symbolic value of non-verbal elements. In "gestures used in conversation", J.B. Bavelas distinguishes "gestures related to the content of the discussion", which correspond to "emblems" and "illustrators" in Paul Ekman's classification, and "interactive gestures", which do not bring, by themselves, additional information, but only enhance the discourse, like "regulators". At the level of interactive gestures, a distinction is made between:

- (1) gestures made in a hurry, such as indicating the direction, the address, signaling the sharing of a common opinion or idea;
- (2) "citing" gestures to adjust the feedback at the receiver level;
- (3) gestures of looking for help, for relationships;

(4) gestures of reciprocity, the gestures by which one responds to others or requests a response.

Interactive gestures are used in face-to-face interactions, especially to include social actors in the communication process. Author of some best-selling works, Roger E. Axtell (1998) considers three broad categories of gestures:

- (1) instinctive gestures, such as scratching the nose when we are ready to tell a lie;
- (2) coded (or technical) gestures, used, for example, by brokers;
- (3) acquired gestures, acquired by people as members of certain cultures. One and the same acquired gesture can have different meanings in one culture or another, and their origin is often unclear (for example, the origin of the OK sign).

### **SIGNIFICANCE OF GESTURES.**

We believe that the gestures could also be grouped according to the parts of the body with which they are performed, thus distinguishing gestures performed with:

- (1) the hands;
- (2) the head;
- (3) the trunk;
- (4) the legs.

We mention that this classification was suggested to us by Nicolae Vaschide's work *Essai sur le psychologie de la main* (1909), in which, in the XIIIth chapter entitled "Handshake and gesture", only gestures made with the help of hands. We will follow the approach suggested by the scholar Nicolae Vaschide, who said of himself that he is only a *paysan du Danube*. Horst H. Rückle (1999) proceeds in the same way: he discusses in turn the modes of expression with the help of movements of the head, shoulders and trunk, arms, hands and fingers and, finally, with the help of the feet.

We will take from the successful work of the German specialist a series of information, namely those based on concrete research, not on intuitions that have not been verified experimentally, like some classifications. Contrary to Horst H. Rückle, we will begin by revealing the meaning of hand gestures. They are emblematic of the species *Homo sapiens sapiens*: animals also have heads or legs, hands - only humans.

*Hand gestures.* We start with these because they are the most frequent and at the same time the most nuanced. Flora Davis (1973) estimates that we can make 1700 gestures with our hands, in combination with posture, hand articulation and fingers. M.H. Krout - cited by Roger E. Axtell (1998) - identified 5000 hand gestures. In the first treatise on rhetoric, *De institutione oratoria*, Marcus Fabius Quintilianus remarked: "And other parts of the body help the speaker; but the hands may be said to speak alone. With them we ask, promise, call, push away, threaten, beg, we express horror, fear, indignation, opposition, joy, sadness, doubt, approval, regret, measure quantity, numbers, time".

Hand gestures can be broken down into finger, palm, fist and arm gestures. Of course, we are dealing with a mental breakdown, because in reality the whole hand, even the whole body, always participates in gesticulation.

As will be shown next, fingers frequently intervene in non-verbal communication. Proverb "There are five fingers on one hand, but none is equal to the other" applies very well in connection with gesticulation. The use of fingers in non-verbal communication is very uneven.

The index finger participates in making many gestures, with the most different meanings: from declarations of love to admonitions and insults. Paradoxically, although it is called "shower", the code of good manners forbids us to show with it; in any case, not persons (A. Marinescu, 1995/2002, 40). It seems that the ban on pointing the finger at a person does not work for Americans. I have seen so many times on TV and even live (the visit of Presidents Bill Clinton and then George W. Bush to Bucharest) how high-ranking American personalities from the podium or from the stairs of the presidential helicopter point the pointer at a person in the audience whom they surprisingly he remarks and to whom I smile. We think it's a trick to display an elegant smile. Otherwise, we don't understand why pointing the finger at a person in the audience is done when there is no audience (when the presidential helicopter takes off from the White House).

Pointing to the hat is equivalent to a salute (it's true, the gesture is sanctioned by the code of good manners). This is the "one finger salute". The explanation of the origin of this sublimated gesture of uncovering the head (removing the hat) leads, in the culturological register, to the medieval tumirs (when knights raised their visors so that their faces could be seen), and in the ethological register, to the gesture of calming down aggression by exposing in front to the other of the most vulnerable part (the head, in humans; the jugular vein, in wolves - as Desmond Morris remarked in *The Empty Ape*, 1991).

In Romania, as in the USA, with the index finger and the arm raised (slightly inclined), we call, for example, the waiter to pay the bill or not to be late serving us.

When we call a child to us, especially if we have something to reproach him for, we point the pointer at him and bend him a few times. The other fingers are curled into the bridge of the palm, the palm facing up. Also with the pointer raised, we ask for silence (for example, in the lecture hall). With him we admonish, moving the hand up and down. By swinging the hand from left to right, with a clenched fist and an extended index finger, we convey a refusal or declare our disagreement.

The pointer directed towards a person has the role of a "wand" and marks the dominant position of the one who resorts to this gesture. *Desmond Morris* (1986) shows that there are two versions of the gesture: the frontal position of the baton (frontal forefinger baton) and the vertical position of the baton (raised forefinger baton). The meaning of the two gestures differs. In the first case, the importance of the object towards which the pointer is directed is emphasized or, when the pointer is oriented towards a person or a group of persons, an assertive, authoritative attitude is expressed. On the election posters from 2004, some candidates ask for the citizens' vote from the photo, pointing the pointer at passers-by.

The description of a circle around the ear with the index finger extended and the other fingers flexed communicates, in some countries (in Argentina and Romania, for example), the intention to telephone. It is interesting that the gesture is still preserved today, when telephones with discs are no longer used. Even more interesting is the fact that in North America, Germany, France and Russia - as mentioned by T. Morrison, W.A. Conaway and G.A. Borden (1994) and R. Schneller, 1992) - the gesture, recalling the history of telephony, conveys that something has gone wrong in the interlocutor's head ("You're crazy!"). Finally, the index finger of the right hand brought to the temple, the other fingers being bent and the thumb raised, signifies suicide with the gun.

*The index finger* together with the thumb forms emblems (for example, the substitute for the term OK, which we talked about earlier, or it replaces the word "money"), as well as in combination with the middle finger (for example, V for "victory"). The index and middle finger forming the letter V really means "victory" or "peace" only if the bridge of the palm is oriented towards the interlocutors, towards the public. If the bridge of the palm is oriented towards the one transmitting the sign, the gesture becomes insulting (Up yours!).

Roger E. Axtell (1998) reports on the blunder of the US president, George Bush, who, crossing the streets of Sydney in his limousine, greeted the crowd lined up on the route with the V sign. Only the bridge of the palm was oriented towards his own person. A journalist captured the gesture and immortalized it in a photo that was immediately published in Australian newspapers. Under the photo was written: "President insults Australians". It happened in 1993.

It is interesting that the "sign of victory", well known today in Western culture, in the 60s of the last century still had an obscene meaning for the elderly in the United States of America, symbolizing a woman's bare legs. Commenting on this situation, Vera F. Birkenbihl (1999) concludes that "even "grounded" signals within a culture can transform".

In combination, the index finger and the little finger, both raised and the other clenched in the bridge of the palm, convey an insult: "You're cuckolded!", "The wife, the girlfriend is cheating on you!". The bridge of the palm is directed towards the one to whom the message is being transmitted. It seems that this gesture was first used by the Italians, as an equivalent of the word switch. Now it has international circulation.

The gesture is addressed to a person cheated by his wife or, more generally, to a stupid person. In Brazil and Venezuela - we learn from Roger E. Axtell - this sign conveys a wish for success. In some countries in Africa, a variant of the gesture we are talking about conveys a curse, and in the USA the respective gesture was adopted as a sign of recognition by the fans of some football teams, as well as by some gangs in big cities.

If we make a statistic of the gestures made with the index finger (alone or in combination), we find that the index finger is the most expressive of the five fingers, especially if we also take into account self-touching (of the cheek or forehead), but also gestures in which the index fingers of the right hand and the left hand are synchronized. When you rub your index fingers, you want to say that two people have a special relationship: they have common interests, they do business together, they are friends. In the US, the gesture of rubbing the

index fingers translates the admonition "Shame on you!" In Egypt, this gesture expresses the invitation to go together. For Romanians, the respective gesture has the meaning of complicity.

Crossing the index finger with the middle finger conveys, for North Americans and Europeans, the wish for success. Roger E. Axtell (1998) explains the meaning of this gesture as deriving from the sign of the cross.

Sometimes with our index fingers we conduct an (invisible) choir or an orchestra; other times, with the index finger of the right hand inserted into the circle formed by the thumb and index finger of the left hand we make obscene gestures. Rubbing the index finger against the thumb, while the other fingers are clenched in the bridge of the palm, conveys the message of waiting for a payment, requesting an amount of money, often improper.

*The big thumb.* The hand with the thumb in a vertical position and the other fingers together is equivalent, in the USA, Russia or France, to sending a congratulation for a job well done; In Nigeria it is considered a rude gesture, expressing total disapproval, and in Japan, China and Korea it is used in counting, indicating the number four (Franzoi, 2000). When they were released from Abu Ghraib prison in mid-May 2004, many Iraqis showed American soldiers and TV reporters a clenched fist and a thumbs up. How should we interpret this gesture, knowing that in Arab countries the thumb pointing up is an insult? (R.A. Axtell, 1998).

For pilots and cosmonauts, this gesture means "everything is OK". The origin of the gesture is lost in the mists of time. In ancient Rome, the life of a particularly brave gladiator was spared if the emperor gave a thumbs up; if he pointed it down, the gladiator was sentenced to death. Roger E. Axtell (1989) considers the Hollywood film industry to be "guilty" of circulating this explanation and quotes Desmond Morris, who believes that it is a mistranslation of the Latin phrase *pollice versa* by "directing thumbs down". In reality - argues Desmond Morris - when the cruel condemnation was pronounced, it was not customary to turn the shelves down. Moreover, the pronouncement of the imperial verdict "he will live" was not signaled by raising the police. Illustrating the legend of King Arthur, the painter, writer and poet Dante Gabriel Rossetti (1828-1887) reproduces the death sentence by the king of his unfaithful wife. The king is sitting on his haunches, his left arm is outstretched and his fist with the thumb pointing down.

Even if the origin of the emblem sign remains unclear, the cinema has put it into circulation almost all over the world; in any case, in North America and Europe. For hitchhikers, the thumb raised and the arm flexed to the shoulder conveys the request to be taken as a passenger in the direction in which the automobile is traveling. Let's not use this gesture when we get to Nigeria: there it signifies insolence, impudence. In Australia, suddenly raising your fist with your thumb up is tantamount to swearing. Germans use their thumb for the number one, not their index finger. In the USA, the thumb is only used for counting to represent the number five.

Americans start counting on their fingers by first raising the index finger, then the middle finger. In Europe, counting begins, as a rule, by raising the thumb, then the index, middle finger. Small confusions can arise from here: if a European, let's say a Romanian, visiting New

York asks for three hot dogs, showing the seller his thumb, forefinger and little finger, he might only receive two. It is not a misfortune. We're having fun being silly. We hardly have anything to tell our friends when we get home! But what if, within the framework of NATO cooperation, we want to signal to an American military that three enemy armored vehicles are approaching us? Counting on fingers could cost us our lives.

The thumb can also be used to ridicule a person. Accompanied by a sly smile, the movement of the arm over the shoulder with a clenched fist and thumb pointing at someone in particular ridicules him, shows disrespect.

In the past, but also today, in non-literate communities, the thumbprint takes the place of a signature. The fingerprint of this finger, even more than the others, helps the police to identify the criminals.

Inserting the thumb between the index and middle finger, with a clenched fist, most often conveys to Romanians a serious curse, it has a sexual connotation.

In Brazil, that gesture (called *figa*) has the meaning of a wish: "Good luck!" In the ex-Yugoslav space, the offensive charge of the gesture is much reduced. Roger E. Axtell (1998) assures us of the fact that the gesture, which in Romanians symbolizes the introduction of the penis between the lips, means "nothing": it is not scandalous that a mother who refuses to buy her child an ice cream, for example, show him the thumb between the index and middle finger. And in Romania "the impudent gesture of the three fingers" can mean "nothing". But we don't think a lady can compromise by doing it.

Other gestures made with the tips of the index, thumb and middle fingers together have a religious meaning (the sign of the cross among the Orthodox).

The so-called "hand bag" gesture (ital. *mana a borsa*) expresses mental states of the most nuanced, from annoyance to gentleness. About that gesture, Roger E. Axtell (1991) says that it is emblematic for Italians: the handbag, pizza, spaghetti and the Leaning Tower of Pisa would give Italians their identity. With the exception of the famous leaning tower, the other identities have lost their specificity. The "hand bag" gesture is found in many European peoples.

**The middle finger.** The Romans nicknamed him *digitus impudicus*. Desmond Morris (1994) recalls that the emperor Caligula (31-41 CE), proverbial for his cruelty and extravagance, used to extend his hand to be kissed, making this scandalous gesture (Axtell, 1991).

The sexual insult meaning of this gesture has been preserved even today. Some peculiarities are recorded: the Arabs point the *digitus impudicus* downwards, the Romanians upwards. Suggesting the phallus, the rapid back and forth movement of the palm with the middle finger in a horizontal position amounts to a sexual insult. Naturally, this gesture, specific to the male gender, should not - in the spirit of good manners - be used under any circumstances.

**The ring finger** it's as if it doesn't even exist in non-verbal communication. We don't know of any gesture that is done exclusively with him, apart from that of holding him out for the

religious wedding ring to be put on him. Even in combination with the other fingers, they do not participate in the language of gestures.

**The little finger** also does not play an active role in the transmission of their meanings through gestures. Participate, however, together with the pointer - as I have shown - to the transmission of insults. The little finger and thumb in extension (the other fingers remaining close in the palm) in Hawaii has the meaning: "Be calm", "Relax".

In many countries in Europe, including Romania, if the hand is raised near the mouth, and the two fingers suggest a rotation movement, then the urge to drink alcoholic beverages together is clear. In American Sign Language, the extended little, index and thumb fingers (with the bridge of the palm facing the interlocutor) make a declaration of love: "I love you!".

In the USA, music stars, politicians, and those who address a loyal audience use to express their feelings of gratitude through this gesture, which has no meaning in European countries.

**Palms and fists.** The "rubbing of the palms" expresses a positive assessment of what will follow: an "honorable" deal, a very pleasant arrangement, a long-desired action. Allan Pease (1993) points out that the speed with which people rub their palms also signifies. Sales agents rub their hands together quickly to convince customers that they are being offered the best quality goods and services. The customer does the same when he wants to show that he expects to be well served.

The slow rubbing of the palms unconsciously conveys another message: insincerity, cunning, hidden thoughts. As with any other gesture, in order to correctly interpret the rubbing of the palms, the concrete social situation must be taken into account: it is about a teacher who, rubbing his palms, explains the lesson to the students, a person who is waiting for the tram in frosty weather station, by a waiter who asks us what else we want, etc.

"Standing the palms with the fingers interlaced" expresses a negative attitude, all the more accentuated as the hands thus clasped are held higher. Hands clasped in front of the face, placed on the table or left in the lap (or left down when standing) reveal a state of frustration - as revealed by research carried out by C. Nierenberg and H. Calero.

"Hands in a helmet position" or "helmet-tower" - as Ray L. Birdwhistell called the oblique position of the palms with the fingers touching forming a pyramid - communicates the self-confidence of those who make this gesture, especially people with higher social status. According to the research and observations of Allan Pease (1993), this gesture is used in asymmetric interpersonal relationships (boss/subordinate, lawyer/client, etc.), indicating safety, self-confidence. "Helmet tower pointing upwards" is encountered more frequently when the persons concerned express their opinions, and "helm-tower pointing downwards" when the respective persons listen to the opinions of others. Some research has revealed that women use this gesture more than men (C. Nierenberg and H. Calero, 1971).

The same Iranian sociologist I mentioned before, Alibeman Eghbali Zarch, showed, extending his arm with the bridge of the palm down and with fingers that tighten and relax, how people are called to come closer. With us, the hand gesture has the same meaning, but with the

bridge of the palm up. Desmond Morris (1986), analyzing "guidance signals", presents in a bar histogram the frequency of the call "Come here!" with the bridge of the palm up and down, respectively, in different populations.

When in the academic year 2003/2004 one of the authors of this chapter (Loredana Ivan) benefited from a specialization internship in the Netherlands, in Groningen, she was surprised to find the frequency with which the students put their hands in front of their eyes and looked between their fingers. Thus they expressed a certain disbelief in what they heard, pretending not to notice certain things that contradicted reality. On the cover of a book about public policies, *Ruimte rond regels* (The space between rules) by Wieger Bakker and Frans van Waarden (1999), we find this gesture, which can be considered specifically Dutch, just as the "hand bag" identifies the Italians.

The great diversity of hand gestures (palms and fists, fingers) justify Edward A. Adams' assessment that "hand gestures are economical, quickly used and more promptly executed than verbal responses" (F. Davis, 1971).

## 9. Posture

The posture has been said to be a "frozen gesture". In contrast to the fluid movement of the body, posture refers to the fixed position of the body. But how fixed can the "fixed position" of the body be? Gordon W. Hewes (1957), quoted by Jacques Corraze (2000), says: "The human body is capable of assuming a thousand positions, positions that it can maintain for a certain time without feeling tired." Therefore, it is necessary to take into account the physiological factors, but also the psychosocial ones. We believe that the duration of a body position is evaluated according to the concrete social situation.

Who has not been impressed by the stillness of the military when they stand guard at the flag? What teacher has not been disturbed by the frequent change of the position of the students in the bench? However, other factors also intervene in the evaluation of the "fixity" of the body: people's temperament, sociocultural characteristics and, why not, climate factors, temperature, for example. We do not dwell on this aspect, which deserves to be discussed. However, we draw attention to the difference that must be made between "body position" and "posture". In humans, body positions are limited: orthostatic (vertical), decubitus (horizontal) and sitting.

Edward T. Hall (1972) proposed a system for scoring positions in interpersonal communication, which - the author admits - "is far from perfect", but which can be operated without difficulty. "One of the most important operations in proxemic notation - says Edward T. Hall - is determining the gender and basic posture of the interlocutors (whether they are standing, sitting or lying down). Gender and basic postures can be noted in any of the three systems, depending on the interest of the investigator: the pictographic (iconic), syllabic mnemonic system or by code numbers"

According to this scoring system, 56 signifies a man and a woman in the orthostatic posture while conversing. The active person is noted first. A woman in the orthostatic posture talking

to a man in the same posture is symbolized by the number 65. Certain data about the subjects (age, social status, etc.) can be entered between brackets next to each symbol.

Regarding the orientation of the body in interpersonal communication, Edward T. Hall (1963) classifies it according to geometric criteria, according to the angle formed by the respective persons: face to face, profile to profile, back to back. Body orientation transmits signals that must be interpreted depending on the type of interaction, gender and culture.

Robert Sommer (1959) observed that people sitting at a square or rectangular table to converse sit diagonally across the corner of the table, not "face to face" or "profile to profile". I stand "face to face" not those who cooperate, but those who oppose each other. Facilitation or inhibition of visual contact is, according to the cited researcher, the determining factor of the body orientation model during the conversation. In another research, Robert Sommer (1965) found that the positioning of people at a square or rectangular table depends on the task to be solved. The American researcher administered a paper-pencil test to a number of 151 students from introductory psychology courses. The students were asked to state how they feel about a friend of the same sex in four different situations:

- (1) at a walk before the start of the course (conversation);
- (2) when studying together for the same exam (cooperation);
- (3) when studying for exams in different subjects (coercion);
- (4) when they compete to determine who solves a series of problems faster (competition).

It was easily found that people who want to discuss and work together sit next to each other, that in the case of coercion the distance between the two people increases, becoming maximum in competitive situations. When talking, people prefer to sit on either side of the corner of the table; when cooperating, they prefer the "profile to profile" (or "shoulder to shoulder") position. In competitive situations, people tend to take opposite positions. Interestingly, placing people in different locations boosts either cooperation or competition. In his research, Robert Sommer obtained similar results when students' preferences for seating around a round table were discussed. The conclusion is only one: "different tasks are associated with different spatial arrangements" (R. Sommer, 1965).

Therefore, the term "posture" means the position of the body or its parts in relation to determined landmarks. Albert Mehrabian (1972) believed that posture is much more expressive than gestures.

According to Jacques Corraze (2000), "in non-verbal communication, two types of landmarks are used: the orientation of an element of the body relative to another or to the body itself (vertical trunk, bent head, in extension, etc.); orientation of the body or its parts in relation to other bodies (face towards the interlocutor, body bent forward, etc.)". depending on these two types of landmarks we will also interpret the signals transmitted by the knee.

If we consider the position of the transmitter in relation to the receiver, it can have a front, back or side orientation. The front orientation is often the signal of aggression, strength and power, while the rear orientation is the symbol of following the interlocutor or diminishing hostility. The lateral orientation, intended to block the partner's advance, can also be

interpreted as an expression of aggression. Jacques Corraze (2000) shows that in human interactions one can identify the posture that expresses dominance - the head back, the bulging chest, the leg forward, the knee flexed, the hands on the hip - and the posture that expresses female seduction - the legs crossed at the level of their knees or just above the knee ("leg over leg"), highlighting the legs and breasts, head thrown back.

The American philosopher and psychologist William James (1842-1910) identified, based on experimental studies in which subjects were asked to evaluate a number of 347 photographs, four fundamental positions:

- (1) the approach attitude (paying attention), in which the body is tilted forward;
- (2) the attitude of rejection (refusal), avoidance, withdrawal towards the other;
- (3) the attitude of expansion, which expresses arrogance, pride, aggressiveness (the head, trunk and shoulders are in extension);
- (4) the attitude of contraction, characteristic of disappointment, depressive states, in which the head "hangs" flexibly and the shoulders are brought (*The Philosophy of Experience*, 1910).

The French psychologist Henri Wallon (1879-1962) claimed that posture modulation has an essential role in the expression of emotions (*Les reactions dans les crises doues a l'emotion*, 1920). Research on the modification of muscle tone depending on emotional reactions has contradictory results (J. Corraze, 2000). The increase in muscle tone is associated with individual responses to numerous stressful situations, but the variations depending on individual characteristics are large. Sometimes, changes in muscle tone are insufficiently perceived to be able to speak of "nonverbal communication". We can say that changes in posture, hyper- or hypotonization take place in response to specific social situations, but also depending on the personal characteristics of the analyzed individuals.

Hungarian psychiatrist Sandor Ferenczi (1875-1933) discovered that certain individuals become inhibited by surrounding movements during intellectual activity and need to suppress their movements while thinking; others, on the contrary, need to be distracted, to move during intellectual activity. The first associate intellectual activity with a "numbing of the body"; the second category associates the mental activity with a mobilization of the body. Felix Deutsch (1952) argued that changes in posture reflect and accompany nonverbal expressions at an unconscious level, so reporting to the verbal message is absolutely necessary for the interpretation of posture.

A topic that has aroused the interest of researchers is the typology of posture. David B. Givens (1999) mentions the categories proposed by William James (1932):

- (1) slight leaning towards the interlocutor, which denotes "to pay attention";
- (2) withdrawing or twisting the body in another direction, signifying "denial", "refusal";
- (3) expansion, which denotes conceit or arrogance;
- (4) bending of the trunk, bowing of the head, tightening of their shoulders and shrinking of the chest would be characteristic of depression and depression.

Albert Mehrabian (1972) talks about two fundamental dimensions of posture: direct posture and relaxed posture.

**Albert E. Scheflen** (1972) appreciates that in the interaction between people there are three basic dimensions of posture:

- (1) inclusion/non-inclusion;
- (2) parallel or opposite body orientation;
- (3) congruence incongruence.

The first dimension refers to the activity space of the interlocutors and access to the group. If two people engage in a conversation, for example, two young people - a girl and a boy - who love each other, they delimit a certain space, orient their bodies towards each other and close the space for the other people, turning their backs towards them. The whole position of the body, the relaxation of the lower limbs and the raising of the upper ones contribute to closing the space to others. In a group, things happen the same way. Certain people who are strangers to the group are barricaded, by body orientation, from accessing the discussion space. I stand behind those who are discussing, in the second row. The circle does not widen. It is a rejection signal. In situations where, for various reasons, the intimate space - see the Hall distance zones - is transgressed, the posture (body orientation, arms and legs crossed) signals psychological discomfort.

Taking into account the second dimension, Albert E. Scheflen identifies two ways of placing individuals in space: the opposite position and the parallel position. In the face-to-face position, communication is direct and reciprocal (for example, the interaction between a doctor and a patient, between a teacher and a student, or between a couple in love). In a group of three people, the opposite position signals sympathy, interest, approval for the person in front of you and neglect of the other person. If the posture is parallel, it means that the two interlocutors are moving towards a third, with whom they want to share information. In groups of four, two parallel postural orientations or two opposite postural orientations can be observed. In such cases, it is no longer necessary to investigate the distribution of sympathies within the group. Find out with an acceptable margin of error everything at a glance.

How can the situation be interpreted when one part of the body (head and trunk) is oriented opposite a person, and the other part (pelvis and legs) towards the other person? This mixed posture denotes the intention of the individuals to maintain the unity of the group, the tendency not to ignore anyone. The third dimension refers to the degree of similarity between the positions of the interlocutors. A distinction is made between "congruent positions" and "incongruent positions". Postures can become identical during communication (almost perfectly congruent) or partially identical (only certain parts of the body are similarly oriented). In turn, congruent positions are divided into "directly congruent" and "mirror congruent" positions.

Both types of postural congruence are found in opposite positions and in parallel positions, thus classified based on the first dimension. Albert E. Scheflen calls this phenomenon "postural echo". It is maintained by changing posture during group interactions and signifies,

most of the time, mutual sympathy, acceptance of others, group cohesion. Albert E. Scheflen followed these postural changes during psychotherapy sessions, but the deciphering of the meaning of the posture brings useful information for the analysis and optimization of everyday life and in organizations.

The absence of congruence can be a signal of the difference in status or opinions. The tense posture of one of the interlocutors can generate tension in the other as well, and the increase in postural congruence, especially in the upper part of the body, is a symbol of the quality of interpersonal relationships. Relaxation increases when the interpersonal attraction decreases, if it is a female interlocutor. In the case of two male interlocutors between whom there is antipathy, tension sets in and the absence of postural concordance. Likewise, the lower status of the sender compared to the receiver generates tension and increased postural incongruity, the threatening situation of the sender having the same effect. Therefore, for the analysis of the position, the level of the relationship between the interlocutors, the attraction between them and the socio-economic status must be taken into account.

Flora Davis (1973) is of the opinion that "each individual has a characteristic way of maintaining his own body when sitting, standing or walking. It is like a kind of signature". The posture carries within itself the traces of the past and expresses quite accurately the current mental state of the person, if not the personality traits. Hunched shoulders carry the burden of a life full of difficulties; those highlighted by the bulging of the chest express self-confidence, dominance, defiance of others, preparation for an aggressive confrontation.

## **STANDING HABITS.**

As humans, we are blessed with a strong central structure that enables us to stand and function on two legs, unlike creatures in the animal kingdom. Our feet act as balancing pads, which leave an impression on rubber footwear with constant use. These impressions reveal the pattern of uneven weight distribution on our feet. An ideal weight distribution is one where the weight of the body is evenly distributed on the right and the left feet, as well as the front and the back of our legs. For each foot, the weight should be borne equally by both the inner and the outer edges of the foot.

Standing for a long period of time is a painful activity for many of us, often causing severe pain that hurts the back, the knees and the feet. There are various reasons for such discomfort.

*Uneven Weight on the Feet.* For most people, the general tendency is to put more weight on the outer edge of the feet as compared to the inner side. For people with flat feet and knock knees (knees pointed inward rather than straight), the reverse is true. They place more weight on the inner edges of their feet.

We are also inclined to put excessive pressure on our heels by distributing the weight to both heels and the mounds of our soles (we are generally less aware of the mounds of our soles, the parts of the soles that would be on the floor if we were to stand on our toes). We rarely ever put any weight on these mounds and they stay mostly unused.

*The Wide V Standing Posture.* In this posture, we also rotate our feet outward, which increases the distance between the toes of the two feet and results in locked knees. The locked knees are forced backward to cause immense strain on the knees and the supporting muscles.

The uneven distribution of weight on our feet and the V posture trigger a chain of reactions at the joints in our legs – the ankles, the knees and the hips. With time, the heels and the other parts of the feet that take the pressure, affect these joints negatively to damage the natural protective cushions around our bones.

*The Best Foot Forward.* We begin our walk with the same foot every time - left or right. We cannot be blamed for putting our best foot forward, but this habit can become a source of imbalance. If the best foot is the right one, it usually stays forward and the left foot is used to stabilize the body. This restricts the forward foot's movement. Even when we stand casually, the rear leg is the weight bearer. Even distribution of weight between both feet is a must.

## 10. Proxemics

Edward T. Hall, in *The Silent Language* (1980), calls proxemics the set of observations and theories regarding the use that man makes of space as a cultural concept. Animals are divided into territorial or non-territorial according to whether or not they defend a territory. Typical of aggressive species, man is a territorial animal; territoriality is an innate biological response to another's aggression. The term "proxemics" was first used by Edward Hall in the study entitled: "*Proxemics – the study of man's spatial relations and boundaries*", where he emphasizes that the problem of space also exists in the animal world, showing that the first research on animal behavior in the natural environment and in captivity were made by the Swiss ethologist H. Hediger (1950). He identified five types of distances, namely:

- (1) *flight distance* - the distance that allows an animal to escape by running if it senses the approach of another animal;
- (2) *the critical distance or the attack distance* – from which running to escape the attackers is no longer possible;
- (3) *personal distance or interpersonal distance* between two specimens of the same species. It results from the confrontation of the tendencies of "being together" and "being alone";
- (4) *the approach distance* that animals keep in a territory;
- (5) *the social distance* that an individual maintains from the other members of the group.

Based on the study of distances in animals, Edward Hall makes measurements of voice reception thresholds, delimiting four distances in human communication:

- (1) *the intimate distance* (40-50 cm: two limits of the distances are given because they are not fixed, absolute, but relative to the culture and environment of the communication context!) where you can feel the presence of the other, the smell, the breath. It is a protective space for the individual, accessible only to close people, the partner, girlfriend or boyfriend, own children. The approach of the interlocutors, their acceptance in the area of intimate distance expresses a psychological closeness. In the case of this distance, olfaction, skin contact, thermal sensitivity and the visual element are operated;

(2) *the personal distance* (75-100 cm) in which individuals can touch their hands, defines the limit of direct physical contact with others. At this level we cannot detect the heat, the breathing of the other and, in general, we have difficulties in maintaining eye contact. If this space is violated, we feel uncomfortable, something noticeable through excessive body movements, and the reaction to the invasion of personal space depends on the type of relationship we have with the interlocutor.

(3) *social distance* (3-5 m) is the distance in which we lose the details regarding the interlocutor. It is the distance at which most common individual interactions, transactions, and formal business take place. The arrangement of the furniture takes into account the observance of this distance. Eye contact is very important to maintain an optimal level of communication, the voice is higher, and the inflections of the voice have the role of reducing the social distance.

(4) *public distance* (over 5 m) is the distance at which the individual is protected and can become defensive if attacked. At this level, we are close enough to follow the interlocutor's actions, although we lose details of his behavior: facial expressions, direction of gaze, etc. In this case, sight and hearing are of the greatest importance, tactile sensations being practically eliminated.

However, the term "personal space" was invented by D. Katz in 1937, popularized by R. Sommer in 1969, then taken over by Hall: it is a territorial extension of the body, like a kind of bubble, ring or shell. It is replaced (E. Goffman, Roger Lécuier) by the term "interpersonal distance" - which is variable depending on the interaction situation; Hall and then one of the disciples, J.A. Scott notes differences according to cultures, and Michael Argyle describes different cultures and places according to the cultural use of space.

Michael Argyle and Janet Dean formulated in 1965 for some types of interactions in non-verbal communication the "equilibrium theory": if a person raises the level of closeness, manifested by decreasing the distance, by increasing the frequency of eye contact, by smiling and by other verbal and non-verbal signals and the level of closeness is established by both interlocutors, the other person tends with the same force to restore the balance, increasing the distance and avoiding the gaze of the other. Instead, according to the "stimulation model" of M.L. Patterson, 1976, if one person changes your level of involvement, the other person is stimulated either in a positive sense, i.e. reciprocal, or in a negative sense, i.e. compensatory. If there is no change in the level of involvement, it means that the change made by the first person was insignificant in that relationship.

The dynamic element of communication behavior is the adjustment of the intimacy of the spatial situation to the intimacy of the relationship. A series of signals signifies to your partner the type of relationship you want to establish with him: you get closer to someone who has his eyes closed than if his eyes are open; the closer a partner is to you, the less you look at him. In the case of proximity, the importance of visual contact decreases, while olfactory and tactile ones increase.

The law of proxemics, synthetically formulated by Edward T. Hall, tells us that: "among all things equal in a certain way, those that are closer to the individual are more important than those that are further away." Affective closeness shortens the distance between partners; as well as conformity of opinions; the initiative of touching or approaching belongs to the superior; men are more distant from each other than women are from each other; children are closer to each other than adults, then the distance increases with age and starts to decrease again after 40 years.

A smaller distance allows the entry into function of several channels for transmitting/receiving messages: apart from the visual channel, hearing, tactile sense, thermal and olfactory sensitivity intervene. Mutual feelings are the decisive factor in establishing the distance: ex. how the teacher places the students, or how the students sit in a classroom; hierarchical relationships (according to a verbal expression: "someone is close to you or not!"). We maintain a smaller distance when we are praised than when we are criticized. Reducing the distance from those with whom we communicate is a sign of solidarity.

Also, contextual factors generate tendencies to increase or decrease the distance from the interlocutor. The intimacy of the context increases the distance between the partners (equilibrium theory); noise decreases the distance; likewise, amusement; work grows it. The wider the physical space in which we are, the more we tend to reduce the interpersonal distance. The space in which they converse will be larger in an apartment than on the street and will be smaller in a spacious room than in a narrow one. In addition, the subject around which the interaction takes place can generate variations of the interaction space. Thus, when we talk about personal problems or share secrets, we maintain a smaller distance than when we talk about general problems or when we have formal discussions.

The distances are, therefore, relative. They depend on the type of territorial human community to which the subject belongs - village or city; small town or big city - and the type of culture. Example: the difference between the West and the East is very visible: the Japanese consider the Westerners proud, the Westerners consider the Japanese arrogant. E.T.Hall (1963): "What for an American means closeness, for an Arab can mean distancing." It is what has been called, due to the filming of this behavior in the halls of the UN, the "UN waltz": in order to speak, the Arab partner (or Japanese, according to other sources) approaches the American partner, who takes a step away. The Arab partner, who feels that he cannot communicate across the "chasm" thus created approaches again; in his turn the American moves away again.

The spaces that belong to us are an extension of bodily space. There are typical gestures to mark the space (territory) or property: by placing the hand or the foot. The cars, airplanes, boats we drive also expand our personal space to the respective dimensions; it also increases self-image.

We communicate, of course, with our hands, with the help of facial expressions, with our gaze, but we also communicate through the way we use a certain space. Politicians who give a speech spatially close to the audience, with their eyes directed towards those they are addressing, achieve a different effect than those who, say, place themselves at an appreciable

distance from them, keep their eyes on the ground, sit with their hands on back or with one hand in their pocket when giving their speech.

Thus defined, proximity can be measured in seconds, meters, number of generations in a family, etc. But the term "proximity" also has a subjective connotation, a fact that requires a qualitative approach, not only a quantitative one. Gaël Le Boulche also proposes a functional definition of proximity with reference to the perception of social reality in relation to the triptych: legal norms, space and time. Without a relationship of man to what is allowed by law and what is prohibited, without a relationship to a space and to a time organization of actions, social life would not be possible. "Proximity, which evaluates the distance for each element of the triptych, is centered on perception" - appreciates Gaël Le Boulche (2001).

The term "proxemics" was invented by Edward T. Hall, who used it for the first time in the study entitled "Proxemics - The study of man's spatial relations and boundaries" (1963). In another study, "Proxemics" (1968), the American anthropologist confesses that in his research concerns of "social space as bio-communication" he was inspired by the works of the linguist Benjamin Lee Whorf (1956) and the anthropologist Edward Sapir (1927), considering that their theses about language (the existence of unwritten codes, but understood by all) are applicable to all cultural models.

In the mentioned study, Edward T. Hall emphasizes that the problem of space also exists in the animal world, showing that we owe the Swiss ethologist H. Hediger (1955) the first researches on the behavior of animals in the natural environment and in captivity (at the circus, in zoos). "H. Hediger (1961) distinguished between contact species and non-contact species and operationally described the terms personal distance and social distance. He demonstrated that the critical distance is so precise that it can be measured in centimeters" (E.T. Hall, 1968). Mutatis mutandis, today we talk about "contact cultures" (for example, Arab culture or Mediterranean culture) and "non-contact cultures" (such as American or Northern European). In contact cultures, body touching (skin contact) is encouraged both in private and public space.

No-contact cultures discourage such behaviors. At a business meeting, hugging an American investor, patting him on the back or patting him on the back with your hand to express your hospitality, joy is completely out of place from the American point of view.

Taking into account not only the distances from which the voice can be received (whispers, normal voice and shouts), but also the possibilities of skin contact, temperature, smell, detection of facial expressions, etc., Edward T. Hall and his collaborators arrive at measurements finer, which Marc-Alain Descamps (1993) presents synthetically.

(1) *The close intimate distance* allows for skin contact, receiving the body odor of the other, the warmth of his body. Verbal communication is done in a whisper, even using an inarticulate language. From this distance (0-0.15 m) facial expressions can be seen in detail. It is the distance between mother and newborn, between people during sexual intercourse, between athletes (boxing, wrestling, etc.) or between individuals traveling together in an overcrowded vehicle.

(2) *The far intimate distance* is the one that allows people to hold hands, to feel each other's body odor. Verbal communication is smooth. Such a distance (0.15-0.45 m) is characteristic of family discussions, but also in some public places (in airports, for example).

(3) *Close personal distance* is the distance conducive to confidences (0.45-0.75 m). The features of the face are very well distinguished, the body heat of the other person is weakly felt, and their smell (possibly the perfume used) is not felt unless it is very strong.

(4) *The far personal distance* ensures the exact perception of the other, as a whole and in detail. Can communicate without shouting. From the distance of 0.75-1.25 m between the partners, neither the heat nor the smell emanating from the interlocutor's body can be felt.

(5) *Close social distance*. From this distance (1.25-2.10 m) we talk with foreigners. We can clearly see their face and body in its entirety. It is the distance between the seller and the client, between office colleagues.

(6) *Far social distance* requires loud communication, blurring status differences. At this distance (2.10-3.60 m) formal, impersonal discussions take place, as well as discussions in small groups. In salon discussions, verbal communication is often supported by gesticulation.

(7) *The close public distance* requires speaking very loudly and rarely, emphasizing each word. Such a distance is maintained between politicians and voters during election rallies, between union leaders and demonstrators. From this distance, the facial expressions or the color of the eyes of the speaker cannot be distinguished. However, the body constitution, clothing, etc. can be seen. Exhibitions are held in conference rooms and university amphitheatres, keeping the close public distance (3.60-7.50 m).

(8) *The far public distance* strongly demands the voice of the speaker. It is the stage distance, of politicians, actors and magicians. Communication is heavily controlled. We resort to gestures with symbolic value (raised fist and arm, index and middle finger in the shape of the letter V, etc.). From this distance, according to the regulations, the command is given in the army.

Gaël Le Boulche (2001) is right when he states that for an individual the territory is defined by "the ensemble of proximities". Ethologists understand by territory the space where a group of individuals of the same species lives. We are, therefore, dealing with an "individual territory" and a "collective territory". These territories are marked in one way or another. Edward O. Wilson (2003) describes how ring-tailed lemurs (*Lemur catta*), which live in the forests of southern and western Madagascar, mark territory through a complex system of olfactory communication: "Both females and males mark with genital secretions small vertical branches. They stand on their hands, hold the branch with their legs as high as possible and rub their genitals up and down with short movements.

Males also use palmar marking, spreading an odorous secretion on branches and rubbing surfaces with their forearms and hands." Like glandular secretions, metabolic breakdown products released through urination and defecation are used in the animal kingdom for territory demarcation. Humans also mark their territory, but not through their hormones or excretions, but with the help of articulate language and symbols. We say: "private property",

"my city", "my country", etc. We fix border posts between counties, put the state flag on the border.

Gaël Le Boulche (2001) introduces an important distinction for the sociological study of proximity and space. Proximity can be positive or negative. The proximity of the house to a public garden or the workplace represents a positive proximity, while a house of tolerance next to a monastery or a pub in the vicinity of a school is a negative proximity (there are also legal regulations in this sense). The set of positive proximities determines the "chosen territory" (*territoire choisi*), made up of the proximities that the individual wanted. On the contrary, the set of unwanted proximities, which the individual did not choose voluntarily, represents the "supported territory" (*territoire subi*).

Naturally, individuals aim to maximize their chosen territory and minimize their supported territory. The distinction introduced by Gaël Le Boulche helps us understand interethnic relations, more generally, interpersonal relations, because the territory regulates social interactions. It can generate cooperative relations, but also conflicts. We defend our territory openly, but also through subtler stratagems. We have our own corner in the living room, our own office, etc. We react when these spaces are "invaded" by others. Depending on the social status we have, on our own social power, we exercise control over a larger or smaller territory.

## 11. Gaze

Gaze is of central importance in human social behavior. It acts as a non-verbal signal, showing, for example, the direction of the gazer's attention; at the same time it opens a channel, so that another person's non-verbal signals, and particularly their facial expression, can be received. Gaze, then, is both a signal for the person looked at and a channel for the person doing the looking. It is linked with the social skill model, since this channel is the main one for receiving feedback. Consequently, the *timing* of gaze, in relation to speech, for example, is important.

During conversation and other kinds of interaction individuals look at each other, mainly in the region of the eyes, intermittently and for short periods; this will be referred to as 'gaze' or 'looking at the other'. For some of the time two people are doing this simultaneously; this will be called 'mutual gaze' or 'eye contact'. Several different aspects of gaze can be recorded, and typical figures from one of our experiments are given below:

(1) Total individual gaze	61%
(2) Looking while listening	75%
(3) Looking while talking	41%
(4) Average length of glances	2.95 secs

(5) Mutual gaze	31%
(6) Average length of mutual glances	1.18 secs

When two people are talking, they look at each other between 25 per cent and 75 per cent of the time (61 per cent in the experiment above), though we have seen the full range from 0 to 100 per cent; I shall discuss these individual differences later. They look nearly twice as much while listening as while talking, except interactors of high power or status, who are found to look as much while talking as when listening. Individual glances can be anything up to 7 seconds or so (average 2.95 seconds in the above experiment), and mutual glances are rather shorter.

Interactors can tell with some accuracy when they are being looked at, as can observers of the interaction. On the other hand Von Cranach and Ellgring (1973) have found that interactors cannot tell with much accuracy which part of their face is being looked at. What is being recorded as gaze is really gaze directed to the face; studies with eye-movement recorders show that people scan each other's faces with repeated cycles of fixation, each fixation being about a third of a second long, though they fixate on the eyes more than anywhere else.

In addition to the amount and timing of gaze, the eyes are expressive in other ways:

- (1) pupil dilation (from 2-8 mm in diameter);
- (2) blink rate (typically every 3-10 sec);
- (3) direction of breaking gaze, to the left or right;
- (4) opening of eyes, wide-open to lowered lids;
- (5) facial expression in area of eyes, described as 'looking daggers', 'making eyes', etc.

Gaze is used as a social signal very early in life: mutual gaze with the mother first occurs at the age of three or four weeks. Visual interaction between mother and infant plays an important part in forming the bond between them: by six months infants are upset when eye contact is broken, by eight months it plays an important part in games with the mother.

Gaze is an important signal for liking and disliking; we look more at people we like. Exline and Winters (1965) arranged for subjects to talk to two confederates and then to state their preference for one or the other; in subsequent interaction they looked much more at the one they preferred. Rubin (1973) found that couples who were in love (as measured by his questionnaire) spent a higher proportion of time in mutual gaze. Of course, liking or loving are communicated by a combination of cues; as well as looking there is smiling, a friendly tone of voice and the contents of speech.

Although gaze and eye contact are pleasant, especially with those we like, eye contact is unpleasant and embarrassing if there is too much of it and if mutual glances are too long. This may be because unpleasantly high levels of physiological arousal are generated, or it may be because of the fact that there are also avoidance components connected with eye contact. One of these is that mutual gaze is distracting and adds to the cognitive load. If subjects are

asked to look continuously there are more speech disturbances of various kinds (Beattie, 1981). It is more comfortable watching others from behind a one-way vision screen than watching others who can look back.

If there are forces both to engage in eye contact and to avoid it, there will be a state of conflict of the kind described earlier. It follows that there is an equilibrium level of looking for each person and of eye contact for any two people, and that when the approach forces are relatively strong there will be more eye contact. We will now consider some implications of this equilibrium when the positive forces for eye contact are mainly affiliative or sexual, as opposed to dominant or aggressive. We suggest that intimacy is a function of the following:

- (1) physical proximity;
- (2) eye contact;
- (3) facial expression (smiling);
- (4) topic of conversation (how personal);
- (5) tone of voice (warm).

If we suppose that there is an overall equilibrium for intimacy, it follows that when one of these component elements is disturbed there will be some complementary change among the others to restore the equilibrium. Several examples of this have been observed.

Argyle and Dean (1965) tested the hypothesis that greater proximity would result in less EC. Subjects took part in three three-minute discussions with stooges trained to stare, at distances of two, six and ten feet. The amount of eye contact was recorded by observers in the usual way.

In later experiments it was found that the same results were obtained with pairs of genuine subjects. The effect is greatest for male-female pairs; the change is mainly in looking while listening and changes of EC are due to amount of individual gaze, not changes in coordination.

The gaze-distance effect has been widely confirmed, as have a number of other derivations from the affiliative balance theory (Patterson, 1973). There is less gaze at the points where a person is smiling and when intimate topics are discussed.

What is the meaning of gaze to the person looked at? If A becomes aware that B is looking at him, the main message received is that he or she is the object of B's attention, that B is interested in him and willing to be involved. If they are not already interacting, gaze indicates that something is about to start. The nature of the action which is likely to occur varies with the situation, for example boy-girl, chairman-committee member, diner-waiter. In addition, when B looks, A feels observed, that he is the object of another's attention.

There are those who find this a disturbing experience, and some mental patients feel that they are being transformed into objects, observed as if they were insects, and, for some psychotics, turned into stone.

When there is mutual gaze, this is experienced as a special kind of intimacy and union, in which each is attending to and receptive to the other. Mutual gaze produces an increased level of physiological arousal, such as higher heart rate.

In animals gaze is often used as a threat signal. Exline and Yellin (1969) found that a monkey (in a strong cage) would attack or threaten an experimenter who stared at him, but would relax if the experimenter averted gaze which is an appeasement signal. A number of experiments show that gaze can act as a threat signal for humans too. Ellsworth (1975) found that staring confederates on motorcycles caused motorists to move off more rapidly from stop lights; other studies found that people stared at in libraries either left or built barricades of books.

Marsh, in studies of football hooligans, found that a single glance at a member of the opposing group can be an occasion for violence, with cries of `He looked at me` (Marsh, Harr and Rosser, 1978). Kurtz (1975) found that if the occupant of a work table greeted newcomers with a long gaze, this was interpreted as a hostile stare and prevented the newcomer using the table; i.e. it was successful in defending the territory. In contrast Ellsworth found that a mere glance from a person in need increased the likelihood of help being given.

### **THE BODY LANGUAGE OF EYES.**

Eyes can be used for many reasons, key among them as a body language tool. The expressions that come from the eyes can send a very strong message concerning a particular issue in regard to what one is thinking about. Seduction is one of the expressions that mostly come out of eyes for both men and women. You just have to look at the gaze, blinking and positioning of eyes to read that very clearly.

*Windows to the soul.* Many people including scientists refer to eyes as "windows to the soul" because they always create a first impression. That is so because by just looking at the eyes of a person in a deep sense, it will reveal a lot of things including his or her truthfulness and sincerity. You can easily tell a person is lying or saying the truth by just looking at his or her eye expressions. Through the eyes, people get to see your inner self and you get to see that of other people through their eyes. If there is a person you suspect is not being honest to you, just ask him or her to look into your eyes directly.

Their reaction to that will tell a lot about the answers you will be seeking out. It is good to do some repeated exercises with a mirror so as to improve upon your ocular expressions. Alternatively, you can have your partner help out. This is very important to ensure the expressions coming out of your eyes represent your true inner self and not a cover-up. Your focus should always be on the eyes of the person you are conversing with.

*Revealing your feeling or thinking.* If your feeling is that of lust or love, the eyes are in a position of telling it all. In their own capacity, eyes are very good communicators, thus you will be able to get many things from them. If you have very strong feelings, your eyes will tend to be sparkling, while narrow eyes represent some painful experiences as well as suffering.

Do you know that you can easily intimidate a person using your eyes? Yes, you just need to have them wide opened and your targeted persons will become scared. Unfocused looks will show a person who has lost concentration on an issue while too much blinking is a show of secrecy.

*A natural and important part of the communication process.* For you to understand what message is being sent by ocular expressions, you need to be very observant of their movements. That will be very critical in helping you understand the whole process of communication. Try to learn what it means when eyebrows are raised as well as when the mouth is open, lips are compressed and eyes blink. Do not assume because it might be sending out a different signal from what you think.

*Making direct eye contact or averting gaze.* Eye contact is very important in the process of communication. When you make a direct eye contact, it means that you trust the person that you are talking to and that you are ready to listen to his or her word. To the contrary, averting gaze will mean that you don't have time for that and it will be more of a way of showing disapproval.

*Direct eye contact.* You will be showing your interest in something as well as confirming your attention once you are in a position of making direct eye contact. That will, however, be very delicate to people who are naturally shy and don't have the confidence to speak in a public place. To make sure you have the best eye contact when talking to another person, you will have to improve on your confidence levels so that you have self-belief. You can do some practicing so as to perfect the act of making direct eye contact.

*Prolonged eye contact.* Despite the fact that eye contact is very effective in communication, you should not have it prolonged for too long. The result can be perceived as threatening or intimidating to the person you are dealing with. It is advisable that you watch out on the length of your eye contact so that it is effective without causing any discomfort to the other person.

If you look at a person you are familiar with for longer than usual, he or she might think that something is wrong with their body maybe the hair, teeth or face. That will immediately create discomfort. When in a conversation, very gluey eye contact disrupts the thinking process in a person leading to an abrupt end to the talk. You should always be mindful of the other person when making eye contact so as not to threaten them unknowingly.

*Breaking eye contact and frequently looking.* When you fail to sustain your eye contact on the person you are conversing with, it might send a signal that you are distracted, uncomfortable or trying to conceal your real feelings. Even as you are advised against prolonging the eye contact, you should not keep it breaking up because it will send a totally different signal. You have to be consistent even if it's for a minute or minutes. Your eye contact should always send the right signal to the other person.

*Blinking.* The way your eyes blink will send a certain message to people you are dealing with. It can show your approval or disapproval of whatever they are saying so be sure of what you are doing. Many people take blinking for granted without knowing that it is a normal response

that they cannot do without. Apart from the usual things that people think about blinking, it is a very powerful body language that will say a lot about you more than words can.

*Too much or too little.* Too much blinking can be accompanied by several factors among them being excess amount of light, changes in temperatures or even due to eye contact with another person. Even though there have been no scientific details to show what is normal blinking, you should try as much as you can not to overdo it. For you to know that you are blinking more than it is supposed to be, you will be doing it very frequently with either one eye or both. When your eye blinking is more energetic than normal, it will be a sign of excesses, which you should watch out for.

On the other end, you might find yourself blinking too little, which is equally dangerous. There are dire consequences of doing that. This will lead to the cornea of your eye being starved of enough oxygen and the eyes will turn dry. You might experience some cases of blurred eyes due to inadequate blinking among many other effects. The other effect of little blinking of your eyes will be penetration of dirt. You are supposed to blink consistently to keep off any bacteria, which will be compromised once you can't blink in an adequate manner.

*Rapid blinking.* For those people who tend to blink more rapidly, they mostly complain of enduring a lot of discomfort and stressing situations. Too much of anything is poisonous and blinking is not an exception. You should make sure your blinking is maintained at the right levels without exaggerating anything. If you feel distressed or uncomfortable next time, make sure you have checked on your blinking because that might be the real cause.

*Infrequent blinking.* People will interpret your infrequent blinking to mean you are intentionally trying to control eye movements and convey a certain emotion. That might not be the case from your position, but that is what people will view it from a different angle. To avoid being misunderstood, you are supposed to ensure your blinking is maintained at a frequent mode all the time. Do not do it too much or too little but stay within your normal blinking.

The consequences that will come with inadequate blinking will be too serious for you to handle. Instead of enduring all that anguish, you will have the easy option of maintaining your blinking at frequent levels all the time.

*Dilated pupils.* Are there any dangers that you will be under once your eye pupils are dilated? There are none, even though it can be a medical condition referred to as mydriasis. Pupil dilation can occur in various situations. When you enter a dark cinema, your pupils will automatically dilate to let more light in. It happens every time when light penetration into the eye is low thus get dilated to allow for more light entry.

Not all cases are like that since emotions play a big role as well. There are times when the small or big size of your pupils will be as a result of emotions. By looking at the pupils in a detailed manner, you will be able to learn some of the messages they are sending resulting from emotions.

## 12. Outfit

We express much through dress, including our personal identities, our relationships with others, and the types of situations in which we are involved. A phenomenal amount of information is transmitted in one's appearance, and human beings have an amazing capacity to make sense of a substantial amount of detail in a very short time. In this chapter we will consider both the complexity of communicating through appearance and factors that influence messages sent through dress. We will look closely at the process of creating meanings about the self and society' through dress.

Dress is one of several modes of nonverbal communication that does not necessarily involve verbal expression through speaking or writing. Other types of nonverbal communication include facial expressions, physical movement and actions (kinetics), the physical distances people maintain from one another (proxemics), touch (haptics), the sound of the voice while delivering verbal communications (paralinguistics), and hand gestures. All of these types of nonverbal communication involve behaviors that are informative and meaningful to people.

Dress seems as a backdrop while other forms of communication-verbal and nonverbal-occur. Unlike many other modes of communication, dress often tends to be stable or unchanging for many hours of the day. Dress, then, is usually nondiscursive behavior rather than behavior that dynamically changes or unfolds moment by moment as do words in a conversation or movements in a dance (McCracken, 1988).

Two different definitions of communication are useful in understanding dress. One definition, mapped out by Burgoon and Ruffner (1974), contains a number of premises about sending and receiving messages:

*Communication is an interactive process between two or more people.* Millions of people can be involved when television and other media send messages to a vast audience. The performer may never interact directly with most viewers, but an interaction nonetheless occurs, for example, when Jennifer Lopez, appeared on the Golden Globes awards show on January 25, 2004, her gown, jewelry, and hairstyle were perused by the vast TV audience. Many fans were checking out how she looked in the aftermath of her breakup with actor Ben Affleck just days earlier. Commentary on morning shows the next day indicated that people had been watching.

*Communication invokes the sending of messages to at least one receiver who, for a complete act of communication, sends a feedback message to the original sender.* Feedback messages sent about dress are not always obvious and overt. Occasionally, one may receive a direct compliment or insult about dress. Or a long stare or whistle may be the feedback. In many instances, lack of comments serves as feedback that nothing was terribly wrong with one's appearance. Getting a job or a date may indicate that one's dress was appropriate or approved.

*Communication is a process that is ongoing and dynamic. Meanings are negotiated and created to reach common understanding.* According to the three-part definition of communication, sender and receiver must come to a minimal level of agreement about the

meanings of dress for a complete communication interaction to occur. This may happen to some extent in purposeful efforts at impression management, such as a suit worn to a job interview, a wedding dress, or a uniform for a job role. But for most dress, wearer and observer never converse specifically about dress and often do not completely agree on what each other's dress means (Tseloni, 1992). Dress is so polysemic (sends a great amount of messages all at one time) that it is difficult to find agreement on all the meanings packed into one appearance.

A second, broader definition of communication emphasizes that dress is "the production and exchange of meanings". A wearer puts clothing, hairdo, accessories, and grooming together to produce an appearance and may assign meanings to that assembled appearance. Each observer of that appearance may agree on some meanings but may also have a unique interpretation of the appearance. According to the second definition, disagree does not mean that communication stops or fails. It is the sum of how wearer and observers interact or do not interact on the basis of appearance that produces meanings for the wearer and the observers.

In contrast to "modern" attire worn throughout the world today, dress in traditional cultures tends to change slowly over time and may incorporate long-used symbols that are steeped with meanings. The dress worn in a bride and groom at a Korean wedding in Seoul reflects hundreds of years of tradition. The colors, patterns, and shapes of garments are highly meaningful to Koreans. Similarly, some uniforms in mainstream U.S. society, such as police and military uniforms, rely on long familiar symbolic components to express the role of the uniform wearer.

### **CHANNELS OF TRANSMISSION.**

Dress as a communication system is extremely complex. In any one appearance, messages may be sent simultaneously through a variety of channels. Berio (1960) defined channels of communication as the five physiological senses. We often study how dress is used to communicate via the visual channel. However, we might also send messages via the hearing channel (the clanging of bangle bracelets, the clackety-clack of high heels coming down an uncarpeted hallway, the rustle of taffeta) or via the sense of smell (perfumes, deodorants to mask body odor, new leather). The sense of touch is inherent in perceiving clothing, as textiles have a tactile component. We can often look at a fabric and guess that it is soft (corduroy, velvet) or slick (vinyl). These sensory transmissions may have meanings for observers. For example, many business dress advisors suggest that clanging jewelry and obvious perfumes convey an image that is less than professional in the office environment (Fashion Workshop, 1989; Fiore & Kimle, 1997; Roscho, 1988).

Notice that we have not discussed the sense of taste. Perhaps because of the low level of development of that sense in humans, it is not commonly used as a message channel in dress. Other than flavored lipsticks, only a few amusing and/or erotic novelty dress products are flavored. We won't describe those here.

*Grammar.* An array of things may be compiled on the body to complete a dressed appearance. When hairdo, facial grooming or makeup, clothing, scents, jewelry, shoes, and accessories are

all combined, a tremendous amount of organization has taken place. The rules we use to put all of these components together on the body are loosely held guidelines for what is appropriate, fashionable, and attractive. The rules are a sort of grammar of dress. We learn the grammar of dress through the media and through groups and families to which we belong.

Any dress grammar rules can be broken; however, some rules are held seriously in some societies. For instance, in most communities in the United States today, it is against the law for women to go topless and for men to display genitals in public. These laws stem from moral taboos related to a sense of modesty<sup>1</sup> and sexual behaviors.

In France recently, a presidential commission proposed a law that would prohibit students from wearing veils or head scarves to school for religious reasons (Ganley, 2003). Banning of other forms of religious dress in schools was under consideration. Government authorities contended that religious expression through dress might be undermining the constitutional guarantee of secular control. Some government officials feared that communities with high levels of immigration of fundamentalist Muslims could be threatening preservation of France's secular identity.

Banning students from wearing certain forms of dress is not always an easy means of controlling student behaviors in the United States. The "Symbols in School" article outlines cases in which the right to freedom of expression in student dress has become highly problematic. In separate incidents in high schools in a number of states, students were suspended for wearing T-shirts printed with images of the Confederate flag and other racially divisive messages. The courts have supported the rights of students to wear the flag symbols in some cases, leaving schools with no other options than mandatory school uniform policies.

For most of what we wear, however, rules are not seriously enforced but are shaped by personal tastes, fashion trends, and group habits and conventions. For example, many people in the United States tend not to wear red and pink garments together in one ensemble. However, a print or multicolored garment may combine those two colors in ways that appear attractive. Some organizations may have rules for dress of members when they attend meetings or represent the group. In "Its All Greek to Me," Miller and Hunt report data from a study of sorority women attending the University of Kentucky. In contrast to common stereotypes about conformity within college sororities, the members of Greek organizations did not feel that their houses required strict adherence to particular ideals of appearance. They felt that rules for dress were very tolerant and general; they needed to attend to basic elements of hygiene and cleanliness, but had no particular style requirements.

Youth gangs in urban areas in the United States often adopt dress symbols such as colors, tattoos, or headwear that indicate gang membership. Brian Palmer reports in "True Colors" that to thwart bans by school officials and detection by police, some gangs change their group symbols from week to week or abandon sartorial signs altogether in favor of current fashion trends. The grammar of gang dress changes continually and sometimes covertly.

*Elements of dress signs.* These are "perceptual elements" that are the integral units of fabric and apparel that can be perceived by human beings. Many of these elements are the basic elements of design (Davis, 1980; Fiore & Kimle, 1999). Some of the elements have multiple

subcomponents that influence meaning; for example, color has hue (the color family), value (lightness versus darkness), and intensity (brightness versus dullness). Fiber names can be meaningful (silk is a luxury fiber) as are fabrics such as denim (Berger, 1984). These elementary units are relevant for clothing, but other aspects of dress such as hair, tattoos, and shoes have different sets of elementary perceptual units.

*Context of use.* In any appearance, a great number of perceptual elements are combined according to or in violation of some rules of grammar. How elements are combined and placed on the body, who wears them, and in what situation they are worn shapes meanings of perceptual elements. Combinations of elements and surrounding situations make up context (Bateson, 1979).

Garment pieces are combined in an ensemble with accessories and worn on the body. In some cultures, infinite arrangements and meanings are possible. Susan Kaiser discusses in “Identity, Postmodernity, and the Global Apparel Marketplace” how choice is a characteristic of dress during the current era in time. Consumers collect an array of garment pieces and accessories that can be used to produce a different look or unique expression of identity.

The wearer’s shape fills out a garment, and skin and hair coloring interact with garment elements. Body size also influences meanings of clothing. Clayton, Lennon, and Larkin (1987) found that garments worn by larger-size female models tended to be evaluated as less fashionable. This could pose a problem in marketing to larger-size women via catalogs and magazine ads. Do larger-size women themselves see plus-size models as less fashionable than slim models?

Body movement may add meanings to clothing. In “Kimono Schools” Liza Dalby explains how movement and posture are essential for achieving a graceful presentation of kimono. Displaying the same movements while wearing modern dress makes an individual look pigeon-toed and awkward.

Numerous characteristics of the wearer can influence interpretation of clothing meanings. For example, an ice-cream stain on the shirt of a toddler may be perceived as cute or amusing, but might not be so cute on a 42-year-old.

Consider the color red, for example. Red is an appropriate color for traditional Chinese bridal dresses, but what would the meaning of red convey in an American bride’s dress? Similarly, bright red is the traditional color for funerals in Ghana, Africa, but is not usually an appropriate color to wear to funerals in the United States. In “India Examines Color of Beauty,” Tim Sullivan reports that lighter skin color in India is considered beautiful and a sign of higher social caste.

Dress helps us define social situations. Some social critics fear that the invasion of casual dress into business organizations will degrade the seriousness and professionalism business interactions, while many workers enjoy the relaxed tone set on “casual days.” Similarly, a party to which everyone wears tuxedos and formal gowns might have a different atmosphere or definition than a party to which everyone wears T-shirts and jeans.

In sum up the model of clothing in context, it is not individual colors or garment pieces that dominate an appearance to create meanings. How all elements are combined on the body within cultural context is crucial for meanings. As Roach-Higgins and Eicher (1992) emphasized, dress is an assemblage. How the wearer uses clothing and other components of dress in context makes dress meaningful.

*The present-day cultural "moment"*. The present situation in U.S. culture very much shapes how consumers assemble appearances and send messages through dress. The characteristics of U.S. culture, as well as many cultures around the world, at the end of the twentieth century and the beginning of the twenty-first century were sometimes referred to as "postmodern" (Gitlin, 1989). We will not try to pinpoint when postmodernism started, to assume that now is totally different in every way from prior eras, or to trace the philosophical or political bases of postmodern theory; the term is useful in summarizing some present-day trends in consumer life. Morgado (1996) thoroughly analyzes postmodern influences on dress. We will focus our look at four characteristics of consumer culture-eclecticism, nostalgia and simulation that are reflected in how we purchase and present our appearances today.

Postmodern appearances are eclectic in that consumers often mix-and-match a diverse array of styles and influences in any one appearance or throughout a wardrobe. For example, African-inspired fabrics (kente cloth) are sew into American styles; a Peruvian-knitted alpaca sweater may be worn with jeans. Consumers and designers borrow fabrics, hairstyles, jewelry, and diverse symbols across cultures, making the market for clothing very globally inspired (even though many consumers do not know the origin and meaning of their borrowings). Postmodern consumers are prone to mix diverse brands and designers in one appearance and buy parts and pieces of an ensemble at an array of price levels.

Mixing Target and Gucci can be cool (Agira, 1999). Buying separates and mixing them with diverse accessories is quite common. Consumers mix-and-match not just to save money, but also to have more freedom in putting unique looks together. Susan Kaiser in "Identity, Postmodernity, and the Global Apparel Marketplace" describes how consumers actively put looks together to "produce identity."

Perhaps because the postmodern era continues on while we move into a new millennium, people might become nostalgic for times past as we know we are leaving them behind. Fashion trends tend to highlight a past decade every few years. Currently, flared pant legs are inspired by 1960s and 1970s bell-bottoms. Tie-dyeing, popular in the 1960s, reemerged in the late 1980s and early 1990s.

## **SYMBOLS IN SCHOOL.**

More than three decades ago, the Supreme Court ruled that students do not shed "their constitutional rights to freedom of speech or expression at the schoolhouse door. To prohibit student expression-be it speech, the wearing of black arm-bands as a sign of protest, or the wearing of Confederate flag emblems as a sign of regional or ethnic pride school officials must point to more than an "undifferentiated fear or apprehension of disturbance." Instead, they must point to evidence that they have reason to anticipate that the expression will

“substantially interfere with the work of the school or impinge upon the rights of other students.”

*Identity, postmodernity, and the global apparel marketplace.* Today, a visit to another country-or even to another city or state in our own country-often yields surprises when observing what is available for purchase, what people are actually wearing, and in some cases, most significantly-how people are wearing what they are wearing. For example, one might see the same basic products everywhere, but worn in a variety of ways. Jeans, baseball caps, T-shirts, or other fairly basic items may be worn in many different ways: tight or baggy; shaped in a variety of ways; tucked or loose; and the like. So, it is not only what we buy, but also how we wear what we buy that expresses our identities: that is, who we are and how we see ourselves at any point in time. We can shape these ideas in relation to ourselves as individuals, as well as the groups and communities to which we belong, and even the nations or societies in which we live.

The idea that appearance styles, or “looks,” are negotiated as people influence each other on what to wear and how to wear it is fundamental in understanding social processes of fashion (Kaiser, Nagasawa, & Hutton, 1991; Kaiser, 1997). Places and communities have identities, too. The latter, in fact, is no longer restricted to geographic location. Global technologies, the worldwide production and distribution of apparel, and the circulation of images of style across national and cultural boundaries all contribute to what might be characterized as a larger, complicated negotiation of global style, or international dress (Eicher, 1992).

*Choice.* Eclecticism is the degree zero of contemporary general culture: one listens to reggae, watches a western, eats McDonald's food for lunch and local cuisine for dinner, wears Paris perfume in Tokyo and “retro” clothes in Hong Kong. (Lyotard, 1988).

Choice is often regarded as the mainstay of freedom. In the global context, the desire for and availability of consumer goods is equated with progress. To a great extent, freedom and democracy are associated with an unlimited range of options in the consumer marketplace. And in the capitalist apparel marketplace, the range of choice is tremendous because goods are produced and distributed worldwide. (Often, textiles and apparel are the first items produced in nations taking the first steps toward becoming more industrialized.) The assortment of styles, colors, and textures is enormous, if not overwhelming. In the apparel marketplace, at least in the industrialized nations, the world is at our fingertips. Yet another trend seems to contradict this idea of increased variety in the marketplace.

In some ways, there is a globalization of style, with some looks (often those associated with Western capitalism, modernity, and democracy) having the most global potency. At the same time, the choice within a given store or community seems to have increased, drawing from (and often appropriating) all kinds of cultural and subcultural traditions and innovations. This tendency toward both increased variety within geographic locations and a homogenizing effect across locations represents a global paradox. Still, catalogs stuffing the mailboxes of middle-class consumers defy any problems with geographic access. The concept of choice itself becomes more complicated and harder to interpret.

*Confusion.* Culture is in a process of recycling: everything is juxtapose to everything else because nothing matters. (Gitlin, 1989)

Postmodern eclecticism can foster ambiguity. U.S. culture, for example, is not sending straightforward messages about what is fashionable. We are bombarded with a diverse array of everyday looks of the people around us (intensified in an urban context), commodities in stores, images advertised and promoted in fashion magazines, appearance styles we see in films and television sitcoms, mail catalogs and music videos.

*Creativity.* According to the French sociologist Jean Baudrillard (1975), it is not so much a matter of being the self as it is producing the self. To consume is to produce again. Part of what we produce as consumers are our appearance styles. In addition to its relation to the word *factio*, the term fashion also derives from the Latin *facere*, which means “to make or to do.” Using fashion as a verb or a process in this way, we can consider how fashioning appearance style is one way - a visual and creative way-of producing identity. In African American culture, the term “style” is often used similarly as a verb or process, in a way that implies that styling is a way of producing not only identity, but also a sense of community with others (Hall, 1993). That is, it becomes a process of creating a cultural bond with others.

We could argue about whether or not we are more likely to experiment with our appearance styles, and hence, our identities, in the postmodern context. Is our current level of “producing identity” at a record high, historically speaking? Clothing historian Rachel Pannabecker (1997) suggests that although there do seem to be some unique aspects of contemporary appearance styles, they need to be examined in the context of larger, historical trends.

Perhaps we will be able to arrive at some form of synthesis through new imagery, new social arrangements, and new ways of viewing ourselves. Hopefully, such a solution will be kinder and gentler to women, ethnic minorities, and people of developing nations. We are at a critical juncture in our global society, and fashion plays a part in shaping and defining this juncture. Consciously or unconsciously, we are both commodity consumers and identity producers as we manage our appearances and continue to create ourselves and our communities. With increased awareness of identity politics, global inequities, and industry and media influences, perhaps we can create new, more complex understandings as well.

### **13. Accessories**

In addition to clothing, artifacts such as jewelry, eyeglasses, cologne, and makeup are temporary or mobile aspects of physical adornment that provide clues about our personalities, attitudes, and behaviors and that nonverbally communicate something about us to other people (Breitenbach, 2005; Crymble, 2012; Roberti & Storch, 2005; Tiggemann & Golder, 2006). You might think of a piercing or tattoo as an artifact or form of body decoration; however, we prefer to think of it this way: Artifacts are temporary - you can take off your jewelry or wash makeup off your face.

While some tattoos, such as henna tattoos, are temporary, most are permanent. Most piercings are permanent, unless a hole goes without jewelry long enough that it heals shut. So in most situations, piercings and tattoos are permanent; thus, we prefer to view them as body modifications and will discuss them in the next section of this chapter. For now, let's consider a few categories of artifacts and how they communicate nonverbally.

The most common artifact that comes to mind is jewelry. How many of us are wearing jewelry this very second, as we explore this topic? Rings, bracelets, anklets, watches, cufflinks, necklaces, earrings, nose rings, pins, and so on are examples of jewelry many of us wear on a daily basis. What nonverbal message does jewelry send? Wedding rings serve as a great example of how jewelry can inform us nonverbally about other people. If we're out on the town with friends for a fun evening and notice an attractive person across the room, one clue to figure out his or her availability is to look for a ring. If we notice a ring, we're led to believe that our person of interest isn't available.

On the other hand, if we don't see a ring, it may be okay to approach, buy the person a drink, and ask for a phone number. However, we suggest caution here, in that some married men in the United States do not own or wear wedding rings, while many, if not most, married women do.

Take a moment to think about how jewelry communicates nonverbally. How does jewelry communicate status? Does a Rolex watch communicate a different image than a Swatch? A different message is certainly sent by diamonds versus rhinestones. What does too much jewelry communicate - possible compensation for insecurity about attractiveness? Some people in U.S. culture and in other parts of the world like to wear crosses, typically as necklaces or lapel pins.

Decorating the body to present an appropriate persona also involves putting on trinkets and jewelry. Rings, for instance, convey specific types of messages that can be interpreted only in cultural contexts. In Western culture, they are worn to convey things such as educational status (graduation ring), institutional affiliation, marital status, athletic prowess, social status (diamond rings), group affiliation, personal interests, and so on.

Some ornaments, such as cross chains, beads, and amulets, are worn to convey meanings of a mystical nature. However, more often than not, the wearing of jewelry has a courtship objective. When a Zulu woman falls in love, she is expected to make a beaded necklace resembling a closefitting collar with a flat panel attached, which she then gives to her suitor.

Depending on the combination of colors and bead pattern, the necklace will convey a specific type of romantic message: a combination of pink and white beads in a certain pattern would convey the message "You are poor, but I love you just the same." The jewelry and trinkets we put on are signs of Selfhood. In semiotics they are viewed as part of "material culture," or the system of objects that, as signs, convey specific types of meaning in cultural contexts. All cultures, for example, share the belief that certain objects possess mysterious powers. This belief is the basis of the ancient craft of alchemy, defined as the art of transmuting materials that lasted well into the medieval ages and continues to have some adherents to this day.

Animism is evidence that people see objects as signs. This is why many are preserved and kept in places we call museums. Similar to works of art, they are felt to be reflections of human attempts to shape the world on their own terms and to, literally, "make" it obey human expectations. As McLuhan suggested, objects extend human bodily structure. The automobile, for instance, is experienced by many of us as an extension of our bodily armor, so to speak. In the public world of traffic, it creates a space around the physical body that is

as inviolable as the body itself. Interestingly, but not unexpectedly, this perception is not confined to our culture.

The anthropologist Basso found that the Western Apache of east-central Arizona also perceive the car as a body, even going so far as to use the names of body parts to refer to analogous automobile parts: for example, the hood is called a “nose,” the headlights “eyes,” the windshield “forehead,” the area from the top of the windshield to the front bumper a “face,” the front wheels “hands and arms,” the rear wheels “feet,” the items under the hood “innards,” the battery a “liver,” the electrical wiring “veins,” the gas tank a “stomach,” the distributor a “heart,” the radiator a “lung,” and the radiator hoses “intestines.”

Twentieth-century technology made it possible to make dolls look so lifelike that they were often used to illustrate clothing style trends and were sent from one country to another to display the latest fashions in miniature form. Noteworthy design innovations in dolls manufactured between 1925 and World War II included sleeping eyes with lashes, dimples, open mouths with tiny teeth, fingers with nails, and latex-rubber dolls that could drink water and wet themselves. Since the 1950s, the association of life like dolls with female childhood has been entrenched further by both the quantity of doll types produced and their promotion in the media.

Since their launch in 1959, the Barbie dolls, for instance, have become part of the experience of growing up for many little girls in North America. Incidentally, Barbie also started the trend of making fashionable clothing and accessories for dolls, thus enhancing their human iconicity even more. Dolls now are probably more reflective of trends in pop culture than are other objects. In 2000 the Bratz line of dolls, for example, was introduced as a trendy, new “girl power” sign of the times, complete with street attire and seductive eyes. In a phrase, the times have changed and we can see the changes in the semiotics of dolls. “Toys Are Us,” as the store chain with that name clearly knows.

In addition to jewelry, eyeglasses (including sunglasses) also send nonverbal messages. For example, people who wear glasses are often perceived as being more intelligent and honest but also nerdier than those without glasses. You’ve probably heard the old rhyme, “Boys don’t make passes at girls who wear glasses,” but is this still the case? Women with glasses may be viewed as brainy or studious, but glasses are also a fashion statement. Popular eyeglass styles and shapes seem to change constantly. For a while, large-framed eyeglasses were in style, then it wasn’t long before the skinnier frames and no-rim glasses began to be seen as hip and cool.

The way people use and wear eyeglasses also sends nonverbal signals. For example, people who chew on their glasses may be perceived as nervous and tense. People who push their eyeglasses up into their hair or onto their forehead may send a signal that they’re willing to be approached - they attempt to make direct eye contact without the distraction of glasses. Just as we mentioned about hair color, eyeglasses can be seen as an artifact of the aging process. Many people with perfect eyesight in their youth find themselves needing glasses, contacts, or reading glasses when they reach their 40s or 50s. People who wear reading glasses are interesting to watch; they often use their glasses when trying to articulate or emphasize an important point, in conversation as well as in public speaking situations.

Then there are those who wear sunglasses indoors (such as rapper Lil John and actors Jack Nicholson and Bill Cosby). What nonverbal message does this behavior send? One possibility is that the wearer doesn't want anyone to see how bloodshot his or her eyes are, which could be an indication of alcohol or substance use. Another interpretation is that the wearer is covering up a black eye, which is often a telltale sign of physical abuse. Yet another view is that it allows wearers control over other people - they can see your eyes, but you can't see theirs.

Or perhaps they simply believe it makes them look cool. Some people have medical conditions that make their eyes extremely sensitive to light; so they aren't trying to send a nonverbal message at all - they're just trying to see! Teachers, trainers, or anyone in a public speaking situation may perceive audience members wearing sunglasses as hostile, threatening, or bored. The distraction to the speaker comes from the fact that you don't know who or what they're looking at, if they're interested, or even if they're awake! There's something unsettling about not being able to see someone's eyes, at least in American culture, but be careful not to rush to judgment before you know someone's reasons for shielding his or her eyes.

#### **14. Nonverbal non-visual**

*Olfactory.* In the early months of 2004, it was reported in the press that "A British Internet service provider plans to launch a fragrance device that can be connected to a computer, just like a printer" (The Times, story taken from the Event of the Day). The device has twenty basic aromas, which by combining can produce 60 different smells.

Smell is a signal, and still one of the most used in the evolution of life on earth. Chemical signals have advantages (they bypass obstacles, transmit through darkness, have high energy efficiency and a considerable information transmission range) and disadvantages (slow transmission, attenuation) - E.O. Wilson, 2003.

The essential role of smell in the animal world has been known since Antiquity. Aristotle had noted, as a curiosity, the attraction of their butterfly to certain odors, but it was not until the end of the 19th century that the French entomologist Jean Henri Fabre (1823-1915) demonstrated that certain species of male butterflies are attracted to the odor emanating from the female. Currently, ethologists study pheromones, also called "socio-hormones", given their role in the organization of gregarious life. The term "pheromones" was introduced into the vocabulary of biological sciences in 1959 and refers to volatile and odorous substances secreted by animals. First identified in insects, mammals have also been found to secrete socio-hormones.

Therefore, olfactory signals serve many species of animals (ants, mice, bees) for recognition, defense, grouping, orientation in space and, above all, for identifying sexual partners. In bees, for example, pheromones prevent the development of other queens and trigger the nuptial dance. The midge *Drosophila melanogaster* chooses its partner by smell. In fact, Charles Darwin admitted that, in the evolution of species, the most odoriferous males attract more females and, consequently, have more offspring.

The identification in the genetic structure of a polypeptide called major histocompatibility complex (MHC) led to the assumption that humans also use pheromones as an olfactory signal to recognize genetic similarity. It is accepted - based on the research of N. Nicolaidis (1974) that each individual possesses a distinctive smell, a "chemical signature" and an olfactory recognition mechanism of genetic similarity (R. Lewis, 1984), within each one pheromones have a role . important. Pheromones are chemicals that "serve both the endocrine system to develop exchanges within the body (primer pheromones) and to cause an immediate response from a target organism (release pheromones)" - E.E. Filsinger and R.A. Fabes, 1985.

Experiments in child culture have highlighted the primordial olfactory sensitivity in humans: between the newborn child and the mother, a biunivocal bond is established on this basis since the expulsion of the fetus (R.H. Porter and J.D. Moore, 1981; R.H. Porter, J.M. Cemoch and F.J. McLaughlin, 1983). R. H. Porter and colleagues (1981, 1983) found that women have the ability to identify the odor of their own child's tank top (compared to the odor of other children's tank tops) and even to differentiate the odor of their children's underwear, boys or girls.

In the experiments they revealed, the mothers accurately identified the smell of their newborn's diapers, even in the conditions in which they had only a short time of contact with their newborn children postpartum. Other experimental research has shown that newborns recognize the smell of breast milk from the age of one month (M.J. Russel, 1976). Two days after birth, children do not manage such a performance, but after a week or two they succeed quite well, and at the age of six weeks the success is complete (M.J. Russell, 1976).

The mother-child olfactory bond diminishes as the child grows older: at the age of 2-3, approximately 70 percent of children recognize the mother's smell, and when they turn 4, only 50 percent have such a performance. The psychologist H. Montagner, who found this experimentally, appreciates that smell has a decisive role in the emotional connection between mother and child.

The psychological, sociological and medical research so far converges towards this conclusion. Investigations must be continued, because irrefutable evidence has not yet been produced regarding the nature of the response to olfactory stimuli: are responses innate or learned? What can be said is that "social relationships are based in part on physiological processes, and chemical communication through smell cannot be ignored as a mechanism" (E.E. Filsinger and R.A. Fabes, 1985).

In 1952, Jacques Le Magnen discovered that women are more sensitive than men only to certain odorous substances (for example, the smell of oxadolide). The olfactory sensitivity of women increases during the menstrual cycle, reaching the highest threshold at the time of ovulation. The increased olfactory sensitivity of women is not evident until after puberty and until menopause. Some researchers even consider smell to be a true secondary sexual characteristic. Olfactory hypersensitivity increases in pregnant women, which explains the bouts of vomiting during pregnancy. Also interesting is the finding regarding the difference in the fluctuation of olfactory sensitivity in men and women: women's olfactory sensitivity is more pronounced in the morning than in the evening, while in men the olfactory sensitivity

is maximum in the afternoon. Does this research data have any significance in non-verbal communication? The answer can only be positive.

The applications of studies on olfactory sensitivity and the role of their smells in social life, including non-verbal communication, are not at all insignificant - as we have seen. They are somewhat difficult to achieve and because an adequate classification of odors has not yet been achieved. We don't know well what "pleasant smell" or "unpleasant", "pungent smell" or "sour", "fresh smell" or "stale" etc. means. The variability of the appreciation of smells from one person to another and from one culture to another raises an obstacle, not easy to overcome, in the attempt to classify smells. Often, the objective content of the smell is replaced by the emotional tone of the olfactory sensation. In connection with this, Charles S. Peirce (1990) noted the tendency of smells to represent themselves, as well as their power to bring to mind, through association, psycho-moral qualities:

"A lady's favorite perfume seems to me to be somewhat consistent with her spiritual being. If she uses none, her nature will be devoid of fragrance. If she uses the perfume of violets, she herself will have the same finesse and delicacy. I knew two women who used rose perfume. One was an artist, an old girl, a grande dame, the other was a young woman, married, very noisy and very irritating. Strangely, however, they looked alike. As for those who use the perfume of heliotrope, frangipane, etc., as far as I know about them, that's enough for me. Undoubtedly, there is a subtle similarity between perfume and the impression I get of a woman's nature. "

The German philosopher and sociologist Georg Simmel believed that "many of those who would be willing to make important efforts and sacrifices for the benefit of the disadvantaged classes do not, however, reconcile for anything in the world with direct contact with those who smell the sweat of honest work" (apud S. Dungaciu, 2003). The idea of social discrimination based on smell was taken up by the American sociologists Gale P. Largey and David R. Watson (1972), who highlighted that social and racial prejudices have as a false justification the "bad smell" of peasants, workers, blacks or the Jews and, we add, the Roma.

As in the case of physical beauty, smells generate a halo: whoever smells good is good. Impression management through smells is based on this stereotype. In order to smell socially acceptable, social actors have at their disposal two fundamental practices: deodorization (washing with soap, gargling with mouthwash, brushing teeth) and odorization (using lotions and perfumes). Gale P. Largey and David R. Watson (1972), discussing the two practices in depth, observe that "olfactory identity is associated with racial, class, and sexual identification; and the use of perfumes is closely related to the presentation and manipulation of these identifications."

*Chronemics* or the perception and meaning of the use of time, with strong cultural connotations. This non-verbal communication dimension has its origin in the studies of Edward T. Hall (1988), who distinguishes between linear, monochronic time, with precise historical (modernity) and cultural (north-eastern European, North American space) frameworks, respectively a polychronic one, non-linear. Beyond the two previously mentioned poses and their cultural connotation, Hall distinguishes between a technical time, a formal time and an informal time. Technical time is not relevant to the chronemic code, but

formal time provides information both about the cultural framework, the concrete situational framework, and about aspects related to the personality of the individuals concerned.

In the line of research in the field of verbal communication, regarding the ability to use the language in an appropriate manner in different contexts, the expression non-verbal communication competence was also proposed. Non-verbal communication competence (nonverbal communicative) is defined by Nicholas O. Jungheim (2006) as a part of communication competence and involves the ability to interpret non-verbal elements and to appeal to them to emphasize/reinforce the message verbally expressed, instead what for Howard S. Friedman, Ronald E. Reggio and Daniel F. Castella (Chelcea et al., 2005), nonverbal communication competence (this time nonverbal skills) denotes emotional expressiveness and self-control.

Moreover, starting from the idea that within verbal communication, language shapes culture and from these results a certain opacity between linguistic communities, according to the Sapir-Whorf hypothesis of cultural relativism, McQuail launches the idea of the existence of some paralinguistic communities (McQuail, 1999) that model at the level of other cultural codes, without the borders of linguistic and paralinguistic communities coinciding.

*Tactility.* It is worth mentioning the special importance that tactile communication has acquired in humans. Although the advanced states of today's world are not "tactile societies", touch between individuals continues to represent a significant social bond. Civilized people continue to shake hands when they meet, contemporary lovers, as well as old lovers, embrace, and mothers embrace their beloved offspring. Stanley Jones and Elaine Yarbrough tried to classify the functions of tactile communication, delineating five main classes:

**Touches that convey positive emotions.** The nursing mother, the adult who caresses a tearful child to calm him down, the boss who pats you on the shoulder to encourage you (in a difficult moment), the man who shakes your hand warmly to express his gratitude for a gesture done in his favor, the girlfriend or the wife kissing you are just a few examples of tactile connections that express affectionate feelings.

**Playful Touches.** Endowed with a pronounced metacommunicative potential, they facilitate interaction, without, at the same time, engaging the toucher's responsibility for the act of touching, which often has heavy consequences. Joking or slapping has completely different connotations than the same gestures done with all seriousness, which does not mean that they are devoid of communicative value, but only that they convey something else, often a feeling of closeness, of comradely solidarity that the great "serious" gestures are less able to communicate it.

**"Control" touches,** aimed at directing the behaviors, attitudes or even the feelings of the person touched. A small tactile signal can attract the interlocutor's attention to look at us, as it can urge him to move aside, hurry up or, on the contrary, stay put.

In most cases, achieving control involves a relationship of dominance and, as such, it can only be carried out unidirectionally. The person with a higher social status or the one who plays the role of the superior in the given communication situation is universally recognized, in all

cultures, as more entitled than the other to touch the interlocutor. The worker patted on the shoulder by his boss will generally feel flattered by this tactile attention, while the same gesture coming, this time, from the former will be seen as at least out of place.

We don't have to think too much to be able to answer the question: "Which of the members of the couples teacher-student, doctor-patient, policeman-delinquent, director-secretary has the inclination to touch the other?" (In the latter case, to the social component is added the specificity of the man-woman tactile relationship, which is also pronounced asymmetrical: the man is allowed to touch women during various daily activities, while the touching of men by women is everywhere interpreted as a sexual invitation. It's easy to see that this second rule is stronger than the first, because it's not enough to be a boss to be able to touch men under you without being suspected of "sexual harassment").

**The "ritual" touch.** The best known and most frequently used is shaking hands as a sign of greeting when meeting and when parting. The gesture has more implications than it seems and takes on countless forms. Attitudes of dominance, equality or submission are communicated through the position of the hand of the one who initiates the greeting gesture, the palm being oriented down, sideways in the second and up in the last. The strength with which the hand is shaken is also a significant parameter: aggressive people brutally snap your fingers, while weak, weak-willed, apathetic types extend a limp, limp hand in the so-called "dead fish" style. The emotional involvement is emphasized by the participation of the other hand, which can collaborate with the right hand in holding the partner's hand in a "glove" system, or squeeze the partner's forearm or arm in a position that is as high as it is desired to convey a more intense feeling of closeness, solidarity or compassion.

Politicians practice the "glove" style even when meeting for the first time, which between ordinary individuals may seem inappropriate or suspicious, the one treated in this way may suspect a hidden intention behind this gesture, too cordial for a first contact. Shaking hands is also present in official meetings. It can be assumed that it comes from the ancient custom of kissing the hand: when both participants try to kiss their partner's hand and, at the same time, oppose the similar attempt of the latter, the result is a rhythmic movement of the kind that today adds a more warmth to the welcome gesture.

The spread and social significance of kissing the hand as a sign of consideration and submission decreases as we move from the East, where, since ancient times, it was also practiced to kiss the feet of people placed on top, towards Central Europe and America, where even the tradition as men to kiss women's hands has practically disappeared, the gesture being today interpreted in terms of sexual aggression. In contrast, kissing on the cheek when meeting close people is still in use. It is true, however, that it tends to turn into a simple touch of the opposite cheekbones, the "rattling" of the lips being done in the air, a habit probably due to women with lipstick who are not willing to bother with their make-up.

Of course, kissing on the cheek at meetings is a common practice among close acquaintances, relatives and lovers, but the latter are clearly distinguished from the others by a detail related to the territorial instinct. The physical distance between two interacting people is closely related to the type of relationship established between them. In this sense, the area perceived as the most intimate and in which the conditions of penetration are very strictly "legislated"

is the one that extends over a radius of 15 cm around our body. Observing carefully the way in which lovers kiss on the cheek, on the one hand, and close people (relatives, friends), on the other, we will find that, although a physical contact of the epidermis takes place in both situations, in that of the in the second case, the participants' pelvises are maintained, during the kiss, at the "canonical" distance of 15 cm, outside the area reserved for maximum intimacy.

The kiss between lovers was also the subject of special research. A. Kendon, who filmed the behavior of young couples in parks, with a hidden camera, came to the conclusion that the kissing ritual is controlled and directed by the woman, who, through a nuanced emission of mimic signals, stimulates or discourages the man's approaches. He does not try to kiss his partner until he receives from her the "free pass" represented by the so-called *sourire fermé* ("closed smile"), a specific facial posture in which the eyebrows are at rest, the eyes are open, and the mouth closed, with tight lips, of which the upper one is slightly retracted, as during a smile, hence the name of the expression. Instead, when she frowns, smiles with her mouth half-open and shows her teeth, he is not allowed to kiss her.

If, however, he closes his eyes, raises his eyebrows and opens his mouth slightly, with the corners of his lips pointing slightly downward, a long and passionate kiss is expected to follow, proof that the partner, who seems to have the initiative in this area, is only obeying the invitations or the girlfriend's non-verbal commands).

**Touching for other purposes than actual communication.** It can take on a multitude of forms, from supporting a person getting in or out of a vehicle, to touching the forehead to assess the temperature of a sick person, or the wrist to take their pulse. Even if the objective pursued is different, in most of these cases affective information is also transmitted, because gestures involving physical contact always involve the presence of a feeling, either positive (care for one's neighbor, respect, solicitude) or negative (hidden hostility his face).

The tactile channel demonstrates its superiority over the olfactory channel and through the possibility of transmitting through it not only affective information (the examples above referred to positive feelings, but it goes without saying that hate or contempt can also be communicated tactilely, perhaps by slapping or by different methods of hand-to-hand combat), but also anything else, with the help of a code as precise as writing. Blind people today have access to knowledge in all fields and can dedicate themselves to a scientific or teaching career: the well-known Russian mathematician L.S. Pontreaghin taught topology at the University of Moscow, composer Joaquin Rodrigo – music history at the University of Madrid.

The invention of writing for the blind is usually associated with the name of the French teacher Louis Braille (1809-1852), who lost his sight at an early age (as a result of a childhood accident), but it should be noted that he only perfected the system proposed by the calligraphy teacher Valentin Hauy (1745-1822), author of the reference work *Essai sur l'éducation des aveugles*, Paris, 1786. The Braille method involves a binary coding of letters and numbers, the idea being somewhat similar to that of ancient Celtic writings.

The originality of the process consists in the use of only one type of sign, their absence being considered as the complementary sign. Similarly, in the Braille alphabet, a small protrusion practiced on a rigid sheet and which can be "read" with the help of the fingers represents one of the two elements of the binary code, the second being the absence of the respective sign in the expected position. Practically, each letter or number is assigned 6 positions arranged in the form of a rectangle with a small horizontal base.

Any of the marked positions can be occupied by a protrusion, thus achieving a number of  $2^6 = 64$  possible combinations, sufficient to encode letters, numbers, punctuation marks and a few other useful signs (Braille has, among others, and the merit of having introduced an easy-to-use notation for musical scores).

## 15. Paraverbal communication

Paralanguage is supported by verbal communication and is made up of the perceptible elements that particularize the speaking or writing of words. Within the limits of oral communication, the elements of paralanguage are the rhythm, intensity, volume, quality and sounds covering the pauses in speech, and in those of written communication, the size, shape and quality of the letters, the order in which the sentences are strung, the arrangement of the lines on the paper of writing, the presence or absence of stereotypes, etc. In what follows, we will limit ourselves to a brief presentation of paraverbal cues in oral communication.

*The pace of speech* can be evaluated by the qualifiers fast or slow and can be correlated with certain emotions, feelings or attitudes. For example, a fast pace can indicate fear, stress or anger, and a slow pace, depression or anger.

*The intensity of speech* refers to how high or low the speaker's voice is. The different degrees of voice intensity can be caused by certain mental states or can be constitutive of the speaker. In both situations, the intensity of the voice denotes the energy exerted by the speaker during the communication and influences the receptive attitude of the addressee, causing him pleasure or displeasure.

*The volume of the voice* - high or low - can highlight mental states or features of the speaker's personality. Depending on the context, the strong voice can be interpreted as a sign of strength, courage or self-confidence, but also as an index of recklessness or voluntarism. On the other hand, a weak voice can be considered an index of fear or insecurity, but also a sign of patience or condescension.

*The quality of speech* signals affective aspects and has a major impact on communication, determining to a great extent the receptive attitude. Thus, the honeyed voice that some clerics cultivate is associated by some of their listeners with hypocrisy, the snoring voice of the politician highlights the demagogue in the making, and the hoarse voice of a woman can cast a shadow of doubt on her honor. In all these cases, the disposition to listen is seriously compromised.

*The sounds covering the pauses in speech* are called to give the speaker respite for reflection. We say "covering sounds", even though in some situations the gaps in speech are apparently filled with words or phrases. As a professor of logic, I often criticized the abusive use of the inferential indicator "therefore", even more so if it was placed at the beginning of an independent sentence. In fact, the criticism is only partially justified: the proponents were not trying to draw my attention to the fact that they formulated a reasoning, more precisely, that it follows the logical consequence of what was said previously, but they were filling a gap in their own speech (giving themselves time to think, to prepare his message).

The sound complex "so" was devoid of any verbal component, it could very well be replaced with other "filler sounds" ("isn't it?", "hmm", "uhh", "well", "do you know?" etc.) or with equivalent gestures, such as arranging a strand of hair, wiping the forehead with a handkerchief, drinking from the glass of water on the table or raising one's voice. We note, however, that only depending on the context we can decide which are the sounds covering the pauses in speech.

### **ORAL COMMUNICATION.**

Under the confusing umbrella of the notion of oral communication are both elements related to the sound expression of the human voice and elements related to the meaning of words. In this sense, a distinction can be made between two types of language, profoundly different in nature, but intimately connected:

(1) *paraverbal language* or what people communicate through the voice (volume, intonation, rhythm, tonality, accent, pauses) and through vocal manifestations without verbal content (laughter, raising the voice, moaning, sighing, grunting, clapping, howling, yelling, whistles etc.);

(2) *verbal language* or what people communicate by saying and deciphering the meaning of words.

In the light of this distinction, the status of a component of oral communication attributed to verbal communication is evident. Oral communication has many advantages over written communication:

(1) the speaker can observe your interlocutor and intervene on the spot with changes, both at the level of paraverbal and verbal language, to make communication more efficient.

(2) orality allows "a logical and immediate game of questions with answers, in a spontaneous and flexible development"

(3) orality "ensures the most fertile ground for the manifestation of persuasive and manipulative behaviors", emphasizes "charisma and the ability to convince and influence people".

The strong connection between the paraverbal and the verbal message translates into the fact that the intervention of the first causes the intensification, weakening, distortion or

cancellation of the meanings of the spoken words. Therefore, people who want to influence or control those around them, to encourage or intimidate them, to assert their authority and maintain their control, to obtain the approval or refusal of the interlocutors, must learn to handle the paraverbal message.

While speaking, man reveals a huge amount of information about himself, but not so much through words as through voice. By alternating the tones of the voice, we can counteract the monotony and direct the listener's attention. The rising tones express a dose of security, while the descending inflections punctuate insecurity. When we want to show confidence and competence, when we want to attract attention and be convincing, psychologists recommend using a "parental tone". When we are not taken seriously, when we see that we are not very successful in convincing and cannot impose ourselves in front of others, it is time to ask ourselves if the tone adopted by us is not that of a child.

Varying the volume of the voice is another technique that we must learn to master because it helps us dominate or be dominated. Each of us can do this better or worse, depending on the volume of the lungs, the thoracic capacity, the quality of the vocal cords, the way we control our breathing, the position of the body, etc. The elements that do not necessarily belong to us in correcting the volume of the voice, but which must be taken into account if we want to be heard and listened to, are the size of the room, the size of the audience and the background noises.

Articulation is the art of speaking intelligibly and making appropriate sounds using the lips, jaw, teeth and tongue. Diction depends on the correct and complete articulation of the consonants and the clear pronunciation of the vowels. Those whom nature has not helped much and always speak slurred, unclear or stammering cannot be suspected of adopting any communication strategy, but a speaker who usually speaks slurred and who suddenly becomes unclear in certain areas of his speech, let it be understood that either he is not sure of what he says, or he does not like what he says, or he simply has something to hide.

Sometimes, although we have no problems with articulation, it is possible that we do not have a good accent. It refers to the more intense and higher-pitched pronunciation of a syllable in a word or a word in a syntactic group. Accent plays an important role in changing the meaning of words and inducing collateral messages to the one conveyed by words.

The speech rhythm is given by the slow (about 200 syllables/minute), normal (around 350 syllables/minute) or fast (around 500 syllables/minute) progression of the spoken words. A good speaker must vary the speed of pronouncing the words according to the content and general importance of the message.

The pauses between words and sentences convey clues both about the speaker's intentions and discursive attitudes, as well as about his affective states. Short pauses divide ideas in a sentence, and long ones mark the end of sentences. Too long pauses can tire the audience, short and well-placed ones give the listener the feeling of active involvement. Tactical pauses are made before the words or ideas that deserve to be emphasized, others do not target the interlocutor at all, but the need for a moment of meditation, of remembering. There are also

pauses due to embarrassment, when all we can hope for is that our interlocutor takes the floor.

## 16. Verbal communication

Verbal communication is carried out through the prism of articulated language and belongs exclusively to human beings. At the center of concerns regarding verbal communication is, therefore, the study of language, with all the aspects that arise from this, approaching from this perspective, the object of study of general linguistics. In this sense, it is important to first point out the differences between language, speech and language.

In the terms of Ferdinand de Saussure (1972), language represents "the social product sedimented in one's mind", a social system existing in the collective as a sum of fingerprints that mark the brain of each individual. Language is comparable to a sheet of paper, which contains thought on the reverse and sound on the reverse, which means that it constitutes a mediator between the notional content and the sound expression. Language updating is done through speech. Speech has a personal and variable character and represents the concrete side of putting into practice the linguistic potential of the individual. Language is the sum of language and speech.

Over time, language has been perceived as a set of skills of the members of a linguistic community based on which they communicate with each other (Otto Jespersen, 1922) or as a set of conventions adopted by a mass of users (Harold Palmer, 1921). Charles Bally considered language to be an organized system that contains elements related to the communication and understanding of thoughts, speech representing the implementation of language. For the Italian linguist Antonio Pagliaro (1967), language belongs equally to the individual and the community (Coşeriu). The Romanian linguist Eugen Coşeriu (2004) believes that language and speech cannot constitute distinctly separable autonomous realities as long as a biunivocal relationship is established between them, in which speech contributes to the realization of language (by putting it into practice), and language represents a speech condition. Language exists exclusively as a linguistic activity, language representing its historical level.

The association between the mental image and sound/graphic outline is the basis of the definition of the sign. Returning to the definition that Saussure gives to language, more precisely to its closest genre, "deposit of signs", we must refer to the sign as the fundamental element in the study of verbal communication. The sign represents a physical entity, directly perceptible by the senses, which refers to something other than itself and which is dependent on the convention of the users of the same code. At the same time, it is also a component of the information transmission process, and a component of the signification process.

Structural linguistics has focused all its attention on the study of signs, considering three fundamental elements that converge in its definition: the sign itself, its user and the object to which it refers.

The meaning of the sign is born as a result of the interaction between these constituent elements. They were highlighted starting with ancient writings, but their valuing in the perception of the sign as an element of the signification process was achieved as a result of the contribution of the representatives of structural linguistics and, especially, those of linguistic pragmatics at the beginning of the last century.

Charles Morris (1938), taking over the distinction made by Peirce, operates with categories of similar signs, such as: iconic signs, signals and symbols. The difference is given by signals, which replace indications, a category denoting natural signs of the organism or the environment, which can be used as a substitute for other signs. Raymond Firth (1973) correlates the classifications of Peirce and Morris and distinguishes between the index - a sign that assumes a direct connection with the signifier, signal - that brings into question the consecutive action, the stimulus that demands a response, icon - a sign that assumes the sensible similarity with what it represents, respectively symbol – sign that characterizes a complete series of associations conventionally understood as expressing thoughts, emotions, events (McQuail, 1999).

Based on the mentioned semiotic triangle, the relations of signs with the elements that converge in their definition give rise to disciplines subsumed by semiotics. Thus, for Morris, the relationship of signs with themselves is the basis of syntax, the relationship of signs with the objects they designate gives rise to semantics, and the relationship of signs with users is the object of study of pragmatics (Lohisse, 2002). If syntactics and semantics correspond to the paradigmatic and syntagmatic dimensions of the linguistic code, pragmatics, assuming the effective use of signs, requires a different approach. Pragmatics is, therefore, a discipline of language, which studies the relationship between signs and users, but also the way signs are used and the effects produced by them. Pragmatics highlights the active and interactive character of language and the structure of norms and conventions established in the case of linguistic communication.

The ability to use verbal communication between partners was analyzed through the prism of semantic and syntactic dimensions. Without taking into account the pragmatic perspective, Chomsky defined linguistic competence as "the ability of an ideal speaker to master an abstract system of generative speech rules". The introduction of the term linguistic competence, a term that illustrates "how language is acquired or used" (Chomsky, 2006) is closely related to a model of language acquisition based on the theory of a universal grammar.

Taking into account the particular acts of language, the pragmatic dimension was added by Hymes (1974) to the Chomskian linguistic competence. In this way, communication competence was born, which involves the use of language in an appropriate manner in different contexts. The aspects of communicative competence, in Hymes' view, concern not only the systemic potential of language (also addressed by Chomsky), but also the context of communication and the degree of appropriateness to the context. Communication competence therefore implies the ability to adapt to social interaction and accumulated experience. Referring to the Saussurian formula: language = language + speech, the related competences are as follows: for language, communication competence and for language, linguistic competence.

Regarding speaking, we can point to the discursive competence, which concerns the ability of the speaking subject to produce statements appropriate to an appropriate discursive formation. Thus, discursive competence can be seen as eminently interdiscursive, because being situated inside a discursive formation means knowing its positioning compared to other discursive formations, from which it is ideologically delimited.

Staying on the territory of pragmatics, John L. Austin (1975) called the use of language in concrete communication situations language acts. A language act consists of three components (Austin, 1975):

(1) *locutionary*, through which the transmission of meanings is carried out by issuing a message;

(2) *illocutionary*, consisting in expressing a certain communicative intention and projecting a conscious objective in relation to the receiver, respectively

(3) *perlocutionary*, aimed at achieving an effect on the receiver, by the receiver achieving the objective intended by the sender.

Although Austin initially distinguished only between the verbalized, "locutionary" component of language acts (sayings) and the actional, "illocutionary" (doings), the latter category is enriched with the "perlocutionary" dimension, aiming at the fulfillment of the intention:

"I distinguished, first of all, a set of things that we do by saying something, which I gathered, affirming that we perform a locutionary act, which is, modo grosso, similar to the statement of a meaning and a reference, in broad strokes equivalent to <meaning> in the traditional sense. Secondly, I stated that we perform illocutionary acts such as informing, commanding, alerting, promising, etc., that is, statements that have a certain (conventional) force. Thirdly, we can also perform perlocutionary acts: what we produce or acquire by saying something, such as convincing, persuading, forbidding or even surprising or misleading (Austin, 1975)."

Containing the three components of language acts, discourses can be viewed as macro-language acts. The most important classification, within verbal communication, is based on the channel used to transmit signals. Thus, we can distinguish between oral communication and written communication.

Based on the studies of **Joos** (1967) and **Dinu** (2000), we can distinguish five transmission styles, which consist of five steps away from written communication, as follows:

(1) *The cold style*, specific to mediated communication, characterizing the forms of non-cooperative communication, assuming the lack of feedback and the greatest proximity to the rigors of written communication;

(2) *The formal style*, specific to mass communication or formal relationships between individuals, characterized by a well-organized and coherent discourse, prepared in advance;

(3) *The consultative style*, specific to formal relationships in the professional environment, characterized by the absence of pre-elaboration and by being situated in an informative communication framework;

(4) *The occasional style*, specific to free conversations between friends/acquaintances, in which the rigor of the discourse is abandoned in favor of a redundant communication, expressing common belonging to the same social framework;

(5) *The intimate style*, specific to intimate relationships, characterized by resorting to a personal code and by the intention of expressing, in the absence of any constraints of the nature of linguistic convention at group or cultural level, some feelings and internal experiences of the communication actors.

### **WRITTEN COMMUNICATION.**

Communication is achieved by calling on much more complex neural interconnections than in the case of speech. Compared to oral communication, writing gives the possibility of "storing" the packets of signals that constitute messages, their transmission in time and space and, above all, the possibility of resuming or returning to them. This hoarding of the written message often leads to its separation from the context of production and the distinct perception of an intention of self-production of the text apart from the intention of its author. Written communication has a low degree of interactivity.

The message is passed between the sender and the receiver, often the act of communication is interrupted after a single stage; through this, the roles of transmitter and receiver become irreversible. The syntactic and semantic dimensions have a decisive role in this type of communication. Communication is carried out as a result of informational rather than persuasive needs. By means of this type of communication, once the production context is isolated, the non-verbal component can also be isolated.

### **THE PHONETIC REVOLUTION.**

Even if at the level of sound production the first leap is physically made from the perspective of the revolution at the phonetic level, the real qualitative leap takes place at a comprehensive level. Certainly, the phonetic revolution did not only involve the transition from unarticulated and articulated noises (phonemes developed spontaneously to imitate nature) to articulated sounds, but to the development of neurocortical networks that began to discern between the semantic contexts of producing the respective sound.

The articulation of sounds became the cause and effect of this revolution: the cause, by realising the difference between the spontaneously elaborated phoneme and the articulated imitation sound, and the effect, by increasing the difference between these two types of sounds and achieving the synchronism of the articulatory movements allowing the articulation of sounds (within the limits of the imposed convention by the community in question). Thus, man began to discern between the sound carrying the primary message, emitted by living things in nature, and the sound carrying the second message (message already processed about nature), articulated sounds carrying meanings - at first, probably

within wider limits in terms of regarding the disruption of articulatory synchronism, containing a message regarding a varied range of processes, starting from the simple perception of an act, a fact or an entity to sensations.

In nature, communication is subject to other rules than those that mainly revolve around verbal communication, in the case of humans. But we are mistaken if, placing ourselves in the area of preverbal semantic processes and eliminating the molecular code - an effect of the intelligence of matter, the dominant system in terms of the living area - we have the impression of a lack of landmarks from the perspective of communication.

First, the variation of the types of communication in the living world, grouped around two important cores, must be pointed out: intraspecific and interspecific communication, referring to the means that the entity uses to communicate with representatives of the same species, respectively with representatives of other species, genera, families, orders, classes, clans or kingdoms. In both major types of communication, the signal emitted, of a visual, acoustic, tactile, olfactory, etc. nature. or combined, accompanied by the emission of a hormone capable of being picked up by the recipient's receptor organs, leads to response reactions (Sebeok, 2002).

In other words, the transition from a communication system in the living world, based on certain channels, to a predominantly auditory communication system, within a specific frequency spectrum, called verbal communication (based, as we have seen, also on data processing at a level different from the animal world, if not superior to it, of the neocortex), becomes natural. With the mention that this new type of communication, about to be produced probably starting with *Homo erectus*, aims at the pre-existence of some semantic rules and criteria, of an interpretative capacity continuously trained to relate to a dynamic environment.

Environmental conditioning, given the system of inherited animal signs, studied by zoosemiotics (Sebeok, 2002), led either to the direct establishment of some semantic mechanisms, or to their establishment indirectly, through semantic transfers on the skeleton of intraspecific communication. Probably the constitution of these mechanisms was realised both directly and indirectly, given the possibility of inherited mediation through what can now be grouped under the name of intraspecific communication.

Lucian Culda (1989) places this stage of communication in the stage of the genesis of the figurative code, determined by the specificities of the functional needs of the organism, the structural characteristics of the community, environmental characteristics, etc. The transition from the system of ideophone conventions to language, in parallel with the abandonment of the figurative code, was not realized consciously. Moreover, language is situated at the level of unconscious thinking: at this stage, one does not become aware of phonemes or phonological oppositions, which could allow the breakdown of each sound into differential elements (Lévi-Strauss, 1978). Characteristic of this stage is the collective elaboration of the language, in a framework that exceeds its strict awareness by the members of the linguistic community - language as a kingdom is born, in Saussure's sense. Gradually, proto-words, ideophone sound associations, give way to arbitrary phonetic associations in relation to the referent. It's just that at this stage the protowords are used sparingly, within the limits of

some norms of verbal conduct, and the transition from a stable signified-signifier relationship to one based on arbitrariness occurs slowly.

The problem of the revolution at the phonological level did not involve the transformation of echophonic sounds into ideophone sounds, but the qualitative leap at the level of receiving meanings in the relationships between human beings. The phonetic revolution represents only the external mark of a complex process, of qualitative transformation in the act of communication, in the sense of abandoning the simple intraspecies communication of an animal nature in favor of a semantic communication.

Let us note that the process of passing from echophonic to ideophone sounds was doubled by an extensive process of simplification of the number of sounds in the proto-language about to be established. "no language retains only a very small number of all possible sounds", asserts Levi-Strauss (1978), also drawing a parallel with the diversity of possible attitudes within the social group: "like language, the social group finds at its disposal a very rich psychophysiological material; also, like language, the social group retains only certain elements from this material, some of which at least remain the same in the most diverse cultures, and which they combine in ever-diversified structures."

But the reduction of the phonological system to the essential sounds of the proto-language, in the context where, on this level of the language (compared to the lexical, morphematic or syntactic levels) the mobility is the lowest, could only be achieved under the direct influence of the external environment in what concerns the sorting of sounds. The presence of certain species of animals in the area of the linguistic community had an influence on the articulation of certain sounds, be they vowels or consonants. Regarding the vowels, the example of the Hungarian language is eloquent. The Hungarian linguistic community, living around horses, developed a system of characteristic, primary and secondary resonances, derived from the semi-closed labial vowel "o", divided according to timbre into acute: ö, ő, respectively grave: o, ó, with their closed pairs articulated posteriorly, acute: ü, ú, respectively grave u, ú, able to reproduce as faithfully as possible the horse voice.

Let's note, however, that these four sounds-type specific to the Hungarian language, rendering the semi-closed posterior labial "o" are also the result of the averages of the different types of pronunciation of the respective sounds; each of the four phonemes are phonological units, gatherings of particularities capable of being recognized only by the native (as a result of the development of a certain habit of reproducing certain series of sounds from the natural framework specific to the linguistic community, genetically habit). A conclusive example regarding consonants is provided by the Arabic language, characterized by rich consonantism, where we find six laryngeals that have a strong articulation and influence the adjacent vowels, reproducing, with greater fidelity, the sounds emitted by camels.

The possibility of transforming echo phonic sounds into ideophone sounds and their semantic interpretation as a result of "conditioned reflexes" cannot be excluded, associating a certain type of reaction at the phonetic level with certain states of the body. As communication through at least two channels cannot be excluded either, one at the phonetic level (the transmission of a certain type of sounds associated with a certain state), the other through hormone emissions (a channel specific to communication in the animal world) that facilitates

the "translation" of the signal sound. The conditioned reflex would be the result, therefore, following the conditioned association of sounds of a certain quality, in a certain register, with a certain sonority and with a specific timbre, of a common experience.

This gives rise to the possibility of interpreting some derived meanings, transmitted through the transmitter. The auditory channel develops at the expense of the other, while the derived meaning, as a result of the repeatability of certain processes and phenomena "interpreted" and transmitted by the transmitter, begins to gain ground in front of the primary meaning, resulting from the semantic processing of messages from nature. The new type of mediated communication is the object of ethnology, given the fact that beyond the simple genesis and development of certain ways of transmitting certain messages, we must also talk about the development of knowledge. Derived meaning begins to no longer create a semantic triangle with a referent in the receiver's mind, but only a signifier-signified relationship, in which the signified takes the place of the referent, by reference to previous experiences.

Therefore, the place of the referent is taken by an "invisible" area, the fruit of the imagination that appeared as a result of reports on previous experiences. This area of "referential vacuum" gradually gives way to "invisible entities" that control and coordinate the visible.

"Thus, the characteristics of the figurative code generate semantic processes that distinguish between two areas of existence, affirm the dependence on the invisible and attribute to the entities in that area powers that the visually perceptible entities are not capable of." (Culda, 1989)

The revelation of the transcendent, 200,000 years ago, could be justified in this way, of the gradual removal of the referent from a certain area of communication. The signifier-object relationship was mediated. The connection is not made between the verbal signifier and some referent, but between the signifier and an image-symbol, a signified built on the basis of previous experience. In other words, in communication during the replacement of the figurative code with the verbal code, the signification relationship is external and subsequent to the naming relationship; moreover, it becomes only the explicit manifestation of "union" in the sense of the lines of force given by the relationship of signification as pre-existing potentiated later. This double relationship gives rise to a double language, in Roland Barthes' terms: a proper language, the language-object, the convention through which the myth is also communicated, a meta-language, a second language "in which the first is spoken" (Culda).

The abandonment of the figurative code in favour of the verbal code, however, had other causes. The intention, in terms of semantics, was not to introduce a certain artificial code into the primary communication process, but to name, locate, signal elements of the environment. But the result could not be predicted, nor could the consequences of this result. The "arbitrariness of the signified" is what opens the perspective of a parallel evolution of signs, not in the world of the transmitter and the receiver, but in another world, in a "fourth kingdom", as Ferdinand de Saussure calls it. Therefore, speech, assumed to be of onomatopoeic origin, appeared as a result of imitating sounds from nature. Whether or not the language of gestures preceded the onomatopoeic language is irrelevant from the point of view of the evolution of written signs.

In the beginning, the invented terms (ideophone sounds) were actually copies of unarticulated sounds from nature (ecophones), imitating them, within the limits of the reproduction capacity in the oral cavity of primitive man, within the limits imposed by the organs of articulation: tongue, lips, jaws, palatine vault, palate veil and uvula. In addition, these primary terms were also restricted by the auditory field of primitive man, so by the threshold of audibility as the lower limit and the threshold of pain as the upper limit, as long as sounds are regularly produced in nature that lie beyond these limits. Not in the last resort, we must subject the primitive man's terms to a third restriction, also at the auditory level, given the disturbances that intervene in this process. If, as a result of practice, the imitated sounds come very close to those in nature, they cannot be exactly reproduced in the current expression, given the associations that require an enormous effort.

On the one hand, as a result of an inability to accommodate the muscles of the ear required by nervous tension, on the other hand as a result of the inability to accommodate the organs of the joint to faithful reproduction, once the goal becomes the communication of a message about the exterior or a sensation interiors, approximate reproduction makes use of sounds that are easy to integrate into a broad register, accepted by the community, and onomatopoeia transforms from spontaneous imitation into voluntary, ordered, information-carrying, processed imitation. Thus, it translates into the "verbal terms" of an early stage of language development.

In the morpho-syntactic plane, the existence of the symbolic reference, of the actual sign, did not impose an immediate appearance of a syntax. The syntax could only have appeared following a gradual evolution of the convention language. Probably, within the same linguistic community, between the appearance of the sound to designate living entities/objects/phenomena from nature or to locate them until the appearance of sentences, many generations succeeded one another to "polish" language conventions.

The emergence of conventions in verbal communication presupposed their passive registration, both in personal and collective memory. Generation after generation, the "imprint" of conventions in the individual mind has been preserved through the prism of collective memory. Language came into being as a living, independent entity, a condition in which its definition in relation to the individual could not be realized only through the lens of the linguistic community.

Language became the social product stored in someone's mind (Saussure, 1972), while the contact with the collective assumed a rupture established between the signifier and the referent. The amount of conventions pushed, initially, to the perception of a language-individual relationship characterized by the equality of the parties regarding the baggage of linguistic conventions:

"Language exists in the collective in the form of a sum of imprints deposited in each brain, almost like in a dictionary whose identical copies are distributed to individuals." (Saussure, 1972). Later, the language is defined by a sum of potentialities, which will be activated or not during the language experience within the community.

## THE GRAPHIC REVOLUTION.

The appearance of the first graphic representations imitating referents from nature is not interpreted as an act of written communication. But the appearance of writing cannot be moved so late, three millennia before Christ. Surprising is the hypothesis of the Neolithic communication revolution, duplicating the technical and occupational revolution. A parallel evolution of the graphic sign with oral communication, approximately between 6,000 and 3,000 BC, raises questions regarding anthropological theories:

"Despite the fact that there is no direct knowledge about the languages spoken by Neolithic people, it is likely that, since this period, the languages have undergone differentiation, reaching an important typological variety." (Giovannini, 1989)

The diversification of languages, the appearance of dialects and dialects could not influence a change of the same dimensions in terms of the types of writing. Even today, writing types can be easily accounted for. There are six current types of writing: logographic (organized by words), syllabic (organized by syllables), alphabetic (organized by sounds), abugida (system in which consonants are invariably accompanied by vowels), abjad (system in which there are graphic symbols for consonants and specific signs for vowels) and subphonological (organized by blocks of syllables).

These types of writing organization are legacies of certain cultures and historical influences and invariably make the connection with the graphic experience of ancient peoples. Moreover, there are eminently oral languages. This could be one of the most important arguments of researchers who position the appearance of speech before writing, from a chronological perspective.

The first known way of graphic expression is the cave paintings which, due to the fact that they appeal to the icon and not the grapheme, are not given priority in terms of the history of writing. With certainty, these representations communicated, using practically the same support as in the case of the first writings. However, given the distorted perspective on the constitutive unit of the text, the iconic dimension is abandoned up to the threshold of transforming the pictogram into an ideogram, respectively up to a certain threshold of the coherence of the iconic or verbo-iconic text. Researchers, linguists or anthropologists, proclaim the psychological and sociological precedence of speech over writing. The counterargument involves referring to a more complex relationship in the case of sound imitation, in which onomatopoeia does not reproduce the referent, but provides clues to be interpreted, compared to the visible reproduction of the object's shape in the case of pictorial representation.

Nature can be perceived as a system of codified signs rather through the lens of the emergence of speech. Codification in the pictorial representation implies a facilitation of the perception of the whole, compared to the need for interpretation imposed by the spoken proto-words. Iconic code is much more accessible than phonetic code. Moreover, the spoken proto-language stage (of the ensemble of echo- and/or ideophone sounds) corresponds, mentally, to the iconic stage of written communication. From this perspective, the pictorial sign imitating the referent, to the same extent as the echophone sound imitates the sound

from nature, constitutes the first attempt at written communication. In its semantic richness, it lacks neither the referent, nor the signifier, nor the signified. The relation of signification is established on the relationship between reality and pictorial representation that induces, later realized through the spontaneous association between the concept and the referent. The semiotic mechanism is the same as in the case of the reproduction of echophonic sounds. First, the message is induced from the outside through the lens of the phonic signifier, which later makes the connection with the concept.

The sounds, simplified, reduced to the anatomical capacities of the human phonatory organ, transformed into ideophones, later create a direct link between the referent and the signified. However, just as mediated oral communication leads to the abandonment of the link with the referent, in favor of the development of a signifier-signified relationship, in which the referent also takes the place of the referent conceptually, in the same way, in the case of pictorial representation, the semiotic triangle is reduced to a simple relationship between two its peaks, creating the possibility of replacing the "referential vacuum" with invisible entities. Gradually, and within the written expression, by appealing to the pictorial, the signifier creates the connection with the transcendent, giving the drawing magical attributes. Probably the first graphic insertions, the first represented signs of the outside world created the same effect of intensity that is created, in contemporary writings, by metalogisms applied by addition or suppression-addition, such as, for example, hyperbola or litota.

Obviously, the first graphic representations could not give birth to asymmetric relationships with meaning, such as allosemy or polysemy, just as one could not speak of such anomalies in the case of the first onomatopoeia (proto-words). But, given the diversity of sounds in nature and the diversity of sounds emitted by the same animal, in different contexts, the asymmetric polyphony or allophony relationship (with two phonic signifiers referring to the same mental concept) is not excluded. In addition, unlike oral communication, where the use of the sign (echo- or ideophone sound) for the referent implies a not necessarily precise orthonymic mediation (either by appeal to the hyperonym, to the proximate genus or, *modo grosso*, to the genus, or by appeal to the hyponym, to the subordinate class), the relationship of written signification induces a high degree of precision in orthonymic mediation.

Due to the need to render with a high degree of precision the information regarding a referent, orthonymic mediation by calling the icon offered the possibility of removing certain barriers in communication. From the perspective of the perceptual dimension, the availability of context creates the premises for a greater closeness, at the level of form, between the signifier and the referent. Practically, the first signs in the history of writing were generated from the direct transposition of some external referents, in a pictographic manner, likely to bring the above-mentioned component elements of the sign closer to identification. Therefore, the first cave representations lead to their interpretation as petroglyphs, beyond their indisputable iconic or mythical value. These petroglyphs, doubled by the inlays, geometrized engravings (zoomorphic, phytomorphic or anthropomorphic) applied to objects from the late Paleolithic, outline the real size of some "signs", probably associated with some sounds or sets of sounds (proto-words), respectively some premitic units and some totemic grasslands (Vulcănescu, 1987). This type of association could later lead to the transformation of the concrete referent - mentally, by jumping through the "referential void" to the transcendent - into an "imagined referent".

On the one hand, the icon has been continuously simplified, keeping the signification relationship intact despite the changes made to the signifier. In this case, the only ways of differentiation in simplification were dictated by the cultural matrix within which specific ways of representation took shape, respectively by the material in which the sign was inscribed/encrusted or drawn. The history of the means of graphic representation can provide important information about the evolution of icons and the typicality of certain graphic signs. From fingers, plant fibers and tufts of animal hair (used as rudimentary brushes), charcoal or soft stone, manganese or iron oxide 'pencils' to flint 'knives', the 'writing' instruments have adapted to the environment on which the signs were reproduced. On the other hand, by appealing to the "imagined referent" the signifier copying a referent from nature began to signify an invisible entity, a deity. Moreover, by appealing to the attributes of certain entities in nature, signs began to represent that attribute and not the referent itself. Thus, pictograms gradually gave way to ideograms.

In this context, the transition from disparate pictographic elements, be they petroglyphs, or inlays, scribes (gr. *graphein* – to scribe) on objects of current use or on ritual objects, to assemblies of such elements led to the contestation of such protoliterate structures and implicitly to the contestation of communicative intentions through them, in the 6th-5th millennia BC. This is the case of the famous pictographic writings belonging to the Old European Civilization, as Maria Gimbutas (1989) calls it, more precisely the Chalcolithic cultural complexes, especially the Vinča-Turdaş culture, but also the Boian, Gumelniţa, Dikili Taş complexes.

It is natural, in this context, to contest the intention of a written expression by means of linear signs, as long as the icon is not assigned sign value. But the approach of drilling towards the beginnings of writing stumbles beyond the well-known Sumerian episode if there is not enough openness to give semiotic value to the petroglyph or the sign engraved on the everyday object.

The writing-urban center association cannot be proven. Instead, the invocation of the economic reasons that would have been the basis of the "invention of writing", or more precisely its spread, is pertinent. On the other hand, the historical-military reasons that led to the appearance and evolution of writing among the ancient Egyptians constitute pertinent reasons for taking them into consideration in terms of the study of the phenomenon as such. Another function, mythical, either primordial or of a nature to complete the "principle of the list", can constitute a necessity that led to the appearance of the written sign. Andrei Cornea differentiates, starting from a different perception, in Plato, of memory as *hypómnesis* (remembering) and *anamnesis* (remembering from within), between a principle of the list, ordering for the first writings, especially in the Middle East, and a principle of internal coherence, which characterized the texts of Ancient Greece.

Obviously, before the appearance of the old pre-Hellenic characters, the known writing could only have the role of fixation, of reminding. Probably the first "written" texts, unlike the first vegetable, animal or anthropomorphic representations, did not aim to acquire the duration, depth and clarity specific to this type of communication, based on memory as *anamnesis*. The adoption of the principle of the list must be sought many years ago, starting with the first

known texts, in which writing was linked to the counting and inventory of goods, income, trade.

Therefore, the first texts, ordered according to the principle of the list, represented records of the minutes type, having a formal, stereotyped character, they were made up of short sentences, preceded by a verb, linked together by the copula "and". In texts ordered according to this principle, subordinate clauses do not exist. The "administrative" character of the text can be best illustrated by the radical "šthr" present in several Semitic languages, including Akkadian (šothrim), denoting both to administer and to write. Even the more elaborate texts are drafted on the basis of the same coherence of minutes.

Communication, as a complex social phenomenon, is governed by certain rules, which were researched in detail and under different aspects by Fârte. There are special communication rules for various fields of activity: pedagogy, medicine, law, management, mass media, etc. We recommend, for example, to retain some of these, which are called "7C". Communication, in the context of the "7C" methodology, must be:

- (1) *clear* – in any discussion, ideas should be formulated in the clearest possible terms;
- (2) *concise* – ideas must be formulated in few words, lapidary, succinct, etc.;
- (3) *concrete* – the ideas expressed by the sender must be accompanied by facts, details that would illustrate them;
- (4) *correct* – the language and tone should be adapted to the respective audience;
- (5) *coherent* – the content of the message should be logical, not contain contradictions of thought;
- (6) *complete* – for effective communication the message must contain all the necessary elements to be understood by the audience;
- (7) *courtly* ("chivalrous") - the sender of the message must be kind, polite, empathetic and sincere to the receiver, the audience.

## **17. Attitude, charm, charisma**

The field of social psychology has been a mosaic of heterogeneous pieces from the start, but attitudes have always been one of the central elements of the design. (McGuire, 1985).

*Attitudes* are the evaluative judgments that integrate and summarize these cognitive/affective reactions. These evaluative abstractions vary in strength, which in turn has implications for persistence, resistance, and attitude-behavior consistency. (Crano & Prislin, 2006).

Extending attitude theory to the motivational domain, the functionalist approach to persuasion posits that any information processing in a persuasive context is motivated.

Motives that guide information processing in persuasive contexts are encapsulated in the functions that targeted attitudes serve. Initial formalizations of this idea - a trio of motives proposed by Smith, Bruner, and White (1956) and Katz, McClintock, and Sarnoff's (1957) quartet of functions - were short-lived. Their near-tautological reasoning, difficulties in identifying attitude functions a priori, and an overall unwelcoming theoretical (cognitive) zeitgeist conspired to cause their early demise.

A recent revival of a long-dormant interest in resistance to persuasion (McGuire, 1964) combines earlier motivational with more contemporary process-oriented approaches to examine resistance as the outcome of a persuasive attempt (Wood & Quinn, 2003). Implied in much of this research is the idea that successful resistance to persuasion leaves targeted attitudes intact. Tormala challenges this assumption, postulating instead that resistance has important consequences for targeted attitudes. Highlighting the role of meta-cognitive factors, Tormala and his colleagues document how perceptions of resistance and the context in which resistance occurs combine to affect post resistance attitude strength. The innovative predictions of the resistance appraisal framework lend themselves to applications in many domains, including health interventions. Together with other approaches to attitude resistance (Knowles & Linn, 2004), the resistance appraisal approach provides a valuable alternative view of persuasive phenomena.

Conner and Armitage's chapter on attitudinal ambivalence nicely illustrates how reasoning about this feature of attitude strength evolved from the conceptualization of an attitude as a concurrent set of positive and negative evaluations. Moreover, the conceptualization of an attitude as a situated construal (rather than a representation stored in memory) accounts for the evidence that features of the environment, typically the attitude object itself, give rise to ambivalence. Intuitively, ambivalence should weaken attitudes. The evidence supporting this intuition, however, is equivocal. On the one hand, higher levels of ambivalence appear to make attitudes more susceptible to persuasion and less likely to guide behavior. On the other hand, higher levels of ambivalence do not necessarily lower the impact of attitudes on information processing or their temporal stability.

Some of this complexity may stem from two different operational definitions of the ambivalence construct: felt or self-reported ambivalence, and potential ambivalence derived from attitude judgment processes or its outcomes. In Bassili's categorization, the former would represent a meta-attitudinal index and the latter would represent an operative index of strength. Importantly, some attitudinal effects appear due to felt ambivalence, others to potential ambivalence, and still others to both.

Conner and Armitage point out that the apparent independence of the two operationalizations of ambivalence may suggest different origins - a possibility that warrants investigation. Future research also should clarify how ambivalence involving two components of an attitude - affective-cognitive inconsistency in the parlance of consistency theories (Rosenberg, 1968) - relates to ambivalence within a single component. This research may reconcile some contradictions in the findings about strength like aspects of ambivalence.

The attitude - behavior relationship is a two-way street, with influence owing in both directions. Of the several accounts of the effects of behavior on attitudes, none has had more impact than cognitive dissonance theory. Since its inception (Festinger, 1957), the theory has provided insights into people's capacity to justify their counter attitudinal behavior, difficult decisions, and ill-invested efforts. In the engaging overture to their chapter, Stone and Fernandez illustrate how this justification process operates in the contemporary political arena.

The original formulation of dissonance as a negative motivational state created by the presence of two inconsistent cognitions has inspired many revisions, including those that situate the motivational source of dissonance in the aversive consequences of any behavior, consistent and inconsistent alike. The self-consistency and the self-affirmation versions agree that the (positive) self plays an important role in dissonance but disagree about the nature of that role. Reconciling divergent views, the self-standards model holds that inconsistent results might be attributed to dissimilar standards that people set for themselves, and the consequences of variations in self-esteem for discrepancies between these standards and actions. Because of varying self-standards, discrepancies between standards and actions could cause differences in dissonance.

Discrepancies from standards involve actions that contradict standards, and also failures to act in accordance with one's self-standards. The latter is an example of hypocrisy that presumably challenges a sense of self-integrity that people are motivated to uphold. Recent studies have documented that this hypocrisy may motivate behavioral changes toward the advocated standard. Extending dissonance research to the cross-cultural domain, recent studies suggest that dissonance may be universal in that it involves anxiety about the self, but also culture-specific in that it is differently configured in terms of the culture-specific views of the self. Yet, dissonance does not appear to be a solely intraindividual phenomenon. Recent research on groups as sources of dissonance and a means of its reduction (Norton, Benoit, Cooper, & Hogg, 2003) takes dissonance research back to the group setting where it began (Festinger, Riecken, & Schachter, 1956).

Although early research conceptualized attitudes as social commitments, much contemporary research examines attitudes in socially impoverished contexts. Making a strong case for socially situated study of attitudes, Smith and Hogg describe how social identity theory can inform the study of attitudinal phenomena. In this approach, attitudes are inextricably blended with group membership, in that they originate from group prototypes in an expression of one's identification with the group. This group-based approach to attitudes has important implications for understanding persuasion.

Because the phenomenological validity of persuasive information is derived from in-group norms, persuasive communication from ingroup sources, including those in numerical minority, should be more carefully scrutinized and ultimately more influential than persuasive communication from out-group sources. Also, attitudes and behaviors should be aligned to the extent that they are normatively consistent with important reference groups. This implies that individual attitudes of group members are manifested in collective action when both are

derived from and contribute to salient social identities. These hypotheses are amply supported in empirical research reviewed in Smith and Hogg's chapter.

Attitude change induced by groups that differ in size, normativeness, and power over others is a special case in persuasion. In their review of research on this group-induced attitude change, Martin, Hewstone, Martin, and Gardikiotis follow four chronological phases. The initial, functionalist, approach placed the power to influence solely in the hands of the majority, because of its presumed means of control over others (minority).

This asymmetrical, dependency-based model of influence was overthrown with Moscovici's seminal demonstrations of the power of minorities to influence. His conceptualization of influence as originating from conflict between source and target balanced the scale, in that both minorities and majorities could create conflict and therefore exert influence. Moscovici's position, clearly in the minority when it was introduced, single handedly changed the field to become an example par excellence of the power of minority to influence.

Once adopted, the symmetrical approach to influence flourished in comparisons involving variations in minority and majority influence. This third phase of research produced numerous models of social influence that focus on either conflict resolution or the role of social identification. Incorporated in some of these models is consideration of intraindividual processes that are activated in response to minority or majority advocacy - a theme that dominates current research on social influence. A hallmark of the prevailing information-processing approach is the examination of cognitive responses, either in their own right or as mediators of attitude change. Importantly, these processes are examined in a socially impoverished context. Martin and his collaborators recognize theoretical and methodological advantages of this approach, but they justifiably call for a broader approach that would account for a more complex social context and causal processes underlying majority and minority influence.

Though typically not included in volumes on attitudes and persuasion, research on normative influence is important for the understanding of these phenomena as it underscores their social foundation. In their review of normative influence, Schultz, Tabanico, and Rendón emphasize how descriptive norms or perceptions of what others do, and injunctive norms or perceptions of what others approve of (or should do), can powerfully regulate behavior not only in controlled laboratory settings but also in various applied domains.

Numerous accounts of normative influence clearly call for future integrative theorizing that should clarify the processes through which different types of norms influence behavior. We hope this brief introduction has served to motivate readers to delve deeply into the many interesting and useful chapters contained here. There is much we know about attitudes - how they are formed, their structures, the ways they may be measured, and the implications of their change. The work presented on the following pages represents the richness of a mature field that is still in the process of dynamic growth, for although we know much, there is much still to know.

Have you ever noticed how some people can captivate, inspire, and influence others without effort? Other people instantly like them and want to be around them. Some individuals can

enter a room and everyone notices. They seem always to get what they want because the people around them want to give it to them. How do they command such instant attention and influence everyone they meet?

*Charisma* is a vital motivational and life skill that can and must be mastered if you are going to influence others. In this book, you will learn how you can harness this power of charisma.

I have spent my life studying persuasion, motivation, and influence. People often ask me what is the most important tool or skill in the entire influence toolbox? What is the one thing I can learn to achieve maximum success? The answer is simple. If there were one skill to master out of all the tools of persuasion and influence, it is charisma. It gives you the quickest return on your time and dramatically increases your success and income.

This vital success skill permeates every aspect of your life. Your career, your relationships, your ability to influence, and your income are all related to your ability to radiate charisma. Have you ever wondered why two people with the same education, the same contacts, the same IQ, and the same experience get dramatically different results from their lives? One enjoys massive success while the other one is barely making ends meet. Some call this simple luck, but when you have charisma you are guaranteed to have good luck. Imagine your success in life when you can automatically get others to willingly do what you want them to do, beg to do it, like to do it, and tell all their friends that they should also do it.

Charisma is the ability to empower and persuade others to believe in you, trust in you, and want to be influenced by you. You captivate and motivate them. You help them see themselves in the future carrying out your vision. They are moved and energized by your passion and enthusiasm. They are magnetized and driven by your charisma. They are lifted and inspired by your optimism and expectations. In essence, you're a source of empowerment, encouragement, and inspiration.

Mastering the various skills of charisma will propel you into a position of influence and success. People often wonder why achieving success is taking so long and why they have not learned even the basic skills to be successful or achieve their dreams. Charisma allows you to be more efficient and effective. Think about this. If others aren't responding to you or your attempts at influence, it probably is your fault. Sure, we like to say it is their fault, but when others are not influenced by you, empowered by you, or don't even want to help you - trust me - it is you.

I cannot stress enough that people of great influence have charisma. A study once asked participants to rate the top characteristic (out of 59 choices) of persuaders. The number one characteristic was charisma. We can all think of charismatic people. They have a certain presence and charm about them; they are captivating and inspiring. They command our attention; we hang onto every word out of their mouths. Their presence prods us, motivates us, and inspires us. We feel better for having met them, seen them, and been influenced by them.

The challenge is that most of us think of charismatic people as movie stars, CEOs, politicians, or even religious leaders. These kinds of people might have a few of the tools of charisma and

influence, but I want to reveal all the tools you can use in your efforts to influence and persuade. Some may call charisma magic, some call it luck, but when you master all these skills, you will achieve more success. In fact, you'll wonder why success took so long and why it now seems so easy.

Charisma empowers others to like you, even if they don't know that much about you and even when there hasn't been enough time to develop trust in you. Charisma gives you power over, the allegiance of, and the devotion from your audience, and it creates instant support. So are you born with charisma or is it learned? Is it nature or nurture? The answer to both questions is yes! Some attributes are inherent, some you have learned, and others can be acquired. Charisma is a trait that can be taught and mastered, although it requires effort on your part. You may wonder - as I do - that if this skill is so important, if it is so valuable, if it is so critical to your success, why didn't they teach it to us in school? I can't answer that question, but I do have the answers you need to master the critical skill of charisma.

People today are less trusting, full of skepticism and more cynical than ever before. Corporate loyalty is a thing of the past. Belief in large business and government and society has eroded away. Everyone around us is confused, overwhelmed, and more difficult to influence than in the past. Now more than ever charisma is a vital and critical persuasion skill.

The challenge is that some people think they have charisma, but they don't. Even if you can get somebody to do something, doesn't mean you are influential or charismatic. For example, if you are a manager, people do what you tell them to do because they feel they have to (even if they pretend to want to), but the results are only short term. If you are charismatic, however, people are devoted to you, want to work for you, and recruit everyone else to help you. In short, you have true influence over them.

When we hear the word "charisma," sometimes we are not sure what to think. What exactly is charisma? It can be a mysterious attribute. It's not assertiveness or enthusiasm, nor is it personality or being a so-called people person, although all of these traits seem to be a part of the package to one degree or another. You know when you have met or seen charismatic people. They are easy to spot and always radiate in a crowd of people.

Sometimes identifying what makes someone charismatic is difficult, but you know when you feel and are moved by the power of charisma. When someone possesses the elusive quality of charisma, we feel honored and privileged to be associated with that person. Charisma is not just charm, devotion, likability, or passion. It is a feeling of confidence that does not overwhelm your audience but rather puts them at ease while maintaining credibility and rapport.

The word "charisma" comes from the Greek goddess Charis. Charis's character was one of total beauty and charity. How do others define charisma? "A rare, personal quality attributed to leaders who arouse fervent popular devotion and enthusiasm (*American Heritage Dictionary*)"

"Charisma is the ability to influence others positively by connecting with them physically, emotionally, and intellectually (Dr. Tony Alessandra)"

”Charisma is energy from the heart zone. If the speaker has no feeling, there is nothing to transfer. Charisma occurs when the speaker’s feelings are transferred in the purest form to another. Charisma is not a diluted feeling. It is not disguised. It is a raw feeling. Charisma is the passing of our pure energy, our pure passion to the other. (Gerry Spence)”

Here’s my own definition of charisma: the ability to easily build rapport, effectively influence others to your way of thinking, inspire them to achieve more, and in the process make an ally for life. In other words, charisma is being able to get others to want to do what you want them to do and be excited to do it. In fact, they are moved to get others onboard to also help your cause.

Is charisma good or bad? Is gravity good or bad? Just like gravity, charisma is neutral. It is how you use the power that defines you as good or bad. Some would say Adolf Hitler, Charles Manson, and Benito Mussolini had charisma, and they might have had a few of the tools of charisma. In many cases, people have had some of the skills of charisma and used them in an unethical way. You could probably count more people in history and in your life who had charisma and used it in a good and honorable way.



## II) FACIAL COMMUNICATION

### MIMICRY

#### 1. Preamble

The human face - in repose and in movement, at the moment of death as in life, in silence and in speech, when alone and with others, when seen or sensed from within, in actuality or as represented in art or recorded by the camera - is a commanding, complicated, and at times confusing source of information. The face is commanding because of its very visibility and omnipresence. While sounds and speech are intermittent, the face even in repose can be informative. And, except by veils or masks, the face cannot be hidden from view. There is no facial maneuver equivalent to putting one's hands in one's pockets. Further, the face is the location for sensory inputs, life-necessary intake, and communicative output. The face is the site for the sense receptors of taste, smell, sight, and hearing, the intake organs for food, water, and air, and the output location for speech. The face is also commanding because of its role in early development; it is prior to language in the communication between parent and child.

The complexity of the face is apparent when we consider its sending capacity, the information it may convey, and its role in social life. Although there are only a few words to describe different facial behaviors (smile, frown, furrow, squint, etc.), man's facial muscles are sufficiently complex to allow more than a thousand different facial appearances; and the action of these muscles is so rapid, that these could all be shown in less than a few hours' time. The face is also a complex information source. We can learn different things from looking at a person's face. The face can send messages about such transient and sometimes fleeting events as a feeling or emotion, or the moment-to-moment fluctuations of a conversation. The face can show more enduring moods, perhaps even stable personality characteristics and traits, and such slow progressive changes as age or state of health, and such immutables as sex. The complication is not just the opportunity to glean such a wide variety of information from this single source, but the possibility of drawing inferences which may not be correct.

Certainly, physiognomic or environmental factors can result in misinformation from the face - for example, the prematurely wrinkled face in a young person. But the face can also misinform by intention or habit. Although smiles may be a reliable index of pleasure or happiness, a person may also smile to mask a feeling he wishes to conceal or to present a feeling when he has no emotion at all. Is the face like an involuntary system or is it subject to voluntary activation and thus vulnerable to purposeful control and disguise? Clearly, it is both.

The very richness of the face, the number of different facial behaviors, the number of different kinds of information we may derive from observing the face, and the uncertainty about whether we are obtaining correct, incorrect, or even purposefully misleading information, can give rise to confusion.

The human face is a feature that is so familiar that, for everyday purposes, it does not require a definition. Except for people with very specific neurological deficits, we all think we know what

constitutes a face. The Pocket Oxford Dictionary provides the definition “front of head from forehead to chin”. Other definitions (collected from the Internet) include: the front of the human head, where the eyes, nose, mouth, chin, cheeks, and forehead are and that part of the head, esp. of man, in which the eyes, cheeks, nose, and mouth are situated.

In the facial modeling literature, Waters (1992) defines a face as the frontal view of the head from the base of the chin to the hairline, and the frontal half of the head from the lateral view. This corresponds to the dictionary definitions but the inclusion of the hairline may limit the value of this definition in the case of middle-aged and older males.

For quantitative facial analysis, the use of a repeatable and reproducible definition of the face is vital and the anthropological and orthodontic literature provides some examples. Ferrario et al. (1992) defined the facial profile as a line “between the submental soft tissue profile and the prolongation of the mandibular edge, and at the intersection of the forehead profile with a line joining the first point and the lateral eye canthus”. Vanco et al. (1995) defined the profile to be the soft-tissue outline anterior to a line perpendicular to Camper’s plane and passing 5 mm posterior to soft tissue nasion. Camper’s plane is defined as a line joining the trageal notch to the lower border of the ala of the nose.

These two definitions are useful as a basis for measurement, but both are dependent on the identification of soft-tissue anatomical points, which are not always easy to locate in a repeatable way. Vanco’s definition has been used successfully for facial profile analysis by groups associated with the author in the School of Dental Science, University of Melbourne (Darwis et al. 2003, Rose et al. 2003, Tangchaitrong et al. 2000), but has required modification for faces with more extreme characteristics (excessive retrognathism). This definition is extended to three dimensions by using it to create a cutting plane rather than a line.

Kapur et al. (1990) used a complex definition of the profile based on cephalometric hard-tissue landmarks which has the advantage of providing a much more repeatable definition of a face but at the expense of requiring a lateral head radiograph.

The portion of the profile used is very restricted with its upper limit on the nose somewhere below nasion and its lower limit near the point of the chin. In the work of Lu (1965), which pioneered the use of Fourier shape analysis of faces, a similar definition was used, but the face was defined to be that portion of the profile between the points menton and nasion and was thus slightly larger. These latter definitions provide much less ambiguity but they exclude the brow-ridges and forehead and thus are restricted in their application. Definitions that refer to profiles are inherently two-dimensional and for many purposes the human face can be considered as two-dimensional. This is possible because the main features of a face lie close to a plane passing through the eyes and a point at the center of the commissure of the mouth. Current face recognition technology relies on this assumption (usually implicit) that the face is two-dimensional, and many of the problems met when attempting to apply face recognition systems in unfavorable conditions of lighting and pose stem from this underlying problem.

## 2. Typologies of faces

The structure of human facial muscles has been known for some time (Duchenne, 1990; Huber, 1931). The anatomical basis of facial expression has been described in detail, and an anatomically based coding system is available for the objective study of facial action (Facial Action Coding System; Ekman and Friesen, 1978). This system outlines specific actions produced by particular facial muscles. The quality of these actions, however, likely varies with differences in the facial muscles. Different facial muscles produce different types of movements, and they are most likely heterogeneous in their structure and innervation.

Goodmurphy and Ovalle (1999) for example, have shown that muscle fiber types, shapes and sizes in orbicularis oculi, pars palpebralis and corrugator supercilii are significantly different, although these two muscles share the same innervation and embryonic origin and are found in the same region of the face (lower eyelid and lower mid forehead, respectively). The orbicularis oculi consists of 89% fast twitch fibers, significantly more than the corrugator, implying some difference in the movements produced by the two muscles (Goodmurphy and Ovalle, 1999). Zygomaticus major and minor muscles are similar to the orbicularis oculi in their high proportions of fast twitch fibers, relative to other muscles, indicating a possible specialization for fast movements (Stal, 1987).

There are also individual differences in the structure and differentiation of facial muscles. For example, a differentiated muscle bundle, the risorius, thought to be unique to humans, is highly variable. As many as 22 of 50 specimens in a recent study lacked this muscle (Pessa, 1998), and Huber believed that it was absent completely in people of Melanesian ancestry (Huber 1931). Various furrows and other deformations of the facial skin are produced by variations in facial muscles, and these may contribute to individual differences in expression. In most individuals, the platysma muscle inserts on the skin over the inferior margin of the mandible, but it is occasionally observed inserting in the lateral cheek, causing a vertical depression or furrow to appear there. The zygomaticus major muscle also varies, appearing in a bifid version with two separate insertion points in 17 of 50 of specimens in an anatomical study (Pessa et al., 1998a). The tension caused by the two heads of the muscle at the corner of the mouth is believed to cause a dimple or small depression during the contraction of the muscle in smiling (Pessa, 1998). Changes in facial texture, such as dimples that appear with a smile in some individuals, could be of added value in making an expression noticeable, or in providing information about the intensity of the expression.

A study of facial musculature in living humans noted a significant sex difference in the thickness of the zygomaticus major muscle (McAlister, 1998). This study also investigated differences in musculature, and found no significant differences in either levator labii superioris or zygomaticus major muscle thickness between Asians and Caucasians (McAlister, 1998). In general, there is not a great deal of published information on populational or sex-based variation in facial muscles, and findings of populational differences described above have not been replicated.

The effects of inter-individual anatomical variation, including genetically based variation on facial

expression are even less well-known. The muscles themselves are highly variable, with some muscles appearing in some individuals and not in others (Pessa, 1998). The presence of anatomical variation raises important questions about the link between facial actions and specific muscles. The relationship between muscle activity and displacement of facial features in expression is individualized to some degree; during posed eyebrow raises, muscle activity is roughly equal to brow displacement squared. Yet there is wide variation for individual brows and left brows rise higher given the same amount of muscle activity (Pennock, 1999).

On the other hand, if the action of the face is the same, although there is variation in the underlying muscular structure, the resulting facial expressions may not be meaningfully discriminated. The universal recognition of some basic expressions indicates that facial expressions may not depend on a one-to-one anatomical correspondence in any two facial signalers. Basic facial expressions are also recognizable in abbreviated form, without the complete set of facial actions described for the prototype expression. Regardless of the degree of variation that can be detected empirically, perceivers may take no notice of these slight variations (Fridlund, 1997; Shor, 1978), or may categorize them similarly, with high agreement (Campbell, 1999; Cashdan, 1998). More importantly, it is unknown whether such phenotypic variation in facial expression meets these criteria of “just meaningful difference” (Hauser, 1996) by causing differences in receiver behavior or judgment to slightly variant displays of the same type.

### **Face Shapes.**

(1) *Broad or wide* (wide or square face). Self confident. Great strength and power.

You possess natural self-confidence. In ancient face reading, your face would have been equated with that of a tiger with all its strength and power. You are not easily intimidated and don't fear a challenge.

(2) *Narrow or thin face* (long or thin face). Feels fear. Works best independently.

Your initial approach may not be as bold as some others. You have had to learn selfconfidence. You are proud of what you have learned and want an opportunity to apply what you know. Your challenge is fear, but remember that brave people are not those who never feel fear but rather those who feel fear and face it. You don't enjoy supervising others and prefer to work independently.

(3) *Diamond shaped face* (wide at cheeks, narrow chin). Impatient. Quick mind.

This is a face that is both quick to anger and quick to love. You can be quite impatient. When you want something, you want it now! Your mind is fast and flexible, and you have no time for slow or stupid people. However, you don't want to be rushed when making up your own mind.

(1) *Pear-shaped* (broadest under cheeks). Peacemaker but not a pushover.

You are a peacemaker, but you may hide your own emotions in order to keep the peace. You put up emotional walls if others don't consult you, because you would always ask them. However, no one should underestimate you because you are no pushover. You have tremendous tenacity.

(5) *Flat-faced* (no features protrude; face plane is largely flat). Honest about feelings. Polite and unassuming.

You avoid the limelight, are polite, and dislike attention. You are honest about your feelings. You do your job quietly, without making a fuss and without trying to get all the credit. You are helpful and want to share with others.

### **Face Types.**

In addition to face shapes, there is another way of looking at the face as a whole to determine some basic characteristics about the person. This is the face type. In faces types, you have a combination of facial characteristics that talk about a general personality type. There are three basic types and mixtures of the three.

(1) *Mental type* (thin face, large forehead, small jaw/chin). Intellectual. Internal focus.

Your focus is internal and intellectual. You are more connected to your inner thoughts and feelings than to the external world. Consequently, you may sometimes get lost or have trouble remembering people's names, even when you have just been introduced. You take refuge in your mind, retreating inward when troubled to figure out problems for yourself.

(2) *Physical type* (large square face, big jaws and chin). Doer. Needs space and freedom. Competitive.

You are a doer and respond to life with action. Possessing a competitive spirit, you love a challenge and physical activities. You approach life with a "can do" attitude and when troubled, will probably want to do something immediately. You need your freedom and personal space. You also have a keen sense of geographical direction. Your challenge is in connecting with and expressing your feelings.

(3) *Emotional type* (round face and chin, full cheeks). People person. Likes good food. Enjoys group activities.

You are a people person and you connect easily with others. Physical comfort is important to you. You love celebrations, enjoy good food and like sharing it with others. You are probably one of those people who wants every celebration to be better than the last. You love to plan and direct group activities, including the making (or raising) and handling of money.

### **Combination Face Types.**

(1) *Mental/physical* (broad forehead, square chin). Mechanical ability. Plans projects. Active doer.

You like to do mental work in connection with some form of physical or mechanical activity. Your type is frequently found among promoters, engineers, inventors, architects, athletic managers, and the military's top brass. Your challenge is to connect with other people's feelings.

(2) *Mental/emotional* (high, broad forehead, round chin). Capable director. Good manager. Reserved about self.

You enjoy people and planning, but with a decided intellectual approach to it. You are probably inclined toward banking, politics, and finance and are quite perceptive about people. You connect with people's feelings, but may be inclined to keep your own to yourself.

(3) *Physical/emotional* (square face, round chin). Energetic personality. Loves people and comfort. Good sense of direction.

You have a strong people orientation and excel at planning group activities. You enjoy being physically active in whatever is going on. You combine a strong physical drive with a good mechanical ability, a love of physical comfort, and a good sense of direction. Your challenge is a fear of old age.

### **Facial Dominance.**

As discussed in the introduction to Part III, the face can be divided into three areas horizontally. When one is larger than the other two, it indicates an emphasis on the traits associated with that part of the face. It is also important to note when one area is much smaller than the other two. This usually takes some practice to see readily. As you study many faces, it will become obvious. If the areas appear to be nearly equal, dominance is not important to the reading.

(1) *Large upper area* (from original hairline to eyebrows - not a receding hairline). Focuses on ideas and information. Loves distinctions.

Your focus is on thinking. You enjoy the world of ideas, and want to acquire knowledge, especially in your areas of interest. You like complete explanations with all the details. You love distinctions: how one thing is different from another. You prefer to judge the data yourself, and you want all the facts.

(2) *Large middle area* (from eyebrows to nose tip). Ambitious. Appreciates quality.

Your focus is on status, luxury, and quality. You may also be ambitious, shifting into action to carry out your goals and dreams, but your secret desire is to be envied by everyone for your success. You enjoy the status of having the best. When others talk to you, you want them to get to the point. In selling to you, you need to be shown how an item is better than what you already have or how it will improve your status or success quotient.

(3) *Large lower area* (nose tip to bottom of chin). Wants practical applications of ideas. Well-grounded.

You are well-grounded and like to see a practical application of ideas. Physically tough, solid and earthy, you have a good sense of yourself and your physical surroundings. You need time to make up your mind and refuse to be rushed. When you have a problem or need to make a decision, you think best when you can walk around or do something physical. You may not be the first to speak up in a group, but when you do, others listen because you project integrity and sincerity.

(4) *Small upper area* (forehead is the smallest area). Persistent. Determined.

You can be very determined, persistent, and intense. Not easily deterred, once you decide on a goal, you will let nothing stand in the way of your obtaining it.

(5) *Small middle area* (nose area is smallest). Hard worker. Well-respected.

You are a hard worker and you always give 110%. Your challenge is in receiving the financial reward you deserve for your efforts. While you may not get rich, you will always be well-respected. It doesn't mean you can't gain wealth, just that you will work harder for it than someone with a larger middle area.

(6) *Small lower area* (chin area is smallest). Sensitive. Not Physically grounded.

You are a person of the mind and more connected to your inner world than your outer world. Extremely sensitive, criticism can wound you. You may not enjoy physical exercise and will do it only when necessary for some specific purpose or in connection with some other activity. Your challenge is with the physical plane. You may occasionally lose your sense of direction or forget people's names even after you have just met them.

### **Profile Types.**

Profile types combine facial features in particular groupings that form a gestalt that denotes a recognizable personality type. The convex profile includes a sloping forehead, large nose with a high bridge, a mouth that protrudes further than the chin and teeth that protrude outward. The eyes are full and quite prominent.

(1) *Convex* (forehead angles back, nose most forward). Quick mind. Impulsive and impatient. Directs others.

Your gift is a quick mind with an appreciation for systems and procedures and a practical approach in your thinking. While you may be quick in speech and action, your challenge is that you can be somewhat impulsive and impatient in your desire for tangible results. You prefer to direct others.

(2) *Extreme convex* (prominent nose, extreme angle to forehead and chin). Observant and energetic. Fluent speech. Quick in action.

Observant and energetic, you need only to see most tasks performed once to be able to do them yourself. Quick of mind and fluent in speech, you mentally outpace most people you meet. Your

challenge is to overcome a tendency to be too aggressive or harsh, which may keep you from obtaining the full cooperation you need from others.

(3) *Moderately convex* (mild angle to forehead and chin). Tangible results. More self restraint. Gets cooperation from others.

Like the other convex types, you also focus on obtaining tangible results and appreciate efficient systems and procedures. You are more successful in directing others, because you have more self-restraint and a milder manner than the more convex face types.

The concave profile has a full round forehead which protrudes at the hairline, eyes are deep-set, the nose bridge is shallow and the nose is concave. The chin protrudes further than the lips with the teeth either vertical or sloping inward.

(4) *Concave* (full forehead, protruding chin). Creative Problem solving. Moderate energy level.

You are always looking for a creative solution to problems, and may seem easygoing with your meditative approach and moderate energy level, but you have a patient determination and can even be stubborn when confronted. Your challenge is being overly cautious and not taking enough risks.

(5) *Extreme concave* (dish-shaped profile). Mild-mannered. Dreamer. Procrastinates.

People may call you a dreamer and at times you may be absent-minded, but you have a sweet, mild-mannered, non-aggressive nature and are diplomatic in speech. Your challenge is a tendency to procrastinate.

(6) *Balanced* (neither convex nor concave profile). Balanced thought. Careful in speech. Versatile.

You show a good balance between physical, mental and emotional areas of your life as well as between quick practical thought and slow, meditative thought. You are probably quite versatile and able to apply yourself in many directions. With so many possibilities open to you, your challenge is in deciding what you are going to do.

### **Profile Combinations.**

Combinations of convex and concave show characteristics of both types. The upper face is about thought processes, while the lower face is about implementing the thought into action.

(1) *Convex/concave* (forehead slants back, chin protrudes). Mentally quick, patient in action. Thinks before speaking.

You have a quickness and practicality of thought along with a gift for memorization. You can be mentally aggressive but tend to be more diplomatic in speech and patient in action. You can pack

a lot of substance into a few words. Your challenge is in speaking up before the moment to speak passes.

(2) *Concave/convex* (forehead full, chin recedes). Emotional approach to work. May act without thinking.

You have an emotional approach to work and appreciate recognition for your efforts. Once you learn a task you can be quick in performance. Your challenge is to remember to think before you act.

### **Head Types.**

The shape of the head can give you an instant gestalt on certain personalities. The following four head types have strong characteristics that you will see repeated in the features and/or lines on the face. The distinctive head shape provides an overall perspective which allows you to identify these characteristics even at a distance.

(1) *High crown/low forehead* (highest point at crown). Dominating. Skeptical. Persistent.

You have a quick, skeptical mind and insist on being shown. You demand facts as the basis of your judgments and care little for religion. You can be determined, persistent, hard to influence, and difficult to coerce. You may try to dominate others in your eagerness to have your own way. Your challenge is to develop sympathy, benevolence, and altruism toward others as you pursue your quest for power.

(2) *High forehead/low crown* (highest point at hair line). Hopeful, optimistic and trusting. Discouraged by adversity.

You are an optimistic, hopeful person with a willingness to believe in others. You are trusting, sympathetic, and benevolent. Your challenge is with persistence and determination. You usually begin projects with high hopes; just don't allow yourself to become discouraged and give up before you are really defeated.

(3) *Round head* (widest part is just above ears). Fearless. Dominating Force.

You are fearless and plunge ahead, often throwing caution and prudence to the wind. You can be a very dominating force. Your challenge is to avoid becoming too reckless, impulsive, or shortsighted in your desire to rule.

(4) *Square head* (vertical rise above ears with flattened top). Cautious and prudent. Dependable.

You take a cautious, prudent approach. You are dependable and have moderate appetites and passions. Your challenge is that you are not a crusader, and you may be reluctant to go to battle for your ideals.

## **Dimples and Clefts.**

For beginning face readers, I recommend they start with dimples, clefts and lines. With other features, you must make comparisons. It can be difficult at first to determine what is a short nose versus a long nose, or high eyebrows versus low eyebrows. Accurately reading features comes with practice and careful observation. However, with dimples, clefts and lines, if you can see it, you can read it. It is that simple.

Dimples and clefts are softening features that indicate more playfulness, humor, and concern for others.

(1) *Good sport dimple* (dimple in chin). Playful. Good sport. You have a playful, good-natured approach to life and are a good sport.

(2) *Adaptability cleft* (cleft in chin). Adventurous. Extremely adaptable. You have an extreme playfulness and are adventurous. You are also extremely adaptable and may try many different jobs or relationships if the ones you have are not to your liking.

(3) *Destiny dimple* (dimple in end of nose). May feel stuck in a job. May have challenge with money. Your job needs to feel right to you. If it doesn't, you may find yourself questioning, "Is this my destiny; is this what I'm supposed to be doing?" Don't be afraid to follow your heart, even if others think you're flaky. You may also have a challenge with money. At times, you can put yourself on a tight budget, but then "blow it" when you suddenly see something you can't resist.

(4) *Romantic dimple* (dimple in one or both cheeks). Romantic playfulness. You have a romantic playful nature and love is important to you. Your focus is on matters of the heart.

## **Lines.**

Stop worrying about wrinkles and lines on your face! They are badges of honor for a life well-lived. Remember, if you can see the line, you can read it. The deeper and more noticeable a line, the more pronounced the quality it indicates. Deeper lines hold more meaning than fine lines. Don't forget that lines on the left side of the face arc about personal issues. On the right side, the lines reflect issues in the external or outer life including career issues.

(1) *Mental development lines* (horizontal lines on forehead). Developed mental abilities. Possible brilliance. If you have three or more lines that run across your forehead, you have worked very hard at developing your natural mental abilities. The deeper and longer the lines, the greater the development. These could also be called genius lines, because when they run all the way across the forehead, they indicate brilliance in your field. If you have many broken lines, it indicates you have developed several mental interests.

(2) *Mental pressure lines* (diagonal lines on forehead). Mental concentration. This indicates that through intense effort, you have developed your power of mental concentration in some specific areas. Their development resulted from an imposed mental discipline.

(3) *Freight train line* (single deep line between eyebrows). Self discipline. Lets nothing stand in the way. This indicates that you have developed a single-minded power of self-discipline and possible self-sacrifice. You let nothing stand in your way. Once you set a goal and get rolling, you are hard to stop! Your laser-beam focus is on details and being right. You need to be gentler with yourself.

(4) *Forced focus lines* (two lines between eyebrows). Too hard on self. Focuses on being exact and right. This indicates that you have imposed a focused mental discipline in both your personal life and work life. You are too hard on yourself, demanding more of yourself than you ever would of someone else. Whether you feel like it or not, you take yourself by the collar and force yourself to get the job done.

(5) *Perfectionist lines* (many lines between eyebrows). Perfectionist. Wants everything in its place. If you have more than two vertical lines between your eyebrows, you have perfectionist tendencies. You believe in a place for everything and everything in its place. You need to ease up and enjoy life a little more; don't make it so hard. You may want to ask yourself, "Why do I need to be so perfect?"

(6) *Visionary lines* (triangle between eyes). Inner wisdom. This indicates that you have a strong connection between the left and right sides of your brain, giving you a dual perspective that allows you to access your internal vision and inner wisdom. You logically reason what is right and feel that it is so. You have an immediate capacity to see the deeper meaning beneath the surface.

(7) *Responsibility lines* (many fine lines on bridge of nose). Very responsible. You are overly responsible and assign your self the difficult tasks. As a child, you may have been told that good people are responsible, and as a result you may take on too much responsibility.

(8) *Burn-out line* (horizontal line on bridge of nose). Overly responsible. You have been so overly responsible that you have forced yourself to continue even when a task gave you no emotional satisfaction or mental stimulation. This "burn-out" line indicates you have now reached a stage where you need to find something to bring more joy into your life, even if it's just a hobby.

(9) *"Big picture" lines* (radiating from outside corners of eyes). Sees the bigger picture. You have worked hard to develop a broader perspective and see the bigger picture. You have a better understanding of the relationship between all things. Your focus is more expanded and less gullible than in your youth. You realize if something sounds too good to be true, it probably isn't true.

(10) *Courage lines* (diagonal lines across cheek bones). Badges of courage. You have had to access your deepest internal resources to confront the difficult circumstances life dealt you. These lines are badges of courage. On the left side, they show courage in facing personal problems. On the right, they show courage in facing professional or external problems.

(11) *Humor lines* (lines on sides of the nose). Mischievous. Impish glee. You have an interactive, playful, and sometimes mischievous sense of humor. You like to tease for fun. In fact, there may be a bit of impish glee in your humor.

(12) *Disappointment lines* (nose to corner of mouth). Emotional disappointment. You have experienced emotional disappointments. The deeper the lines, the greater the experience of disappointment. If the line is only on the left side, read it as inner world or personal disappointment; on the right, it is read as external world disappointments.

(13) *Compassion lines* (corner of mouth to chin). Deep Emotional pain and loss. You have weathered a traumatic emotional experience that may have included deep emotional pain and grief. On the left side, it indicates an intense loss or suffering, such as the loss of a loved one. If the line is on the right side, it may indicate severe loss in your external or business world. Because your heart has been opened by your own experiences, you have greater compassion for people and true empathy with their pain and suffering. The deeper the lines, the greater the sense of loss.

(14) *Forced smile line* (horizontal line on upper lip). Hides negative feelings. Cut off from Emotional support. Your happy external appearance may not reflect your true internal feelings. You may often use a smile to hide your emotions. Your challenge is that you may not receive the nurturing and support you need and deserve from others because they may not be able to see past your smile.

(15) *Support lines* (dimples that look like lines). Lifts up others. Gives encouragement. You exert power by lifting up those around you and helping them feel better about themselves. In return they look up to and respect you. Because others expect your support and encouragement, your silence will often speak louder than words ever could in terms of calling attention to a problem.

(16) *Libido lines* (vertical ridges under nose). Divides world into male and female. The more pronounced these lines, the more you may tend to divide the world into categories of male and female with specific roles for each. The wider apart these lines, the greater the sex drive in the individual and the greater the need for physical affection.

(17) *Survivor lines* (vertical lines on upper lips). Has overcome adversity. A tested survivor. These lines show the development of an inner personal strength born out of adversity. You have been hit by circumstances in life that felt totally overwhelming and perhaps even devastating. You may have faced what felt like a dark bottomless pit, and you had to dip into your deepest personal resources to pull yourself out to survive. You found a deep inner strength you didn't know you had. Today, you can face whatever life throws your way because you know you can handle it.

(18) *Gab lines* (continuous line runs under chin and up cheeks). Natural talker. Communicates easily. You have a wonderful, natural gift of gab and love to talk. In fact, you are a born talker and seldom run out of something to say. You never meet a stranger. This line shows strongest when you smile, which you do easily and often.

(19) *Desirability line* (arch on chin). Need to know you are desirable. You may need confirmation of your sense of self-worth from external sources. You have a strong need to know that you are desirable from at least one person. A lack of childhood attention, appreciation, or just not feeling special may have given you a lower self-esteem than you deserve. Don't worry. People with a little lower self-esteem are easier to be around and more desirable than those with overblown egos.

(20) *Heart lines* (vertical line on ear lobe). Heart problems. Too hard on Yourself. Your focus in life is on doing and you may be too hard on yourself. If you push yourself too hard, it can lead to heart problems: just ask your doctor. Your challenge is to take better care of yourself. Pay attention to diet and exercise, get more rest, and find ways to put more joy, love, peace, and contentment into your life. Learn to measure your success by your ability to be authentic in every situation rather than judging yourself by outcomes and accomplishments.

(21) *Secrets lines* (indents at corner of mouth). Psychic trauma. Closed on some topics. There are some areas of your life that you do not choose to share and may never tell anyone. As a child, you may have learned that some topics were not safe, and you therefore prefer to hold them in rather than express your view or opinion. You have closed the door on some aspects of your life, feeling they are too painful or dangerous to deal with. To reclaim all of who you are, you may one day want to re-examine your reasons for closing off this part of yourself.

(22) *Obstinate chin* (chin has a tense, bumpy appearance). Steeled self to face world. Because you don't expect life to be gentle or kind, you've hardened yourself to perpetually meet difficulties. You can be tough and even obstinate when challenged. You brace yourself for adversity and prepare to take it on the chin.

### **Facial Hair.**

In face reading, everything counts, including facial hair. Just because someone has a mustache or beard covering part of his face doesn't mean you can't read it. In fact, it may give you more clues about the person's character than if he had no facial hair at all!

(1) *Mustache*. Sensitive, but hides it. Wants to appear very strong.

In face reading, upper lips express feminine energy. If you wear a mustache, you may feel self-conscious about expressing feminine energy. You hide your upper lip because you believe you will be ridiculed or that you won't be respected if others find out how sensitive you are. You want to appear strong at all times. You become defensive if your masculinity is questioned.

Beards cover up all the softening features on the lower face such as dimples, and indicate a desire to appear more masculine and authoritative. When reading beards, read the outside shape.

(2) *Round beard* ("Santa Clause" beard). Sensitive. Concern for other people.

If you have a round beard, you may be covering up your softer side. You may be concerned that if people found out how softhearted you really are, they might take advantage of you, so you

maintain a rough exterior. When you act on your ideas, you put people first and have a genuine concern for others.

(3) *Square beard* ("Abe Lincoln" beard). Focuses on ideas and ideals. Assertive

You feel a need to present a more forceful image in the pursuit of your ideas and ideals. You want to be taken seriously and have your authority respected.

(4) *Pointed beard* ("Prince John" beard). Goal-oriented. Dominating presence.

Your focus is on accomplishing your goals. You let little stand in your way, including other people's feelings. When you act on your ideas, you are usually in control and often are a dominating presence.

### 3. Face architecture

As we move up the kingdoms of life, there are fewer species and more consistent structures that define a common appearance. Within the Felidae family (cats) in the order of Carnivora, we find the golden ratio in the proportion and position of the eyes, nose and mouth. Specifically, the inner corners of the eyes align closely with the golden cut of the distance between the center of the nose and the outside of the eyes. Furthermore, the top of a cat's nose aligns closely with the golden cut of the distance between a cat's pupils and the mouth.

Within the Hominidae (great ape, including humans) family in the Primate order, we often observe a similar relationship between the positions of the eyes, nose, and mouth. In particular, the bottom of the nose is closely aligned with the golden cut of the distance between the pupils and mouth. There is also a clear golden relationship between the position and proportion of the eyes in relation to the width of the face. Not surprisingly, these same proportions are found in human faces.

Golden proportions are also found in the faces of several monkey species, including the juvenile macaque and the chimpanzee.

*Occam's razor* is a philosophical principle popularized by the fourteenth-century friar William of Ockham (1285–1347), stating that among competing hypotheses, the one with the fewest assumptions is the most likely explanation. More than seven hundred years later, it is still a guiding principle for scientists, and we should consider it when examining the scientific explanations for the proportions of the human face and body.

In Leonardo's *Vitruvian Man*, we find evidence of a system of human proportions based on halves, thirds, quarters, sixths, sevenths, eighths, and tenths. However, these same human proportions can be more easily expressed with a series of golden ratios. Which system makes more sense? If you could ask William of Ockham, he might have suggested the simpler,

parsimonious golden ratio theory. When we consider the constant rates of fractal expansion in the proportions of other living organisms, this explanation seems even more likely.

Hold your hand out in front of you and look at the proportions of your index finger. X-ray images show that each bone of your index finger, from its tip to its base at the wrist, is larger than the preceding one based on the Fibonacci numbers 2, 3, 5, and 8. We already know that the ratios of successive Fibonacci numbers approach the golden ratio, so it's not a huge stretch to consider that the ratio of the length of the forearm to the length of the hand is approximately 1.618.

## **THE HUMAN FACE.**

So, what about the human face? Do golden ratios exist there, too? The basic structure of all of our faces is fundamentally the same. That's what makes us look human, and not like a lion or chimpanzee. There's a wide variety within that basic human structure though, so how do we pick a face that would be representative of all humankind? One approach to answering to that question was found in the research done by researchers Lisa DeBruine and Ben Jones.

Using the PsychoMorph software developed by Dr. Bernard Tiddeman, they combined full-color face images of fifty white men and fifty white women between the ages of eighteen and thirty-five to develop an "averaged" face. The researchers also used four images from male and female individuals of white, west Asian, east Asian, and African descent to create "averaged" faces for those ethnic groups, with strikingly similar results. Even though only sixteen individual faces were used, combining these four ethnic composites into a "universal" face yielded a composite face nearly identical in their basic proportions to the averaged male and female faces based on fifty individuals.

After applying a simple PhiMatrix golden ratio grid to the male and female composite faces, we discover that, as with other hominids, the inner corners of each eye are often located at the golden cut of the distance from one side of the face to the other, and the outside corners of the eyes are located at the golden cut of the distance from the inner corners each eye to the side of the face. Measuring the vertical distance from the pupils to the chin reveals another commonly observed golden proportion at the center lip line of the mouth.

Examining the distances between various features more carefully, we discover that there are at least a dozen proportions in this "averaged" human face that reflect the golden ratio, including the proportions and positions of our eyes, eyebrows, mouth, lips, and nose. The height-to-width proportion of the head is a golden rectangle, as is the facial feature area bounded by the hairline, chin, and eyebrows. It's remarkable the degree to which the average human face embodies the same "secret science" of harmonizing golden ratios that has been applied in the arts throughout history.

Some question why the golden ratio would appear at all in the human face. An equally appropriate question is to ask why it would not. We find this ratio and the related Fibonacci series in a variety of life forms. Many who say that the golden ratio does not appear in the human

face simply neglect to use the facial markers defining the proportions where it commonly does appear. Some making this claim have never even taken any measurements at all. Measurements made by recognized experts like Dr. Stephen Marquardt and Dr. Eddy Levin corroborate not only the appearance of the golden ratio in human facial proportions, but also their impact on our perceptions of beauty and attractiveness.

Collin Spears, an independent researcher, used the FaceResearch.org software to develop composite images of men of women from over forty countries. The results were fascinating. Even though there are slight differences in facial shapes, the averaged faces all fit the golden ratio facial grid pattern quite well, illustrating the common appearance of the golden ratio in faces from around the world.

If the golden ratio seems to affect the proportions of our bodies and faces, what about the most fundamental building block of human life, DNA? The abbreviation stands for deoxyribonucleic acid, and this submicroscopic double helix contains all the necessary instructions for the formation and development of every life form, including viruses.

Just how tiny is DNA? Every cell in the human body contains ninety-two strands of DNA (there are twenty-three pairs of chromosomes for a total of forty-six, each of which is made up of two DNA strands). According to the latest estimates, humans contain approximately thirty to forty trillion cells! <sup>6</sup> By necessity, each of these cells is tiny, ranging in size from a few micrometers (millionths of a meter) to roughly 100 micrometers, and the width of the DNA strands contained in each cell nucleus is far smaller, measured in nanometers (billionths of a meter). Estimates place the length of a single 360-degree rotation of DNA at 3.2 nanometers, and the strand's width is estimated at 2.0 nanometers. <sup>7</sup> Those measurements create a ratio of 1.6, which is surprisingly close to the golden ratio.

Analyzing faces recognized for their beauty in past ages with my PhiMatrix software, I found that key facial markers, including the pupils, the edges of the eyes, nose, lip line, chin, and width of the face, were all aligned with the same phi-based grid. On the following pages, we see that the golden ratio is also found very commonly in beautiful models of today across all ethnic groups, illustrating in yet another way that our deepest perceptions of beauty are unchanged, and apply universally to all.

The roots of modern humans can be traced back into deep time, many millions of years ago. The primary evidence comes from fossils - skeletons, skulls, and bone fragments. Scientists have many tools that allow them to extract subtle information from these ancient bones. It's even possible to extract ancient DNA from some specimens. The environmental contexts in which fossils are found, as well as artifacts made by some of our more recent ancestors, also provide useful clues. Modern scientific research in the field and in the laboratory can now provide a rich understanding of how our ancestors lived.

#### **4. Facial areas**

The anatomical basis of facial expression has been described in detail and an anatomically based coding system is available for the objective study of facial action (Facial Action Coding System; Ekman and Friesen, 1978). This system outlines specific actions produced by particular facial muscles. The quality of these actions, however, likely varies with differences in the facial muscles.

Different facial muscles produce different types of movements, and they are most likely heterogeneous in their structure and innervation. Goodmurphy and Ovalle (1999) for example, have shown that muscle fiber types, shapes and sizes in orbicularis oculi, pars palpebralis and corrugator supercilii are significantly different, although these two muscles share the same innervation and embryonic origin and are found in the same region of the face (lower eyelid and lower mid forehead, respectively).

The orbicularis oculi consists of 89% fast twitch fibers, significantly more than the corrugator, implying some difference in the movements produced by the two muscles (Goodmurphy and Ovalle, 1999). Zygomaticus major and minor muscles are similar to the orbicularis oculi in their high proportions of fast twitch fibers, relative to other muscles, indicating a possible specialization for fast movements (Stal, 1987).

There are also individual differences in the structure and differentiation of facial muscles. For example, a differentiated muscle bundle, the risorius, thought to be unique to humans, is highly variable. As many as 22 of 50 specimens in a recent study lacked this muscle (Pessa et al., 1998), and Huber believed that it was absent completely in people of Melanesian ancestry (Huber 1931).

Various furrows and other deformations of the facial skin are produced by variations in facial muscles, and these may contribute to individual differences in expression. In most individuals, the platysma muscle inserts on the skin over the inferior margin of the mandible, but it is occasionally observed inserting in the lateral cheek, causing a vertical depression or furrow to appear there. The zygomaticus major muscle also varies, appearing in a bifid version with two separate insertion points in 17 of 50 of specimens in an anatomical study (Pessa et al., 1998).

The tension caused by the two heads of the muscle at the corner of the mouth is believed to cause a dimple or small depression during the contraction of the muscle in smiling (Pessa et al., 1998). Changes in facial texture, such as dimples that appear with a smile in some individuals, could be of added value in making an expression noticeable, or in providing information about the intensity of the expression.

A study of facial musculature in living humans noted a significant sex difference in the thickness of the zygomaticus major muscle (McAlister et al., 1998). This study also investigated differences in musculature, and found no significant differences in either levator labii superioris or zygomaticus major muscle thickness between Asians and Caucasians (McAlister et al., 1998). In general, there is not a great deal of published information on populational or sex-based variation in facial muscles, and findings of populational differences described above have not been replicated.

The effects of inter-individual anatomical variation, including genetically based variation on facial expression are even less well-known. The muscles themselves are highly variable, with some muscles appearing in some individuals and not in others (Pessa et al., 1998). The presence of anatomical variation raises important questions about the link between facial actions and specific muscles. The relationship between muscle activity and displacement of facial features in expression is individualized to some degree; during posed eyebrow raises, muscle activity is roughly equal to brow displacement squared. Yet there is wide variation for individual brows and left brows rise higher given the same amount of muscle activity (Pennock et al., 1999).

On the other hand, if the action of the face is the same, although there is variation in the underlying muscular structure, the resulting facial expressions may not be meaningfully discriminated. The universal recognition of some basic expressions indicates that facial expressions may not depend on a one-to-one anatomical correspondence in any two facial signalers.

Basic facial expressions are also recognizable in abbreviated form, without the complete set of facial actions described for the prototype expression. Regardless of the degree of variation that can be detected empirically, perceivers may take no notice of these slight variations (Fridlund, 1997; Shor, 1978), or may categorize them similarly, with high agreement (Campbell et al., 1999; Cashdan, 1998). More importantly, it is unknown whether such phenotypic variation in facial expression meets these criteria of “just meaningful difference” (Hauser, 1996) by causing differences in receiver behavior or judgment to slightly variant displays of the same type.

A number of authors (Ekman & Friesen, 1969; Nummenmaa, 1964; Plutchik, 1962; Tomkins & McCarter, 1964) have recently commented on the capacity of the face to show more than one emotion at a given instant. These writers have claimed that the facial muscles are sufficiently complex and independent for discrete muscle patterns in different parts of the face to combine so as to present the elements of two or more emotions, observable even in a still photograph.

Blends may also occur through the very rapid succession in time of two different emotions. Affect blends are thought to occur when:

- (1) the emotion-eliciting circumstance by its very nature elicits more than one feeling, or
- (2) habits (common to a group, or idiosyncratic) link the elicited emotion to another as, for example, when a second emotion is generated in response to the initially inspired one.

Nummenmaa (1964) directly studied this phenomenon by having an actor attempt to show blends in his face. Nummenmaa confirmed that blends could be posed by finding that observers tended to select a blend judgment (happy and angry) more often than a single affect judgment for the stimuli intended to portray blends, but not for the stimuli intended as single-emotion portrayals.

In unpublished research, Ekman and Friesen have found that some of the photographs which past investigators found to yield a bimodal distribution of judgments when observers were

allowed only one judgment choice yielded agreement about the presence of both emotions when observers were allowed to indicate the presence of more than one emotion in the face.

Most investigators have failed to take into account the occurrence of blends in their stimuli. The frequent finding that observers disagree about which of two emotions is present can no longer be interpreted only as evidence of low information in the face, but alternatively as the consequence of presenting a multiple message stimulus and allowing the observer only a single message judgment. In other words, low agreement may be a result of the insensitivity of the dependent variable measure to complex forms of facial behavior.

The phenomenon of blends complicates not only the judgment procedure which must be utilized, but also the measures of facial behavior which need to be taken in studies where such measures are related to eliciting circumstances.

In all but one of the studies, the judgments of observers who saw only part of the face were compared with the judgments of observers who saw either another part of the face or the whole face. A question asked in such studies is whether a specific emotion (happiness) or even all emotions might be better judged from one facial area than from another. Even when successful, such studies do not provide information about the particular facial components relevant to the judgment of a particular emotion, but they do delimit the location of such components.

The most popular division of facial areas has been:

- (1) *the top half of the face* (including the eyes) from
- (2) *the bottom half of the face*.

In a few studies three or four divisions have been made, and Frois-Wittmann was the first to note that anatomical possibilities for independent movements of the facial muscles argue against a simple dichotomy of facial areas.

All of the experiments suffer from severe methodological handicaps. No study had a sufficient sampling of stimulus persons, of behaviors of each person, of eliciting circumstances, or of emotions to justify any conclusions; and each study utilized somewhat different judgment tasks and methods for presenting stimuli. We will not provide any tables summarizing methods or results, because our inspection and reanalysis of the data did not suggest interpretations different from the authors', and considering results does not resolve methodological problems or suggest any common findings.

Two authors discovered evidence for the superiority of the *mouth area* (Ruckmick and Dunlap), two found evidence of no reliable differences between facial areas (Frois-Wittmann and Coleman), and three provided evidences that the importance of facial area depended upon the particular emotion judged (Hanawalt, Nummenmaa and Plutchik).

Ruckmick (1921) performed the first study in which observers saw either the top or bottom half

of the face. Posed facial behavior of one stimulus person was employed, and the judgments of the bottom half of the face were found to be more similar to the judgments of the full face than were judgments of the top half. The data were not reported, so it was not possible to verify these results. Dunlap (1927) reported similar findings.

He sampled facial behavior in laboratory situations similar to those used by Landis. Observers were given four photographs at once, two of which were composites of the top and bottom halves of the other two. The observers' task was to select the original which most resembled each composite. He found that the bottom half of the face dominated in the sense that the composites were usually judged as most similar to the original which shared the same bottom. But, acknowledging that his eliciting circumstances were not completely successful, many of his photographs were of poor quality, and the composites difficult to make, he restricted his conclusion to the importance of the mouth as a clue for the judgment of happiness.

Frois-Wittmann (1930) showed the top of the face to one group of observers and the mouth area, excluding the *nose and cheeks*, to another. The observers were told to choose a single word from a list of 43 emotion terms. The stimuli were posed photographs of himself and drawings made from these photographs. Comparing judgments of the whole face with those of the top or mouth, he concluded that there was "no consistent dominance of either eyes or mouth in the determination of the judged expressions of the face."

Coleman (1949), utilizing quite different eliciting circumstances, came to the same conclusion. The stimuli were motion picture films of two subjects' facial behavior during eight spontaneous situations similar to those employed by Landis and Dunlap, and of the subsequent posed behavior of remembered reactions to the eight situations. Observers saw the top, bottom, and whole face, with the judgment task requiring that they select the correct eliciting circumstance from a list. He concluded, "in general, identifications of the facial expressions of emotion were not made more reliably from either the mouth region or eye region. The identifiability of a specific facial expression of emotion was found to be dependent upon the subject, the facial region viewed, and whether or not the expression was acted or natural."

Hanawalt (1944) compared observers' judgments of emotion from top, bottom, or whole face versions of candid magazine photographs and of Ruckmick's posed faces. His evidence on judge agreement suggested that the area of the face most likely to elicit judgments similar to those for the wholeface depends upon the emotion. For both his candid and posed pictures, the bottom of the face was better judged from the top on happiness, while the top was better judged on surprise, anger and fear; the results on sadness were equivocal. His results, like those of Coleman and Frois-Wittmann, did show marked differences between areas of the face for particular stimuli.

Nummenmaa's (1964) findings partly contradicted Hanawalt's. Nummenmaa had an actor attempt to pose three "pure" emotions (happiness, surprise and anger), and blends of each of the pair combinations. Different groups of observers were shown the forehead, the eyes, the nose, or the mouth and were asked to judge the presence of a single emotion, or any of the

emotion pair blends, or the blend of all three. Because there were only two stimuli for each of the intended emotions, "pure" or blend, of only one actor, the results must be treated with considerable caution. Inspection of the stimuli themselves suggests to us that this actor was rather atypical in not utilizing brow/forehead movements.

High agreement (70%) for happiness was obtained with the eyes and nose but not the mouth or brow. This contradicts Hanawalt's and Dunlap's findings on the mouth, but because they treated the mouth as part of the bottom of the face, while Nummenmaa separated the mouth from the nose, the difference in results is difficult to explain. High agreement (97%) on surprise was found only for the mouth, contradicting Hanawalt's findings for the top half of the face.

Anger was judged with high agreement both on the eyes (67%) and on the mouth (73%). The presence of blends was judged with moderate agreement (between 40-56% with a choice among seven categories) from each area of the face, for at least one of his stimuli. However, often the stimulus judged as a blend when seen in whole-face version was judged as either of the two separate emotions involved in the blend when the separate areas were seen. Nummenmaa interpreted his findings as showing that the eyes were the only region which usually conveyed to the observers the presence of both of the blended emotions. Considerable caution is necessary about Nummenmaa's interpretation of his findings.

As mentioned before, there were only a few stimuli from the poses of only one person, who perhaps displayed a less than usually active brow. Further, the data suggest that for half of the intended blend stimuli, the actor failed in the sense that less than half of the observers judged a blend when they saw the full face. If only those stimuli are considered which did convey a blend to the majority of the observers when the full face was seen, then there is no difference in frequency of blend judgment as a function of the area of the face observed. Nummenmaa's results have importance, however, in suggesting that it may be possible to show that components of facial behavior will differentiate not only among single emotions, but also among particular blends.

The last study to be considered can only be described generally, since Plutchik (1962) provided little information about the stimuli and only summarized the results. Two actors attempted to show all possible movements of the face, without concern for associated emotions. Still photographs presenting only one area of the face were shown to observers, who judged them with Plutchik's set of emotion categories.

Translating his terminology into the categories, the mouth was most important for happiness, anger, and disgust', the eyes for fear and sadness', eyes, mouth, and forehead for surprise. In a parallel experiment, he presented the partial faces to other observers who were asked to compose a face for each emotion from the partial faces. He reports that happiness and sadness have a neutral brow/forehead; surprise, fear, and disgust have raised foreheads, while anger is depicted with a frowning forehead. In regard to the eyes, he did not report the distinctive components, but noted overlaps between particular emotions: surprise and fear, disgust and anger. In regard to the mouth, sadness and anger were said to be most similar.

In sum, these studies of how observers' judgments of emotion might vary with the area of the face observed have yielded contradictory results. Every finding was contradicted by at least two other investigators. We believe this confusion is due to an oversimplified view of how facial components might be related to emotion, based on an unwarranted assumption that different facial areas are independent, and a questionable assumption that there is one movement in one facial area for each emotion.

*The area of the eyes* will often reflect the action of muscles in other areas of the face: brow/forehead, nose, mouth, and cheek/nasolabial fold. This is not always the case; some eye movements do not anatomically cause changes in other areas of the face, and some movements in other areas of the face do not anatomically cause changes in the appearance of the eyes. But strictly on the basis of anatomy, completely apart from habitual linkages between movements in different muscle areas, the facial areas are not as independent as most of the studies have presumed.

Perhaps more important, it seems doubtful that there is only one movement in only one area of the face for each emotion. Instead, we believe that for each emotion there may be a number of alternative movements within each facial area. Some of these alternatives may lead an observer to an emotion-specific judgment, some may permit him to narrow the choices to two or three emotions, with inspection of other areas further narrowing the choice.

The facial areas may differ in terms of the numbers of alternative components within each area which are relevant for each emotion. A further complication is that there are a number of facial movements within each facial area which are completely irrelevant to emotion. The face is not simply a display system for emotion. There are facial gestures (winks, sticking out the tongue, etc.) and instrumental actions (yawning) of the face which are not specific to any one or two emotions. The facial areas probably differ in terms of the ratio of nonaffective movements to affect-specific components which can occur.

*The brows/forehead* probably have a smaller number of nonaffective movements and also of affect-specific components than the lower face. In both spontaneous and posed eliciting circumstances, there is probably considerable variability across persons, and perhaps even within the performance of a particular person. As a consequence, alternative affect-specific components will be shown for the same emotion, and variation in the involvement of components across different facial areas will occur. For example, observers may be able to agree that a face shows anger if the brows are drawn together and lowered and the rest of the face is not active. But they may also judge a face as angry when there is activity in the lower face, such as pressing the lips firmly together, or even when an open square mouth is shown.

If our reasoning is correct, then the confusion in results would be dissipated only by a better definition of separate facial areas, and by sampling a very large number of persons and stimuli. The actual specification of facial components, and the correlation of these with judgments of the whole face, may actually be a shorter research route than studies of judgments

of different facial areas. We shall now turn to consider such studies of facial components, which support some of the hypotheses we have just made about alternative components in each facial area for each emotion.

## 5. Facial Action Units

The face is a multisignal, multimessage response system capable of tremendous flexibility and specificity. It is the site for sensory inputs and the communicative outputs. Faces convey information via four general classes of signals:

(1) *static facial signals*: permanent features of the face like the bony structure and soft tissue masses contributing to facial appearance.

(2) *slow facial signals*: changes in facial appearance over time, wrinkles, texture etc.

(3) *artificial signals*: exogenously determined features, such as eyeglasses, and cosmetics.

(4) *rapid facial signals*: phasic changes on neuromuscular activity leading to visible changes in facial appearance.

All four of these classes contribute to facial recognition, however only the rapid signals convey messages (via emotions) in social context. The neuropsychology of facial expression supports the view that facial movements express emotional states, and that the two cerebral hemispheres are differently involved in control and interpretation of facial expression. Some of the initial work studying the relationship between facial expression and emotion was undertaken by Duchenne and Darwin in the early nineteenth century.

Their work still has a strong influence on the research techniques used to examine expression perception. To date, the majority of studies on facial expressions have examined the perception of posed expressions in static photographs. Most of these studies suggest seven universal categories of expressions that can be discriminated by members of all cultures, both literate and preliterate.

Researchers are now beginning to study facial expressions in spontaneous and dynamic settings to avoid the potential drawbacks of using static expressions and to acquire more realistic samples. The problem, of course, is how to categorize active and spontaneous facial expressions in order to extract information about the underlying emotional states.

To categorize expressions, we need first to determine the expressions from facial movements. Ekman and Friesen have produced a system for describing all visually distinguishable facial movements. The system, called the Facial Action Coding System (FACS), is based on the enumeration of all Action Units (AU) of a face that cause facial movements. As some muscles give rise to more than one action unit, the correspondence between action units and muscle units is

approximate.

Ekman give as an example the frontalis muscle, used for eyebrow raising action – this is separated into two action units depending on whether the inner or outer part of the muscle causes the motion. There are 46 AUs in FACS that account for changes in facial expression and 12 AUs that describe changes in head orientation and gaze. FACS coding is done by individuals trained to categorize facial motion based on anatomy of facial activity, how muscles singly and in combination change the facial appearance. A FACS coder “dissects” an expression, decomposing it into specific AUs that produced the motion. The FACS scoring units are descriptive, involving no inferences about emotions. Using a set of rules, FACS scores can be converted to emotion scores to generate a FACS’ emotion dictionary.

Another method for measuring visible appearance changes in a face is Maximally Discriminative Affect Coding System (MAX) by Izard. MAX’s units are formulated in terms of appearances that are relevant to the eight specific emotions, rather than in terms of individual muscles. All the facial actions that MAX specifies as relevant to particular emotions are also found in FACS emotion dictionary, hence making MAX a subset of the FACS model. This reason has led to more applications of the FACS model (especially outside of psychology) than MAX.

The validity of FACS as an index of facial emotion has been demonstrated in a number of studies. Unfortunately, despite efforts in the development of FACS as a tool for describing facial motion, there has been little exploration of whether AU are the units by which we categorize expressions. Supporters of the FACS model claim in that emotions that are often confused with one another are those that share many action units. However, the literature contains little systematic investigation of comparisons between different bases for description of postures or relative positions of facial features.

Emotion recognition requires delineating the facial patterns that give rise to the judgment of different emotions. It involves the description of information in the face that leads observers to specific judgments of emotion. The studies based on the above methods of “coding” expressions are performed by presenting subjects with photographs of facial expressions and then analyzing the relationship between components of the expressions and judgments made by the observers.

These judgment studies rely on static representations of facial expressions. The use of such stimuli has been heavily criticized since “judgment of facial expression hardly ever takes place on the basis of a face caught in a state similar to that provided by a photograph snapped at 20 milliseconds”. The feature-based descriptions derived from static stimuli ignore several levels of facial information relevant to the judgment of emotions. One of these levels is the rate at which the emotion is expressed. Another level is related to the structural deformation of the surface of the face. Bassili argues that because facial muscles are fixed in certain spatial arrangement, the deformations of the elastic surface of the face to which they give rise during facial expressions may be informative in the recognition of facial expressions.

Bassili conducted experiments by covering faces of actors with black makeup and painting white

spots in random order over it. Faces were divided into upper and lower regions (to correlate with FACS data for upper and lower regions) and recognition studies were conducted. This study showed that in addition to the spatial arrangement of facial features, movement of the surface of the face does serve as a source of information for facial recognition.

This study suggests that the use of such “frozen” action descriptions as proposed by the FACS model are unsatisfactory for a system developed to code movements. The lack of temporal and detailed spatial (both local and global) information is a severe limitation of the FACS model. Additionally, the spatial arrangement of facial features also suggests the importance of understanding the face as a mobile, bumpy surface rather than a static flat pattern.

The goal of the research presented in this thesis is to provide a method for extracting an extended FACS model (FACS+) using a physics-based model of both skin and muscle, driven by visual motion extracted from image sequences, not photographs. Our method is capable of very detailed analysis in time and in space, thus providing the information required to observe coarticulation of expressions and to obtain an improved model of facial motion.

The Facial Action Coding System is used for describing facial expressions and was developed by Ekman and Friesen in 1978. This approach for facial movement is achieved by describing and encoding the most basic facial muscle actions and their effects on facial expression. It independently models all facial motion based on muscle action. These Action Units (AUs) are based on the visible motions of parts of the face. However, for coding of the motions related to these AUs the underlying muscle actions are also accounted for, providing a more detailed description.

Muscles are the real effectors of facial motion, and all facial expressions are formed by actuation of dynamic muscles spread over the whole face. This suggests the need for modeling the face and the facial patterns dynamically. Modeling of the dynamic state evolution is important since visual motion sensing measures the change in facial appearance resulting from expression changes over time. Additionally, as the state measurements and the states evolve over time, they are constrained by the time-varying muscle actuations that are the cause of changes in the facial pattern. For this reason, we model our facial analysis system as a dynamic state-space system with state variables that describe the muscle actuations and facial patterns in space and time. We present the underlying concepts that combine the visual motion estimation and analysis methods discussed with the synthesis and modeling aspects.

## **HEMIFACIAL ASYMMETRIES.**

Assessment of the hemifacial asymmetries - *right and left sides of the face* - in emotional expressions showed that the left side is more emotionally expressive and the left-sided facial movements are more pronounced for negative than positive emotions (Borod, 1988; Nicholls, 2004). Indeed, measuring facial muscle movement during emotional expression demonstrated increased movement of the left in comparison with the right hemiface (Dimberg and Petterson, 2000).

These findings are in line with studies using composite photographs, created by mirror-reversed images of left-left and/or right-right hemiface, showing that the left composite of faces are judged as more emotionally expressive than the right one (Moreno, 1990). Also for posed smiles, produced by actors in the absence of the real emotion stimuli, the left-left composite photographs were judged as more trustworthy than the right ones (Okubo, 2013).

To determine which facial features are selected in visual search for more detailed examination, gaze fixation has been examined during judgment of different emotions. In facial expressions of 2D images people fixate their eyes mainly on the eyes and nose region, followed by the mouth and cheeks (Kret, 2013; Miellet, 2013).

However, these regions seem to contribute differently to the recognition depending on the type of emotion being processed. Happy expressions can be recognized after exposure as brief as 20-40 ms, and the most fixated facial region is the mouth, while other regions make little contribution to this recognition (Nusseck, 2008; Calvo and Nummenmaa, 2009; Du and Martinez, 2013). Longer exposure times of approximately 100-250 ms are needed for recognition of sad and fearful expressions (Eisenbarth and Alpers, 2011; Du and Martinez, 2013).

For recognition of sadness, mainly the eyes, eyebrows, and mouth are looked at Nusseck et al. (2008), Eisenbarth and Alpers (2011). For fear recognition, people mainly fixate the eyes, and the nose region can provide additional information (Schurgin, 2014). Interestingly, visual processing of facial regions correlated with the total number of left hemiface fixations and when the eye movements were reduced by short stimuli presentation time, the left side bias was evident (Butler, 2005; Butler and Harvey, 2006).

Much of this research has used static faces, which do not closely reflect a natural social interaction. Therefore, a dynamic presentation should provide a more similar representation of the natural environment, as well as more visual cues for local and global feature processing when compared to the use of static presentations (Atkinson, 2004; Krumhuber and Manstead, 2009; McLellan, 2010; Harris, 2014). In the case of basic expressions, there is a consensus over a stereotypical pattern of facial activation that can be adequately perceived and recognized as one emotion (Nusseck, 2008; Cristinzio, 2010). This pattern strongly depends on deformation of distinct morphological facial areas (AUs).

Other researches on hemiface differences in expressions involved a qualitative analysis of neutral expressions. This issue was first addressed by Wolff (1933) who constructed facial composite photographs of models instructed to pose a neutral expression. Two composites are created: a left-sided composite and a right-sided composite.

Wolff collected descriptions gives these composite photographs by untrained observers and found the following: a right-hand view produces an effect of liveliness and individuality while the left-hand view produces one of remoteness from life. The right-hand view is described as full of

vitality, sensual, smiling, frank, active, brutal, social, or full of emotion while the left-hand face is described as being in a state of rigor, dead, concentrated, reticent, passive, ethereal, demonic, solitary, and masklike.

Wolff's data suggested that the left hemisphere (primarily controlling expression on the right side of the face) might be dominant in the control of positive emotion while the right hemisphere might have an advantage in the control of negative expressions of emotion.

Wolff also investigated a second aspect of facial asymmetry - the resemblance between left and right composites and the entire face. He found that the right-sided composite was chosen by untrained observers to have a closer resemblance to the whole face (the original photo) than the left-sided composite. He reported "The right-hand half of the face roughly agrees with the impression caused by the original, merely intensifying the latter; the impression of the left-half cannot be traced in the original" (Wolff, 1933).

His findings regarding left-right resemblance to the full face were subsequently replicated by McCurdy (1949) and Lindzey, Prince and Wright (1952). In addition, Lindzey (1952), in a more systematic qualitative assessment of facial expressiveness than Wolff (1933), constructed left and right composites and required 20 observers to rate these photos on Hemisphericity and facial expression 285 seven trait variable:

- (1) *introverted-extroverted*,
- (2) *intelligent-nonintelligent*,
- (3) *popular-unpopular*,
- (4) *aggressive-submissive*,
- (5) *sad-happy*,
- (6) *vital-passive*,
- (7) *nervous-stable*.

For example, happy emotions can be produced by AU such as crow's feet wrinkles around the eyes together with pulling up of the lip corners, known as the Duchenne marker (Ekman and Rosenberg, 1997).

This marker is produced by the contraction of the orbicularis oculi and zygomaticus major muscles and is thought to be a sign of a genuine smile in static emotional faces (Peron and Roy-Charland, 2013). A study that examined the importance of the Duchenne marker in discrimination between spontaneous and deliberate smiles in static and dynamic displays by healthy adults showed that the marker was not the most stable cue for rating smiles and the selection of preferable visual features follows a different pattern (Krumhuber and Manstead, 2009).

The importance of dynamic expressions, such as movie clips, lies in the possibility of seeing the onset, apex, and offset phases of the expressed emotion, thus increasing perceptual sensitivity

(Krumhuber and Kappas, 2005). Furthermore, it seems that both the features and the event's timing play an important role in facial perception and emotional recognition. The observer may ignore the AU markers of negative emotion in the eye regions when there is a smiling mouth. This effect tended to be bigger if the mouth motion came only after a change in the eyes (Iwasaki and Noguchi, 2016).

Thus the evidence shows that the perception of timing in facial movement enhances the facial expression recognition (Atkinson, 2004; Harris, 2014; Weyers, 2016; Yan, 2017). However, not many studies investigated how the left side bias is affected in these dynamic presentations, and the influence of timing. In one study that investigated this question, a stronger left hemiface bias was found in dynamic displays compared to static faces or face-like objects. The preference to explore the right side of the face was most evident in the eye region and it was present even in the mirrored face stimuli (Everdell, 2007).

## 6. Face anatomy

Facial expressions refer to movements of the mimetic musculature of the face. The vast majority of these muscles are innervated by the 7th cranial nerve, emanating from the brainstem between the pons and medulla. The nerve includes a motor root that supplies somatic muscle fibers to the muscles of the face, scalp, and outer ear, enabling the muscle movements that comprise facial expressions.

The facial nerve receives impulses from multiple brain areas. Lower face muscles are represented more fully in the motor cortex than the upper face, allowing for more voluntary and learned control of the lower face; this provides the fine controls of that facial region required for speech articulation.

Voluntary and involuntary expressions are under the control of different neural tracts (Rinn, 1991), with voluntary expressions controlled by impulses from the motor strip through the pyramidal tract, and involuntary expressions controlled by impulses from subcortical areas through the extrapyramidal tract.

The activation of facial movements that have become habitual, although acquired voluntarily, might resemble involuntary activation, but no research on this has been reported. Once innervated, the face is intricate and differentiated, making it one of the most complex signal systems available to humans. It includes over 40 structurally and functionally anatomically independent muscles, each of which can innervate independently of each other. The facial musculature is fairly unique. They include the only somatic muscles in the body attached on one side to bone and the other to skin; thus facial movements are specialized for expression. The face is also one of the few places in the body where some muscles are not attached to any bone at all (orbicularis oculi, the muscle surrounding the eyes; orbicularis oris, the muscle in the lips).

Finally, there isn't a one-to-one correspondence between structure and function in some facial muscles. The corrugator muscle group, for instance, which brings the brows down and together, is comprised of three muscles that usually act together when innervated. (Note it is possible to activate just the muscle that lowers the brows without drawing them together, although it is not common.) Although the frontalis muscle is a single muscle that spans the forehead, the inner and outer parts of this muscle can move independently of each other, allowing for just the inner or outer corners of the eyebrows to rise (or the entire brow if both portions are innervated).

Because this requires separate neural supplies to these two strands of frontalis, from a functional viewpoint this should be regarded as two not one muscle. Thus when decomposing facial behaviors, it is important to understand them from the perspective of functional, not structural anatomy (how the muscles function in a living, not dead, individual). Moreover, each of the functional muscle units of the face can be innervated with different timing, intensity, and laterality characteristics. These characteristics produce the ability to create thousands of different expressions.

Facial behaviors are used for various functions, including:

(1) *Speech illustration*. For instance, people often raise their brows when being inquisitive, and lower their brows when they lower their voices. Conversation regulation. People can cue others that they are either done talking and it's their turn, or not, through their faces (and voice).

(2) *Emblematic Gestures*. These are movements that symbolically give verbal meaning that can be conveyed by words, such as the doubtful look produced by raising the upper lip and pushing the lower lip up.

(3) *Cognition*. People often furrow their brows when concentrating or are perplexed. They also purse their lips when conducting mental searches.

(4) *Talking and eating*. People use the muscles around the mouth area for talking and eating, and especially speech articulation.

(2) *Emotion signaling*. People use the facial muscles to signal their emotional states.

(3) *Expressive regulation*. People also use the facial muscles to regulate their emotion signals.

Facial expression is a mode of close-proximity non-vocal communication used by primates and is produced by mimetic/facial musculature. Arguably, primates make the most-intricate facial displays and have some of the most complex facial musculature of all mammals. Most of the earlier ideas of primate mimetic musculature, involving its function in facial displays and its evolution, were essentially linear "scala natural" models of increasing complexity.

More-recent work has challenged these ideas, suggesting that ecological factors and social systems have played a much larger role in explaining the diversity of structures than previously

believed. The present review synthesizes the evidence from gross muscular, microanatomical, behavioral and neurobiological studies in order to provide a preliminary analysis of the factors responsible for the evolution of primate facial musculature with comparisons to general mammals. In addition, the unique structure, function and evolution of human mimetic musculature are discussed, along with the potential influential roles of human speech and eye gaze.

Facial expression musculature, or mimetic musculature, is present in all vertebrates, being defined as those muscles derived from the 2nd (hyoid) pharyngeal arch and innervated by the seventh cranial nerve, the facial nerve. This musculature is heavily conserved throughout vertebrate classes. In agnaths, the musculature serves primarily feeding respiratory functions by supporting the gill structure and pumping water in and out of the pharynx. In osteichthyes and chondrichthyes, with the development of jaws, this musculature takes on an additional role of elevating and depressing the mandible and hyoid, increasing predatory effectiveness.

With the emergence of terrestrial vertebrates, the need for gill support was reduced and the facial musculature focuses more on feeding functions by increasing the musculature around the pharynx and hyoid bone. In these vertebrate classes with jaws, the musculature is very similar and commonly includes the depressor mandibulae, interhyoideus and hyomandibulae. It is only in the mammalian orders that the facial musculature takes on the additional role of communication. With few exceptions, mammals are the only vertebrates that live in large social groups and use social interactions as part of daily life.

In a shift away from primarily supportive roles for the pharynx, mandible and hyoid (feeding and respiration), mammalian mimetic musculature spreads across the facial region and toward evolutionarily new structures: the external ears (a new auditory function) and vibrissae (a new tactile function). Mammalian mimetic musculature attaches into the thick dermis, mobilizing the facial mask. In addition to serving a new sensory function, movements of the vibrissae and external ears also carry some emotional/intentional content in many species such as the social canids and felids.

One of the most primitive living therian mammals, the opossum (*Didelphis virginiana*), has relatively undifferentiated continuous blocks of musculature that are connected throughout by fascial arrangements. In this nocturnal, mainly carnivorous, asocial mammal, most of the musculature is clustered around the external ear and nares. Relatively little is known, though, about the gross appearance of facial musculature in the other non-primate mammals, especially so for the most social mammals.

However, compelling studies on non-primate mammals have indicated that some social mammals are adept at recognizing individual faces and at extracting emotional information to some levels, as reviewed in Tate et al. Sheep have been shown to be able to discriminate between sheep and human faces, between different breeds of sheep, and between sheep sexes. Interestingly, similar experiments have shown that sheep show an inversion effect as well.

Additionally, there is evidence for specialized temporal cortex that responds preferentially to faces.

The human face contains a large number of muscles and a single facial expression involves the action of several individual muscles (Hjortsjö, 1970), see Figure 1 below for an illustration of the facial muscles. One way to measure facial reactions is to use some kind of coding system. Ekman and Friesen (1976b), who developed the Facial Action Code (FAC), took as their starting point the analysis of the anatomical basis of facial movement. Their method can be used to describe visible facial movements.

Another approach to measuring facial reactions is to use facial electromyography (EMG), which has been found to be a sensitive tool for measuring facial reactions (Dimberg, 1990). EMG can supply unbiased measurements of even small facial muscle reactions that no visual coding technique can capture. In EMG measurements, electrodes are attached to the surface of the skin above the studied facial muscles. Fridlund and Cacioppo (1986) described in detail the technical issues and placement of electrodes in EMG research.

Positive emotional reactions have been found to be related to increased tension in the zygomatic major muscle, which is activated in a smiling reaction. Negative emotional reactions have, on the other hand, been found to relate to increased tension in the corrugator supercilii muscle, which is involved in lowering the brow to form a frown in an angry facial expression. For cognitive induced emotions, Schwartz, Fair, Salt, Mandel, and Klerman (1976) found that subjects reacted with corresponding positive and negative facial muscle activity in the zygomatic major muscle and the corrugator supercilii muscle when imagining happy, angry, and sad situations.

Other studies have found positive and negative facial reactions to external stimuli such as pictures of emotional facial expressions. Several studies have demonstrated positive facial reactions among subjects shown pictures of faces expressing happiness and negative facial reactions among subjects shown pictures of faces expressing anger (Dimberg, 1982, 1990). It has been suggested that humans are biologically predisposed to having different facial reactions to different emotional facial expressions (Buck, 1984; Dimberg, 1997).

Understanding the facial musculature is critical to any discussion of botulinum toxin use in the head and neck. Our understanding of these complex muscles has evolved over the centuries to include functions relating to sphincters for eye protection and oral competence. They also assist in articulation for speech and bolus preparation in the oral cavity. Finally, they must convey our complex emotions and expressions to the world around us. These “muscles of facial expression” are embryologic derivatives of the second pharyngeal arch (hyoid arch) and as such, are all innervated by the nerve of the second arch (cranial nerve 7) known as the facial nerve 2.

The facial nerve follows a circuitous route through the internal auditory canal into the inner ear, middle ear, and mastoid bone to emerge from the skull at the stylomastoid foramen. After exiting the bony canal, the nerve immediately gives off three small branches supplying the postauricular muscles, posterior belly of digastric, and stylohyoid, respectively. The main trunk then enters the

substance of the parotid to divide at the pes anserinus 1.5 cm distal to the foramen. At this point, the nerve divides variably into its five terminal divisions.

## **MUSCLES OF THE UPPER FACE.**

*Frontalis.* This muscle has no bony attachments, as its fibers arise from the scalp occipitofrontalis muscle and aponeurosis and terminate on the skin and dermal tissue of the anterior forehead and brow. The muscle runs in a vertical direction, and as such, contraction will result in horizontal forehead rhytids above the brow level. Corrugator supercilii. This muscle attaches to the orbital rim medially and inserts with the frontalis on the skin more laterally.

Contraction of this muscle produces vertical rhytids known as “frown lines” in the glabella and lower median forehead. Procerus. The procerus muscle draws down the medial brow by attaching to the facial aponeurosis overlying the nasal bones and inserting on the skin of the eyebrow and lower forehead. Contraction of this muscle produces horizontal rhytids over the nasal dorsum, or “glabellar lines”.

*Orbicularis Oculi.* This is a broad, flat muscle that encircles the palpebral fissure. The muscle contains three parts, including the orbital portion, which is the outer im blending over the frontalis to end in the lateral canthus and orbit. The thinner, central preseptal portion arises from the medial palpebral ligament and ends at the lateral palpebral raphe. Finally, the pretarsal part forms the inner ellipse of muscle.

Contraction of this muscle acts as a sphincter for eye closure. Hyperactivity can cause “crow’s feet” rhytids at the lateral orbital margin. It must be remembered that all of the upper face muscles contribute to brow position. This is a critical element in the esthetic appearance of the upper face and must be balanced to achieve an acceptable and pleasing result.

## **MUSCLES OF THE LOWER FACE AND NECK.**

*Depressor Labii Inferioris.* The depressor labii inferioris arises from the mandible and inserts on the skin and mucosa of the lower lip, medial to the mental foramen. Contraction draws the lip downward and everts the lip.

*Depressor Anguli Oris.* This muscle originates at the mental tubercle on the mandible, lateral to the mental foramen, and inserts on the lateral lower lip and modiolus. Contraction causes the angle of the lower lip to depress and open the mouth. Increased use can cause radially oriented lower lip rhytids, known as “marionette lines.”

*Mentalis.* The mentalis arises from the mandible and inserts on the skin of chin, inferior to its origin. Thus, contraction pulls the chin and lip upwards and wrinkles the chin. Overuse may account for a “poppy chin” pincushioning effect on the mentum.

*Platysma.* This broad, sheetlike muscle arises from the fascia over the upper chest and clavicle and extends over the anterolateral neck to meet in the midline at the lower chin margin. The

muscle then extends laterally over the mandible body to attach to the lateral lower lip and subdermal tissue of the lower face. With increasing age, ptosis of the muscle, skin laxity, and thinning of subcutaneous tissues create platysmal banding as a cosmetic issue in some patients.

Varying concentrations of botulinum toxin to the upper lip muscles may be used in balancing upper lip position, such as in patients with facial paralysis and synkinesis, and in softening deep nasolabial rhytids. Balancing the upper and lower lip muscles poses a great challenge for the clinician.

The symmetry must be managed for upper and lower lip both in repose and during a host of complex facial tasks and expressions. Clearly from the number of muscles contributing to this coordinated movement, restoration of symmetry will require titration and modification by even the most experienced clinicians use in patients with facial synkinesis and paralysis has contributed much to improved facial symmetry and has provided a less-invasive option for patients wishing to avoid traditional surgical procedures.

Knowledge of specific muscle insertions and origins can prevent toxin diffusion and minimize unwanted side effects. This is illustrated well around the globe, where diffusion can impair either rectus muscle function, leading to diplopia, or levator muscle function leading to upper lip ptosis.

## **MUSCLES OF THE MIDFACE.**

*Nasalis.* This muscle arises from the maxilla and sends fibers over the nasal dorsum to decussate in the midline at an aponeurosis at the bridge of the nose. The muscle functions to open the nasal aperture and valve during exercise or deep inspiration. Excess contraction can cause “bunny scrunch lines” on the nasal dorsum. Levator Labii Superioris Alaeque Nasi. This muscle arises from the upper part of the frontal process of the maxilla and passes obliquely, lateral to the alar cartilage on the lateral nose to insert on the upper lip, blending with the orbicularis.

Contraction deepens the nasolabial fold, dilates nasal ala, and everts the upper lip. Levator Labii Superioris. This muscle arises from the inferior orbital margin and inserts into the upper lip muscular slip, lateral to the levator labii superioris alaeque nasi. Contraction raises and everts the upper lip and deepens the nasolabial fold.

*Zygomaticus Minor.* The zygomaticus minor arises from the lateral surface of the zygoma and inserts into the muscular slip of the upper lip, just lateral to the levator labii superioris. Contraction will cause elevation of the upper lip, exposing the maxillary teeth, such as in smiling. This muscle also contributes to the nasolabial fold, as contraction of fibers interdigitating with the skin will deepen this fold over time.

*Zygomaticus Major.* This muscle runs from the zygomatic bone to the modiolus, blending with the orbicularis. Contraction draws the angle of the mouth upward, such as in laughing.

*Levator Anguli Oris.* This muscle arises from the canine fossa and inserts on the lateral commissure muscular slip, known as the modiolus. The modiolus is best described as a dense, fibromuscular interface of the muscles contributing to oral commissure movement and function by acting as a scaffold for muscles to pull on. The levator anguli oris also aids in smiling and contributes to the nasolabial fold, again via interdigitating skin fibers, which deepen the fold with repeated use.

*Buccinator.* The buccinator forms the lateral border of the oral cavity between the alveolar ridge of the maxilla and mandible. It originates on the stylomandibular raphe and inserts into the orbicularis sling. This muscle assists in bolus control in chewing and in the oral phase of swallowing.

*Orbicularis Oris.* The orbicularis oris is divided into two parts: the pars peripheralis, which attaches as a circular sling to each commissure at the modiolus, and the pars marginalis, deep to the vermilion border and mucosal lip surface. Contraction functions as the primary oral sphincter. Hyperfunction with time can lead to fine “lipstick lines” around the lips.

The complex and often variable interaction between this finely tuned muscular network allows the staggering array of movements required of this region. Each muscle may play an important and occasionally difficult to predict role in essential functions such as lip position at rest and during movement, control of food and drink, animation of the face (smiling, frowning, etc), and articulatory movements (puckering, whistling, blowing). As such, experience and careful discussion with the patient about possible unwanted effects and the need for future adjustment and titration are absolutely critical before chemodenervation in this region.

## 7. Movements of the face muscles

In studying functions, the head and neck may be divided into fixed and movable regions. For any facial movements, there must be a frame, and that frame is the skull. In the general region concerned with these movements, there is a fixed bone region (the upper part of the face) and a movable bone region (the lower part of the face). The two points of anchorage for facial movements are the anterior part of the cranium and the sternum, and between them are the synergistic groups of muscles that move the skin and bone to alter expression.

Between these anchors, the mandible and hyoid bones are suspended. The two condyles of the mandible articulate with the cranium in the mandibular fossae of the temporal bones. These articulations provide certain leverage advantages as well as control and limitation of mandibular movement.

### **MUSCLES OF THE FIXED BONE REGION.**

The fixed bone region is one of limited movements which, nevertheless, produce important facial expressions. The contraction of the frontalis muscles is responsible for transverse lines of the

forehead and raising the eyebrows, giving the expression of surprise, amazement, doubt, or fear.

The orbicularis oculi surrounds the eye, and its contraction closes the eyelids, pulls down the eyebrows, and raises the cheeks. These latter two contractions produce the crowfeet wrinkles at the corners of the eyes.

The muscle chiefly controlling the movements of the eyebrow is the corrugator. Its action produces the supercilious look of the lifted eyebrow, and the vertical wrinkles of the forehead are the result of the contraction of this muscle.

The muscles of the nose are delicate and feeble. The procerus, originating at the bridge of the nose and inserting into the skin between the eyebrows, contracts to pull the eyebrows downward and produce the wrinkles over the bridge of the nose.

The nasalis draws the wing of the nose toward the septum, compressing the naris. This action is apparent during utterance of certain speech sounds or the crying of an infant. The nostrils are dilated by the action of the two dilatores naris, while the depressor septi nasi draws the septum downward, flattening the philtrum: maxillary lip and narrowing the nostril.

#### **MUSCLES OF THE MOVABLE BONE REGION.**

The movable bone region may be depicted as an inverted pyramid, extending from the sternum to the ears and then to the nose. It may well be called a pyramid of polyfunction since it houses the organs responsible in whole or in part for the functions of breathing, speech, mastication, deglutition, and facial expression. It is the area of greatest concern to the dentist, for within it lies the oral cavity. The dental treatment afforded this cavity obviously affects all of the functions associated with it.

Now, let us consider the mouth not as the initiator of mastication or the finalizer of speech but as the most versatile of the expressive features of man. The mouth reflects a wide range of emotions and varying degrees of these emotions. The lips, sometimes termed the curtains of the mouth, actually become the main actors in facial expression.

Their movements are controlled by the muscular activity affecting the corners of the mouth. The five types of movements which occur in the lip area are: elevation, depression, retraction, compression, and protrusion. Each is the result of the contraction and relaxation of groups of muscles. Consequently, functional consideration of such actions should be in terms of the groups of muscles producing the action rather than in terms of individual muscles.

Elevation of the lips is produced by the zygomaticus, quadratus labii superioris, and caninus muscles. The lips are drawn downward by the triangularis, quadratus labii inferioris, and platysma muscles. Retraction of the lips is produced by the zygomaticus, risorius, platysma, triangularis, and buccinator. The chief compressors of the lips are the orbicularis oris, incisivi labii superioris and inferioris, mentalis, and orbicularis oris.

Translating these group actions into terms of facial expression, the movements accompanying mirth and joy are raising or lifting motions, apparent in the lip area and at the corners of the mouth and eyes. A smile is produced by the elevators of the lips, assisted by the retractors. As these muscles work in varying degrees, they exert a pull on the angles of the mouth, resulting in a relaxing of the continuous fibers of the orbicularis oris, the sphincter control of the mouth. The lips are stretched and drawn against the teeth and tend to part and open the mouth. The degree of opening varies with the individual or the depth of emotion expressed. True laughter occurs when the orbicularis oris is completely and involuntarily inhibited.

The prosthodontic significance of a smile is the recognition that if one part of the intricate complex which produces smiling is out of position, this affects all of the other components which make up the smile. With the elevation of the maxillary lips and the retraction of the corners of the mouth, the lips are drawn against the teeth, and the placing of these teeth becomes extremely important in forming the backdrop for the smile. If the teeth are placed too far labially, the orbicularis oris is stretched and the modioli are positioned too far anteriorly so that they are prevented from moving in the positions they were accustomed to when natural teeth were present. This stretching effect of the lips against the teeth also tends to exert a dislodging force on the maxillary denture.

On the other hand, if there is lack of maxillary lip support and teeth are set on the crest of the ridge, there is a downward cast to the smile which is similar to expressions of grief. This is one of the most pitiful prosthodontic errors which can be perpetrated. Unfortunately, it occurs frequently.

In contrast to the lifting motions associated with expressions of the emotion of joy are the downward movements characteristic of the expressions reflecting sadness, grief, despair, or contempt. The depressor muscles, acting particularly on the corners of the eyes and mouth, incline these features of the face obliquely downward and outward. The rima oris is reduced in size to a narrow, cranially bowed slit with the corners slanting downward. This downward and outward cast appears to occur from a contraction of the depressor muscles of the corners of the mouth.

This is actually somewhat of an optical illusion produced by the following actions which take place:

- (1) the muscles inserted into the modioli become tense, thus fixing the modioli,
- (2) the triangularis muscles contract, drawing the corners of the mouth downward and outward,
- (3) a contracting action of the mentalis muscles thrusts the mandibular lip upward, and
- (4) the inferior part of the orbicularis oris then assists in raising the mandibular lip against the maxillary.

Dentists sometimes place plumpers on maxillary dentures near the reflective borders in an effort to raise the corners of the mouth of patients with a habitual downward cast in these regions. The

erroneous feature of this procedure is that it provides overcompensation in a region which has not suffered a loss. The correction should be made in the replacement of teeth in their proper position and alignment and by a restoration of the denture base where structural loss has occurred.

Increase or decrease in vertical dimension of occlusion can also cause strained maxillomandibular relationships which result in damaging effects on residual ridges and distortion of facial structures.

The movement of the angle of the mouth during laughter was also traced by the movements of the angle of the mouth is a straight line lying almost parallel but slightly medial to the direction of the Zygomaticus. With the teeth closed it seems quite impossible to drag down the corners of the mouth and some other means must be employed by the facial musculature to give this illusion. This will be discussed later.

Finally, a test was made of the effect of opening the mouth upon the level of the modiolus and the angle of the mouth. In this case the position of the angle of the mouth when widely opened was marked by the pencil and the subsequent change and the position of rest noted and marked upon the skin. No alteration in the level of the modiolus was noted until after the "neutral" position had been passed. When the mouth opened more widely than this, the depression of the modiolus and angle of the mouth was found to vary directly as the depth of the rimal aperture, though always it remained approximately midway between the upper and lower sets of teeth.

Also it was noted that the deeper the aperture the less control the modiolar muscles were able to exercise. Next, a study of the anatomy of this region was made to substantiate these experiments and to explain the difficulties to be overcome, when attempting to depress the corners of the mouth whilst the teeth remained closed. To do this it was found necessary to study each muscle in relation to its own group and the grouping of the previous article has been retained. Briefly, this was as follows:

(1) *Muscles acting upon the modiolus*: M. cruciati modioli, M. caninus, M. zygomaticus, M. triangularis, M. transverse modioli, M. orbicularis oris, M. buccinators, Portio modiolaris platysmae.

(2) *Muscles acting upon the lips (the labial tractors)*: M. quadratus labii superioris, M. quadratus labii inferioris portio labialis platysmae.

(3) *Accessory muscles*: M. mentalis, M. incisivus superior, M. incisivus inferior.

Of the cruciati modioli the Zygomaticus differs in two respects from the remainder: it is of much greater length and its action tends to lift the modiolus away from the teeth and gums owing to its origin from the prominent malar bone. The other muscles of this group tend to press the modiolus against the teeth and gums.

These two points of difference give to the movements of this muscle greater flexibility and a wider range. They make the Zygomaticus the commanding influence or sentinel muscle of this middle region of the face, and nothing short of its involuntary complete inhibition would allow unrestricted movement to the other muscles of its group.

A somewhat similar argument holds against the M. incisivus inferior dragging the modiolus caudally. These three muscles, *capita longum et latum* M. triangularis and M. incisivus inferior, are comparatively short muscles and their very shortness would restrict greatly much downward movement. Another muscle able to depress the angle of the mouth is the *portio modiolaris platysmae*. The action of this muscle is to drag the modiolus laterally rather than caudally and the caudal dragging is again negated by forces similar to, if not identical with, those just mentioned for the *caput latum* M. triangularis.

Thus it will be seen that a depression or dragging downwards of the modiolus would be an extremely difficult if not impossible task owing to the anatomical disposition and physiological activities of the muscles acting upon it.

The commanding influence of the M. zygomaticus upon the middle region of the face, and especially upon the position of the modiolus, seems a necessary corollary to the above-mentioned experimental and anatomical facts. Its greater flexibility and its wider range of movement, its lateral lift and the direction of its fibres makes it an efficient protector of the *portio labralis platysmae* from undue pressure by the other modiolar muscles just mentioned. It might be called the sentinel muscle of the middle region of the face.

Thus, ever on the alert, it becomes the medium for the expression of man's commonest emotion, namely, joy and high spirits. A recapitulation of the muscular activities during laughter and the effects caused by them will be given before describing distress, as it affects the lower half of the face. This will afford not merely a foil but a basis on which to build.

*Laughter.* The mouth is widely opened and the teeth separated. The modiolus are drawn cranially and laterally and the upper lip forms a straight or slightly orally convex line stretching from modiolus to modiolus. This exposes the upper teeth as far laterally as the 1st molars and cranially as far as the gingiva or even this may be exposed. The distance between the nasal septum and the "red" margin of the upper lip is very much decreased, the naso-labial fold is deepened, concave oralwards, extended caudal to the rima oris and its cranial portion is more horizontal in direction.

The lower lip is bowed downwards with a very marked oral concavity, but the lower teeth are only slightly exposed, or they may not be seen. This marked semilunar outline of the lower lip is due to three causes:

- (1) the cranial position of the modiolus;
- (2) the caudal position of the mandible;
- (3) the activities of the inferior labial tractors.

The muscular activities which cause laughter are the Modiolar muscles, M. zygomaticus is dominant and the caput longum M. triangularis is resistant. The superior and inferior labial tractors are dominant the M. orbicularis oris is completely and involuntarily inhibited. It is this inhibition which is the basis of true laughter.

*Distress.* The examination of the antitheses of laughter has many obstacles, the chief of which is the difficulty of its voluntary reproduction. Even had this difficulty apparently been overcome may not the result have been similar in its dissimilarity to "forced laughter".

The next difficulty is the answer to the question: How is distress expressed? That facial expression of itself is not sufficient. Is easily understood if one peruses such illustrations as may be seen in Dante's Divine Comedies, whether by Gustave Dore, Botticelli or by Blake, when it will be realised how little the artist relies upon the facial expression and how greatly upon the expression of the body musculature. The headless body writhes and nauseates us with its pain and often with the face concealed the attitude of body reveals to us the attitude of mind.

## 8. Facial expressions

It has been suggested that some emotions are primary and associated with distinct facial expressions. Ekman (1973) proposed that *fear, anger, sadness, happiness, disgust* and *surprise* are basic emotions and associated with distinct facial expressions. Discrete facial expressions have been demonstrated to correspond to subjective emotional experience.

Darwin (1872/1965) proposed that human facial expressions are evolved phenomena that serve important communicative functions. Darwin emphasized the similarity between emotional expressions in humans and animals. In Darwin's view, emotional expressions are remnants of more complete behavioral actions.

*Anger* - nostrils raised, mouth compressed, furrowed brow, eyes wide open, head erect, (chest expanded, arms rigid by sides, stamp ground, body sways backwards/forwards, tremble).

*Contempt* - lip protrusion, nose wrinkle, partial closure of eyelids, turn away eyes, upper lip raised, (snort, body expiration, expiration).

*Disgust* - lower lip turned down, upper lip raised, expiration, mouth open, spitting, blowing out protruding lips, clear throat sound, lower lip, tongue protruded.

*Fear* - eyes open, mouth open, lips retracted, eye brows raised, (crouch, pale, perspiration, hair stands on end, muscles shiver, yawn, tremble).

*Happiness* - eyes sparkle, skin under eyes wrinkled, mouth drawn back at corners.

*Joy* - zygomatic, orbicularis, upper lip raised, naso labial fold formed, (muscle tremble,

purposeless movements, laughter, clapping hands, jumping, dancing about, stamping, chuckle/giggle).

*Sadness* - corner mouth depressed, inner corner eyebrows raised (low spirits).

*Surprise* - eyebrows raised, mouth open, eyes open, lips protruded, (expiration, blowing/hissing, open hands high above head, palms toward person with straightened fingers, arms backwards).

The expression of anger, for example, is a remnant of an attacking behavior with furrowed brow and displayed teeth. In support of this evolutionary view of facial expressions, only 36 hours after birth, human neonates have been found to be able to imitate facial expressions (Field, Woodson, Greenberg, & Cohen, 1982).

Other studies of nonhuman primates provide additional support for this evolutionary proposition (Andrew, 1963).

Moreover, cross-cultural studies have found supporting evidence that the facial expressions for anger, fear, enjoyment, sadness and disgust are distinct and universal (Ekman, 1992). On the other hand, a critical review of Russell (1994) suggested that posed facial expressions, forced-choice response format and within-subjects design may have contributed to the results and it was concluded that facial expressions and emotion labels probably are related but that the relation to some degree vary with culture.

Tomkins (1963) suggested that emotional facial expressions are generated by emotion-specific, evolution-based “affect programs”; in support of this notion, it has been proposed that genetically coded emotional reaction systems are “wired” into the nervous system (Panksepp, 2007).

Furthermore, it has been suggested that humans are biologically disposed not only to sending emotional messages through the facial expression, but also to receiving them (Dimberg, 1997). Dimberg, Thunberg and Elmehed (2000) demonstrated that this ability to interpret and respond to emotional facial expressions functions even at a subconscious level. Unconscious exposure to happy faces evoked distinct facial reactions in the zygomatic major muscle involved in smiling, while angry faces evoked distinct reactions in the corrugator supercilii muscle involved in angry frowning expressions. In accordance with this, it has been demonstrated that exposure to distinct emotional facial expressions results in different activation patterns in the brain (Blair, Morris, Frith, Perrett & Dolan, 1999; Breiter et al., 1996; Whalen et al., 1998). Based on these findings, Matsumoto et al. (2008) proposed that this indicates that humans are equipped with distinct emotion perception systems.

In addition to functioning as a communicative channel to the environment, facial expressions are thought to function as a feedback system *within* the individual. The facial feedback hypothesis suggests that feedback from the facial muscles modulates ongoing emotional experience and, according to a strong version of the hypothesis, even initiates emotional reactions. For a more

thorough discussion, see the chapter “Facial feedback” later in the present thesis.

Positive emotional reactions have been found to be related to increased tension in the zygomatic major muscle, which is activated in a smiling reaction. Negative emotional reactions have, on the other hand, been found to relate to increased tension in the corrugator supercillii muscle, which is involved in lowering the brow to form a frown in an angry facial expression.

For cognitive induced emotions, Schwartz, Fair, Salt, Mandel and Klerman (1976) found that subjects reacted with corresponding positive and negative facial muscle activity in the zygomatic major muscle and the corrugator supercillii muscle when imagining happy, angry, and sad situations. Other studies have found positive and negative facial reactions to external stimuli such as pictures of emotional facial expressions.

Several studies have demonstrated positive facial reactions among subjects shown pictures of faces expressing happiness and negative facial reactions among subjects shown pictures of faces expressing anger (Dimberg, 1982, 1990). It has been suggested that humans are biologically predisposed to having different facial reactions to different emotional facial expressions (Buck, 1984; Dimberg, 1997).

There is no single unifying definition or theory of emotion. Nevertheless, several characteristics of an emotional reaction are frequently mentioned. In the three-component model of emotion, an emotional reaction consists of three parts: physiological, expressive, and conscious experience (Dimberg, 1997; Lang, 1968; Myers, 2001; Öhman, 1986).

According to the James–Lange somatic theory, an eliciting stimulus causes physiological reactions, which in turn send feedback to the brain, resulting in a conscious experience of emotion (James, 1884). According to this theory, the physiological reactions precede the conscious experience of emotion.

The Cannon-Bard theory suggests that an eliciting stimulus simultaneously evokes a physiological reaction and a conscious experience of emotion (Cannon, 1927; Bard, 1928).

The two-factor theory of emotion (Schachter, 1966), a cognitive–affective theory, claims that arousal level indicates our strength of feeling and that the situation helps us label the emotion in question. The two-factor theory and the James–Lange somatic theory both assume that physiological arousal precedes emotional experience.

Zajonc (1980) proposed that some emotional reactions precede cognition. In support of this, it has been suggested that the thalamus in the brain can send sensory information along two independent pathways, one to the amygdala and the other to the cerebral cortex (LeDoux, 2000; LeDoux & Phelps, 2000). This design makes it possible to react quickly to relevant emotional stimuli via the amygdala pathway, before the more time-consuming cognitive interpretation is finished in the cerebral cortex. It has been proposed that it is possible that not all emotional reactions reach consciousness (LeDoux, 2000; LeDoux & Phelps, 2000). Lazarus (1982)

emphasized that emotional response requires appraisal, but that such appraisal need not be conscious.

Emotions are commonly described as comprising several dimensions or a set of basic emotions. In the dimensional view, some authors have suggested two dimensions (Russell & Carrol, 1999; Watson, Wiese, Vaida, & Tellgren, 1999), one dimension being positive versus negative emotion and the other high versus low arousal. High arousal and positive valence means having positive energy, such as when excited. High arousal and negative valence could be exemplified by being fearful. Low arousal and positive valence could be described as a calm mental condition and, finally, low arousal and negative valence could be exemplified by sadness.

Fontaine, Scherer, Roesch, and Ellsworth (2007) proposed a fourdimensional model: evaluation-pleasantness, potency-control, activationarousal, and unpredictability. This model can resolve the differences between more emotions than can the model with only two dimensions. Izard (1992) stressed that basic emotions have unique feeling-motivating states and expressions that broad dimensions, such as high versus low arousal and positive versus negative valence, cannot capture. The basic emotions are supposed to have a biological basis (Darwin, 1872/1965; Ekman, 1973; Izard, 1991; Plutchik,1991). Tomkins (1962) has further suggested that biologically given affect programs control emotional reactions, and he emphasized that the facial muscles function as a feedback system for emotional experience.

As mentioned above, some authors have preferred to describe emotions in terms of a number of basic emotions with discrete characteristics. In line with this and in opposition to the dimensional view, Izard (1992) stressed that basic emotions have unique feeling-motivating states and expressions that broad dimensions, such as high versus low arousal and positive versus negative valence, cannot capture. The basic emotions are supposed to have a biological basis (Darwin, 1872/1965; Ekman, 1973; Izard, 1991; Plutchik, 1991). Tomkins (1962) has further suggested that biologically given affect programs control emotional reactions, and he emphasized that the facial muscles function as a feedback system for emotional experience. In further support of the theory of basic emotions, it has been suggested that genetically coded emotional reaction systems are “wired” into the nervous system (Panksepp, 2007).

There has been discussion of what emotions should be considered basic. Ekman (1992) suggested that happiness, sadness, fear, disgust, surprise, and anger are basic emotions, and raised the possibility that contempt, shame, guilt, embarrassment, and awe may also be found to be basic emotions. Plutchik (1991) argued that anger, fear, joy, disgust, anticipation, surprise, sorrow, and acceptance are basic emotions. In addition, Plutchik (2002) suggested that combinations of basic emotions can form certain mixed emotional states; for example, the basic emotions disgust and anger could combine to form the emotional states hatred or hostility.

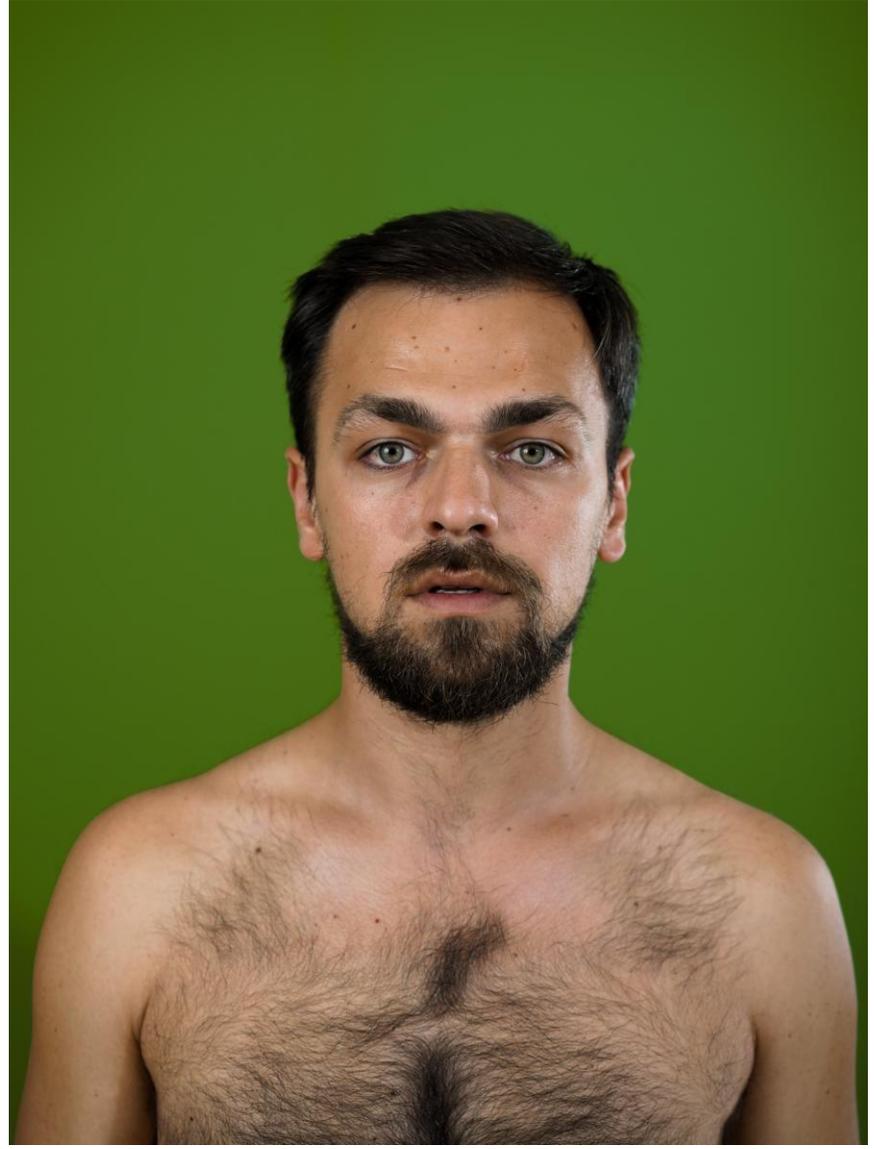
Furthermore, distinct patterns in the autonomic nervous system (ANS) have been found for the negative emotions fear, anger, and disgust (Ekman, Levenson & Friesen, 1983; Levenson, 1992; Levenson, Ekman & Friesen, 1990). On the other hand, no distinct ANS pattern has been reported for positive emotions such as surprise or enjoyment. Ekman (1992) argued that there is no instant

need for motor activity, with survival value, connected to positive emotions, in contrast to negative emotions, which are thought to be connected to responses such as flight or fight.

This may explain why no distinct ANS patterns have evolved for positive emotions. There has been some criticism of the findings of emotion specific ANS patterns. For instance, the results from a meta-analysis by Cacioppo, Berntson, Larsen, Poehlmann and Ito (2000) did not support some of the emotion specific reaction patterns in the autonomic nervous system regarding fear reported in Levenson (1992). For a review of the psychophysiology of emotion, see Larsen, Berntson, Poehlmann, Ito and Cacioppo (2008).

In order to derive facial expression, we have selected 100 emotional samples among the predefined emotional words from circumplex model and semantic space of emotion.

## 1. BORED



Boredom is a secondary emotion and is the exaggerated form of disgust (the primary emotion). Its easy form is "sila". It is an oppressive emotion, which feels like a slight moral depression caused by loneliness, lack of occupation or an unattractive, monotonous occupation.

Boredom is divided into 5 types:

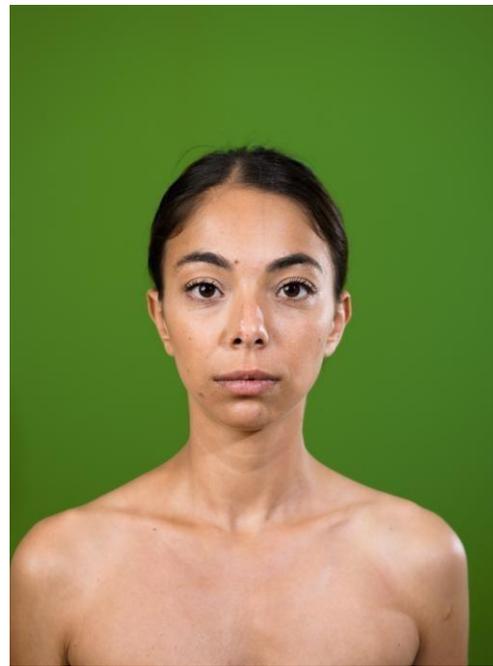
1) Indifferent boredom. Indifferent boredom is characterized by a state of general calmness and withdrawal. The person has no agitated behavior, nor is he looking for activities to do.

2) Calibrating boredom. Calibrating boredom is felt when we are available to do activities other than those we are undertaking at that moment, but we are not looking for something else to do. We don't have a restless demeanor, but we feel the slight discomfort of boredom.

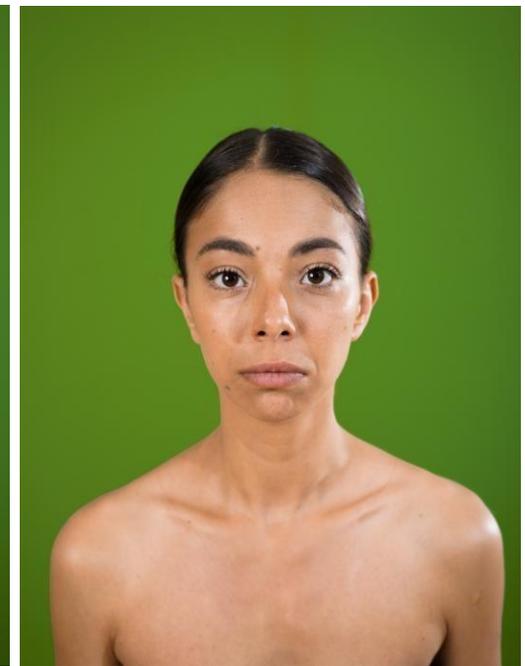
3) Activating boredom. Activating boredom is characterized by a state of restlessness and an active search for activities to reduce boredom.

4) Reactive boredom. Reactive boredom is a type of boredom felt more intensely than active boredom. The level of physical agitation is increased. The person actively seeks and has attempts to engage in various activities.

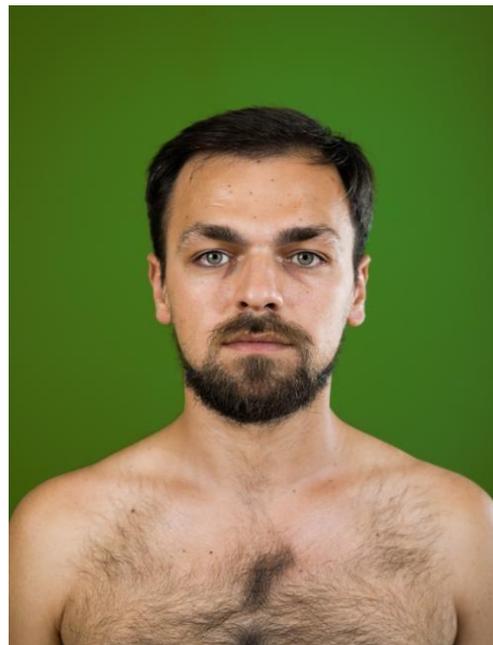
5) Apathetic boredom. Apathetic boredom has a high degree of negative affectivity and a low degree of physical activation, different from the 4 previously mentioned where, gradually negative affectivity and physical agitation increase.



**NEUTRAL**



**BORED**



**NEUTRAL**



**BORED**

## 2. CLUMSY

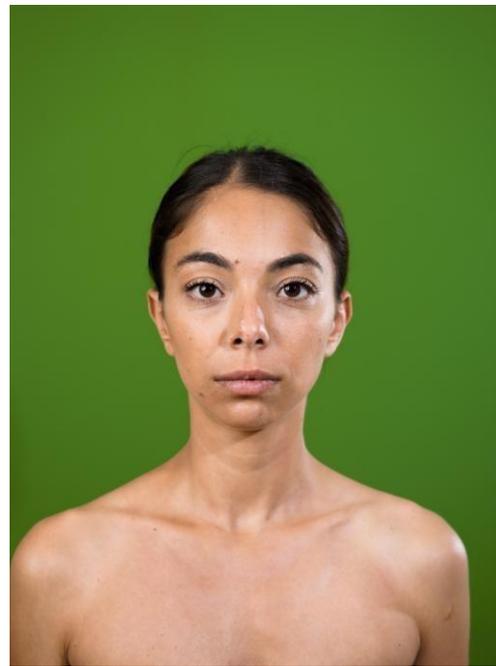


A person feels clumsy when he lacks some competence in an action. He does not have ability, skill, security in solving some situations, so it will lead to not accomplishing something. Clumsiness or clumsiness results from difficulty coordinating our movements correctly. Examples of clumsiness are when a person spills liquids on himself or drops things from his hand, or performs activities using his right hand when he is left-handed. Another example of clumsiness is when we hold a child in our arms and we have the impression that we are incompetent, that the gesture is not a natural one, but felt very clumsy.

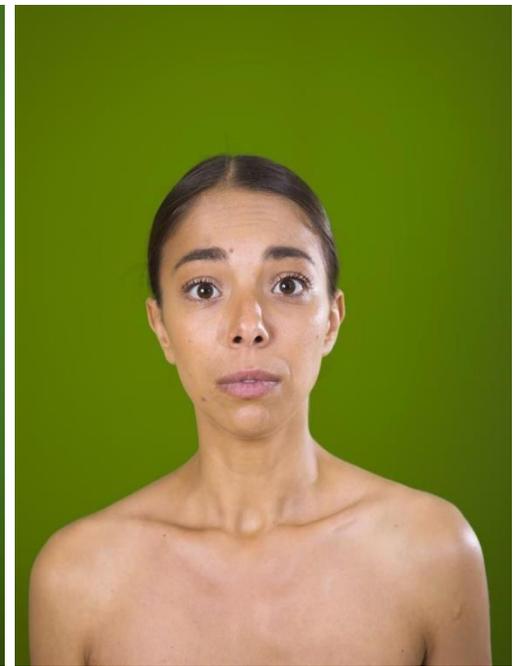
Clumsiness is the result of poor psychomotor skills – beginning in childhood, when we explore everything in our field of vision and at the level of our hands or feet, practicing our dexterity. Can we therefore say that all children who are constantly challenged by the environment will later be very skilled?

Emotions present throughout education can also hinder skill acquisition. Thus, some parents impatient to see their child cleaning an apple, startle him with their aggressive reaction and encourage clumsy learning. This is because the child, always eager to please his parents and disturbed by their pressure, will no longer have the patience necessary for learning in stages. Wanting to reach the final result as quickly as possible, clumsiness sets in.

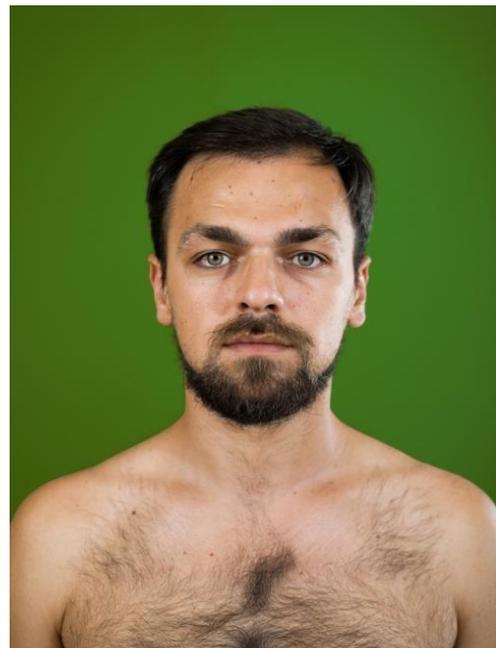
In adulthood, it is possible that the image of the aggressive parent (or the feeling experienced then) returns, for example, at the time of using the knife. Also, the child's behavior may generalize and expand in the future.



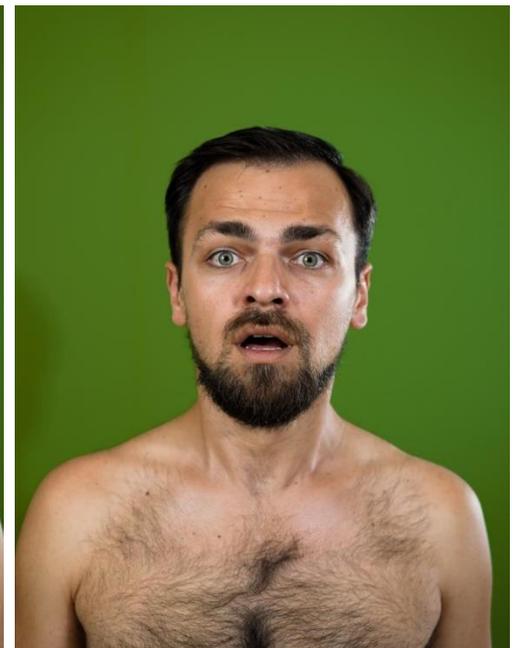
**NEUTRAL**



**CLUMSY**

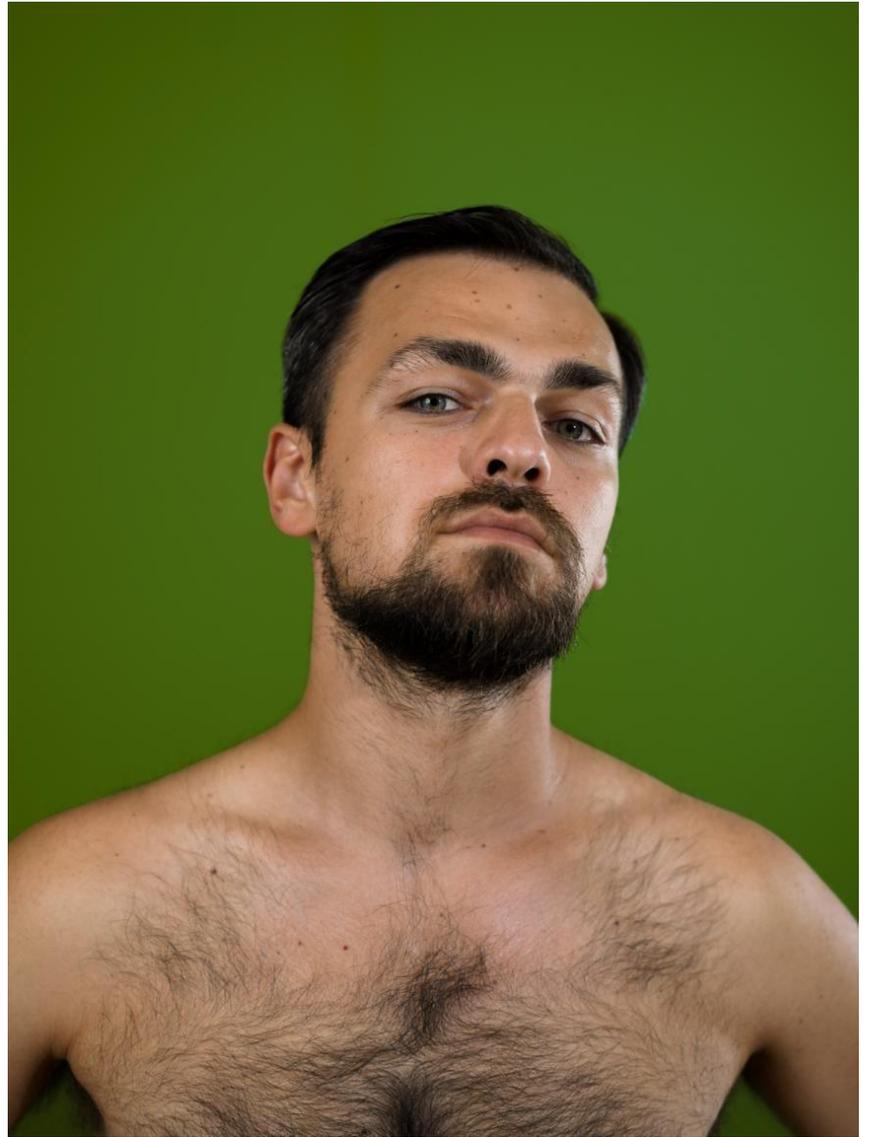
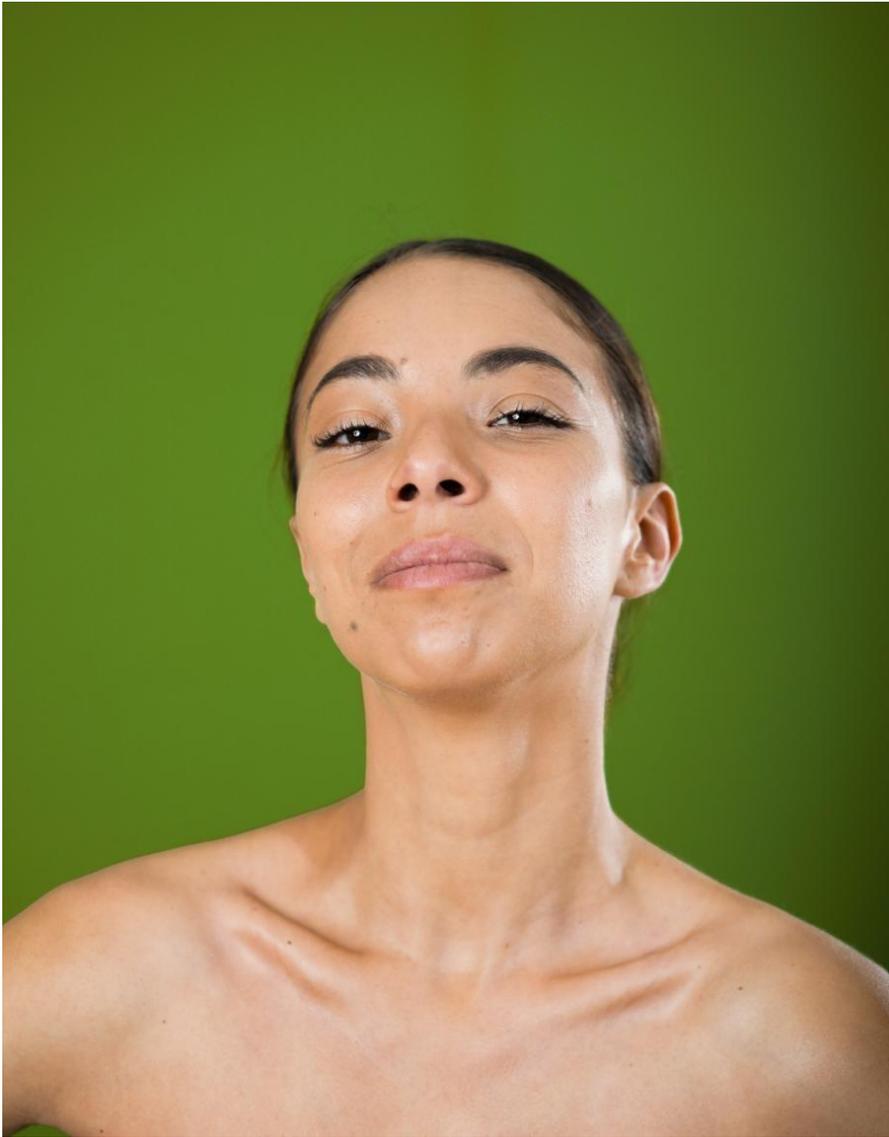


**NEUTRAL**



**CLUMSY**

### 3. CONFIDENT



Trust is a primary emotion. A confident person is a person who has confidence, a sense of security in someone's honesty, good faith, or sincerity. Trust is the point where you know you can rely on yourself, a person, or an external action without thinking about the consequences. A low level of trust leads us to the emotion called "acceptance", and an exaggerated level of trust leads us to "admiration". Both are secondary emotions, derived from trust.

Self-confidence is the inner feeling of power to fulfill one's own desires. This feeling allows us to act.

And it means knowing that you deserve happiness. Having this basic trust is a matter of survival. Recognizing what fuels self-esteem and what damages it is one of the challenges that must be faced in order to live consciously, lucidly. Because reality is sometimes different from what we think."

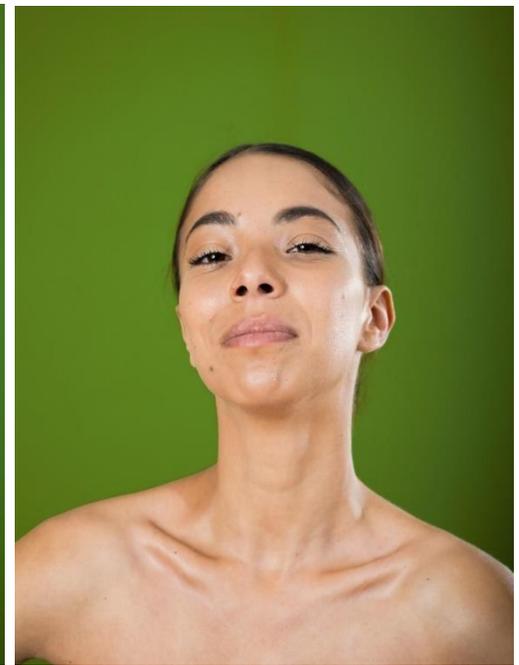
Self-confidence is about recognizing who we are and who we are not, about being honest about what we discover.

When you do your best to see reality as it is, self-esteem grows almost naturally. Conversely, if out of fear or your own will you run from reality, you sabotage your self-confidence. A human being cannot count on himself unless, over a longer period of time, he faces his own realities, the most diverse challenges of his unique and unrepeatable life.

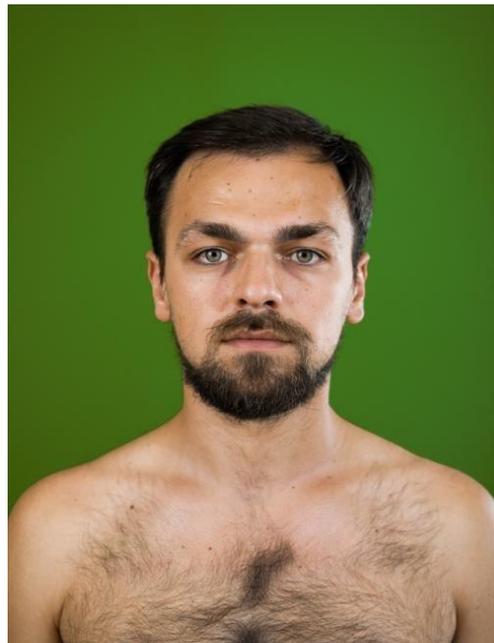
Self-confidence is about what we make of ourselves.



**NEUTRAL**



**CONFIDENT**

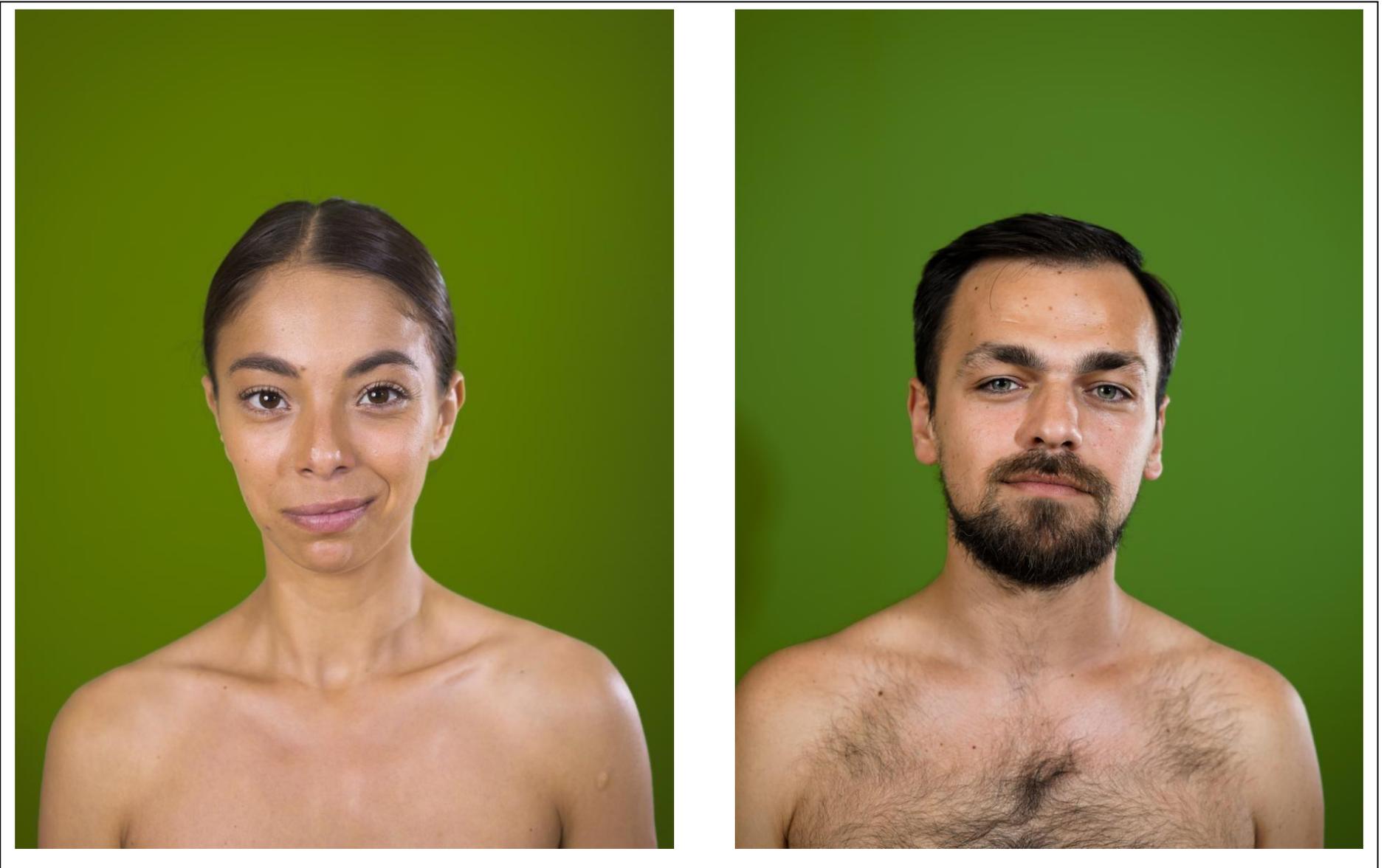


**NEUTRAL**



**CONFIDENT**

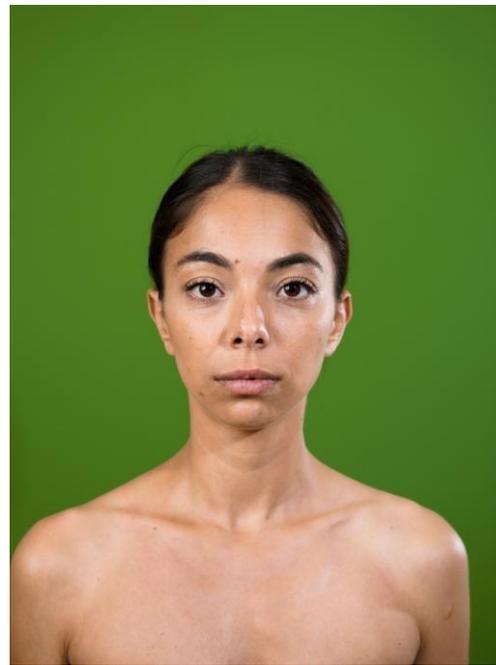
## 4. CONTEMPT



Contempt is a feeling of disregard for someone or something; lack of consideration or respect for someone or something. Robert C. Solomon (American philosopher) places contempt on the same level as resentment and anger and argues that the differences between the three are as follows: resentment is anger directed at an individual of higher status, anger is directed at an individual of equal status, and contempt is anger directed at an individual of lower status.

Ekman and Friesen (1986) identified a particular facial expression that observers from ten different cultures, both Western and non-Western, agreed to signify contempt. In this study, citizens of West Sumatra, Indonesia, were given photographs of American, Japanese, and Indonesian individuals. Their ability to categorize certain facial expressions as contempt different from emotions such as anger, disgust, happiness, sadness, fear or surprise showed that, regardless of culture, contempt is universally understood (with a level of agreement equivalent to 75%). "An expression in which the corners of the lips are pursed and lowered slightly on one side of the face (or much more on one side than the other) signals contempt." This study showed that contempt, as well as the facial expression of contempt, can be encountered within Western and non-Western populations when contrasted with other primary emotions.

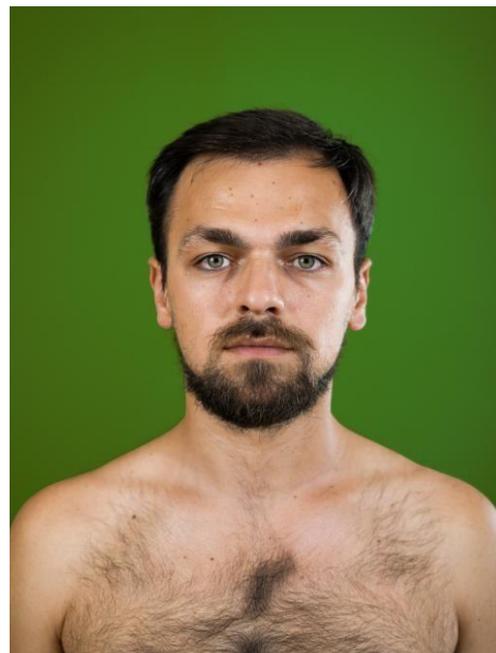
Prolonged contempt damages the psyche and affects physical health. The University of Pennsylvania conducted research in several schools, during which several facts were found. The first concerns the effect of contempt on self-esteem. All students who were victims of humiliation and contempt showed a negative attitude towards themselves.



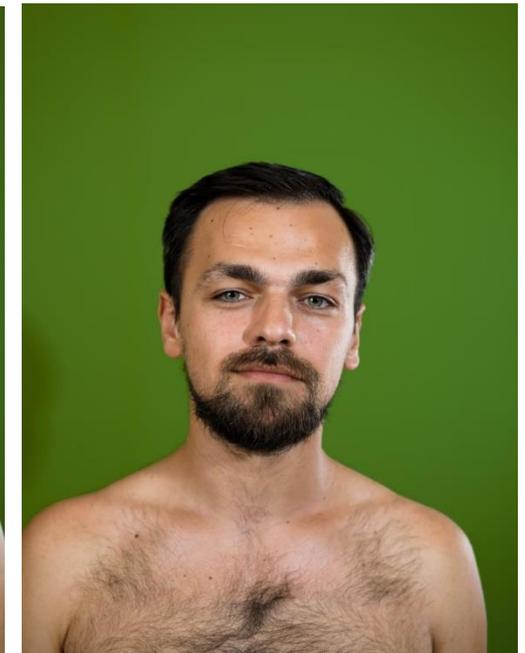
**NEUTRAL**



**CONTEMPT**

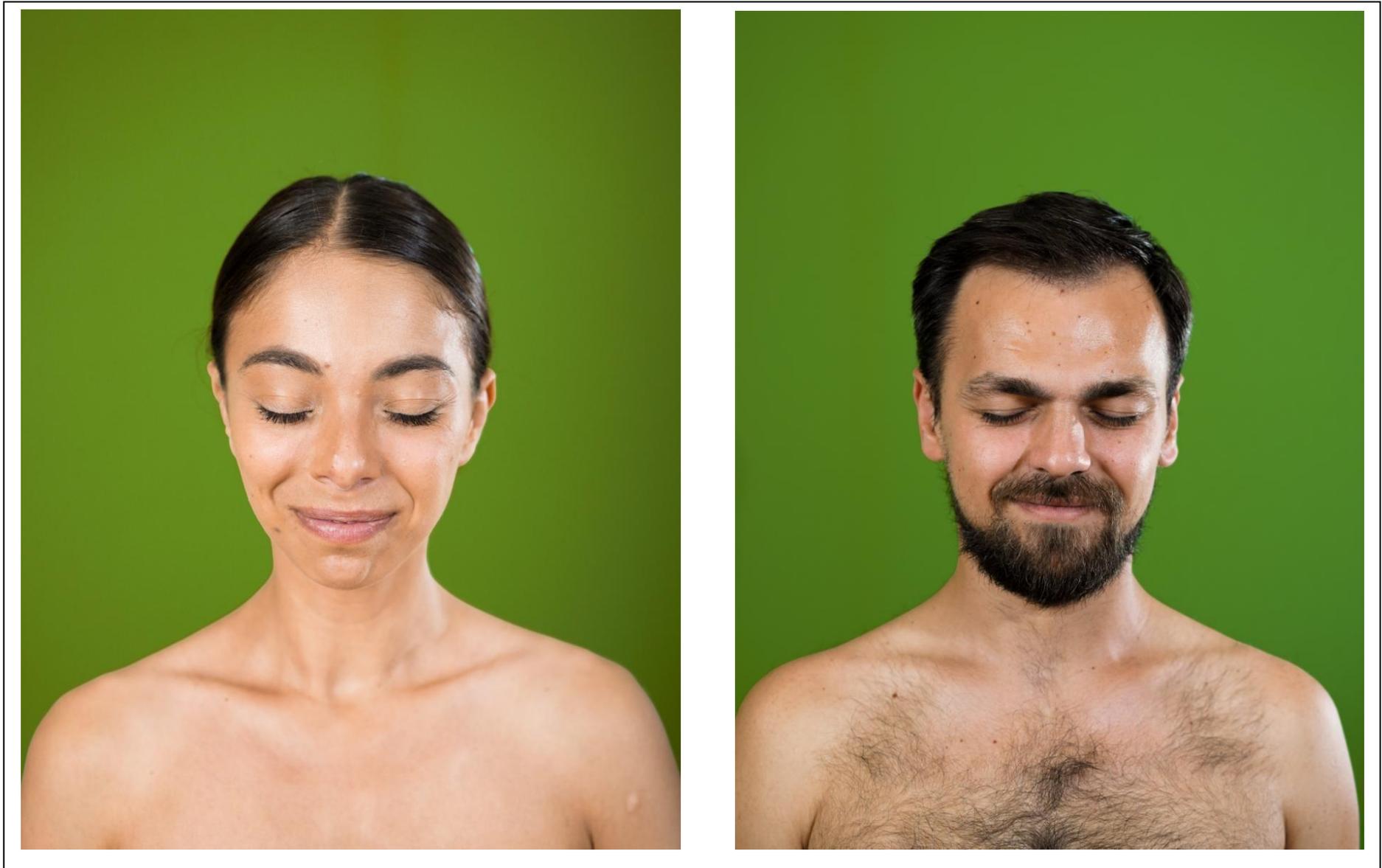


**NEUTRAL**



**CONTEMPT**

## 5. DELIGHTED



A delighted person is a person full of joy, contentment, enthusiasm; enchanted, bewitched, fascinated.

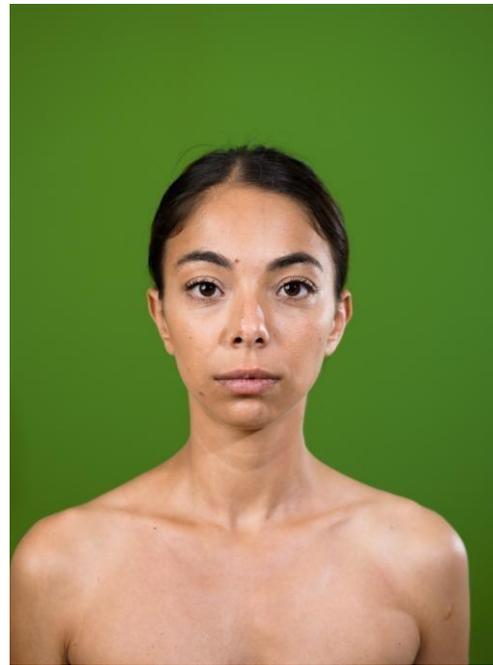
This feeling transforms situations and interpersonal relationships. It converts hostility into kindness and reshapes kindness into affinity. It transforms skeptics and cynics into confident individuals and undecided individuals into loyal individuals.

The feeling of delight can occur during a business transaction, a difficult negotiation between competing companies, or even when you update your Facebook status. Delight is a more powerful tool than traditional persuasion and manipulation techniques, and even more effective than the classic marketing techniques that everyone abuses.

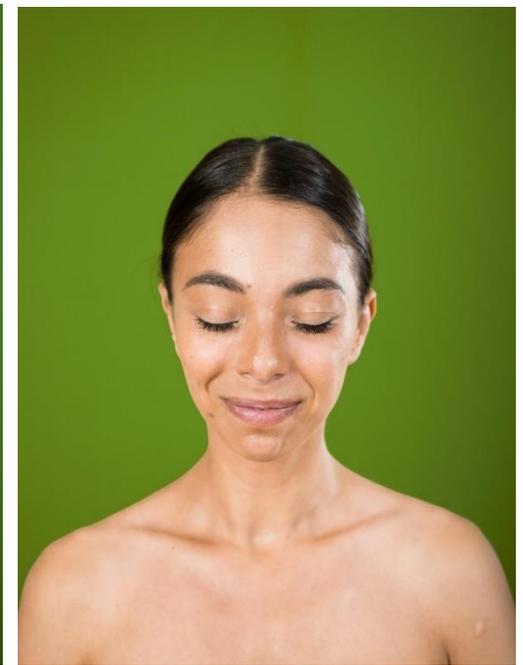
Guy Kawasaki (Marketing Specialist) describes it in his book *Enchantment* as follows: "I define delight as the process by which people delight in a product, service, organization or idea."

You can use the adjective delighted to describe being really pleased or happy with something. Maybe you would be "stoked" about getting backstage passes to a concert, while someone getting backstage passes to the symphony would be delighted.

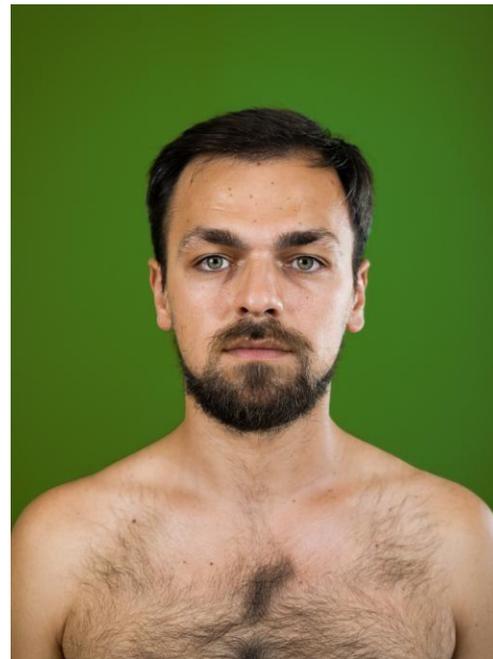
Delighted might be a slightly old-fashioned way to show excitement or enthusiasm, or maybe it's a more refined way to express how you feel. Saying, "Oh, I'm so delighted you decided to come!" was once a common way to show how happy you were to see a friend. More contemporary uses might be sarcastic, like when you hand your mom an armload of stinky gym clothes without a "Please" and she says "I'll be delighted to wash these for you!"



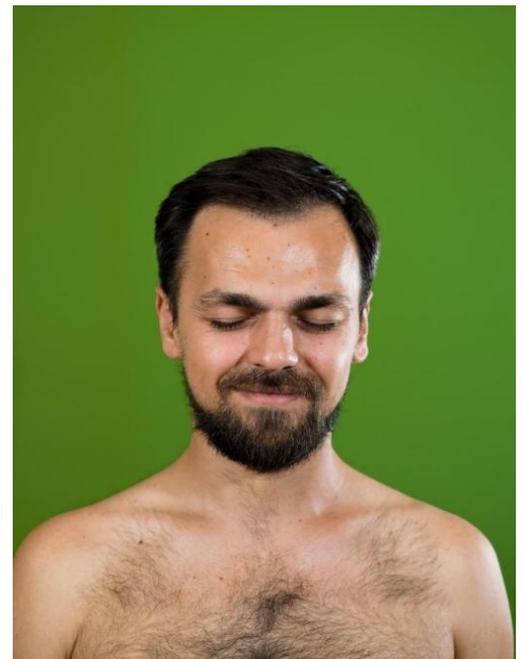
**NEUTRAL**



**DELIGHTED**



**NEUTRAL**



**DELIGHTED**

6. DISILLUSIONED



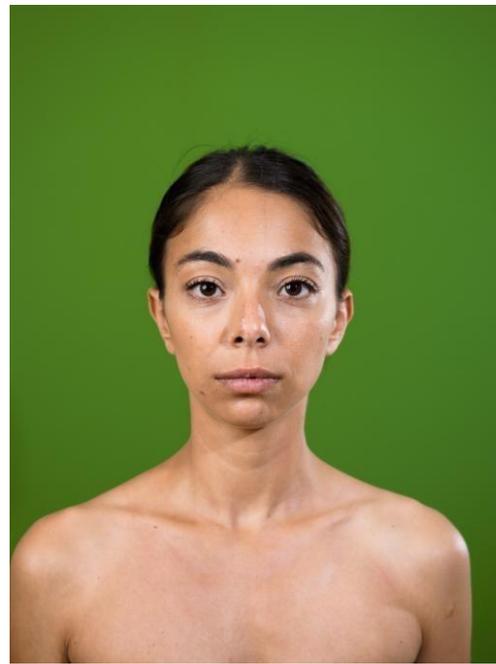
Disillusionment is the emotion we feel when our expectations are disappointed. To cause someone to be disillusioned, to make (someone) lose their hopes, confidence, illusions; to disappoint, to disappoint.

Disillusionment comes from the fact that some people think they can do more than they actually can. We try to convince others that we are super heroes, when in reality we are just people like everyone else. Disillusionment can only help you if you block the thoughts that hold you back and enjoy your real abilities.

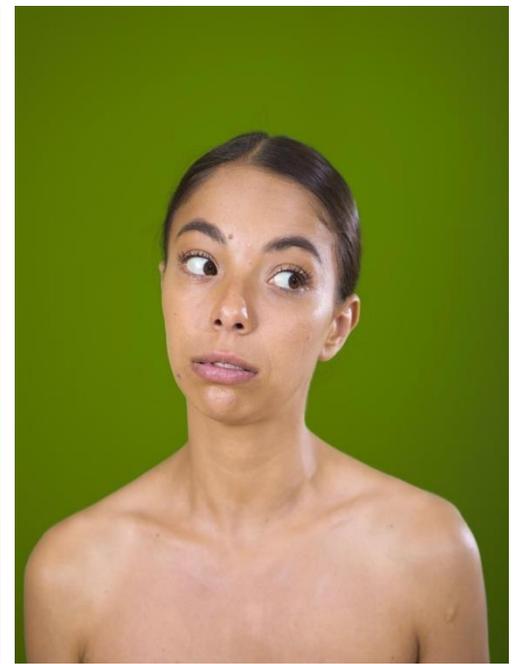
Having lost faith or trust in something: disappointed that something is not as good, valuable, true, etc., as it had seemed.

One can only be disillusioned if once one lived within illusions- and so disillusionment is always after the fact as illusions come into view even as they are crumbling within. With a crisis of disillusionment-or existential disillusionment - one falls away from a coherence of meaning, revealing a system of intertwined fundamental illusions that had always been lived within and implicit, part of one's being-in-the-world, and that now seem broken, strange, and uncanny.

This way of being that one recognizes only retrospectively may be called "illusionment," a state of being apprehended in the very process of its falling apart. That is, prior to disillusionment, there may not have been an illusion as such; rather, there was some overall effective-enough, taken-for-granted coherence, an experience of world and being that now comes into view and seems broken precisely because it no longer holds together.



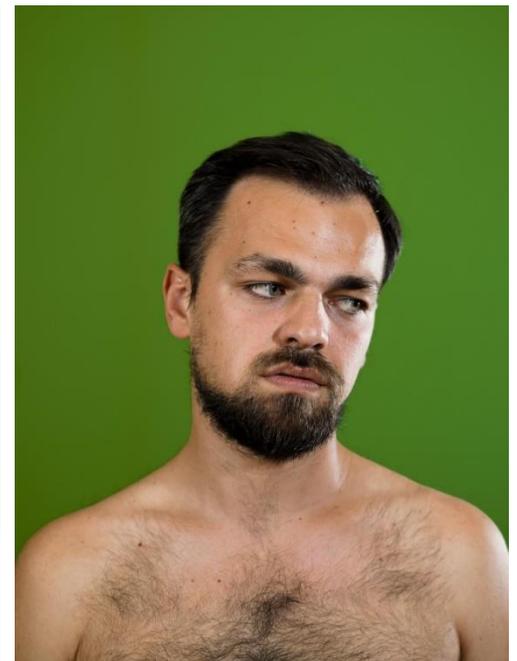
**NEUTRAL**



**DISILLUSIONED**

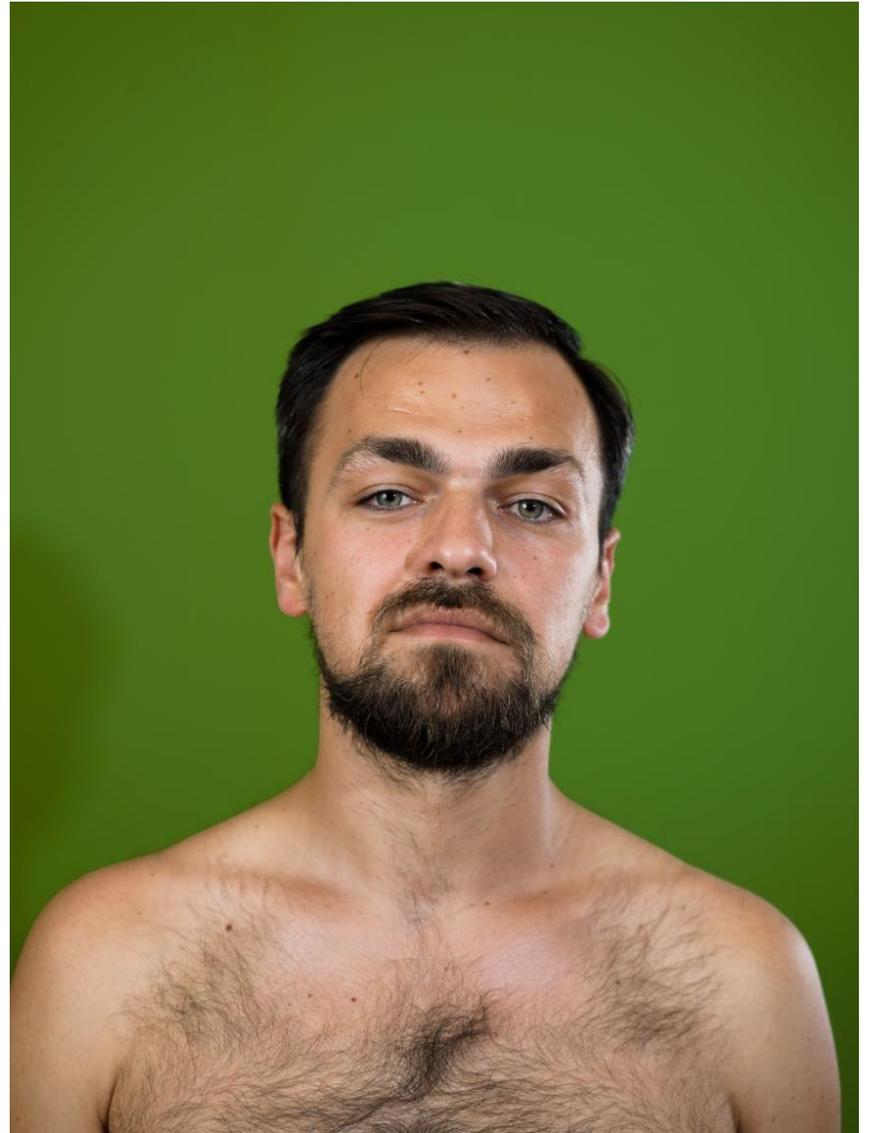


**NEUTRAL**



**DISILLUSIONED**

## 7. DISAPPROVAL



Disapproval is the act of disapproving. To speak out against something said or done by someone.

The feeling of having a negative opinion of someone or something.

Disapproval is what you express when you share your dislike or opposition. If you fail a class, you might worry both about your grade point average and also your parents' disapproval.

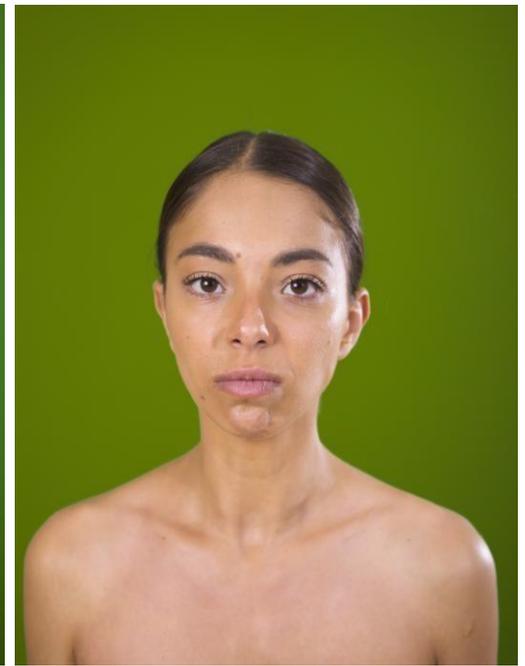
When you feel disapproval in your teacher's voice after you show her a draft of your research paper, you might want to start over. You might feel disapproval yourself when you see your friend spend money instead of saving it, or watch your dad feel the dog from his plate at the dinner table. Disapproval uses the "opposite of" prefix dis-with approval, from its Latin root *approbare*, "to regard as good."

To disapprove is to object to something, or frown on it. Your parents, worried about head injuries, might disapprove of your joining the football team.

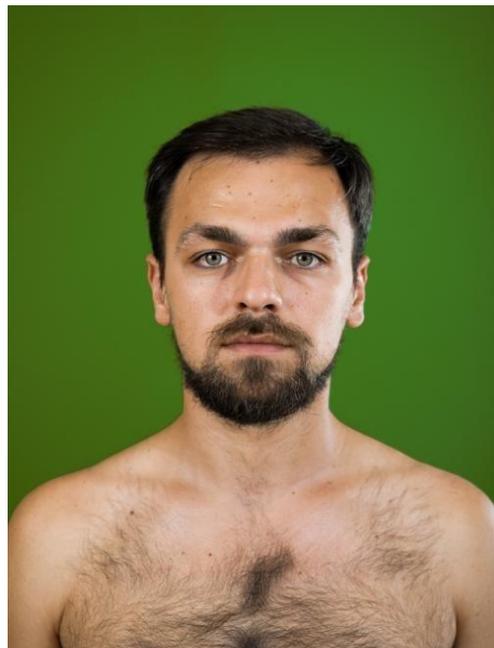
You can say that you disapprove of violence in movies and video games, or that you disapprove of censorship of any kind. Almost everyone disapproves of things like drunk driving or being cruel to animals. In all of these examples, to disapprove is to believe something is wrong or bad. Originally, in the 15th century, the word meant "disprove," but by the mid-1600s the meaning shifted to "the reverse of approve."



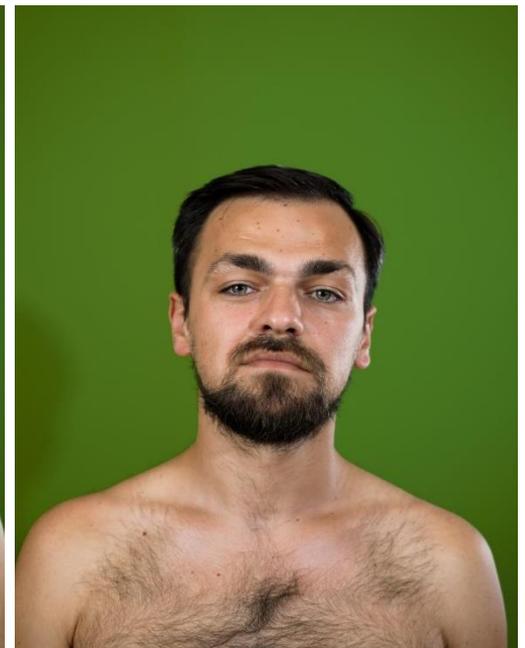
**NEUTRAL**



**DISAPPROVAL**

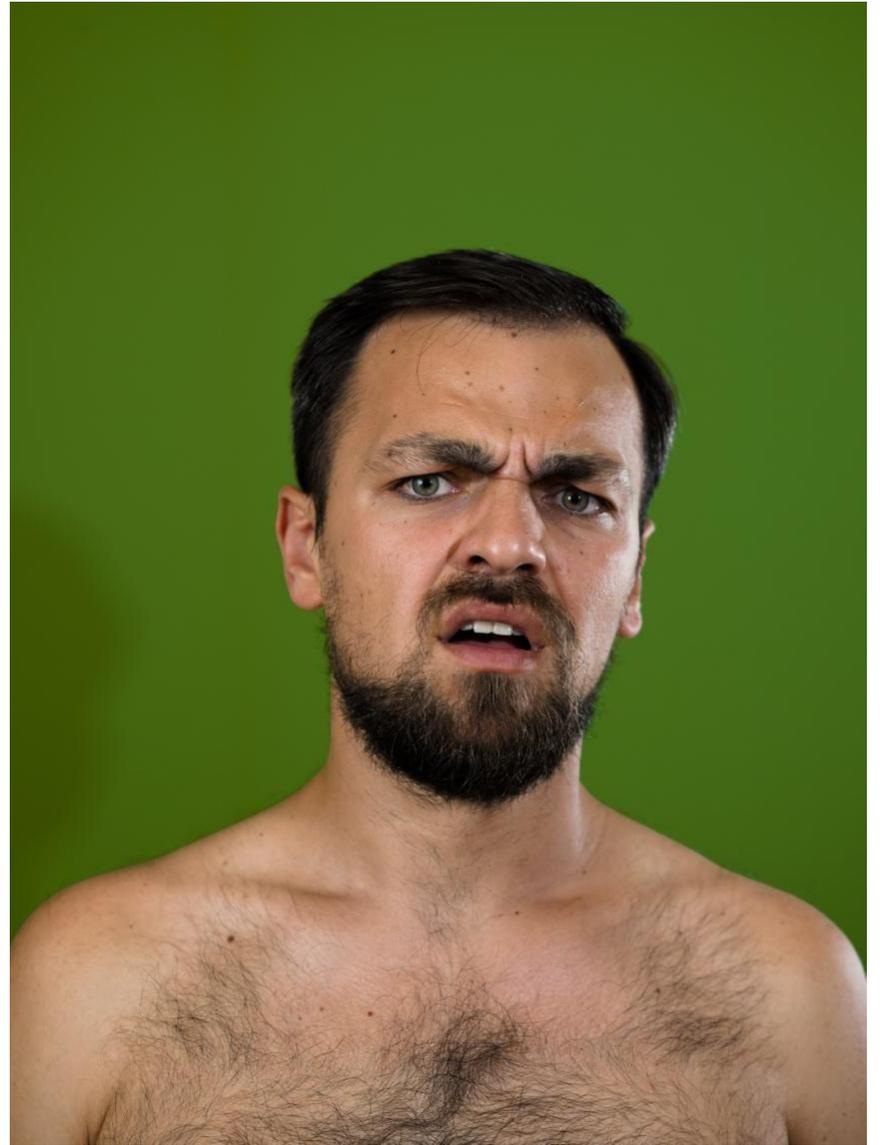
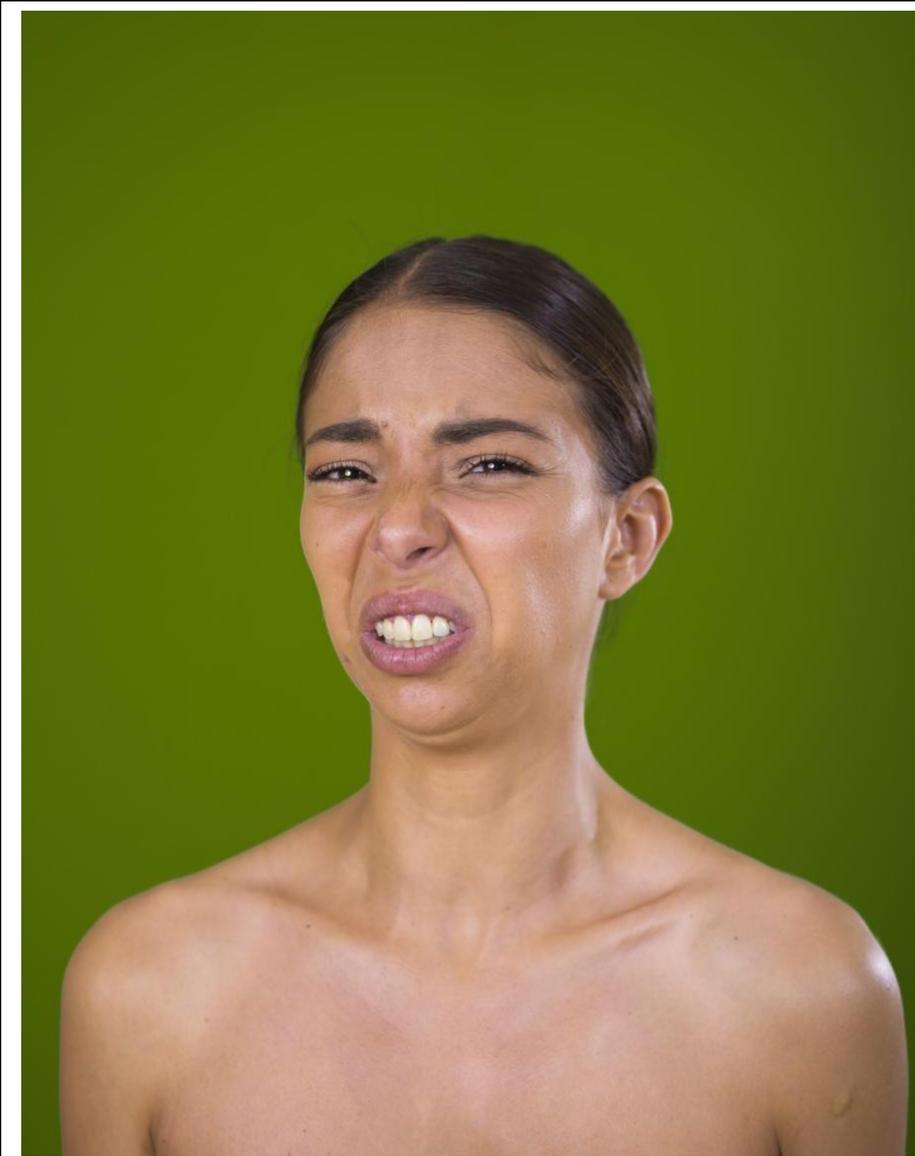


**NEUTRAL**



**DISAPPROVAL**

## 8. DISGUSTED



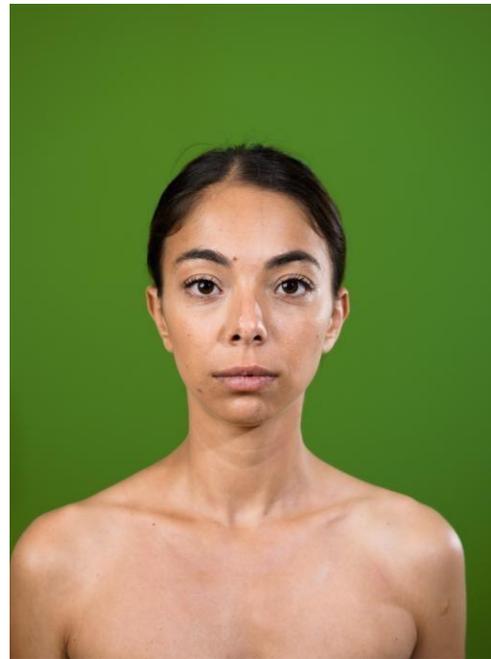
Disgust is a primary emotion. It is characterized by not feeling any pleasure for something, without reluctance, without feeling like it. Disgust can also manifest itself through physical reactions such as nausea, vomiting, sweating and a drop in blood pressure to the point of fainting. From a scientific point of view, disgust is considered not only a sensation, but also an instinctive reaction.

The latter manifests itself immediately in the presence of certain smells, tastes and visions and involves the desire to get rid of them. Subsequent feelings of disgust can also occur in the social sphere with moral disgust, for example towards ideas, behaviors and categories of people with whom one does not want to be associated.

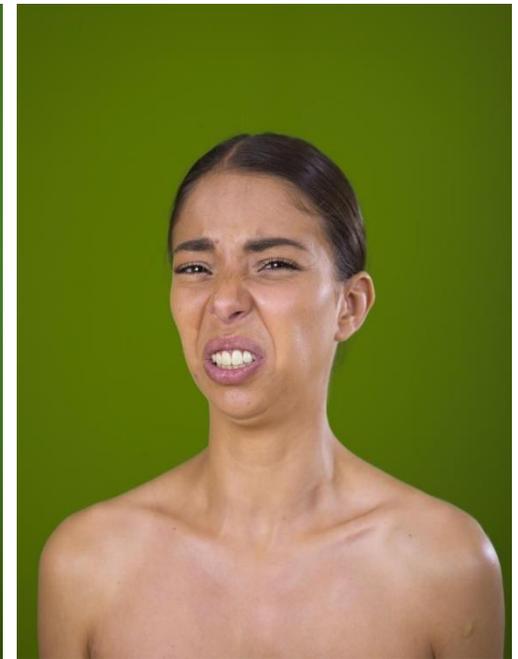
This emotion is related to contempt, the negative perception of something or someone who does not comply with one's own acceptable internal concepts. It is generally believed that man cannot feel disgust towards the animate, i.e. humans, animals. The emergence of this feeling is possible only for objects, sensations of taste, smells and state.

Some people shudder at the sight of snakes, spiders or mice. It is disgusting to them to think of the proximity of these creatures to them. Even the thought of touching an animal or an insect causes not only contempt but horror. Fear and disgust often go hand in hand, appearing simultaneously or causing the other. A similar feeling sometimes arises in relation to other people.

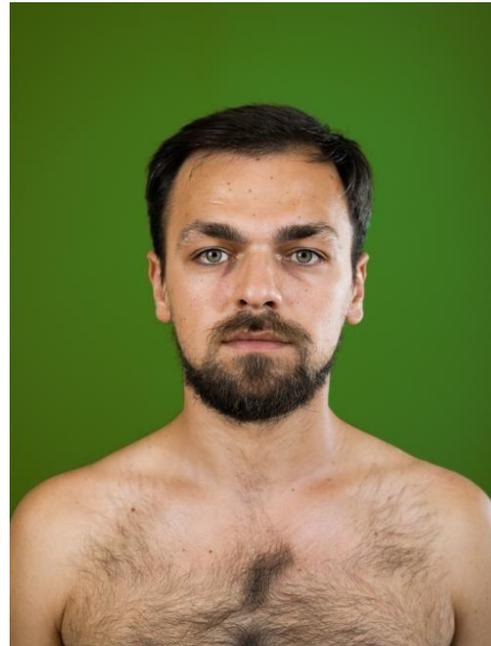
More often it is called hostility or contempt. But the emotion of disgust that has come upon people is not uncommon. It happens if a friend has done something very bad. "How disgusting! How could he (a) do this?!" This will be the reaction of his entourage.



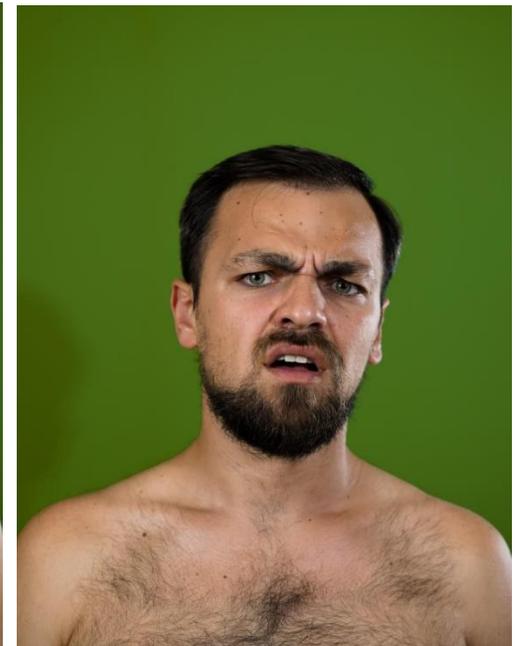
**NEUTRAL**



**DISGUSTED**



**NEUTRAL**



**DISGUSTED**

## 9. DISMAYED



Dismayed is a person gripped by dismay. Dismay is bewilderment mingled with sorrow and indignation; unpleasant surprise, stupor.

An example of when we can use the word dismay is: I felt great dismay when the author killed off my favorite character.

A dismayed person experiences or exhibits feelings of worry or alarmed dismay: angry, worried, or agitated because of an undesirable situation or occurrence: example: the dismayed expression on one's face.

Dismay describes an emotional state of alarm, fear, or severe disappointment.

Dismay is defined as a sudden or total loss of courage. An example of dismay is feeling defeated after applying to dozens of jobs and not being offered any of them.

Dismay is a strong feeling of fear, worry, or sadness caused by something unpleasant and unexpected. If you are dismayed by something, it makes you feel afraid, worried or sad.

Antonyms for consternation are: encourage, rally, enliven, assure, allure.

Synonyms for consternation are as follows: frighten, amaze, terrify, dismay, dismay, frighten, terrify.



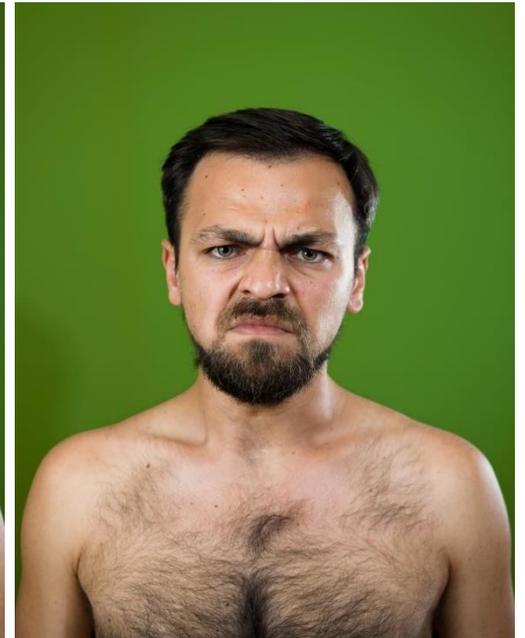
**NEUTRAL**



**DISMAYED**

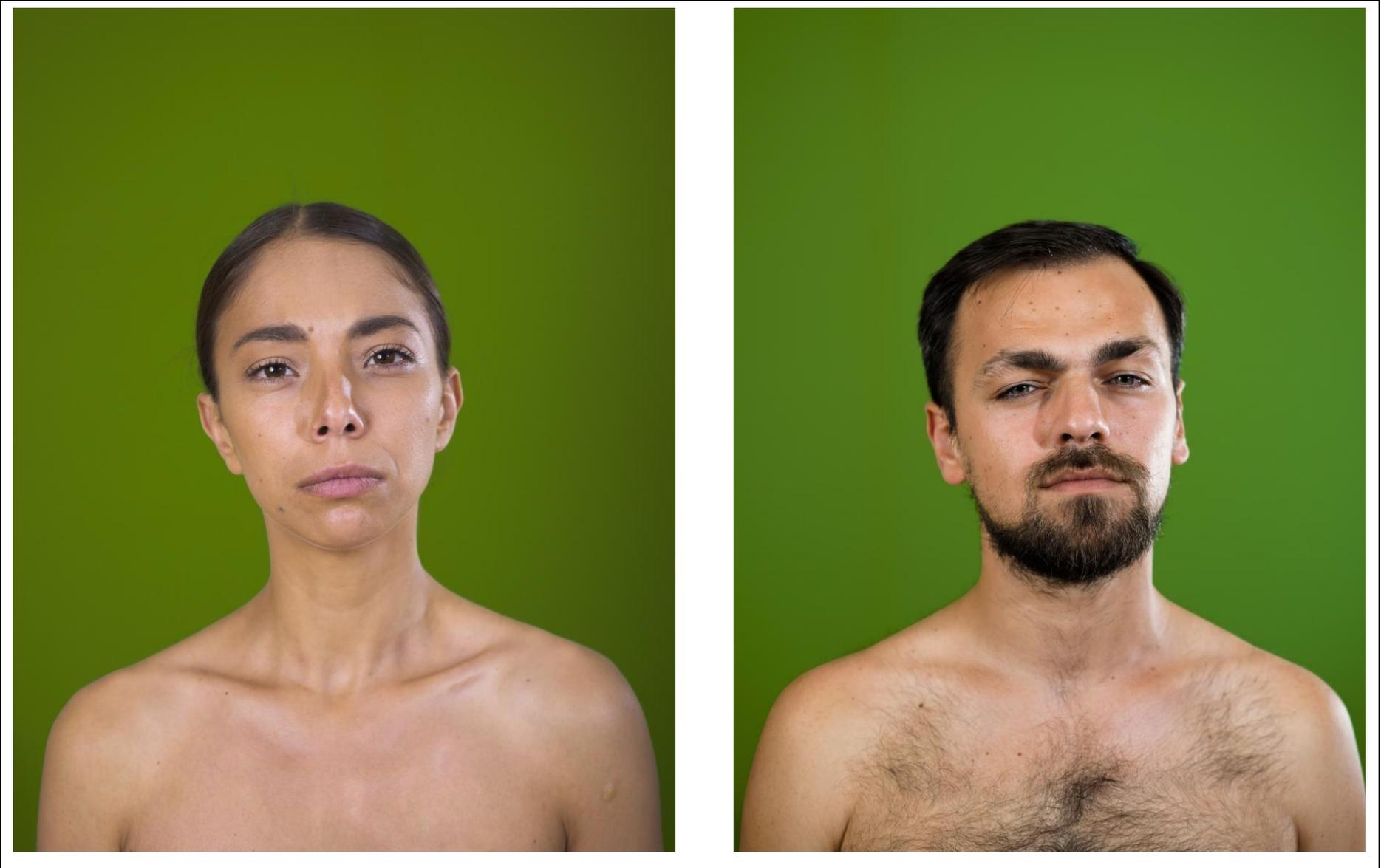


**NEUTRAL**



**DISMAYED**

## 10. DOUBTFUL



Doubt is the state between belief or certainty and distrust, implying lack of certainty.

You feel doubtful when something is unlikely, uncertain; which does not inspire confidence; suspicious, unclear.

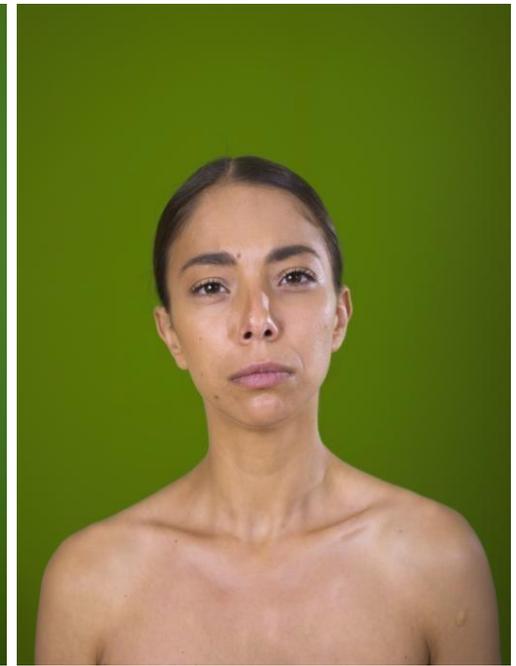
Doubt can arise in human consciousness due to lived experiences that influence human behavior, distinguishing between information heard or seen and observable reality can cause a person to have doubts, the most common being about the origin of life on Earth. In marital relationships, partners may have doubts about the family situation if there are suspicious behaviors.

When we say that a person is visited by doubt, it means that he is not sure about some of his actions, behavior or words from which he expects the desired result.

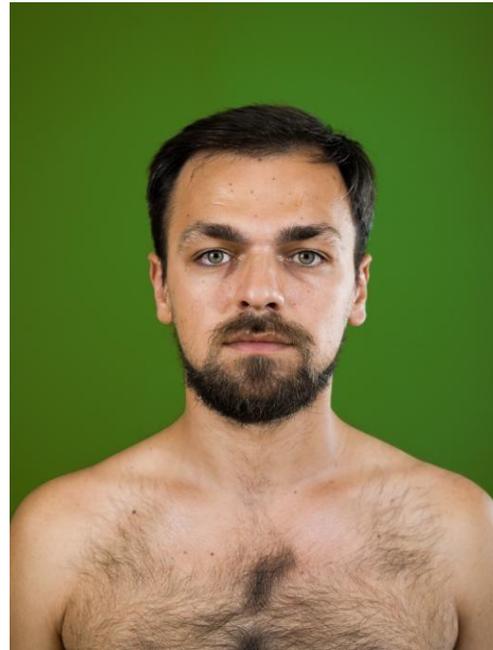
Self-doubt: this is the presence of doubts in the abilities, choices, strengths and fulfillment of the plan, on the basis of which there is fear and, in critical cases, even the refusal to take active actions. The feeling of self-doubt is closely related to the feeling of wrongness of the self or the idea of deficiency in some part of life.



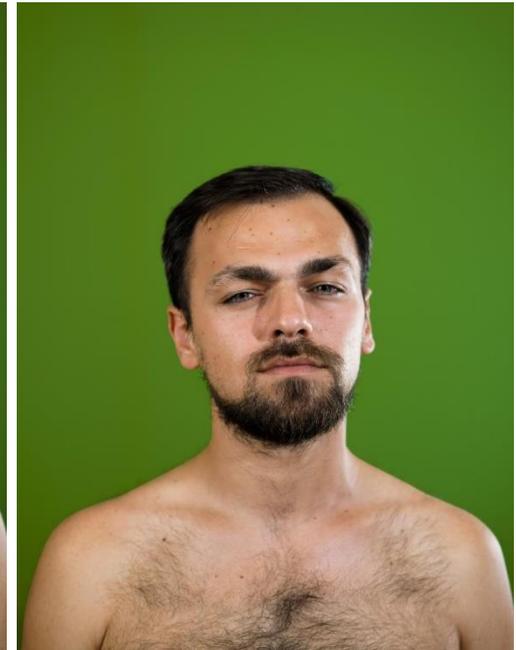
**NEUTRAL**



**DOUBTFUL**

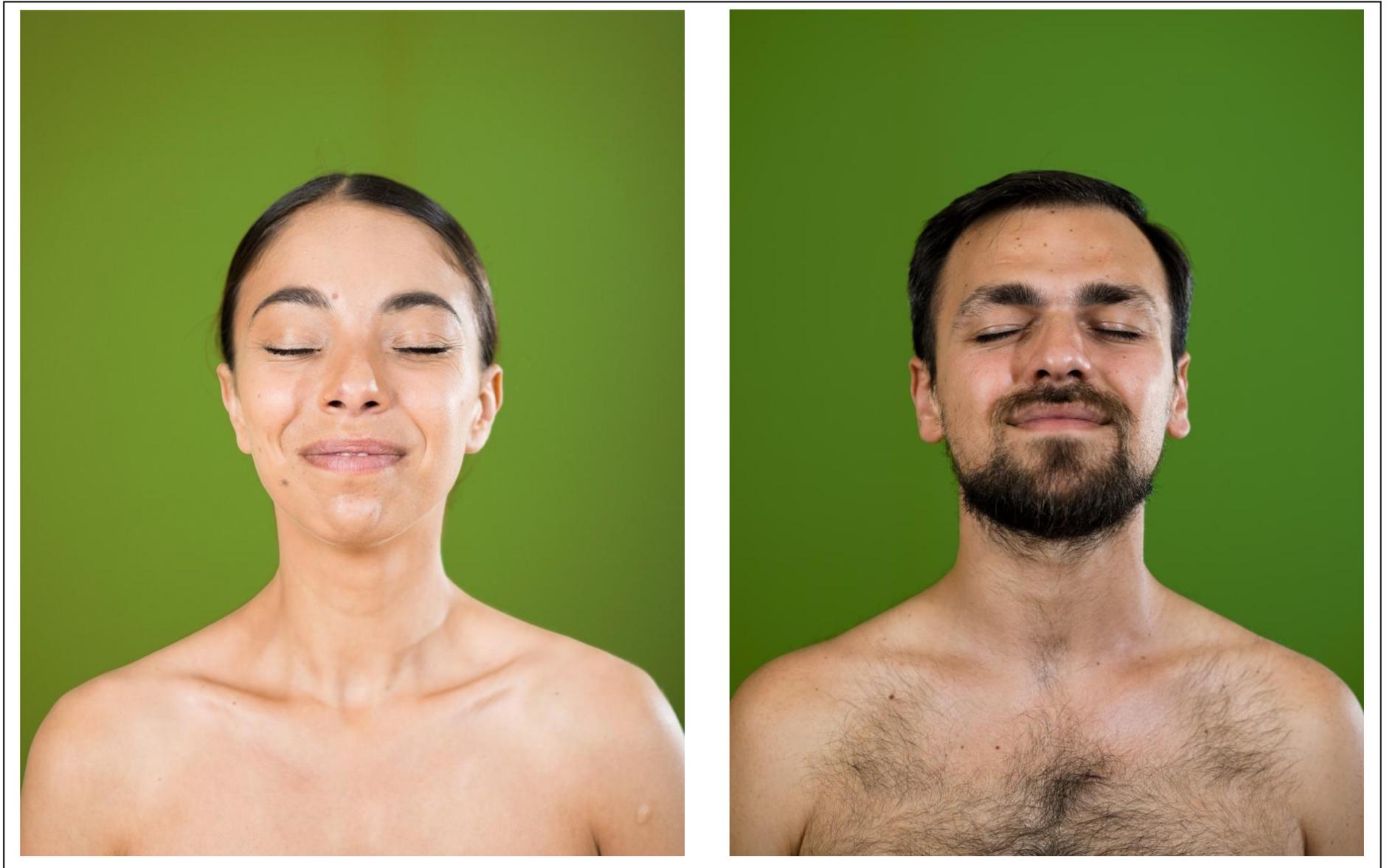


**NEUTRAL**



**DOUBTFUL**

## 11. ELATED



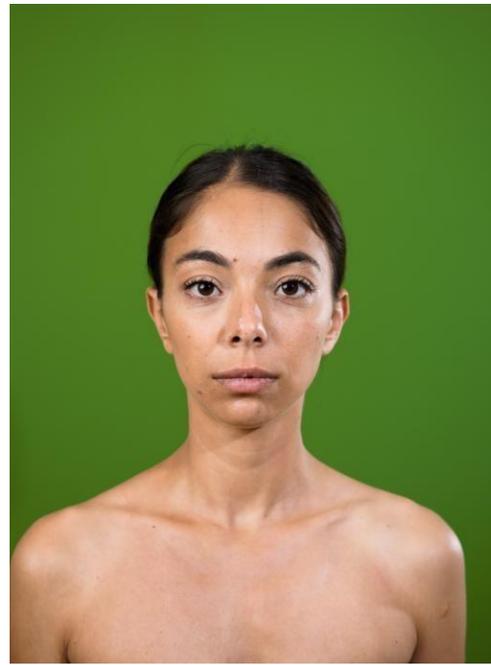
Exaltation is an elated, enthusiastic state. To be turned on beyond measure, to the point of paroxysm.

The state of exaltation can simultaneously cover large groups of people in the form of spontaneous excitement at certain events, such as natural phenomena: a fire, an earthquake, or social events: concerts, festivals, major sporting events.

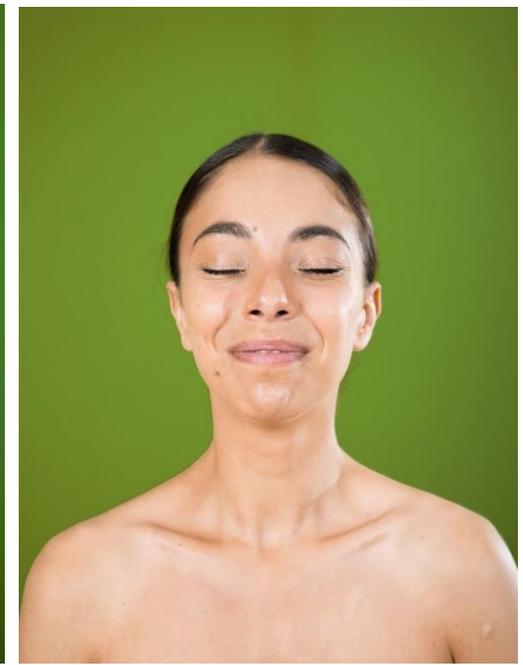
If you're elated you aren't just happy — you're over the moon, absolutely excited, and bursting with pride. Like the way you feel after winning a scholarship to your first-choice college or mastering a back handspring.

You might be elated to hear you got that dream job, and your whole family might be elated when your favorite baseball team wins the World Series.

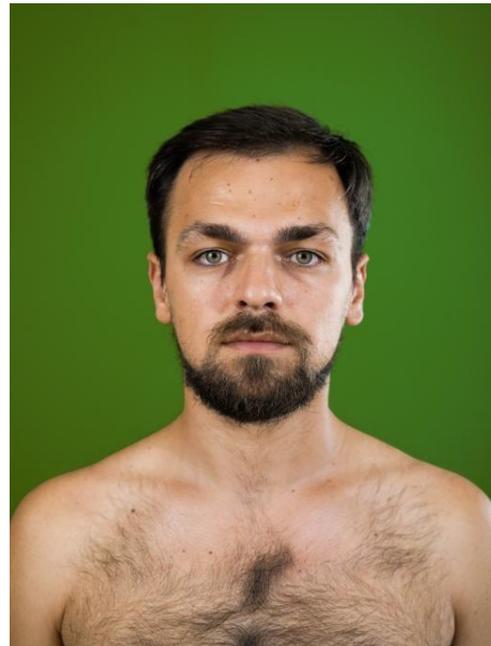
Feeling elated is all about being so extremely proud and overjoyed, and usually happens as a result of an accomplishment. So if you've just achieved something big, feel free to be elated — and enjoy your time on cloud nine.



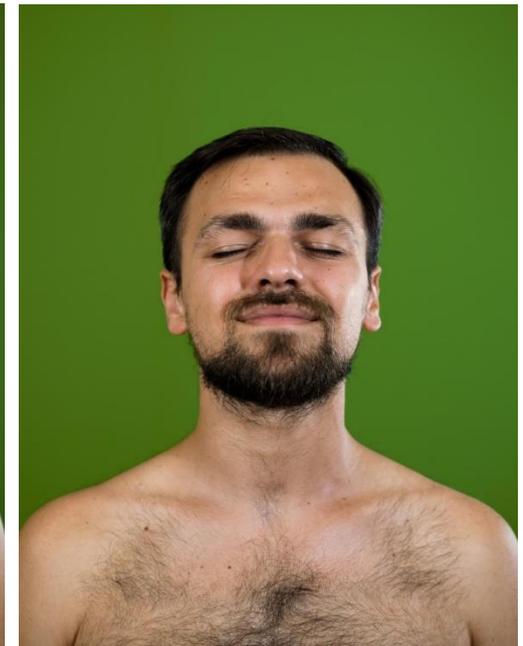
**NEUTRAL**



**ELATED**

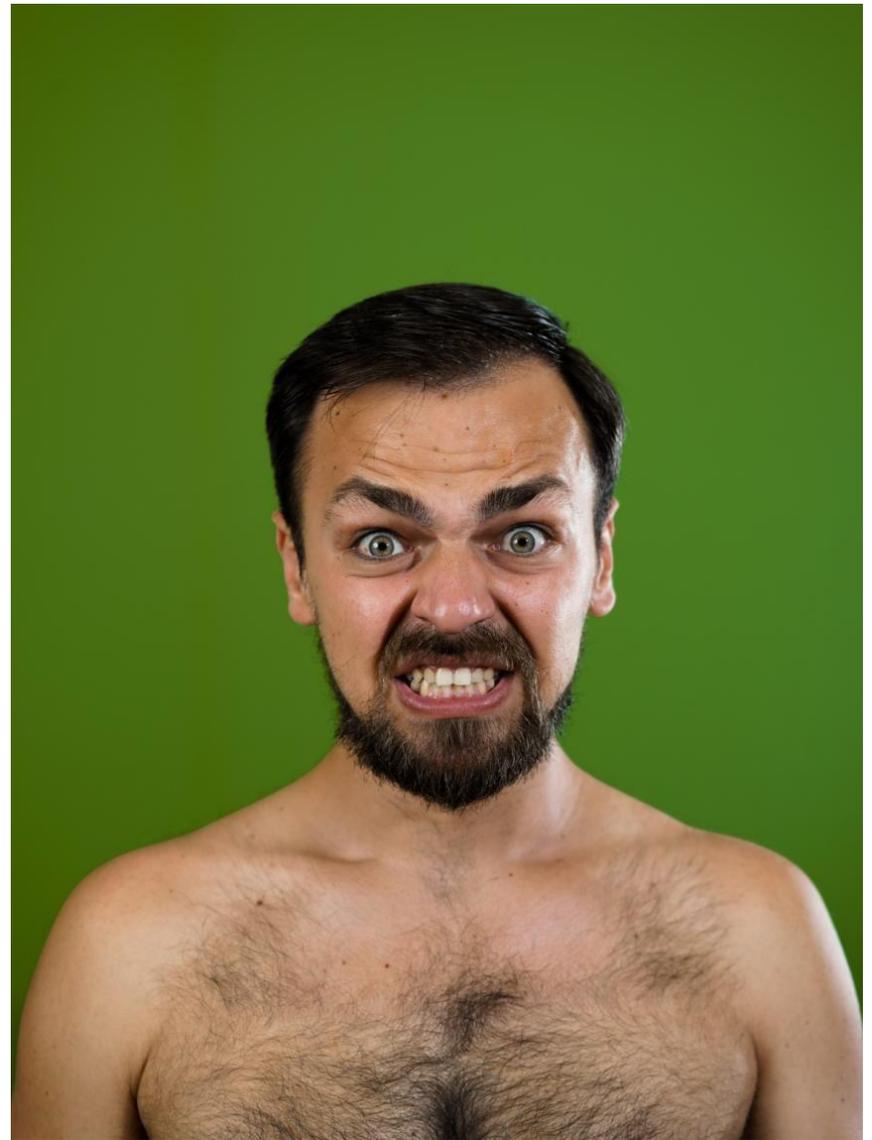
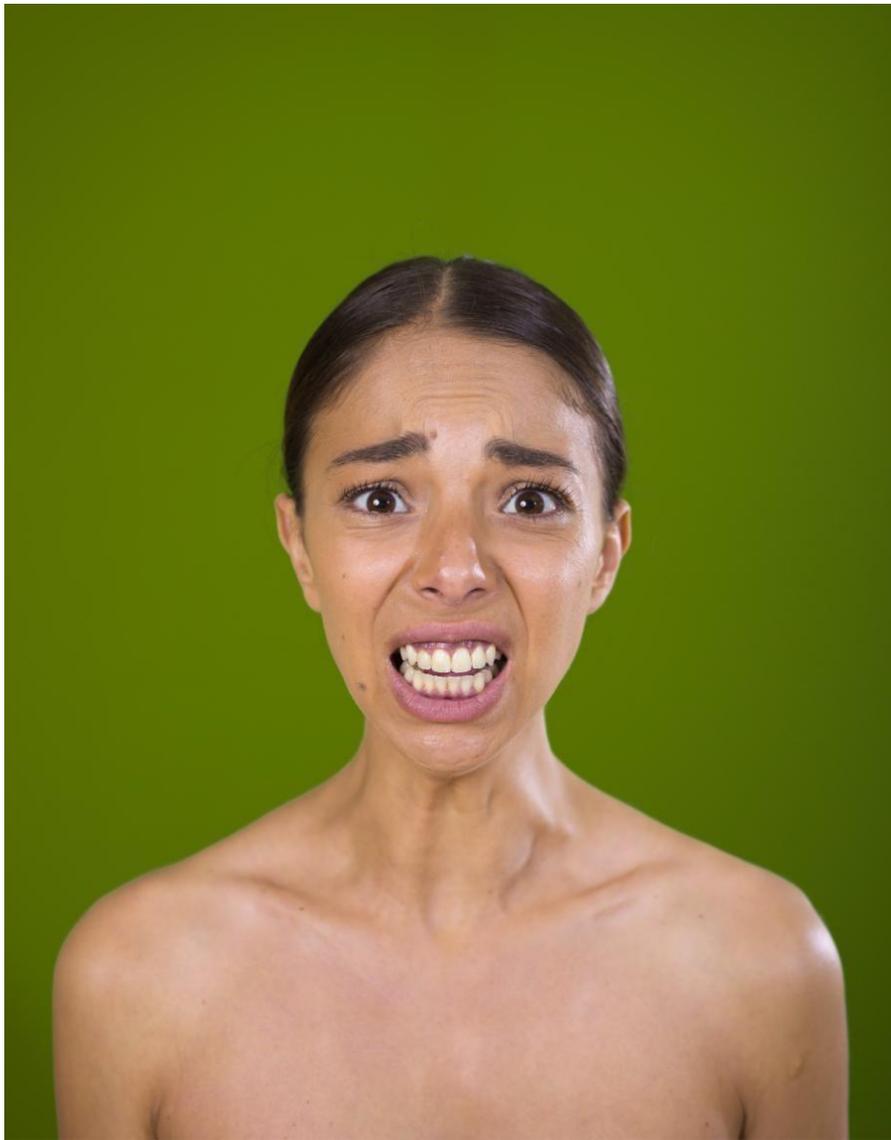


**NEUTRAL**



**ELATED**

## 12. ENRAGED



According to the circle of emotions made by Robert Plutchik (American psychologist), anger is a basic emotion. This represents an emotional state that varies in intensity from mild irritation to intense anger: uncontrollable anger, violence. Angry - person expressing anger.

Anger is defined as a feeling of strong discomfort and, more often than not, antagonism. We can say that anger is an unpleasant emotion that ranges in intensity from irritation or displeasure and can rise along this continuum to anger or "frenzy". But what is at the root of anger differs from person to person, depending on how each of us interprets a situation: what for one person may be the spark that triggers the anger episode, for another it may not bother at all.

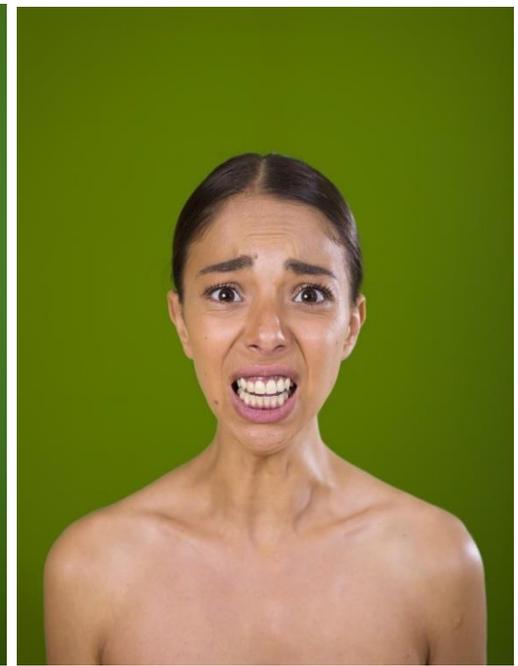
Anger and aggression are different things. Anger is an emotion while aggression is a behavior. Not everyone who feels angry is also aggressive and vice versa. Sometimes people engage in aggressive behaviors because they feel scared or threatened.

A moderate level of anger can motivate us to take appropriate action, solve problems and deal with situations in a constructive manner.

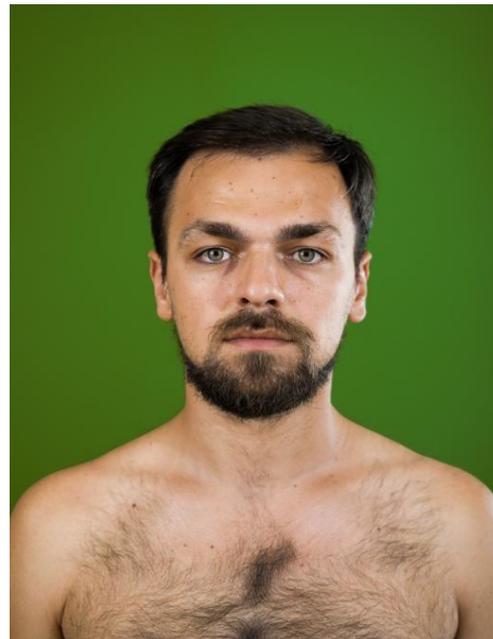
Unexpressed anger is just as harmful as expressed anger. An angry person who does not express their emotion may hide resentment and perceive themselves as a victim.



**NEUTRAL**



**ENRAGED**



**NEUTRAL**



**ENRAGED**

### 13. EXASPERATED



Exasperation shows strong feelings of irritation or annoyance.

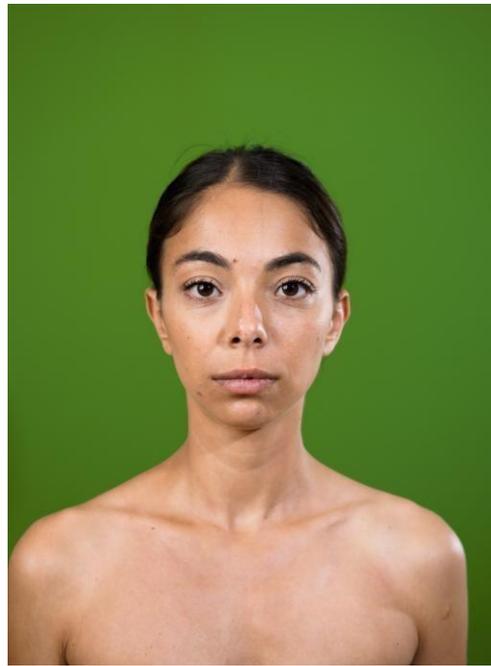
To exasperate someone is to annoy them to the point of impatience, frustration, and irritation, such as when you exasperate a busy waiter by asking questions like "what are all the ingredients in the salad dressing?" and making him repeat the specialties several times.

Exasperated is today most commonly used as a synonym for annoyed.

It's understandable if you get exasperated, or really frustrated, if you're standing in the supermarket's express lane and everyone in front of you has way more than the 10-item maximum.

Over the centuries, nothing much has happened to the definition of this word — the Latin original means "irritated to anger."

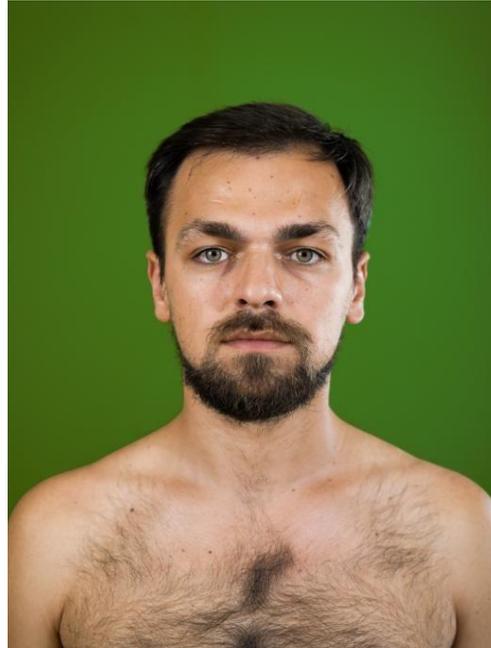
Speaking of which, let's get back to the supermarket, a veritable hotbed of exasperated people pushing wobbly-wheeled shopping carts their children try to fill with cartoon-branded junk food, brushing past unstable store displays that come tumbling down, enduring inoffensive but flavorless supermarket music, and emerging into the cold light of day unable to remember where they parked the car.



**NEUTRAL**



**EXASPERATED**



**NEUTRAL**



**EXASPERATED**

## 14. EXCITED



Excited is a state of mind that is considered "exaltation" or fervor before an event or situation in life. When we talk about excitement, we mean an emotion that takes over our general mood for one or more minutes.

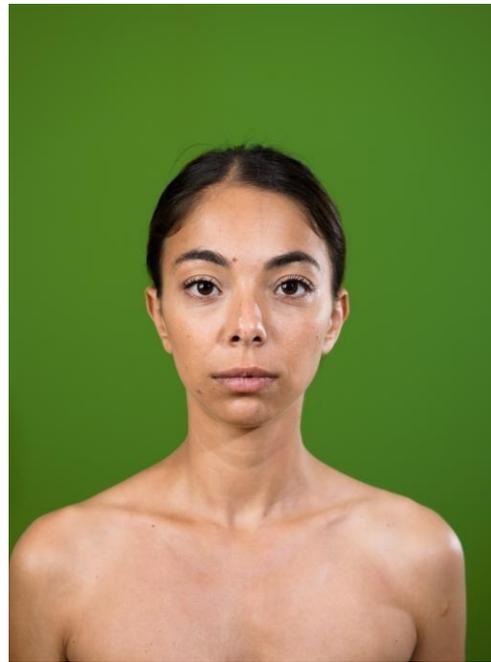
An enthusiastic person shows an unusual joy, that is, we can be happy and positive every day, but when someone is excited we can notice an excessive interest in something.

Enthusiasm is considered as a force coming from within the body that makes a person feel the desire to perform certain activities, feel happy and motivated.

If you're excited you're enthusiastic and animated, like a kid in a candy store.

Meaning more than just "wildly happy," excited describes all sorts of excessive emotions (and not always the good ones).

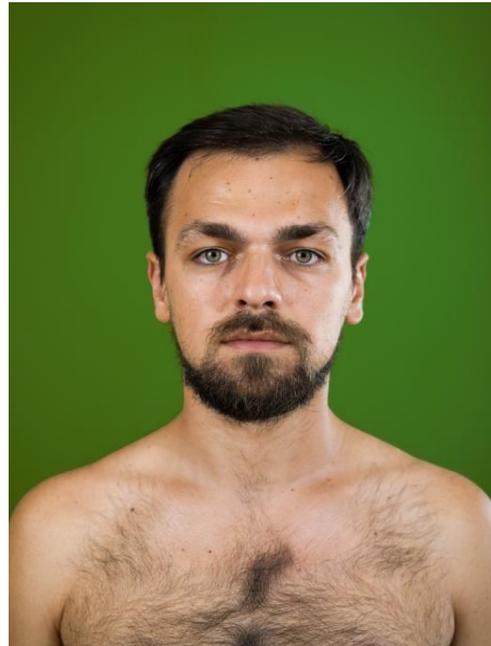
If you're excited you might be agitated, nervous, anxious, or worked up about something. Skip a little further out on the excited spectrum and you're verging on a loss of control: You're delirious, frantic, mad, or unrestrained. Less like a kid in a candy store than a kid on his tenth cup of espresso.



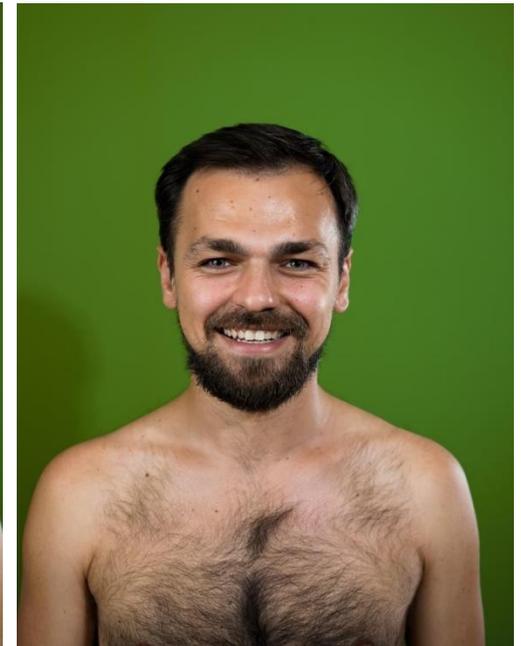
**NEUTRAL**



**EXCITED**

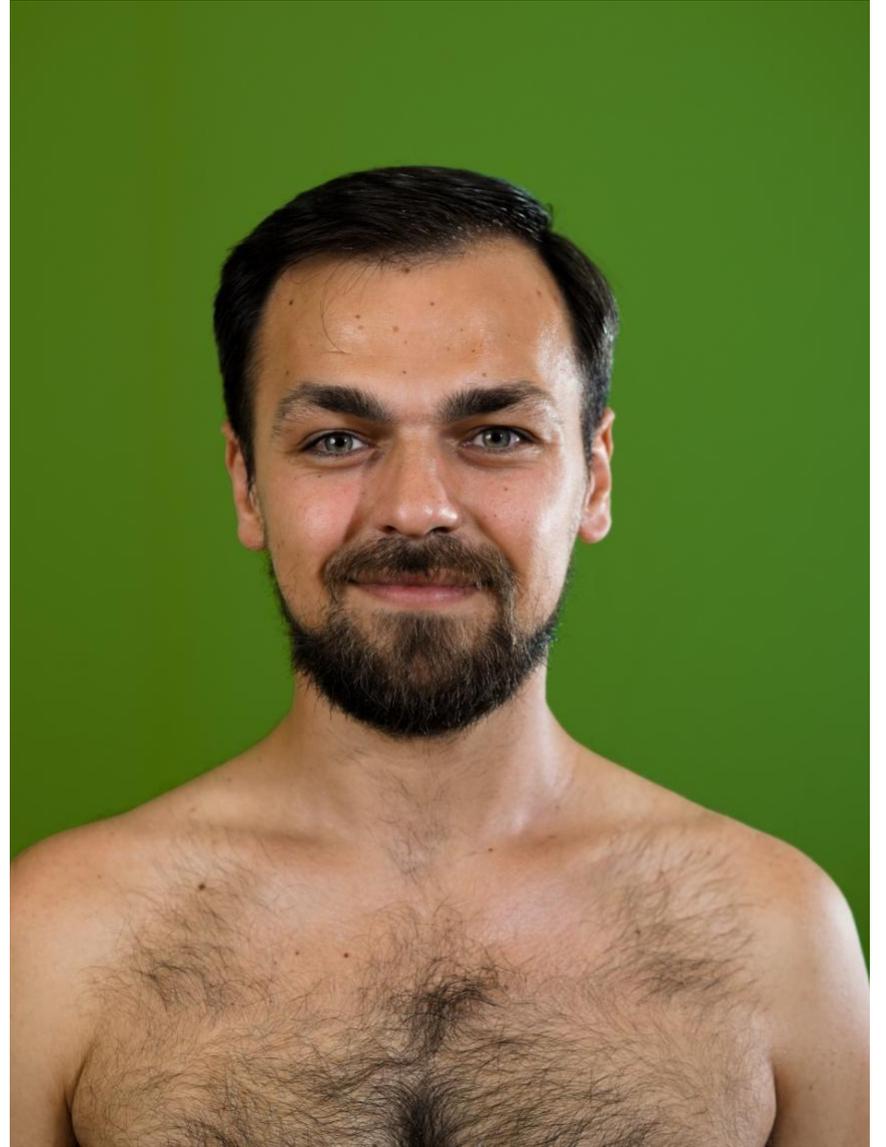


**NEUTRAL**



**EXCITED**

15. HAPPY

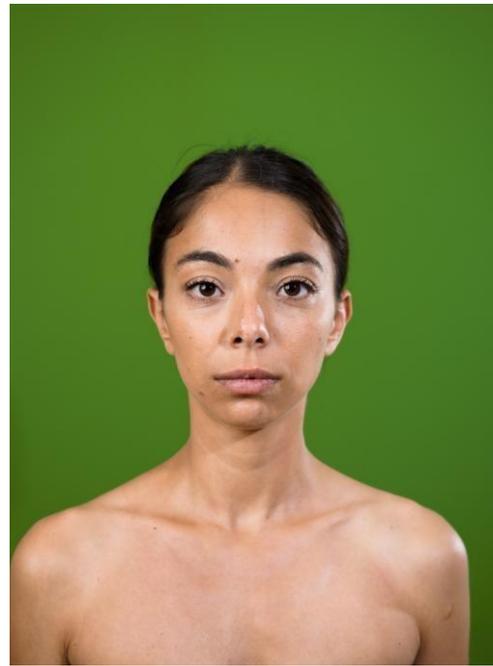


Happiness, in psychology, is a state of emotional well-being that a person experiences either in a narrow sense, when good things happen at a certain moment, or, more broadly, as a positive evaluation of life and its achievements in general, that is, subjective well-being.

Happiness can be distinguished from both negative emotions (such as sadness, fear and anger) and other positive emotions (such as affection, excitement and interest). This emotion often appears together with a specific facial expression: the smile.

People all over the world tend to have a similar concept of happiness and can recognize happiness in others. As a result, the specific emotion of happiness is often included as one of a small number of basic emotions that cannot be decomposed into more fundamental emotions and that can combine to form other more complex emotions (in fact, it is sometimes the only emotion positive which is considered basic).

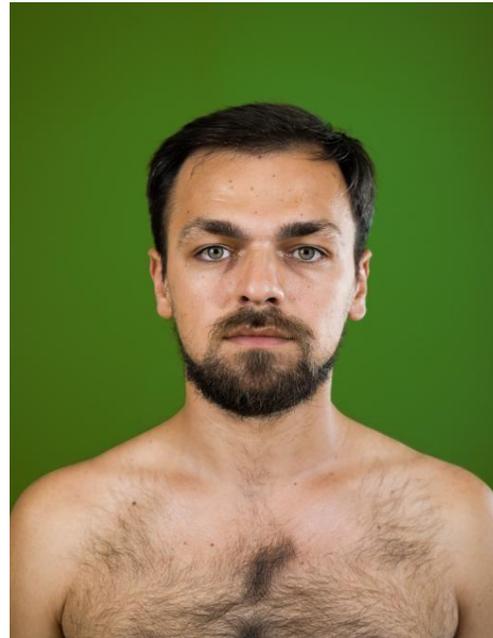
Thus, happiness is an important concept for researchers studying emotions.



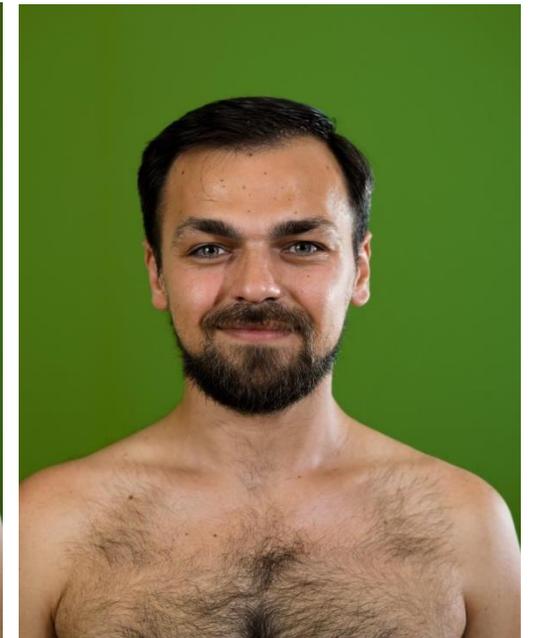
**NEUTRAL**



**HAPPY**

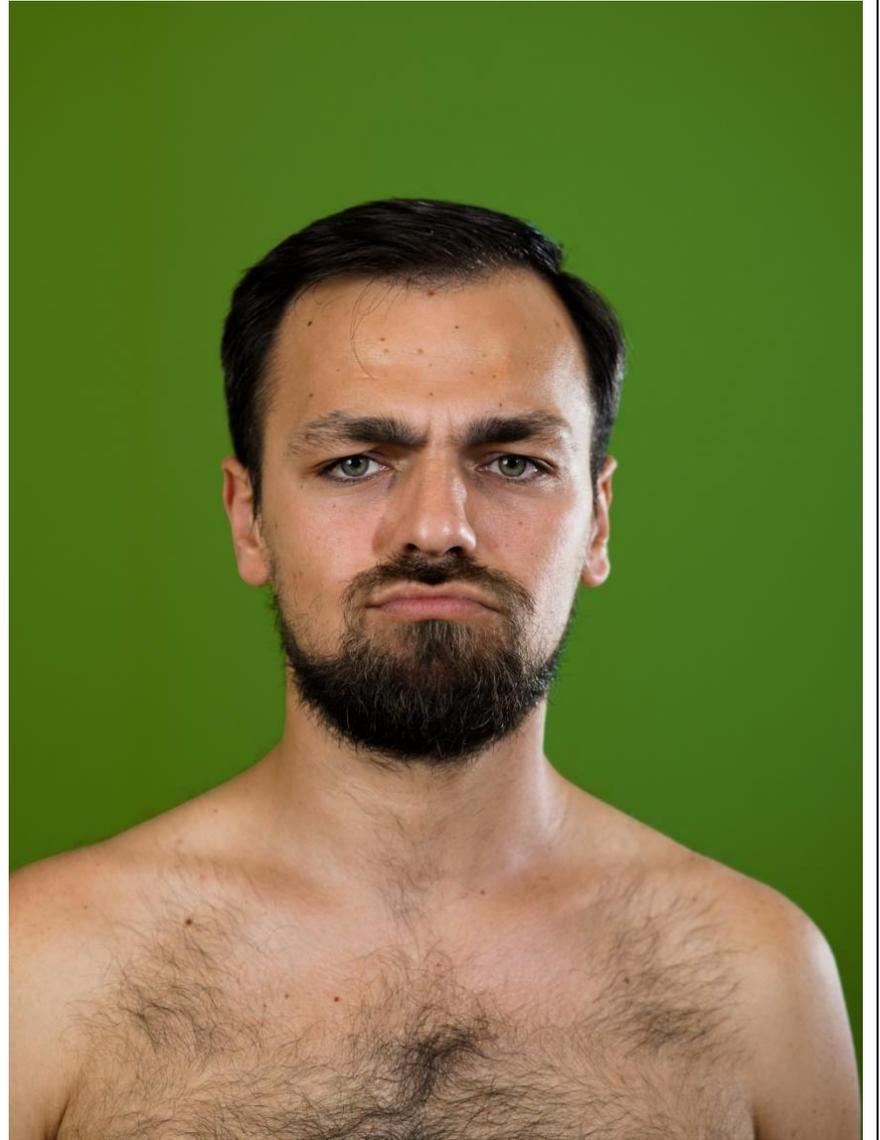


**NEUTRAL**



**HAPPY**

## 16. SULKY



Sulking is the act of being angry, sulking, which is manifested by silence and frowning.

Bumping can be considered a defense mechanism.

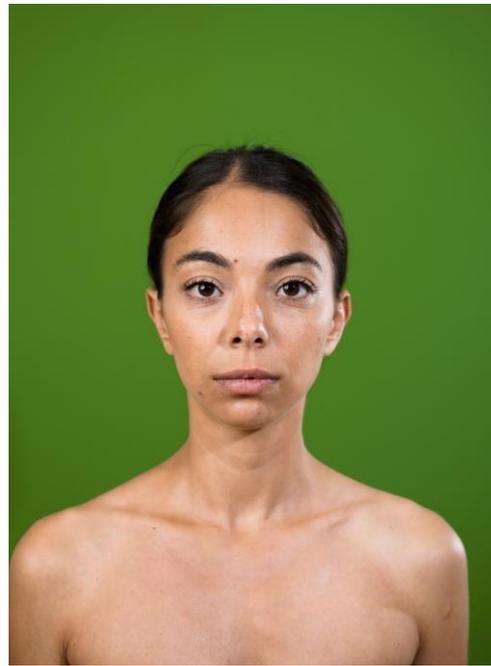
For Marie-France Cyr, professor of psychology at the University of Quebec, there are two types of grumps: Offensive and Defensive. The latter is a sensitive sea. "When he sulks, his sad, fixed gaze is sometimes worried and disarming," she observes.

Man being susceptible and vulnerable, he is easily offended, but tends to hide it. He developed extremely powerful mechanisms to fight his fears.

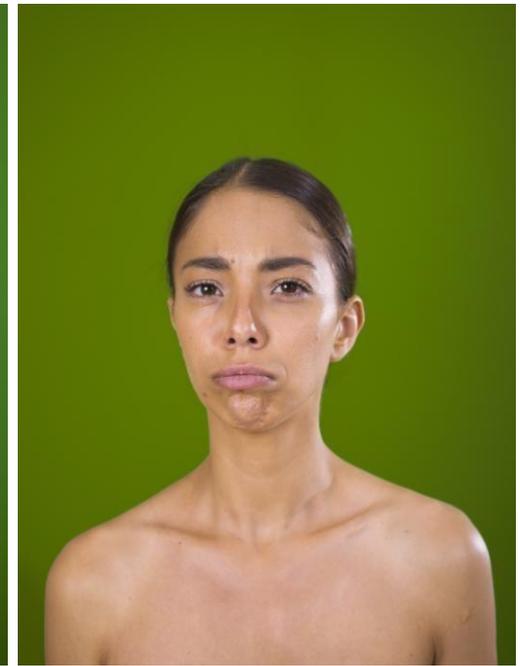
In the case of the offensive, silence is not a shield, as in the case of the defensive, but a weapon. He is a manipulator, who seeks to control his entourage.

Someone who's sulky is gloomy, or quietly unhappy. A sulky teenager is generally not a lot of fun at a family party.

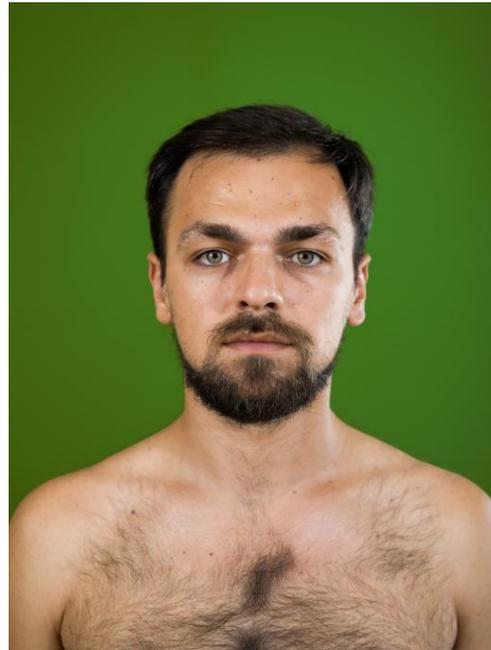
Some people tend to be sulky when they're unhappy or disappointed — when you're sulky, you're not just sad, but you mope and frown and sigh. You might be sulky if your brother gets to travel to England and you don't, or if your coworker gets a promotion instead of you. Sulky probably comes from an Old English word, *asolcen*, "idle, lazy, or slow," which has a Proto-Germanic root.



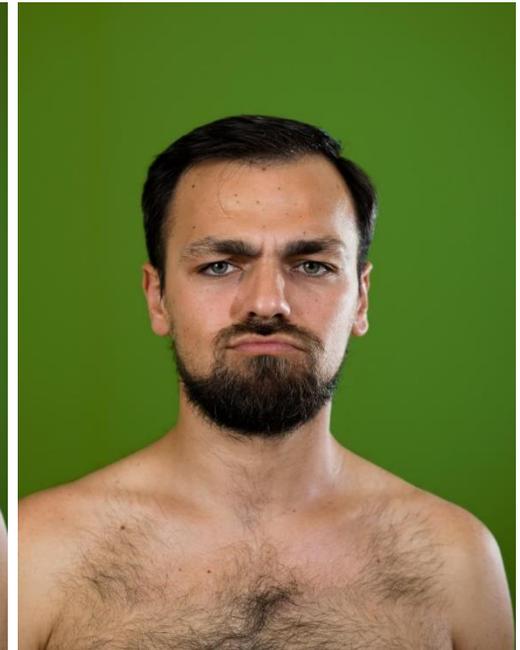
**NEUTRAL**



**SULKY**

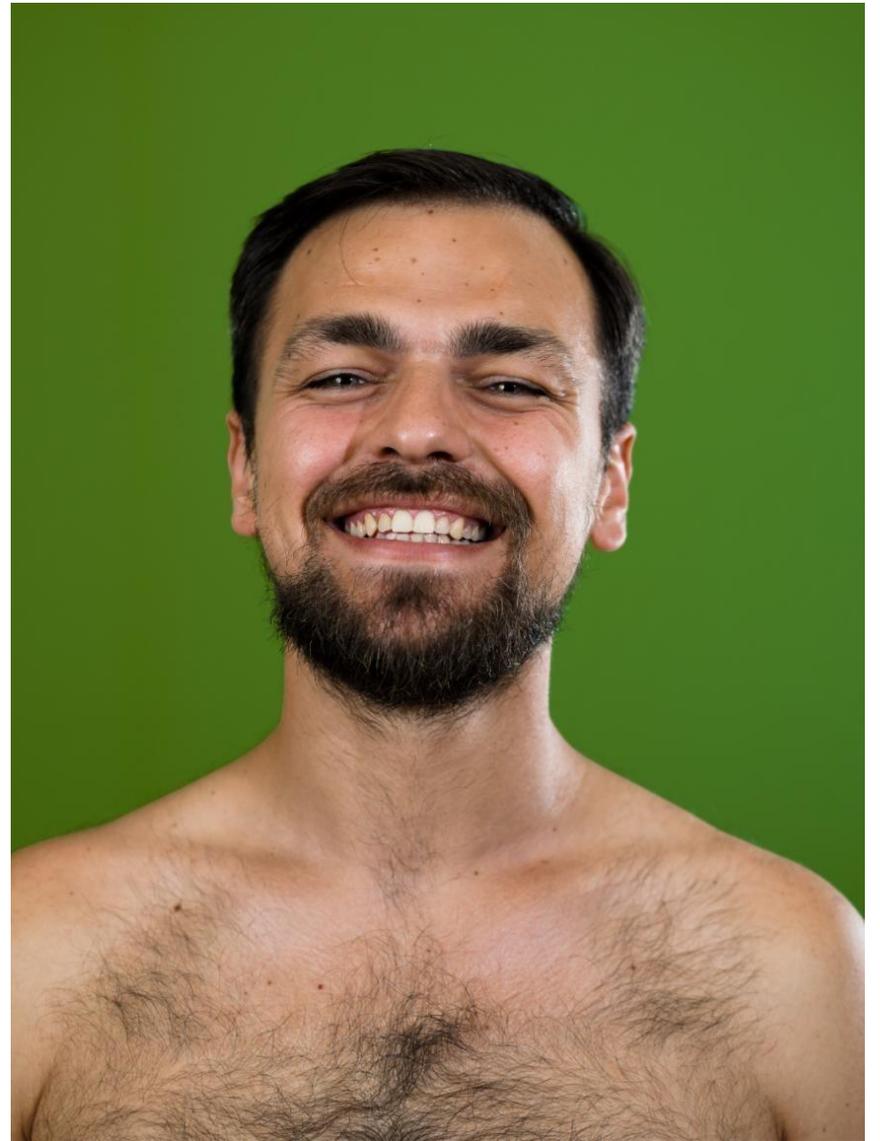


**NEUTRAL**



**SULKY**

## 17. JOY



Joy is a feeling of living contentment, of soul satisfaction. We are happy when we do something with pleasure, with all our heart.

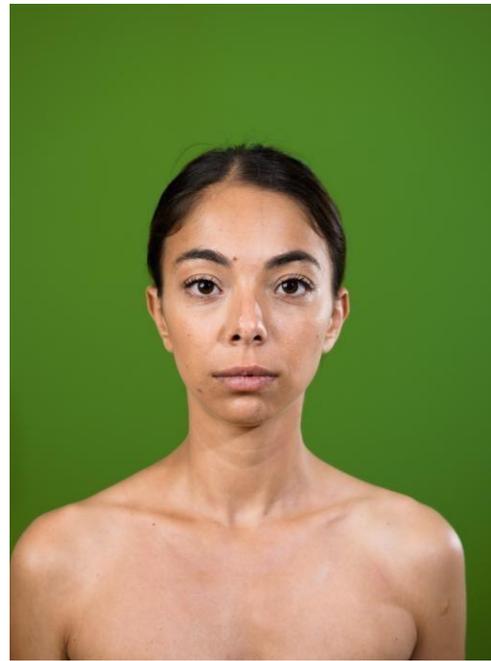
Joy is a positive feeling, a moment of happiness characterized by an optimistic view of a situation. It is a basic human emotion, along with fear, anger, disgust, sadness and wonder. Joy is an inner experience generating a state of well-being with high levels of energy and a lot of availability in front of constructive actions and it manifests itself through all ways of externalization: speech, deeds, gestures, decisions. The opposite state of mind to joy is sadness. The facial expression turns into joy, the eyes become bright and the serene face accompanied by smiles.

There are simple joys and complex joys, intense joys and pale joys, major joys and minor joys. They all make us happy and give us that much-desired well-being. What differentiates them is both the object of the joy and its intensity.

Medically, joy is associated with dopamine. Dopamine is a neurotransmitter produced by the brain associated with pleasure and reward, also called the happy hormone.

Joy is the emotion of pleasure and happiness. Joy can also be what delights you. You may find great joy in learning new vocabulary. Or not.

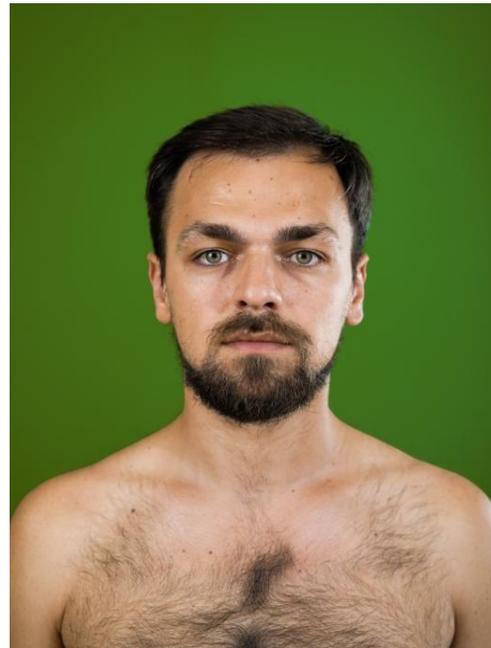
Joy can also be used as a verb. You can enjoy the fact that you have no homework for the weekend. Or, you might want to cheer when the teacher announces that the test has been canceled. It is a real joy to use the word also as an adjective. For example, getting A right probably makes you extremely happy.



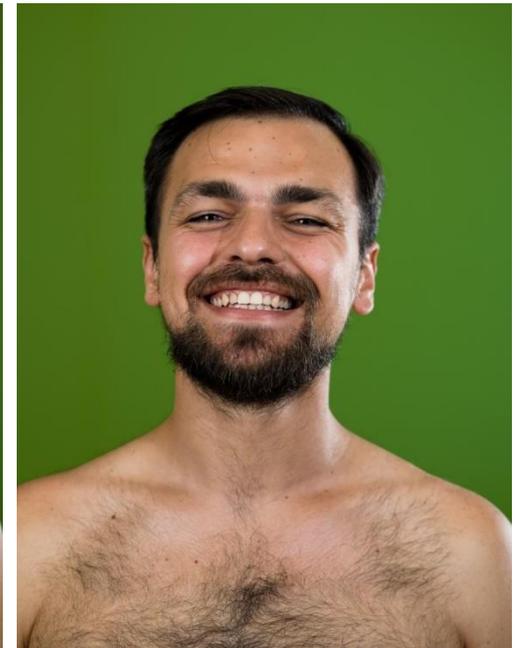
**NEUTRAL**



**JOY**

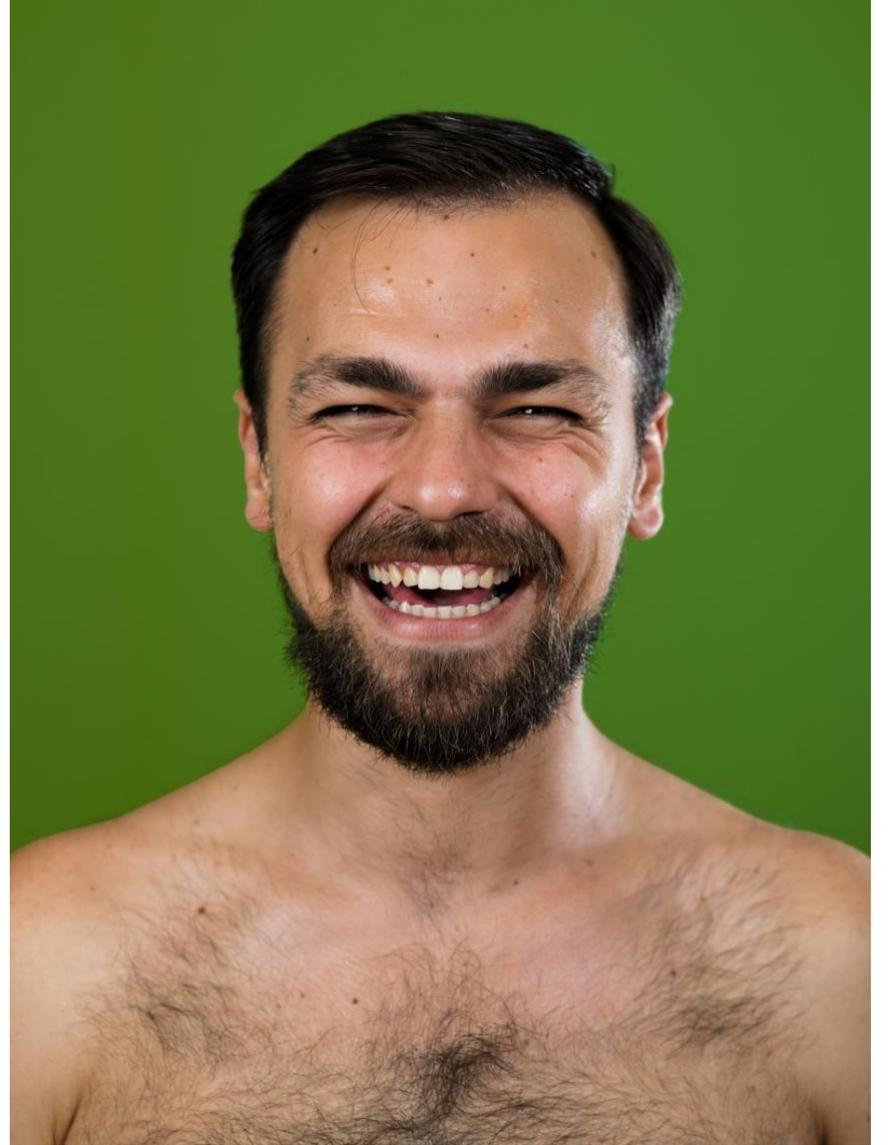


**NEUTRAL**



**JOY**

## 18. LAUGHING



Through laughter we show our joy or satisfaction. It represents a characteristic movement of the face and mouth, while making specific, successive and inarticulate sounds.

In essence, laughter is a unanimous trait among primates, an action that makes us feel good and brings us together. Because it is part of the life of each of us, laughter cannot be ignored by scientists, who tried to explain what happens in our brain when we are amused, but also to investigate the benefits that this action brings us.

Laughter is a trait we share with our primate relatives, the apes, and so researchers believe this evolutionarily conserved action must have its uses.

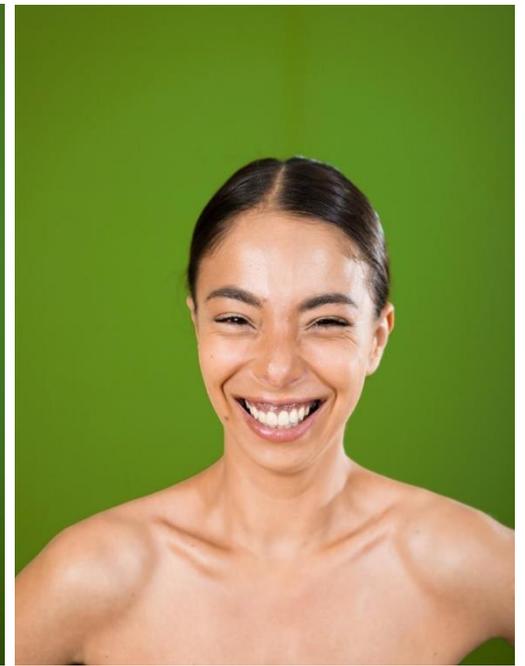
But why do we laugh? A plausible answer is that laughter helps us establish interpersonal relationships and helps us get closer to each other. Laughter helps us bond and thus functions as a social binder. Although some jokes require developed cognitive skills to elicit laughter, this form of expressing our amusement is essentially a primitive act.

To let out a chuckle or giggle is to laugh: people laugh when something is funny. To chortle, cackle, guffaw, or titter is to laugh. The job of a comedian is to make people laugh. Often people laugh at things that aren't supposed to be funny, and people also laugh to be polite. If something is silly, you can say "That's a laugh!"

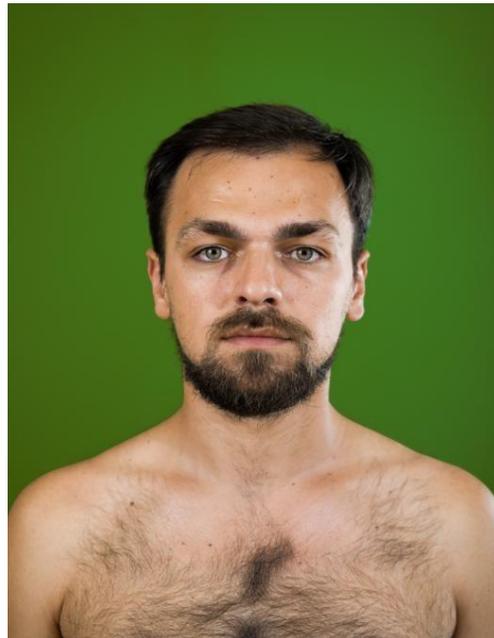
If you had fun at a party, you can say "Thanks for the laughs." Everybody's laugh sounds a little different. It would be a shame if your laugh sounded like Elmer Fudd.



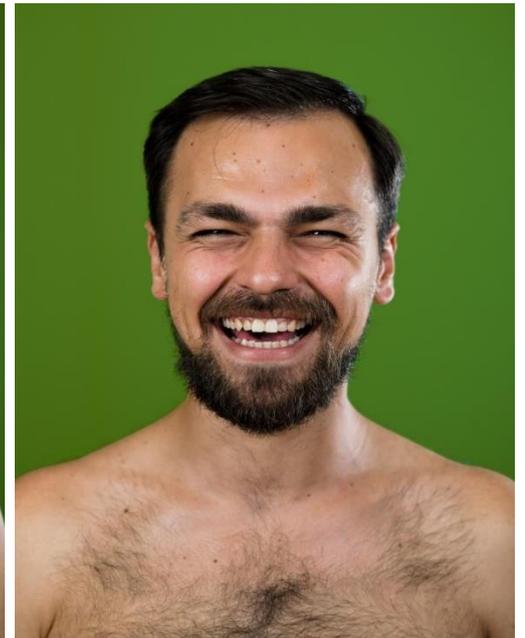
**NEUTRAL**



**LAUGHING**

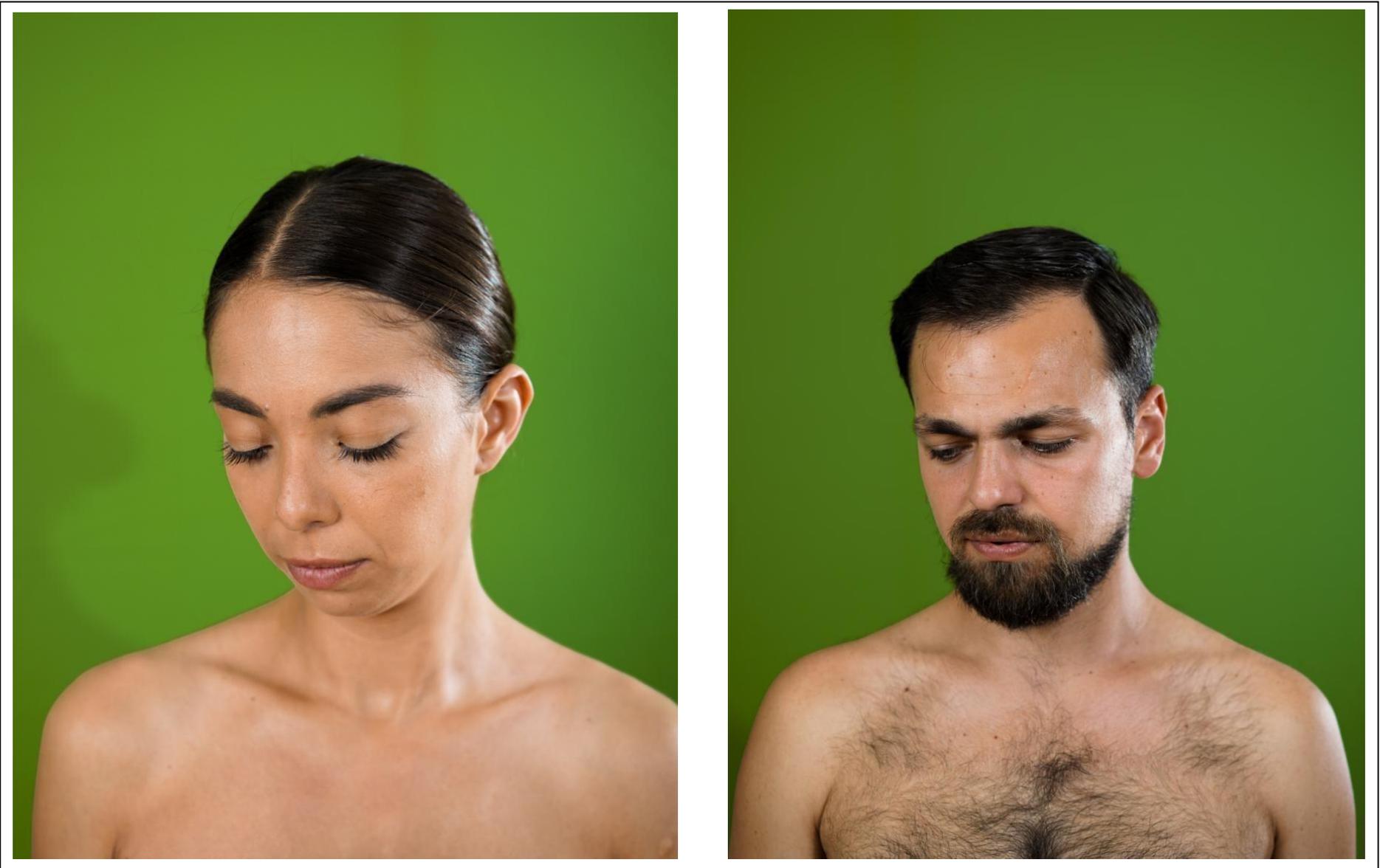


**NEUTRAL**



**LAUGHING**

## 19. LET DOWN



Disappointment is the state of a person when his expectations are disappointed about other people or events or changes that take place in the world. Disappointment means disillusionment, disappointment.

Disappointment is sometimes such a deep feeling that it can lead to mood disorders if the person experiencing this feeling has had repeated episodes.

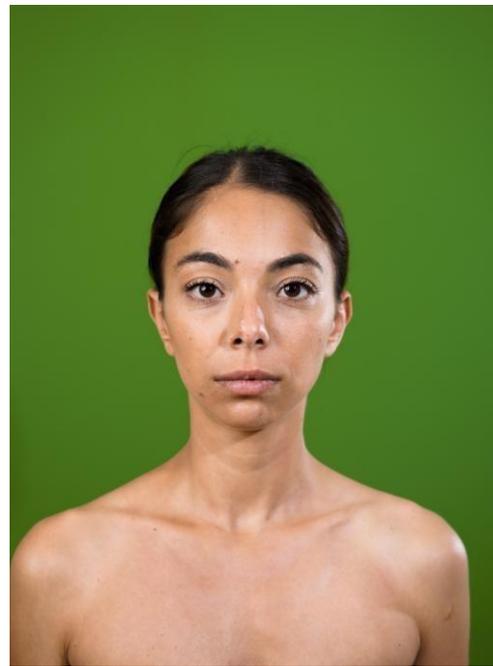
It can arise from unrealistic expectations of what one person wants from another, or when efforts to obtain the desired thing or object fail.

There are situations where people hope that their problems will be solved and when it is not, they become disappointed.

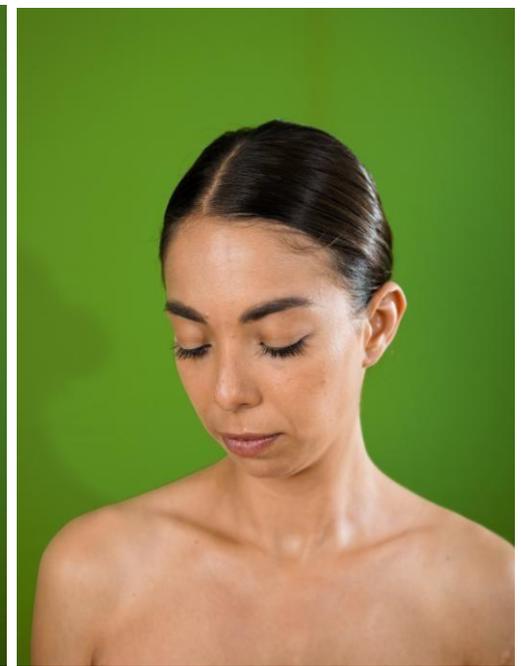
There are people who become disappointed in love according to the way they understand it although "love" could not be a constant permanent feeling but is variable depending on the time that has passed since the beginning of a relationship or according to the experiences of each individual, there can be other situations where people are disappointed with their country or the way it is run.

Disappointed means discouraged or sad because what you hoped for didn't happen. If you write a fan letter to your favorite actress hoping for a personal reply, you're likely to be disappointed.

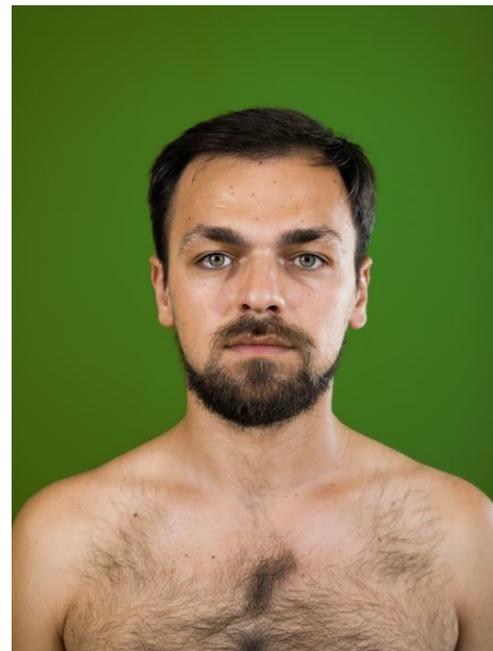
The original French root of disappointed is *desappointer*, which has one meaning that's basically "to fail to keep an appointment." So you might imagine the word disappointed like this: you made an appointment with a friend, but he blew it off.



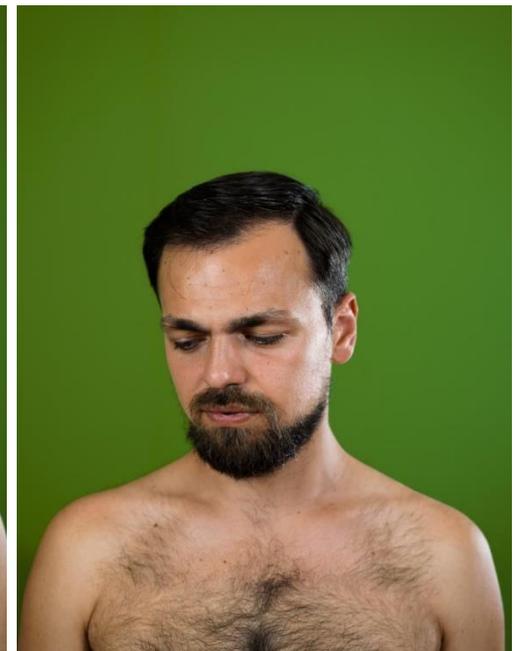
**NEUTRAL**



**LET DOWN**

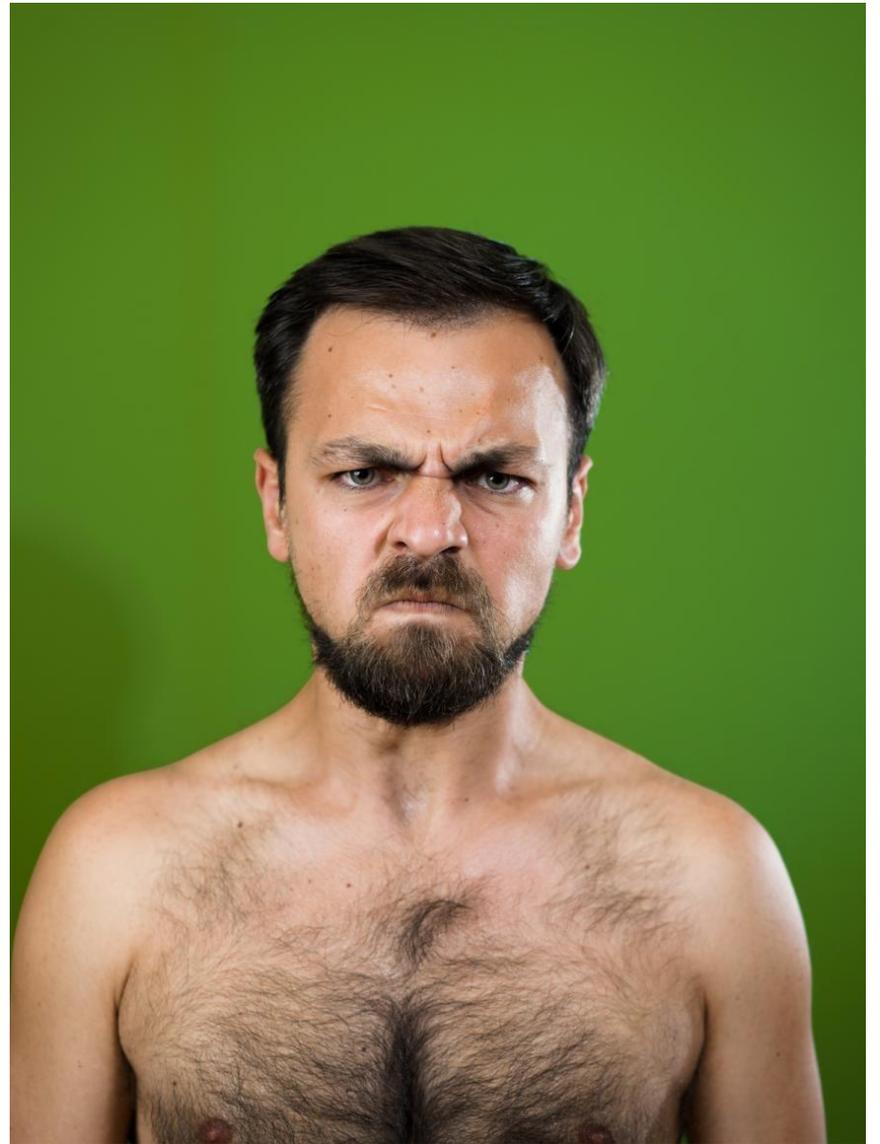
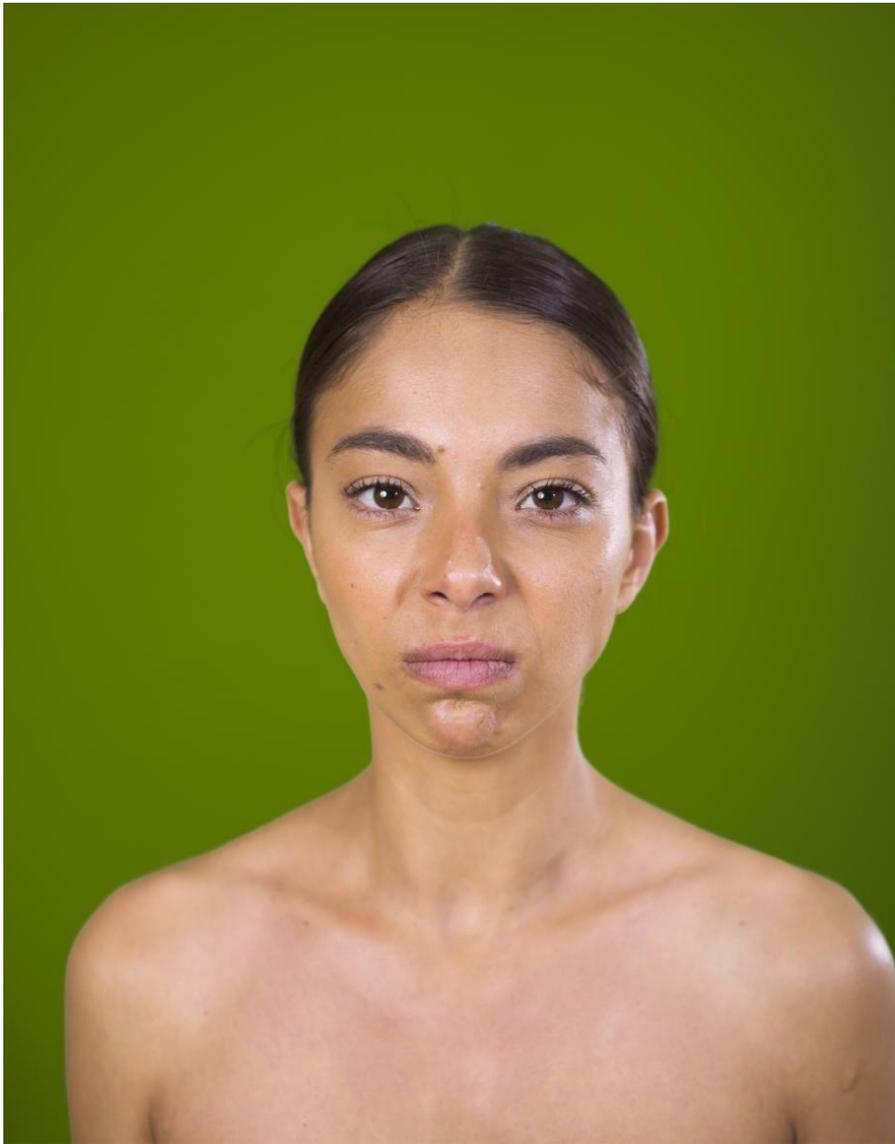


**NEUTRAL**



**LET DOWN**

## 20. MAD

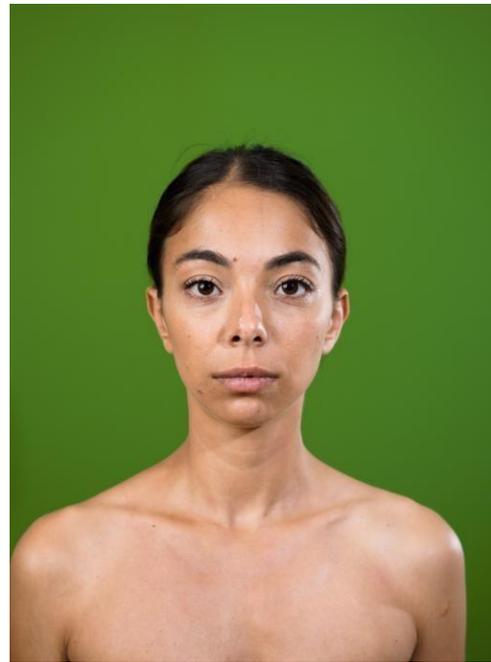


Anger is an outburst of violent but temporary irritation against someone or something.

If you're mad about something, you've lost your temper. If you've gone mad, you've lost your mind. Just like it's more common to be angry than to be insane, you're more likely to use mad to describe someone who's ticked off than to describe someone who has serious mental problems. If you say you're "mad about" something, you're saying you like it so much it distracts you.

According to the nature of the symptoms, madness in life is divided into melancholy, mania and hysteria. Melancholy is manifested by dejection, complete apathy, lethargy, lack of interest in what is happening. Individuals suffering from this deviation experience mental anguish and torment, remain in a depressed state for a long time.

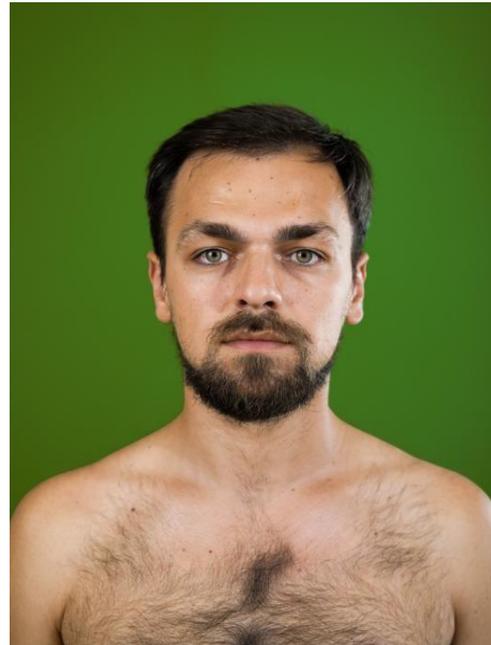
Mania and hysteria are the exact opposite of melancholy. These deviations are expressed by the patient's aggressiveness, excited state and anger. People prone to mania or hysteria may impulsively commit outbursts that often have negative consequences.



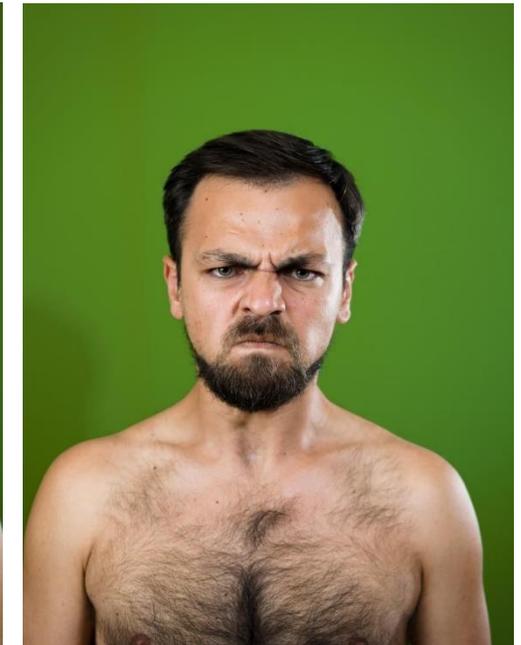
**NEUTRAL**



**MAD**



**NEUTRAL**



**MAD**

21. MIFFED



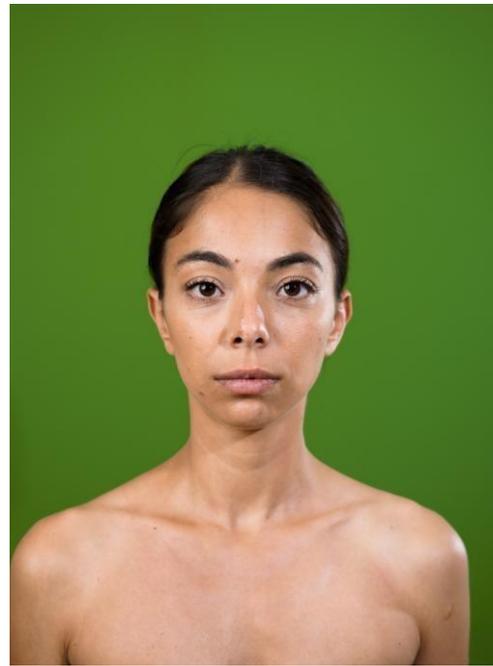
A miffed person shows anger by frowning and pursing his lips; to sulk a person purses their lips and frowns angrily.

The informal miffed is great for describing a feeling of irritation or impatience. Your teacher might be upset if you keep being late to class, and you'll feel just as upset if he doesn't buy your excuse that the bus is always late. Miffed originated in the early 19th century, from miff, "ill-humored crime," which is probably an imitation of the disgusted sound you might make when fed up or offended.

Somewhat indignant, irritated, upset, angry, or annoyed: I wasn't even mad anymore that I was stuck at home without transportation.

To be put in an irritable mood, especially by an offensive incident: I was upset when I was not invited to the party.

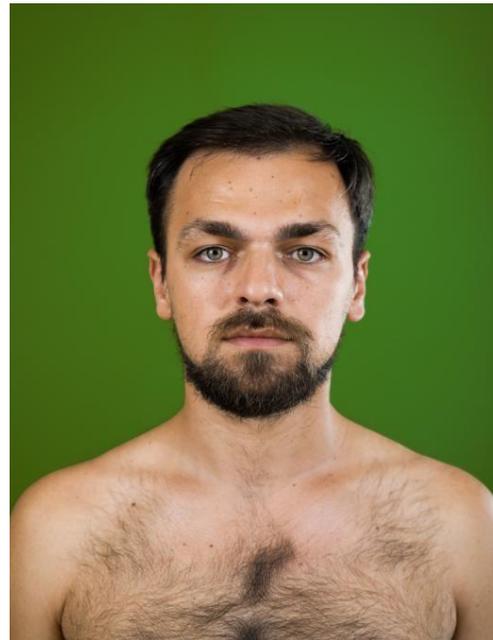
When something made you unhappy or angry, you could say you were angry.



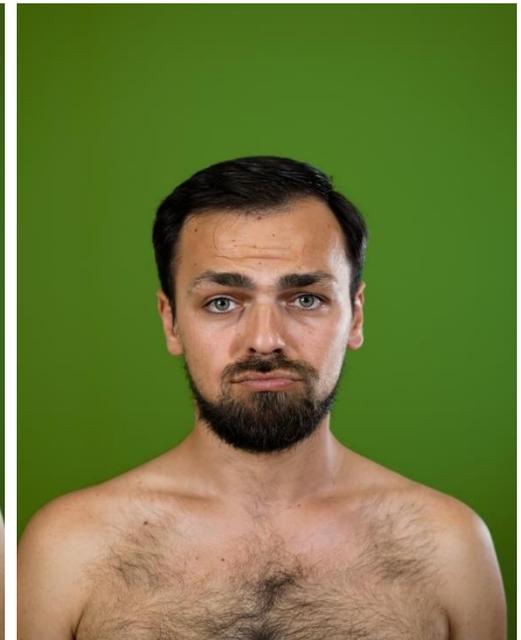
**NEUTRAL**



**MIFFED**

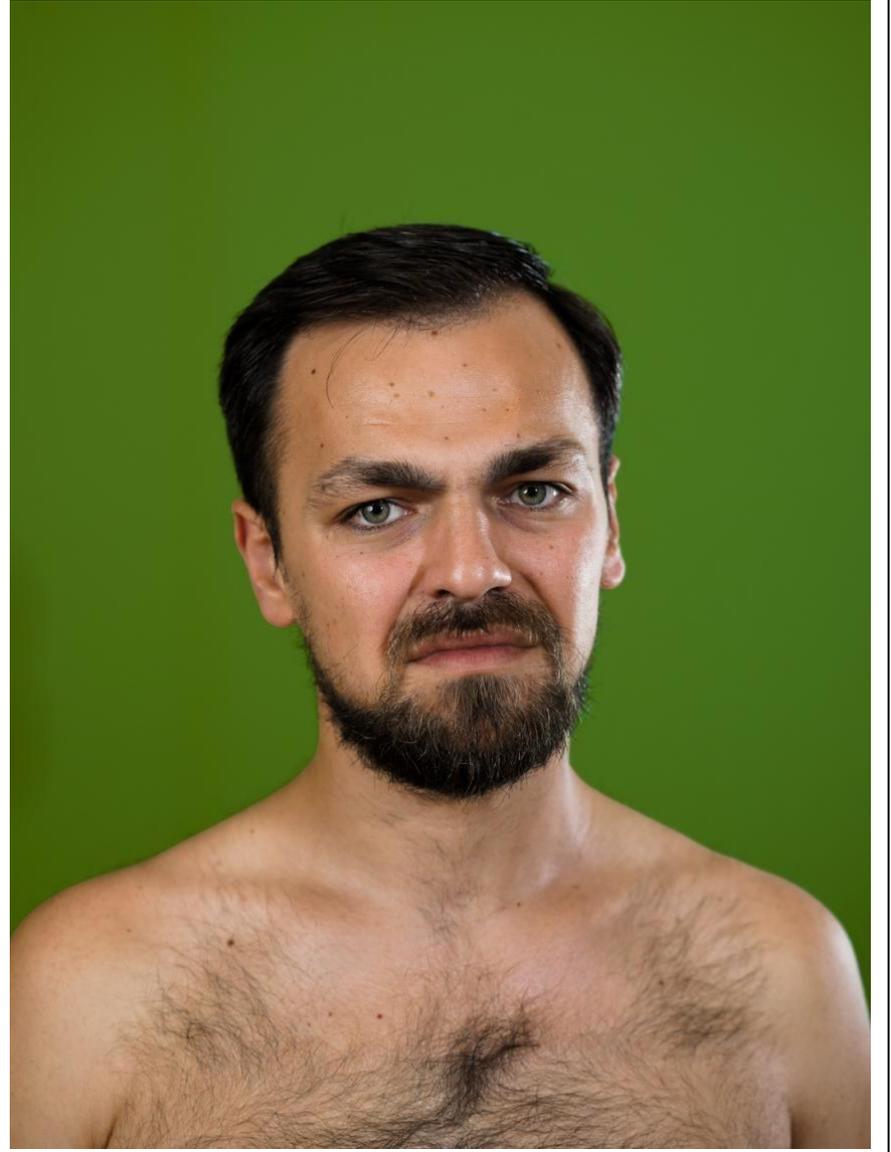


**NEUTRAL**



**MIFFED**

## 22. NEGLECTED

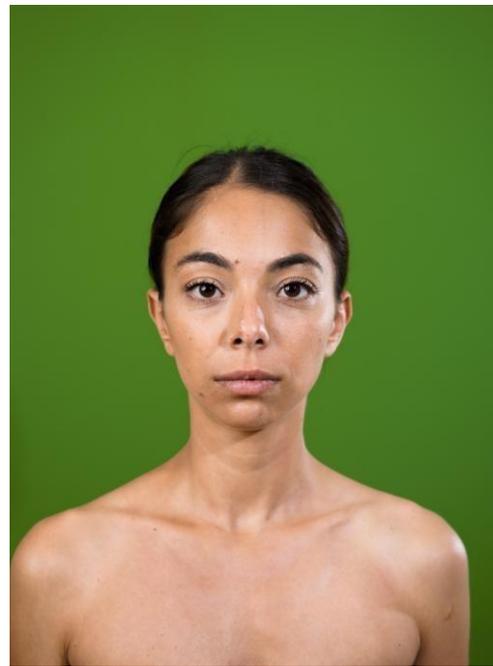


Person who has not been given due attention, person who feels ignored, neglected, uninvolved.

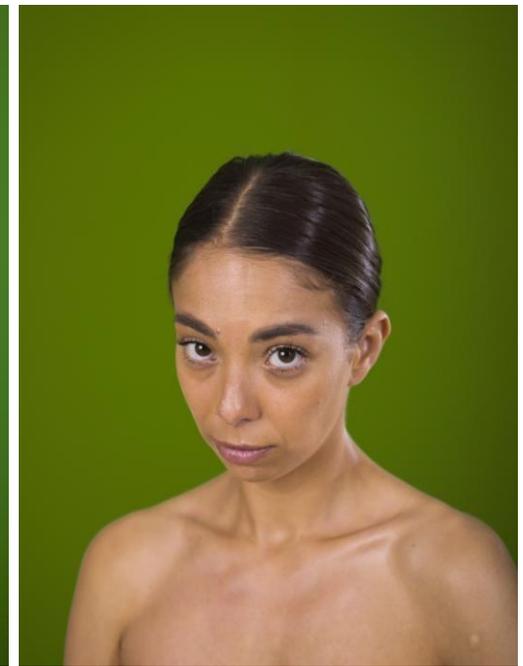
Physical signals and behaviors: An expression that indicates hurt or confusion, a furrowed brow, frowning, wincing, flinching away from the offending party, an inward gaze, a downcast countenance, rounded shoulders, leaning away from the person; keeping one's distance, not speaking up for oneself

Emotional neglect can be defined as a relationship pattern in which an individual's affectional needs are consistently disregarded, ignored, invalidated, or unappreciated by a significant other. People in neglectful families are emotionally disconnected from one another, behaving as if they were living on different planets. Parents may have trouble understanding their children's needs for love, affection, closeness, and support, or they may feel too overwhelmed or powerless to meet these needs on a consistent basis. Neglectful parents usually come from families in which, as children, they were ignored or neglected by their parents.

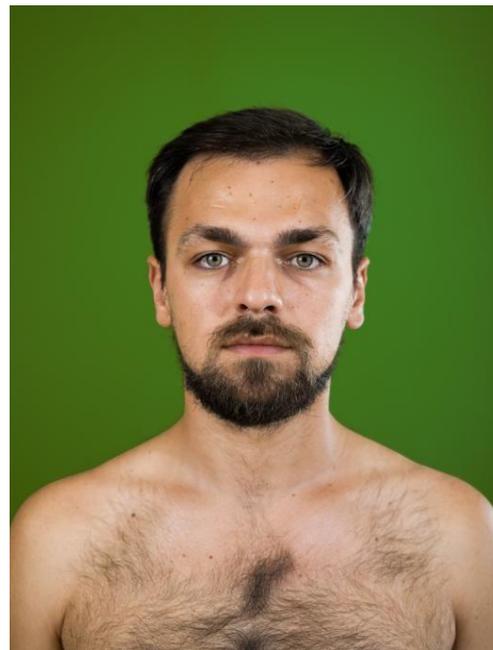
They also may lack emotionally satisfying adult relationships. Forced to rely on themselves for support, afraid of their own dependency needs, and reluctant to admit their pain, these parents are highly ambivalent about their children's needs, particularly when their children are hurting, crying, or looking for emotional support. They may feel jealous or resentful of their children and may perceive them as excessively demanding and impossible to satisfy. They may be so preoccupied with their own needs that they never consider the children's point of view. Alternatively, they may feel so angry and resentful about having children that they simply ignore them.



**NEUTRAL**



**NEGLECTED**

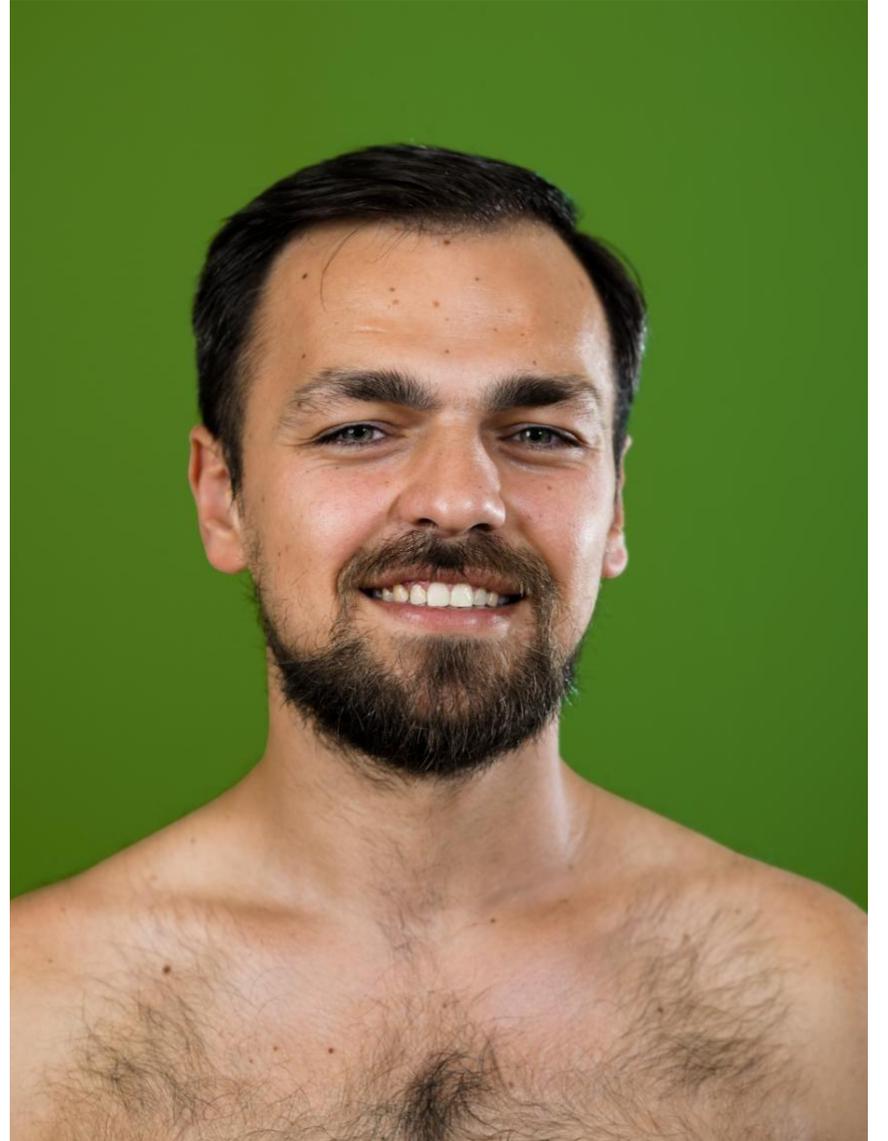


**NEUTRAL**



**NEGLECTED**

## 23. OPTIMISTIC

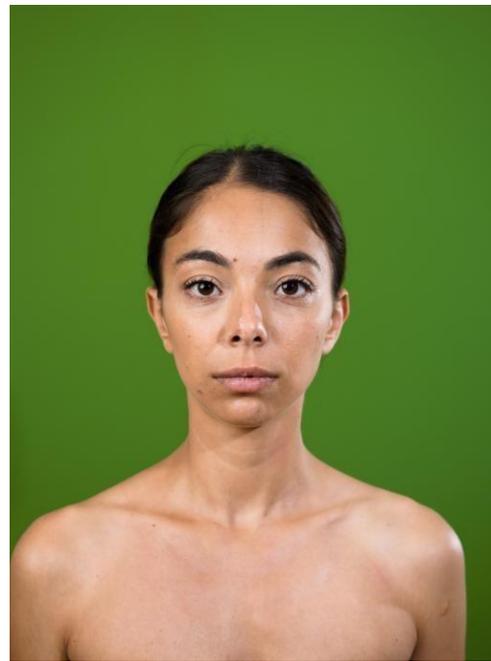


Optimism is defined as the attitude of the person who confidently looks at life and the future, at his peers and who considers that all situations have a favorable outcome, a tendency to see the good, favorable side of things. In a philosophical sense, optimism is a concept opposite to pessimism, according to which good overcomes evil.

People also differ in their usual levels of optimism and cheerfulness, and this appears to be an enduring characteristic rather than a reaction to a specific situation or event. Christopher Peterson, one of the experts in the field, suggests that optimism is an attitude about the likelihood of experiencing enjoyable emotions.

While not everyone is very optimistic, having such an outlook is good for you - it is found in people who have more enjoyment in their lives, greater perseverance, and higher achievements. Remarkably, a number of studies suggest that optimistic people have better health and actually live longer! Peterson suggests that one's overall optimism about life "may be a biologically given tendency, filled in by culture with a socially acceptable content, it leads to desirable outcomes because it produces a general state of vigor and resilience."

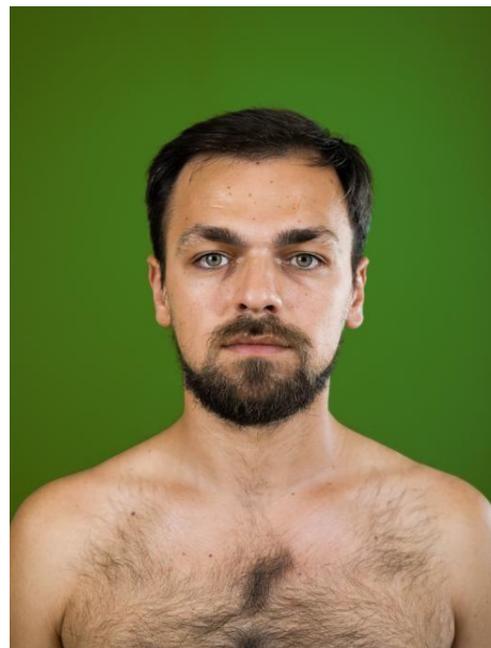
Optimism is a mental attitude characterized by hope and confidence in success and a positive future. Optimists are those who expect good things to happen, where pessimists instead predict unfavorable outcomes. Optimistic attitudes are linked to a number of benefits, including better coping skills, lower stress levels, better physical health, and higher persistence when pursuing goals.



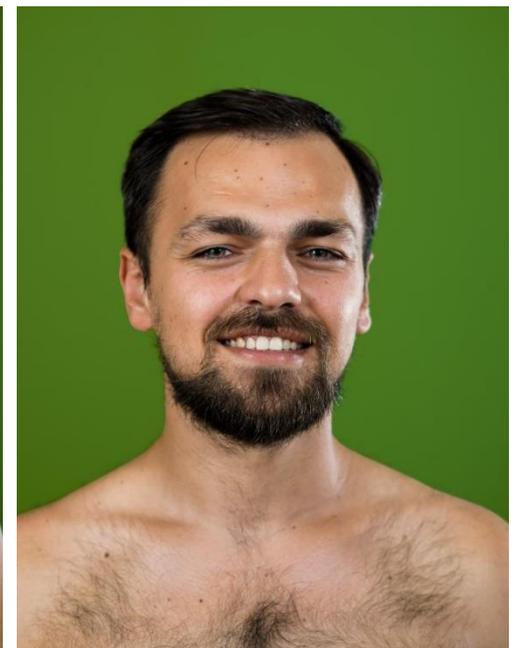
**NEUTRAL**



**OPTIMISTIC**

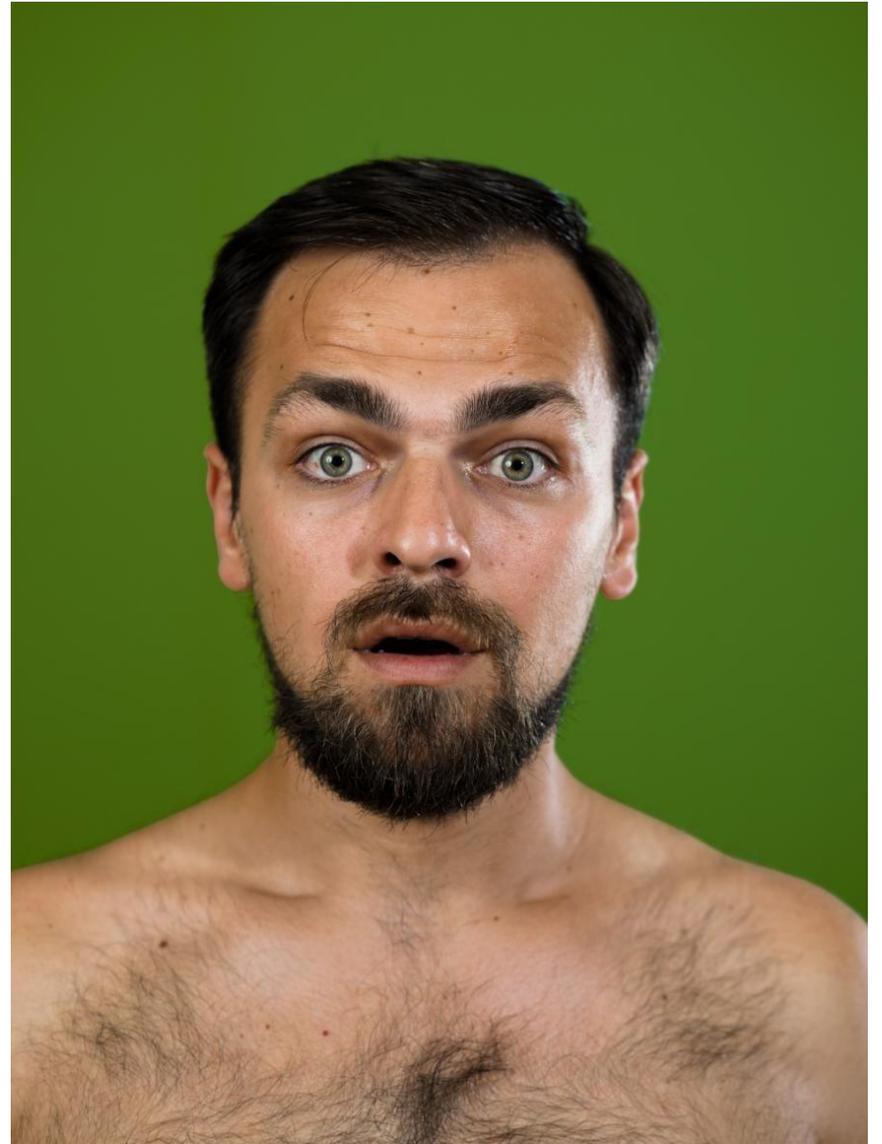
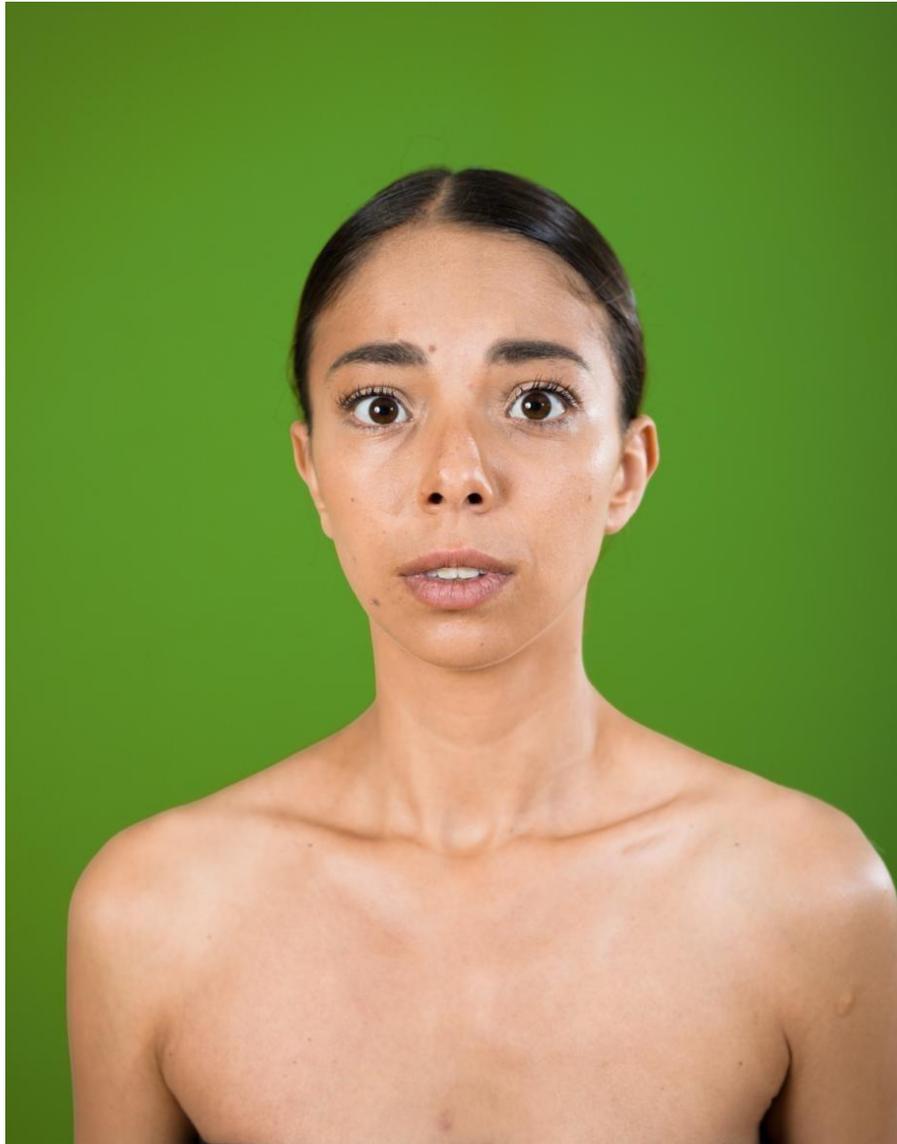


**NEUTRAL**



**OPTIMISTIC**

## 24. PERPLEXED



Perplex is a state of surprise, amazement, mixed with bewilderment; disorientation in the face of an unexpected, difficult, confusing situation.

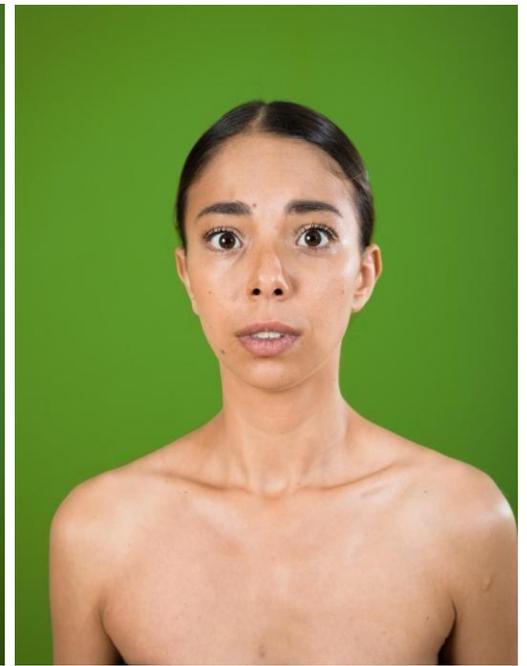
Perplexed reflection is often accompanied by certain movements or gestures. At such times we commonly raise our hands to our foreheads, mouths, or chins; but we do not act thus, as far as I have seen, when we are quite lost in meditation, and no difficulty is encountered.

Plautus, describing in one of his plays a puzzled man, says, "Now look, he has pillared his chin upon "his hand." Even so trifling and apparently unmeaning a gesture as the raising of the hand to the face has been observed with some savages. Mr. J. Mansel Weale has seen it with the Kaffirs of South Africa; and the native chief Gaika adds, that men then "sometimes" pull their beards."

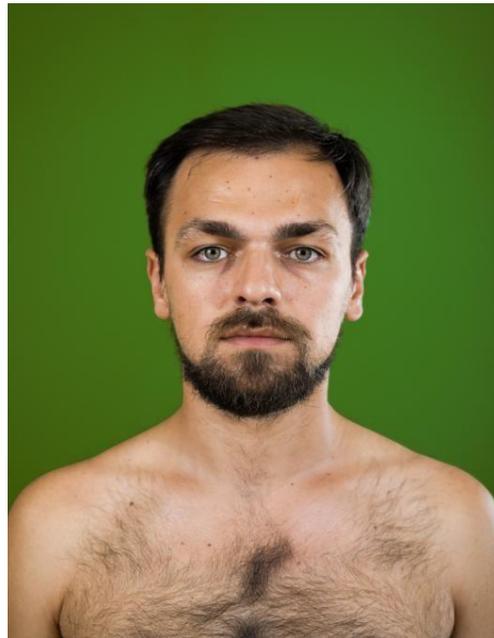
Mr. Washington Matthews, who attended to some of the wildest tribes of Indians in the western regions of the United States, remarks that he has seen them when concentrating their thoughts, bring their "hands, usually the thumb and index " finger, in contact with some part of the face, commonly the upper lip." We can understand why the forehead should be pressed or rubbed, as deep thought tries the brain; but why the hand should be raised to the mouth or face is far from clear.



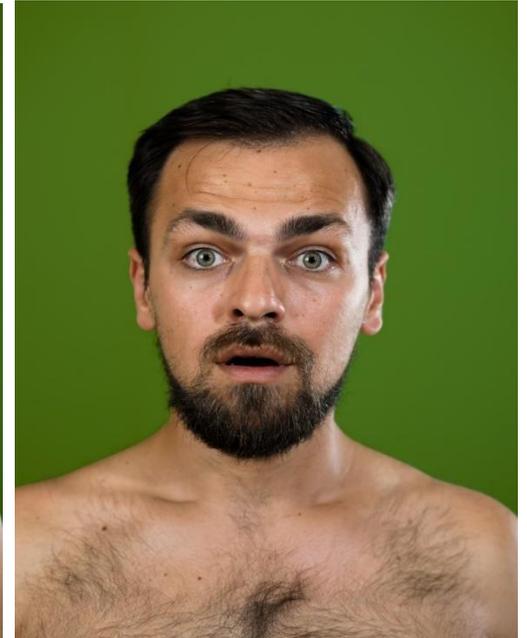
**NEUTRAL**



**PERPLEXED**

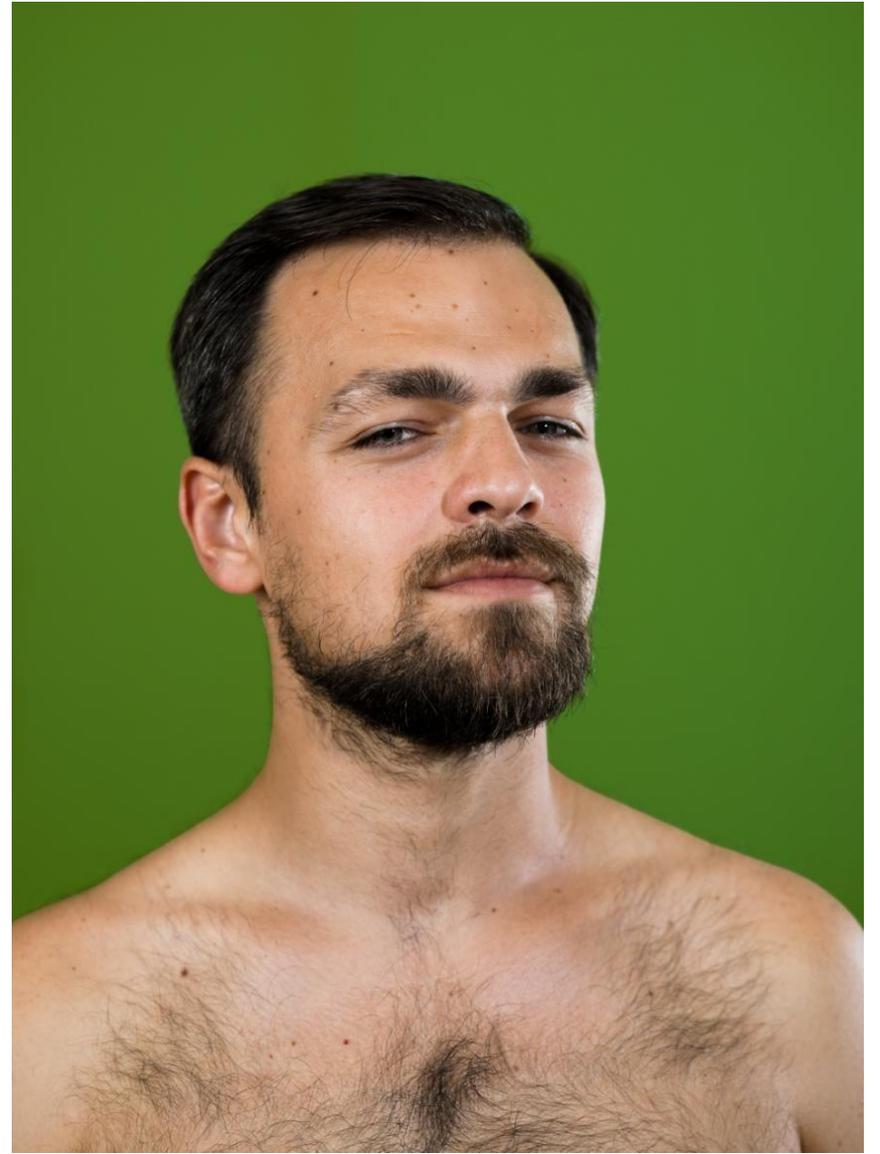
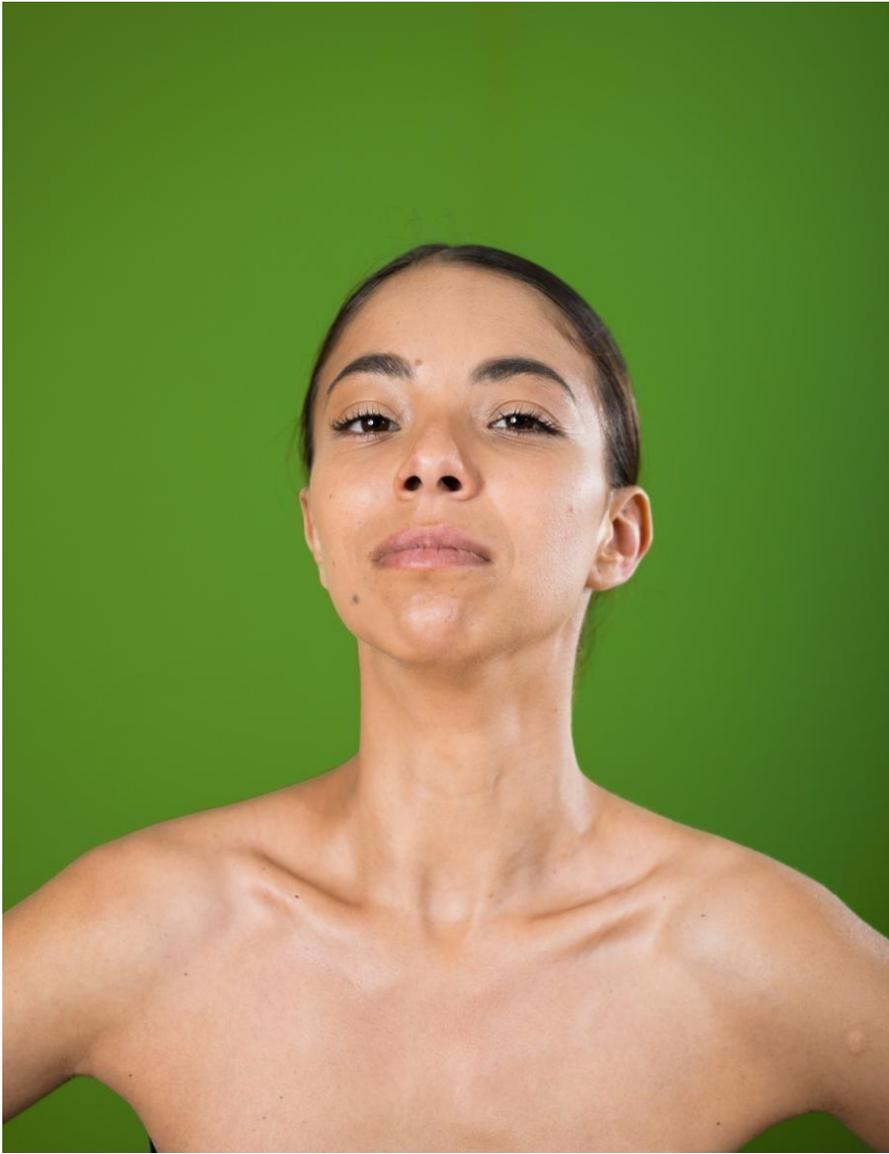


**NEUTRAL**



**PERPLEXED**

## 25. PROUD

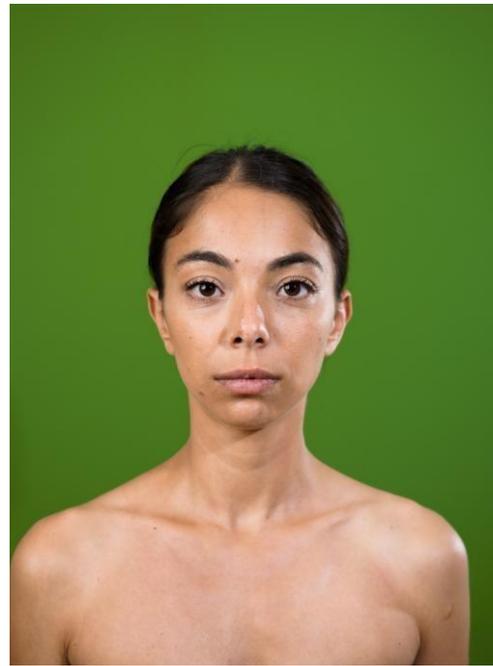


Pride is a feeling of dignity, confidence in one's own qualities that creates a feeling of contentment, satisfaction, pleasure and joy. Feeling of satisfaction caused by a success, a success, a victory. In the negative sense, an exaggerated pride when the individual has an attitude of unjustified superiority towards others, it is also called greatness, conceit, smugness, semesis, falla, fudulia, arrogance, haughtiness.

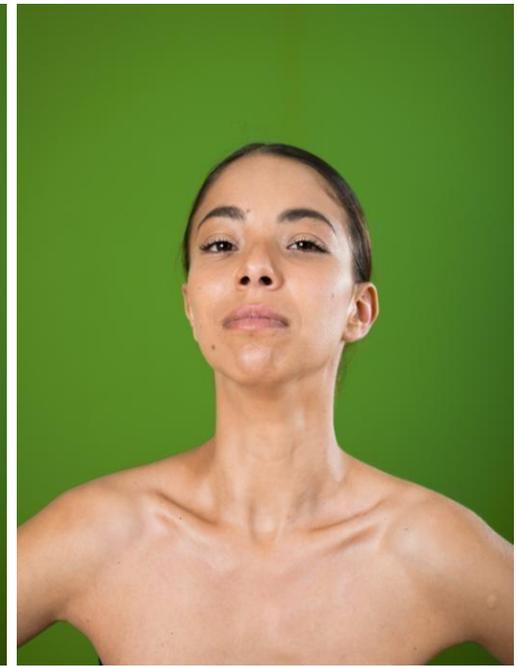
We feel proud of our achievements, of good things, that we have done, and also of good things that those close to us have done (if we emotionally identify with them). But one can also be proud of one's origins, or of one's beautiful singing voice, or even of one's beautiful long hair. Generally speaking, then, we are proud of something good that people can know about us; we expect people to think something good about us because of this, and we think something good about ourselves.

Pride has recognizable features. Although its static facial expression (typically a smile or laugh) does not clearly distinguish it from other positive emotions, it typically results in a bodily posture, gestures, and behavior that are clearly recognizable: lifting your chin, looking people in the eye, walking confidently, or in extreme cases, raising arms above your head. In a way, you try to make yourself larger and more noticeable, as if to say: *'look at me!'* You may also exhibit more perseverance in your activities.

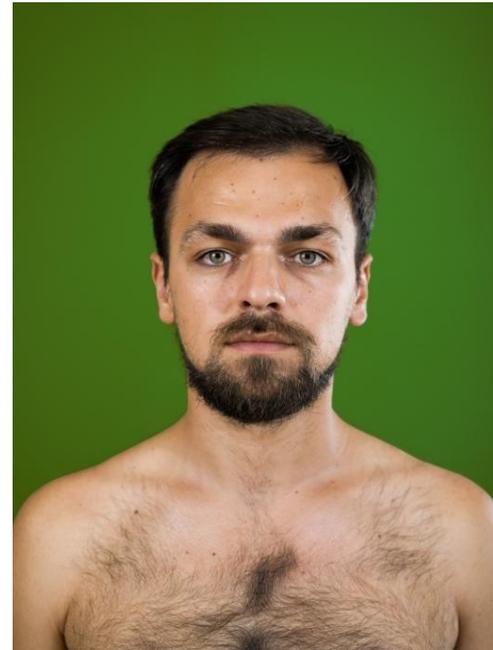
People generally find it very pleasant to experience pride, as it elevates our feeling of social self-worth and status. At the same time, many social groups, religions, and cultures (especially those that are highly collectivistic, such as the East Asian or African culture) believe that pride needs to be contained.



**NEUTRAL**



**PROUD**

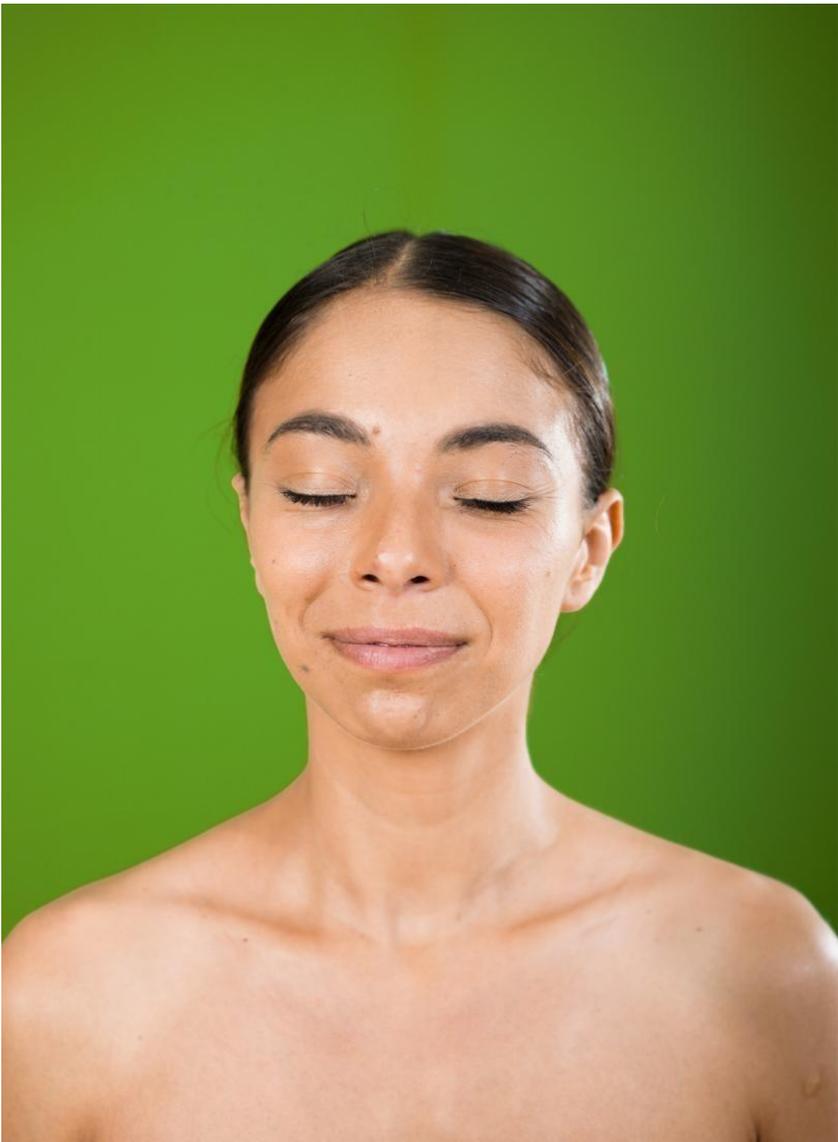


**NEUTRAL**



**PROUD**

26. SERENE



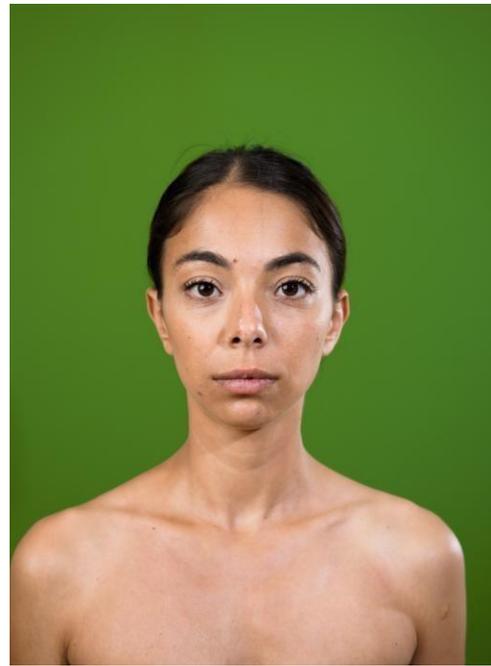
Serene, in people it manifests itself through the expression of their figure, which expresses peace, contentment of soul. A serene person is calm and peaceful.

The ability to stay cool even when things are heating up - that's composure. Those who are calm act confidently and are free of fear, as the manager, consultant and seminar leader Elke Nürnberger writes in her book "Gelassenheit lernen. Serene people rest within themselves and don't waste their time getting upset about things they can't influence. They accept them as they are and manage to let stress, hecticness and worries bounce off them.

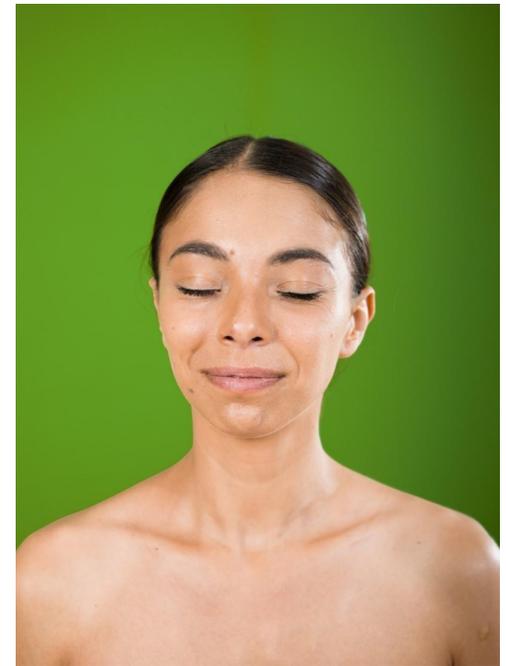
Especially annoying little things do not bring these people out of the calm. Composure is the inner attitude of remaining level-headed in any situation. It doesn't matter whether the job is extremely stressful, there's a traffic jam on the highway, the train is late, or things are going haywire in your private life.

Those who are calm are better able to deal with such situations. Serenity is therefore the opposite of nervousness and restlessness and the ability to be completely in the here and now.

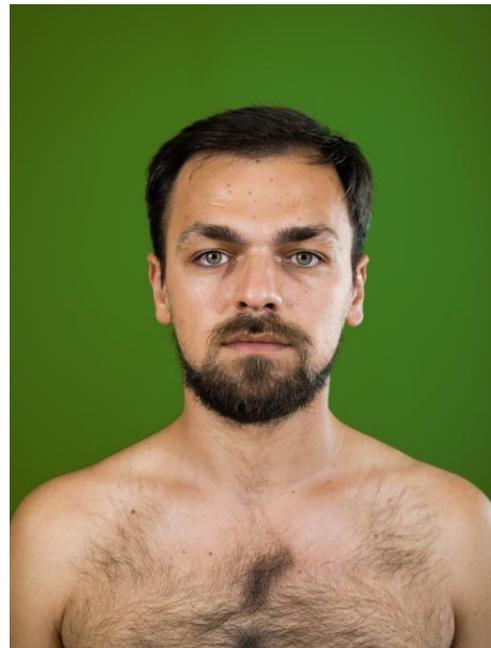
Serenity has been defined as a spiritual state that decreases stress and promotes optimal health (Roberts and Cunningham, 1990), a sustained state of inner peace (Gerber, 1986), and a universal health experience related to quality of life (Kruse, 1999). Boyd-Wilson et al (2004) describe serenity as a spiritual quality that involves inner peace despite vicissitudes and even feelings, thus a person can feel grief, yet be serene.



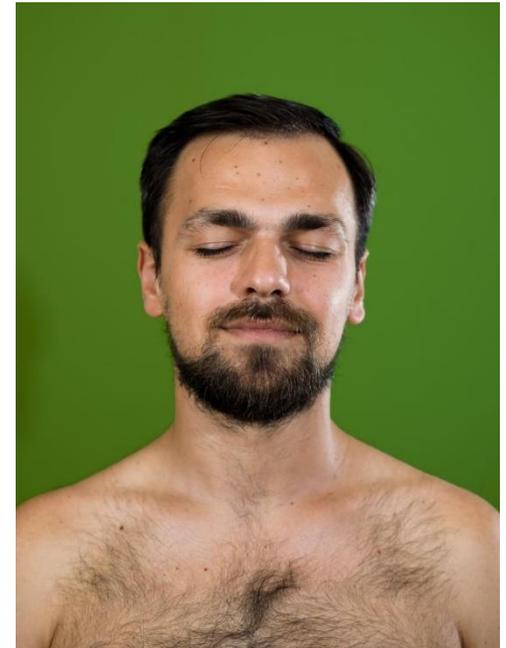
**NEUTRAL**



**SERENE**

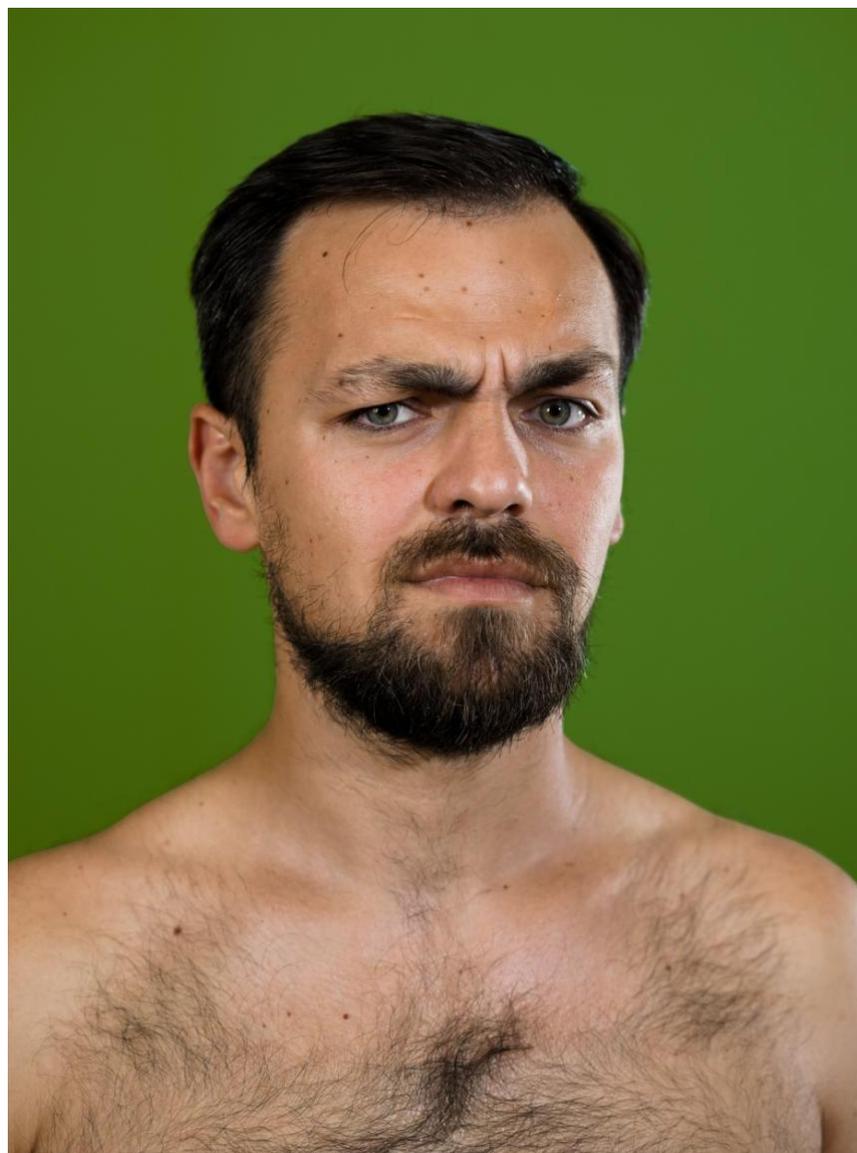
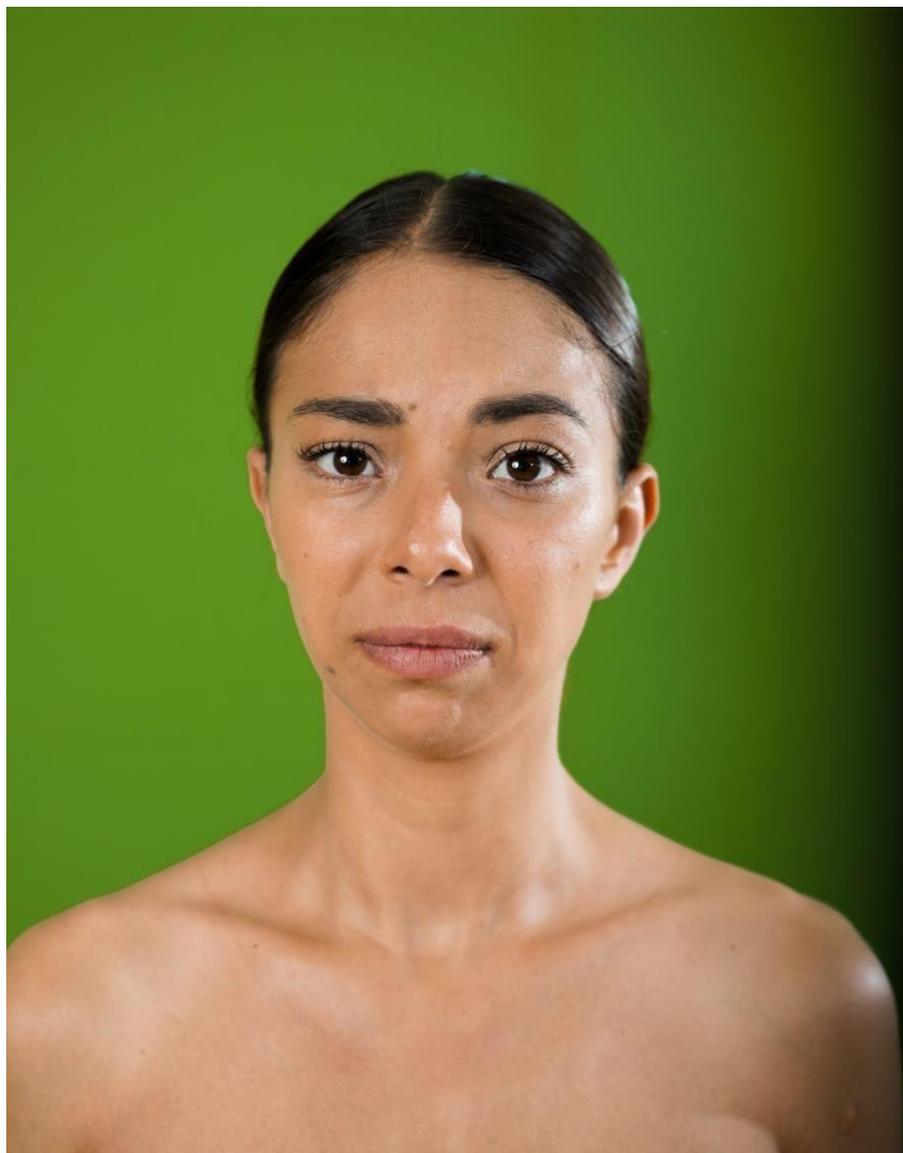


**NEUTRAL**



**SERENE**

## 27. SKEPTICAL

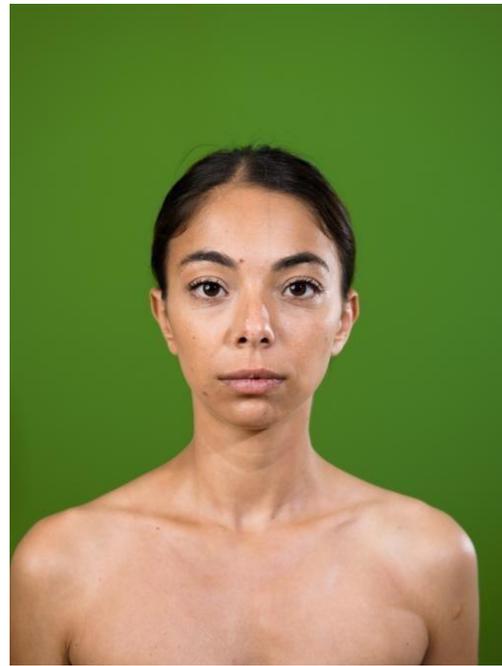


Skepticism is a view that questions the possibility of truthful knowledge of the reality of the external world or, in general, of any certain knowledge, emphasizing its relatively incomplete and imprecise character. A skeptic person has an attitude of distrust, doubt towards someone or something.

Brow raises are also deployed as exclamation or question marks, and as disbelief and skepticism emblems.

Physical signals and behaviors: pursing the lips in thought, tilting the head and pausing, shaking the head, pressing the lips into a fine line, raising the eyebrows, clearing the throat, fiddling with jewelry or other items, shrugging, nodding, but with a tight expression to show one is not fully committed, a confrontational stance, a smirk or eye roll, a hand flap that dismisses the person or their idea

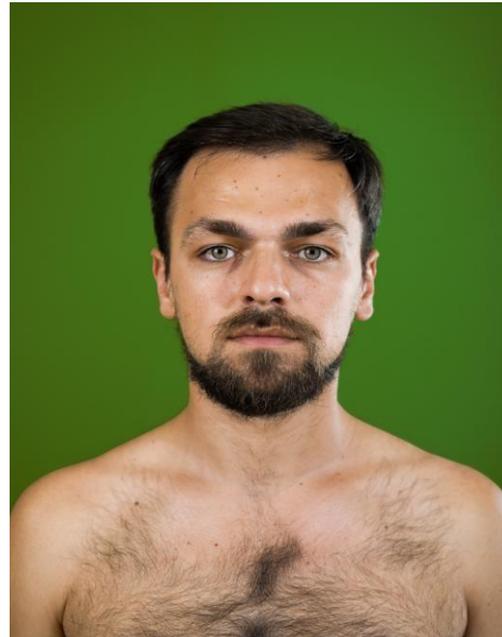
Will you always feel this when you're skeptical? Absolutely not! Again, these symptoms are indicators of anxiety. If you feel like you're struggling to cope with skepticism and questioning everything constantly, it could be beneficial to seek help from a mental health professional. You don't have to navigate these feelings all on your own!



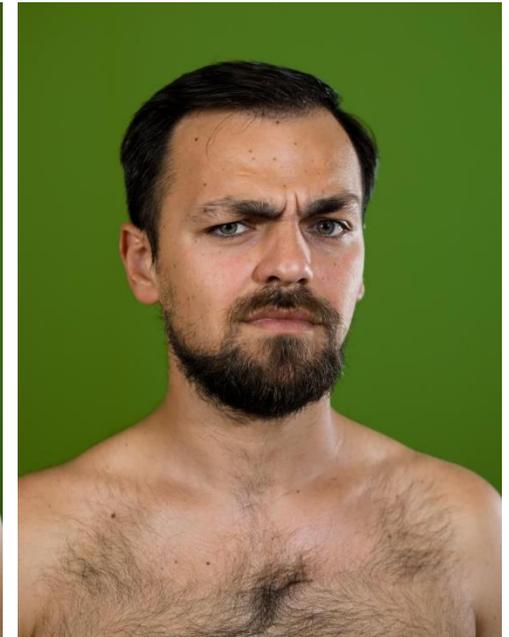
**NEUTRAL**



**SKEPTICAL**

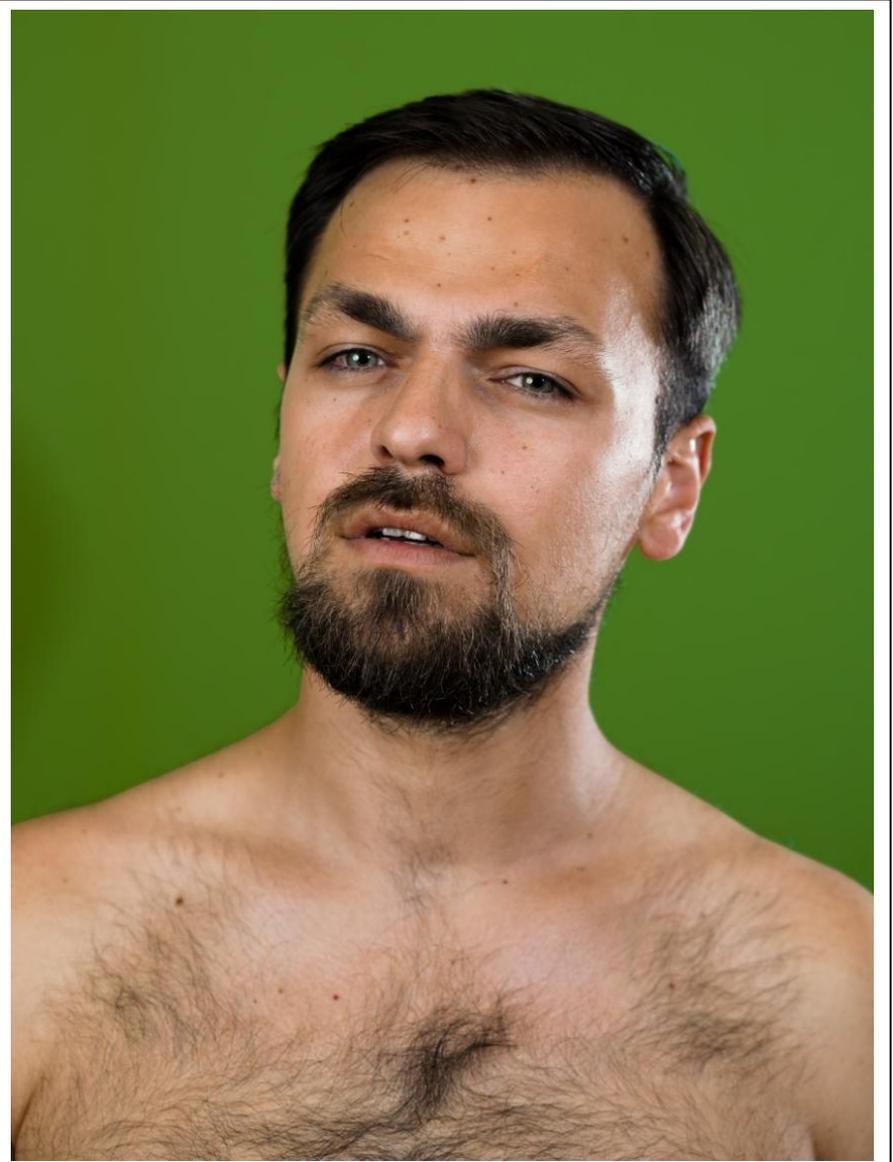
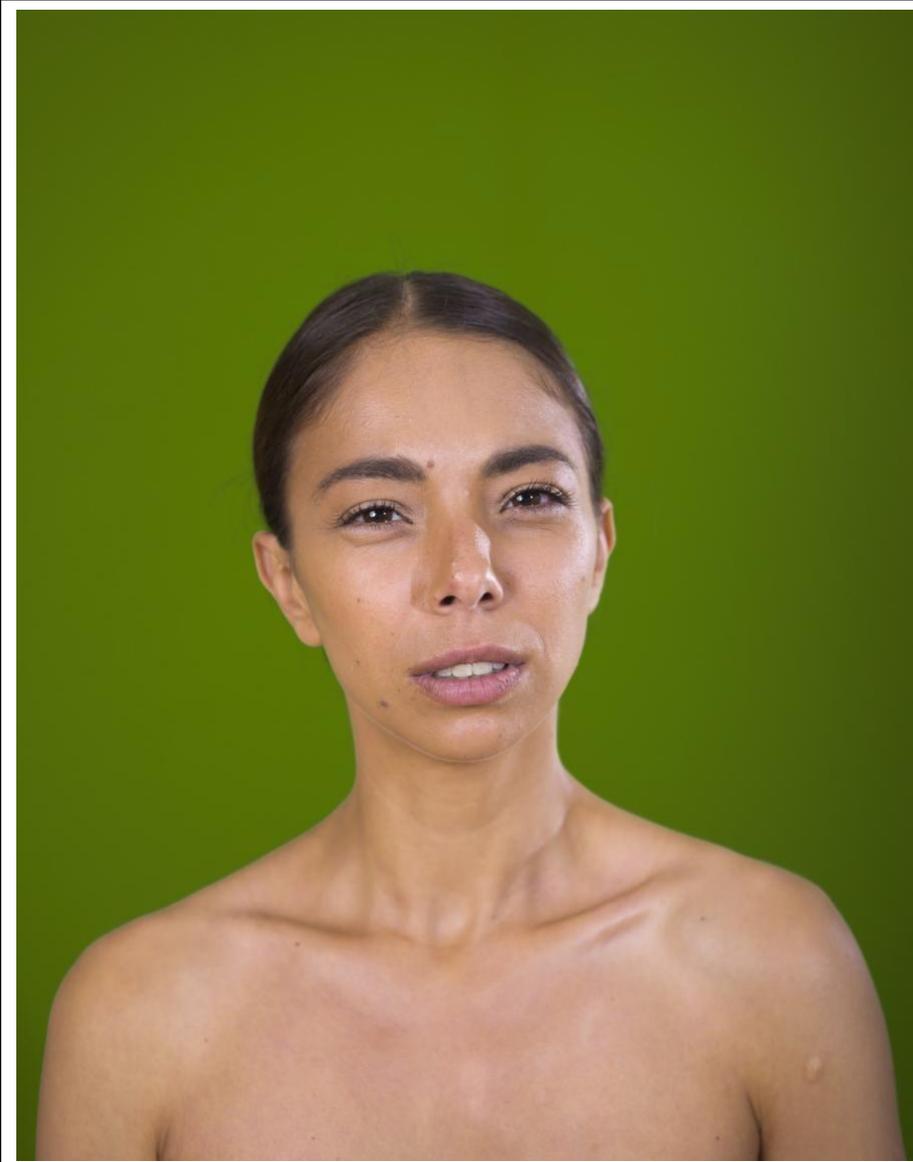


**NEUTRAL**



**SKEPTICAL**

## 28. SUSPICIOUS



Suspicion is a lack of trust in someone, a doubt as to the fairness, legality of one's actions, or the honesty of one's intentions; suspicion, mistrust.

Suspicion is a cognition of mistrust in which a person doubts the honesty of another person or believes another person to be guilty of some type of wrongdoing or crime, but without sure proof. Suspicion can also be aroused in response to objects that negatively differ from an expected idea.

Physical signals and behaviors: narrowing the eyes, squinting, body angling away from suspect, a wrinkled brow, flushed skin, a deliberate lowering of the head to study or stare, arms tight to the body, shooting glances at the suspect, avoiding direct eye contact, A fake smile, Sneaking or spying, eavesdropping, following the suspected person.

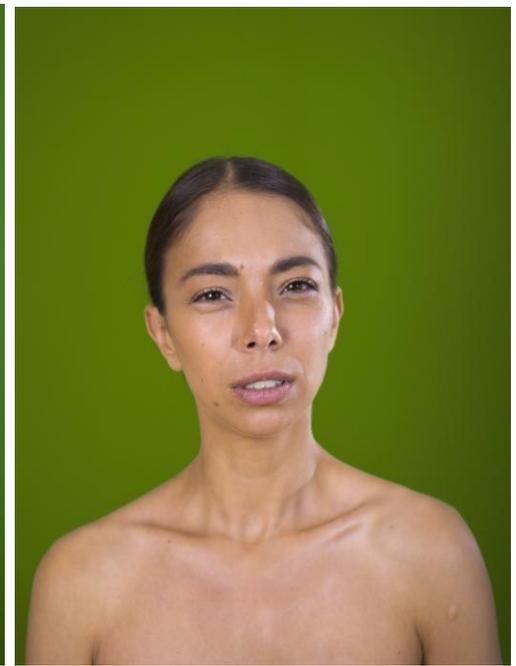
To be suspicious is to have a suspicion about someone or something, especially to have a feeling of distrust about the person or thing. To be suspicious of someone most often involves suspecting that they are engaged in some wrongdoing, as in my parents became suspicious of me when I kept asking whether they'd be home tomorrow.

Suspicious can also be used to describe someone or something that causes suspicion, as in the guards are trained to identify suspicious people, suspicious behavior, and suspicious packages.

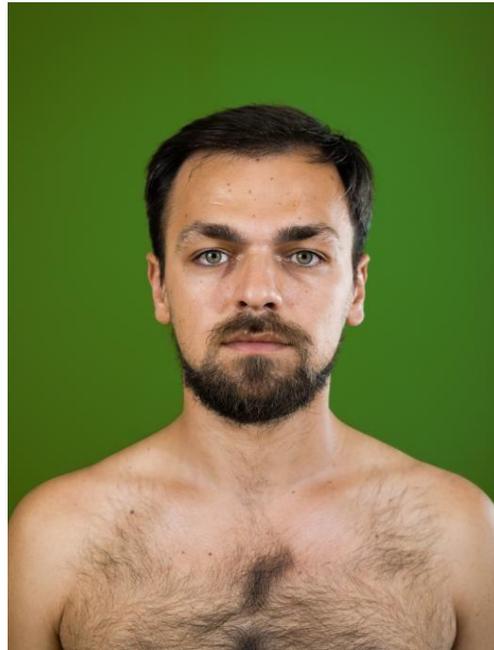
Being suspicious is usually based on something, such as a hunch or some kind of evidence, but the word is typically used in situations in which there is some doubt - when someone suspects something, but isn't sure. The same thing is implied by the verb suspect and the noun suspicion.



**NEUTRAL**



**SUSPICIOUS**

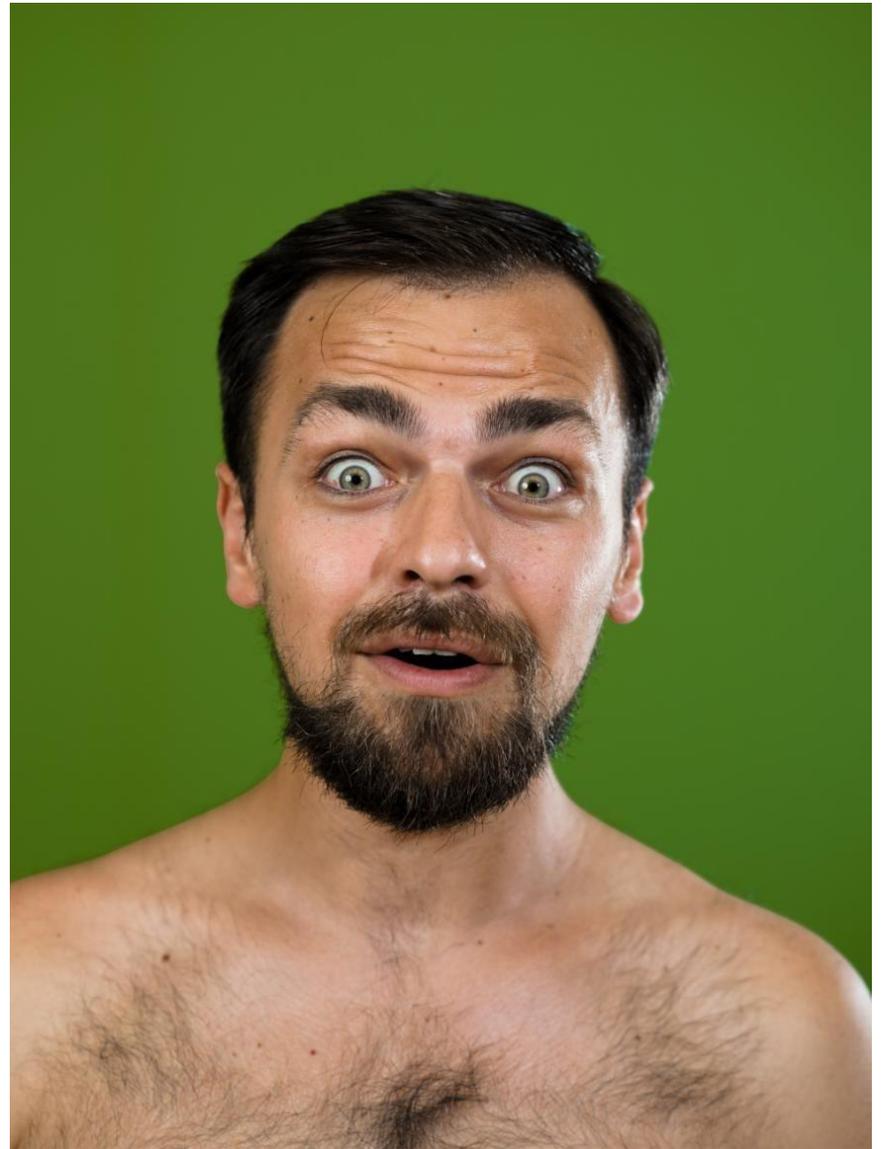
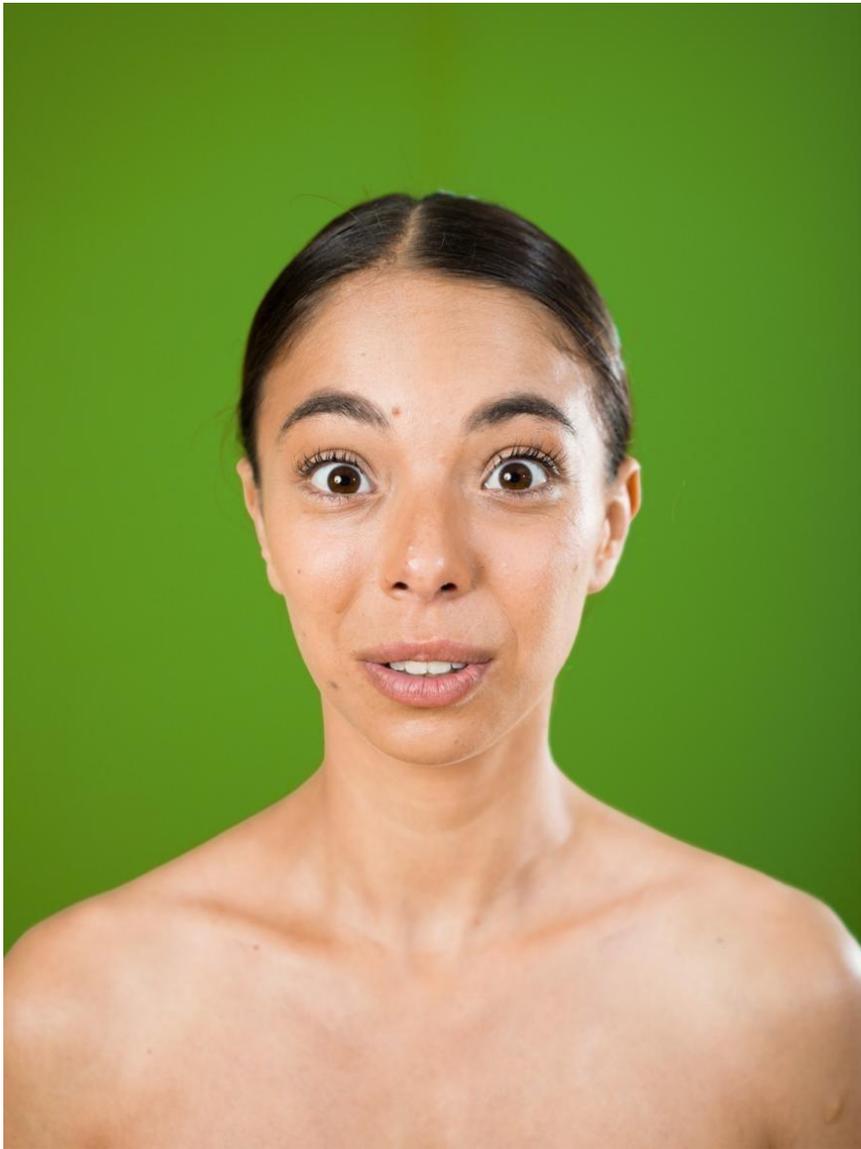


**NEUTRAL**



**SUSPICIOUS**

## 29. STIMULATED

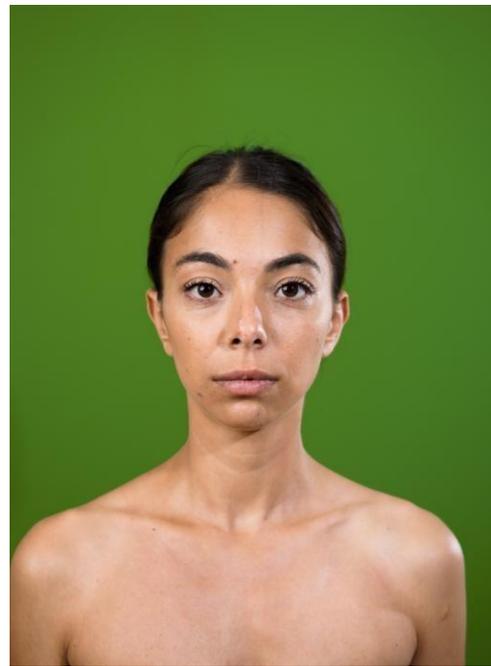


Being stimulated means increasing your energy, productivity. Stimulation is the encouragement of development or the cause of activity generally.

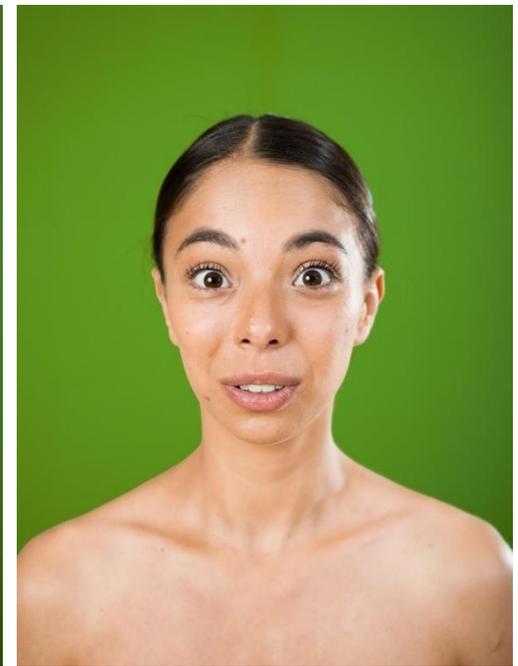
A particular use of the term is physiological stimulation, which refers to sensory excitation, the action of various agents or forms of energy (stimuli) on receptors that generate impulses that travel through nerves to the brain (afferents). There are sensory receptors on or near the surface of the body, such as photoreceptors in the retina of the eye, hair cells in the cochlea of the ear, touch receptors in the skin and chemical receptors in the mouth and nasal cavity.

There are also sensory receptors in the muscles, joints, digestive tract, and membranes around organs such as the brain, the abdominal cavity, the bladder and the prostate (providing one source of sexual stimulation). Stimulation to the external or internal senses may evoke involuntary activity or guide intentions in action. Such emotional or motivating stimulation typically is also experienced subjectively (enters awareness, is in consciousness). Perception can be regarded as conceptualised stimulation, used in reasoning and intending, for example. When bodily stimulation is perceived it is traditionally called a sensation, such as a kind of touch or a taste or smell, or a painful or pleasurable sensation.

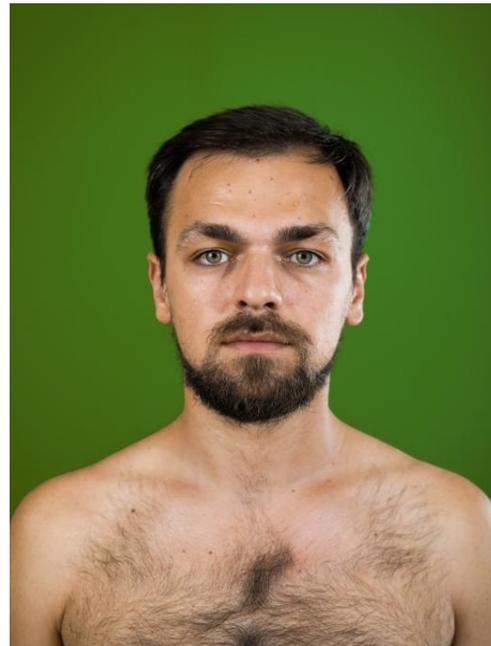
This can be thought of as psychological stimulation, which is a stimulus affecting a person's thinking or feeling processes.



**NEUTRAL**



**STIMULATED**

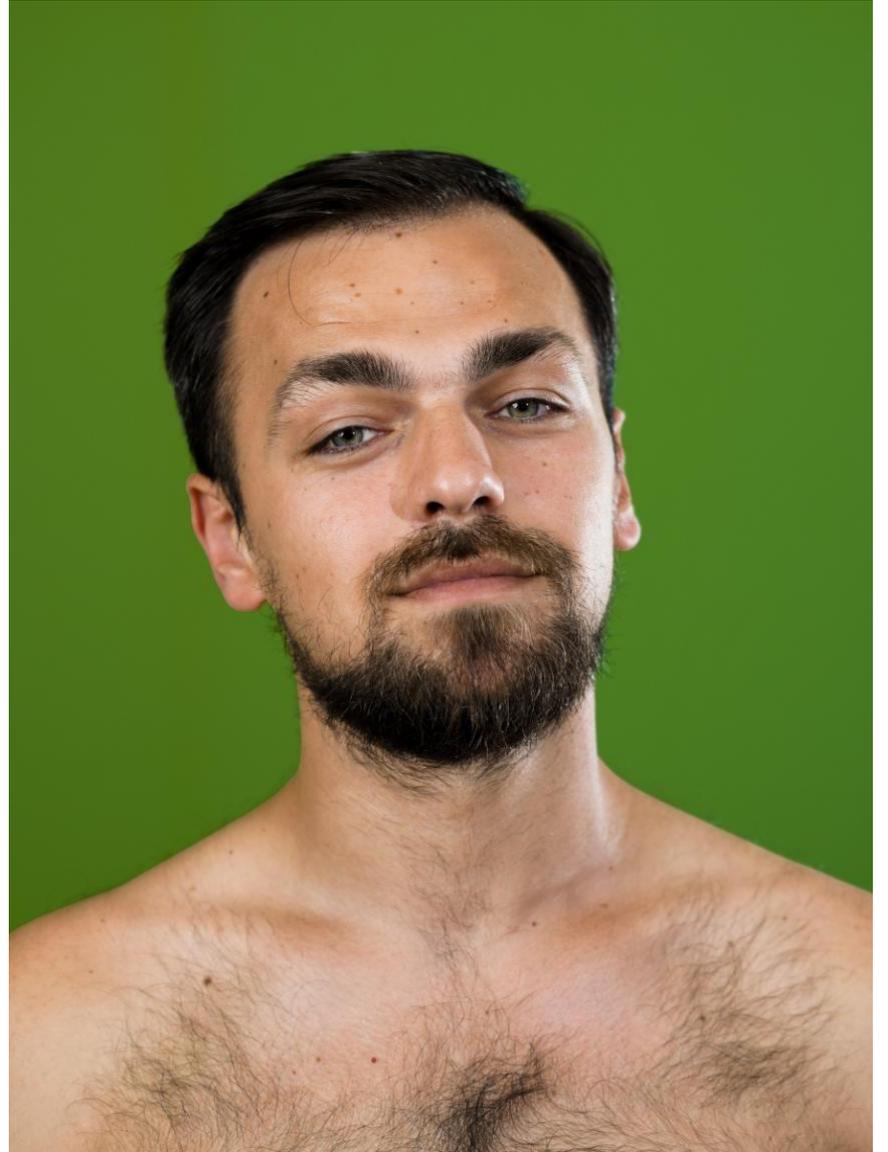


**NEUTRAL**



**STIMULATED**

## 30. TENDER

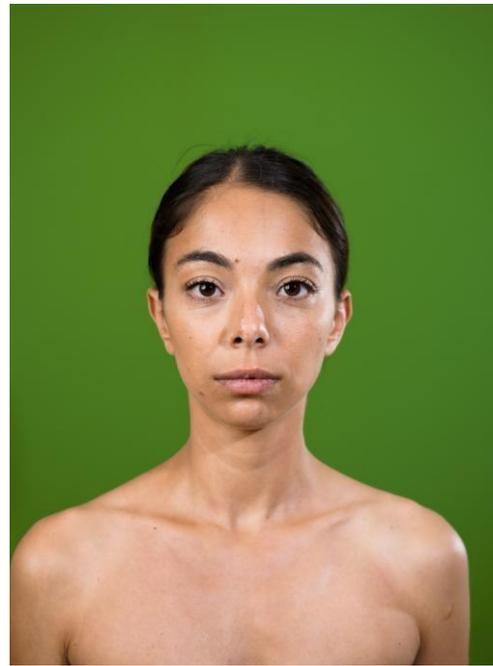


Tenderness is a feeling of concern, gentle affection, or warmth. It's the quality of a person who cries when they see someone get hurt or who gently picks up a tiny kitten.

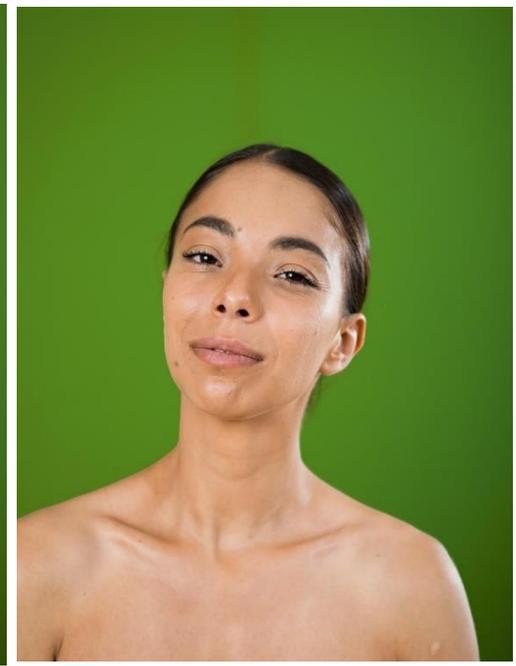
Writing a heartfelt note to a sad friend is one way to show tenderness, and so is giving your brother a sincere hug on his birthday. Another definition of this adjective is "extreme sensitivity to pain." You might experience tenderness in your muscles the day after going on a long hike. This is actually the original meaning, from tender, "soft or easily injured," and a root meaning "stretched, thin, or weak."

Tender emotions refer to emotions that may confer affection, gentleness, or that communicate vulnerability (which may include sadness, fear, love, feeling hurt, and sympathy). Expression of tender emotions refers to using facial, vocal, postural expressions to communicate their internal emotional states that confer gentleness or vulnerability to others (Chaplin and Aldao, 2013).

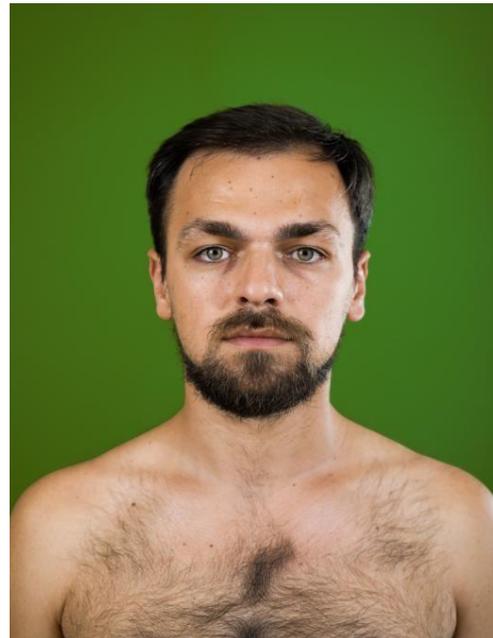
Almost everyone experiences some tender emotions in his/her daily lives, but how those emotions are expressed may differ across individuals. Studies and reviews have been examining the gender differences in the expression of tender emotions (Chaplin and Aldao, 2013; Else-Quest et al., 2006). For example, a recent meta-analysis of 166 empirical studies (Chaplin and Aldao, 2013) found that male adolescents are more likely to express externalizing emotions (anger) and girls are more likely to express positive emotions .



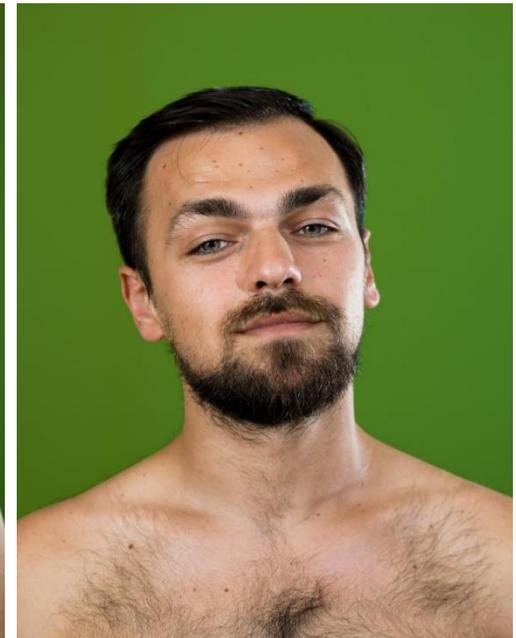
**NEUTRAL**



**TENDER**

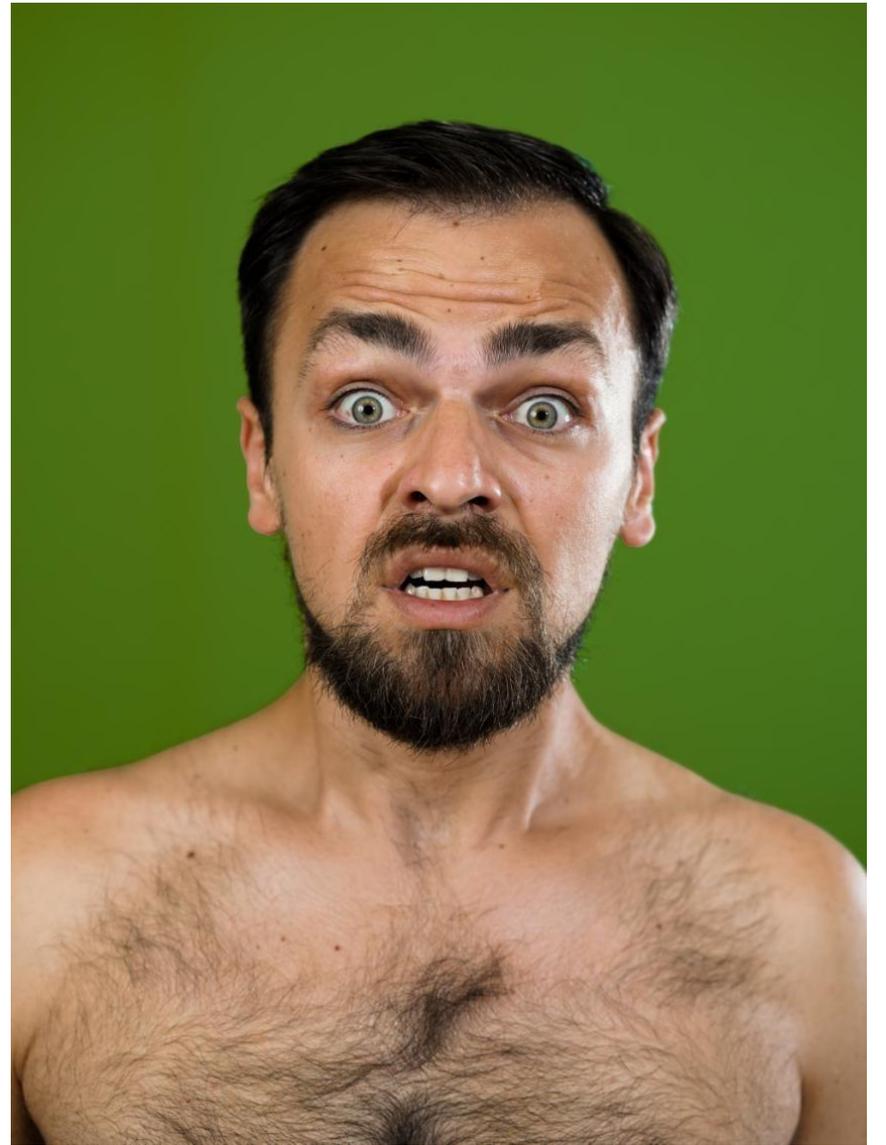
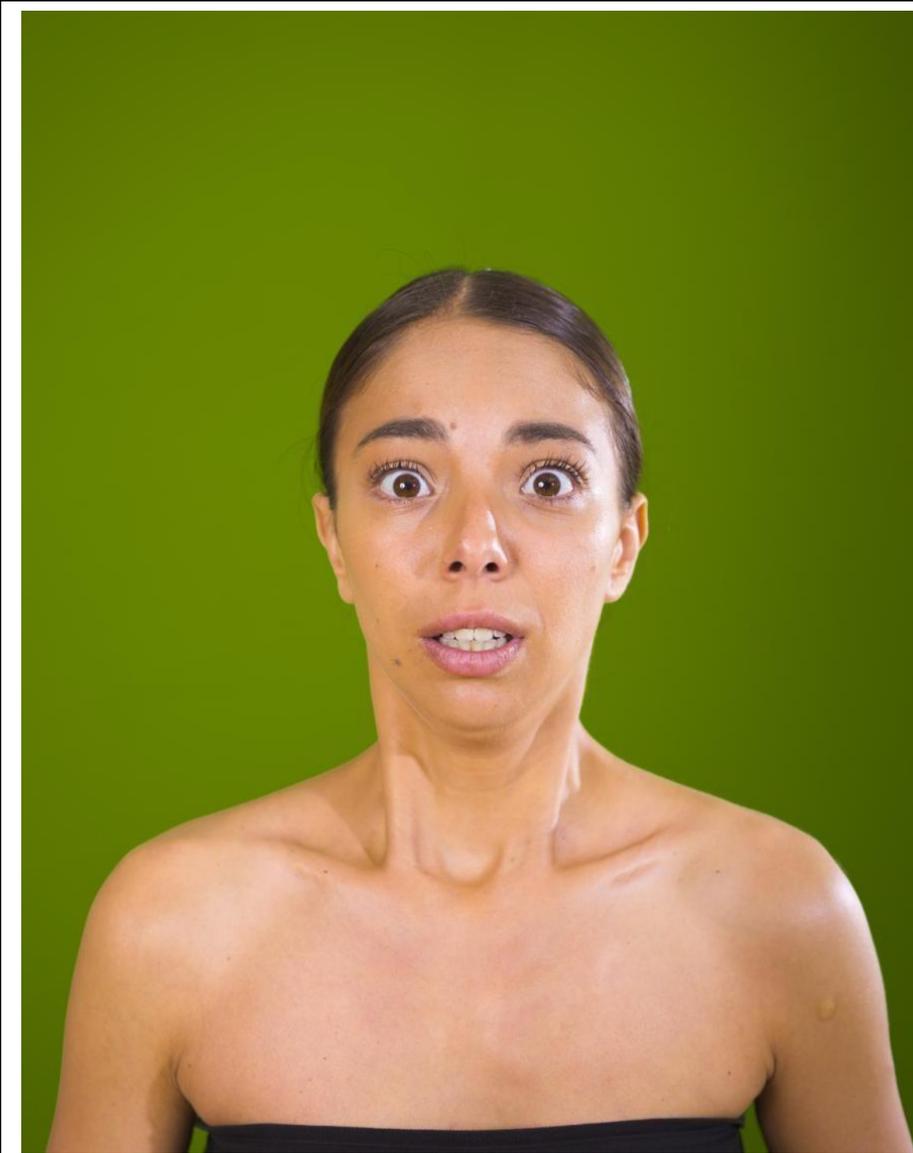


**NEUTRAL**



**TENDER**

### 31. TERRIFIED



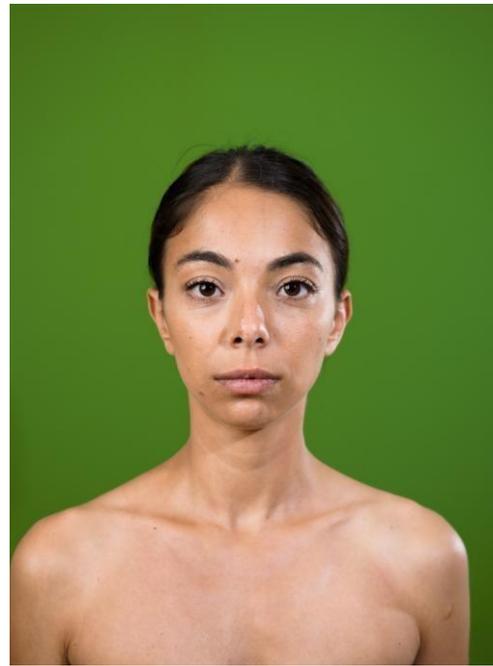
Terrified is a strong and violent emotion caused by a horrible thing, a great danger, a misfortune. To be terrified; frightened, afraid.

An immediate threat of harm focuses our attention, mobilizing us to cope with the danger. If we perceive an impending threat, our worry about what might happen can protect us, warning us, making us more vigilant. The facial expressions when we are worried about impending harm, or terrified if the threat is severe, notifies others that a threat is lurking, warning them to avoid harm or recruiting them to help us deal with the threat. If we look worried or terrified when someone attacks us or is about to attack us, that may cause the attacker to back off, satisfied that we will not further pursue whatever provoked the attacker. (Of course, that may not always be the result.

An attacker looking for an easy victim may interpret a fearful expression as a sign that we won't fight back and will be easily overcome.) Signs of our panic should motivate others to help or reassure us.

Usually when you are terrified you know it, but you may not be as familiar with the sensations that accompany slight worry, when the threat is in the future and is not severe. (I believe that the sensations are similar to terror, but much less intense. However, no research has yet been done to see if worry and terror are associated with different subjective experiences.)

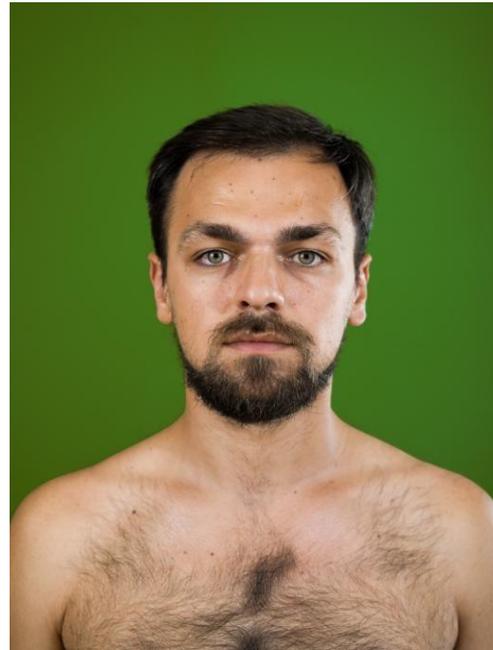
The skin of a terrified person may become pale. He may sweat. His breathing may become rapid, his heart pound, his pulse throb, his stomach may become queasy or tense. His bladder or bowel may open, and his hands tremble.



**NEUTRAL**



**TERRIFIED**

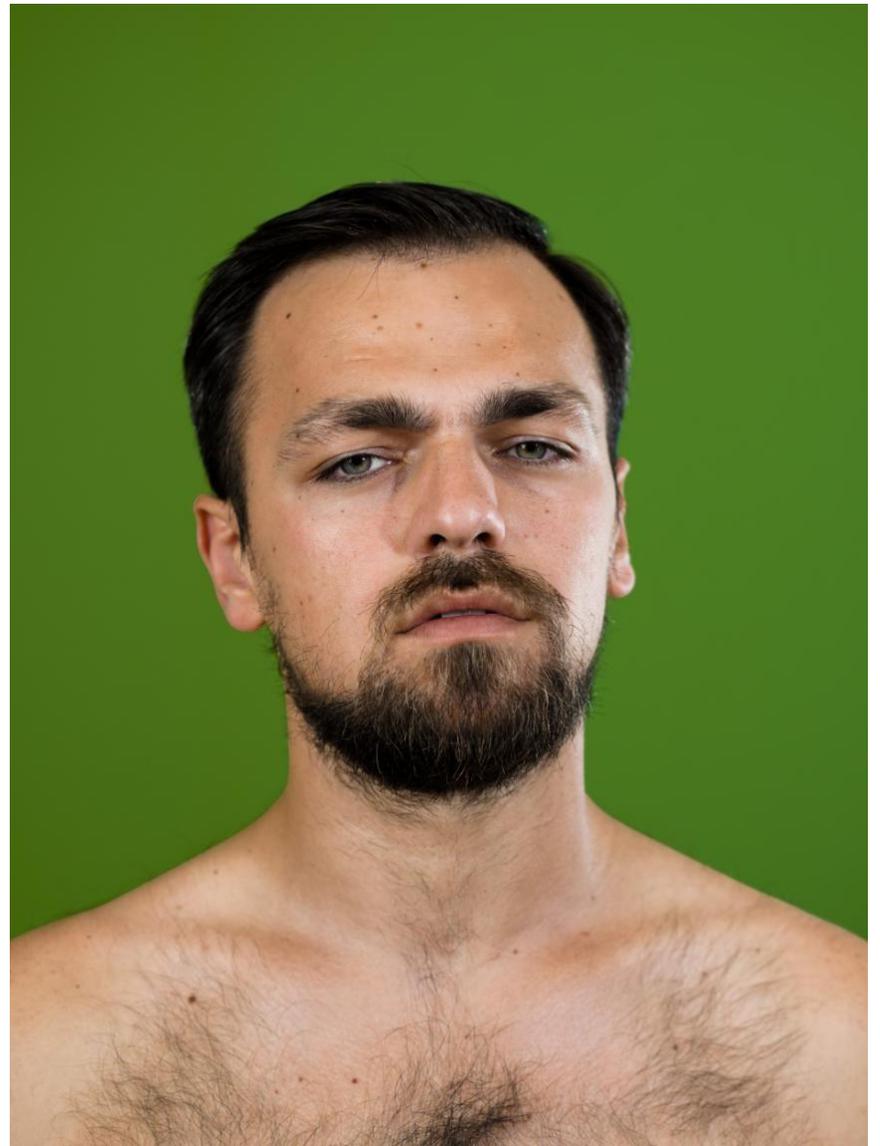


**NEUTRAL**



**TERRIFIED**

## 32. TIRED



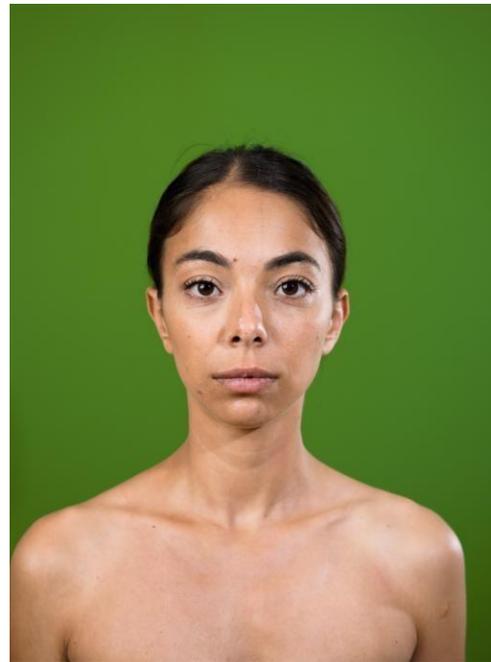
Tired or fatigue is a state of general weakness due to intense physical or intellectual effort; fatigue, toil. To feel exhausted, tired, exhausted.

Muscular fatigue is a sometimes-unwanted consequence of muscular activity, but it may have neural effects that are felt as tiredness. Other forms of exertion and prolonged periods of being awake rather than asleep can also lead to a feeling of tiredness. As sleep tends to occur with a fairly regular rhythm, tiredness could sometimes indicate that the normal time for sleeping has arrived rather than that the individual has been involved in much exertion.

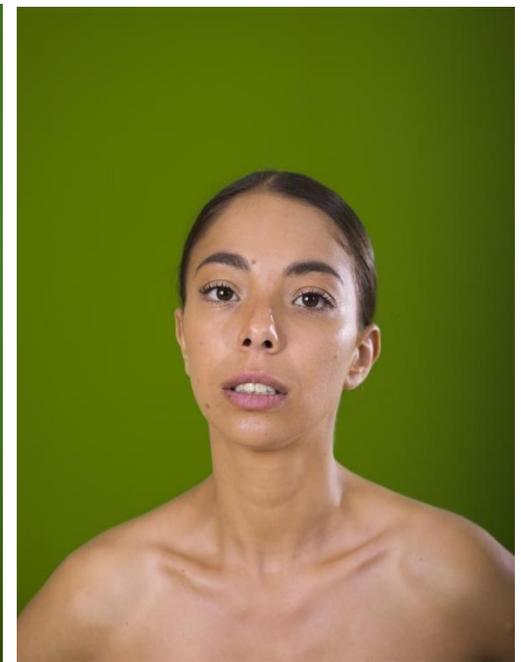
Tiredness as an indicator of high levels of exertion can be an adaptive feeling in that it tends to prevent levels of exertion that might be damaging. Tiredness as a prompter of sleeping can be adaptive, just as sleep can, in that it ensures that the individual is inactive and inconspicuous at a time of day when accidents are more likely and predators abound. There may also be some recuperative function.

Drooping of the upper eyelid was the biggest indicator of tiredness, according to the study. Simulating skin removal of the upper eyelid, as performed in some eyelid procedures, but not correcting accompanying eyelid ptosis (drooping), resulted in an increase in the perception of tiredness (and sadness). Photos that included an overall elevation of the eyebrows or an increase in the distance between the eyebrow and upper eyelid also increased the perception of tiredness.

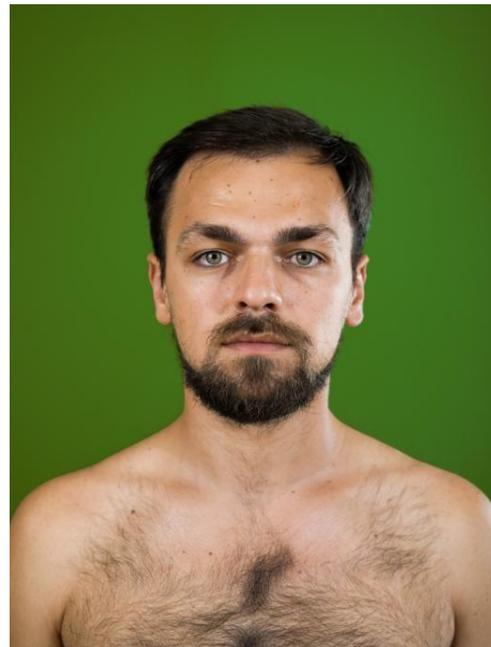
Statistically significant values for tiredness were achieved by changes of increasing and decreasing the pretarsal skin crease, lowering the upper eyelid, and depressing the lateral brow.



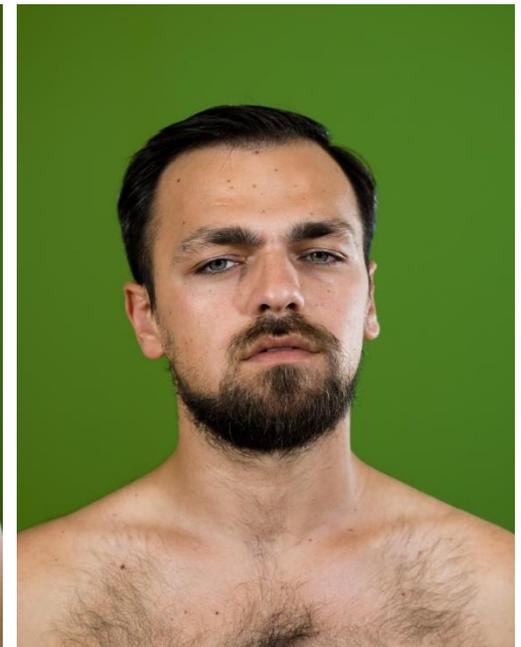
**NEUTRAL**



**TIRED**

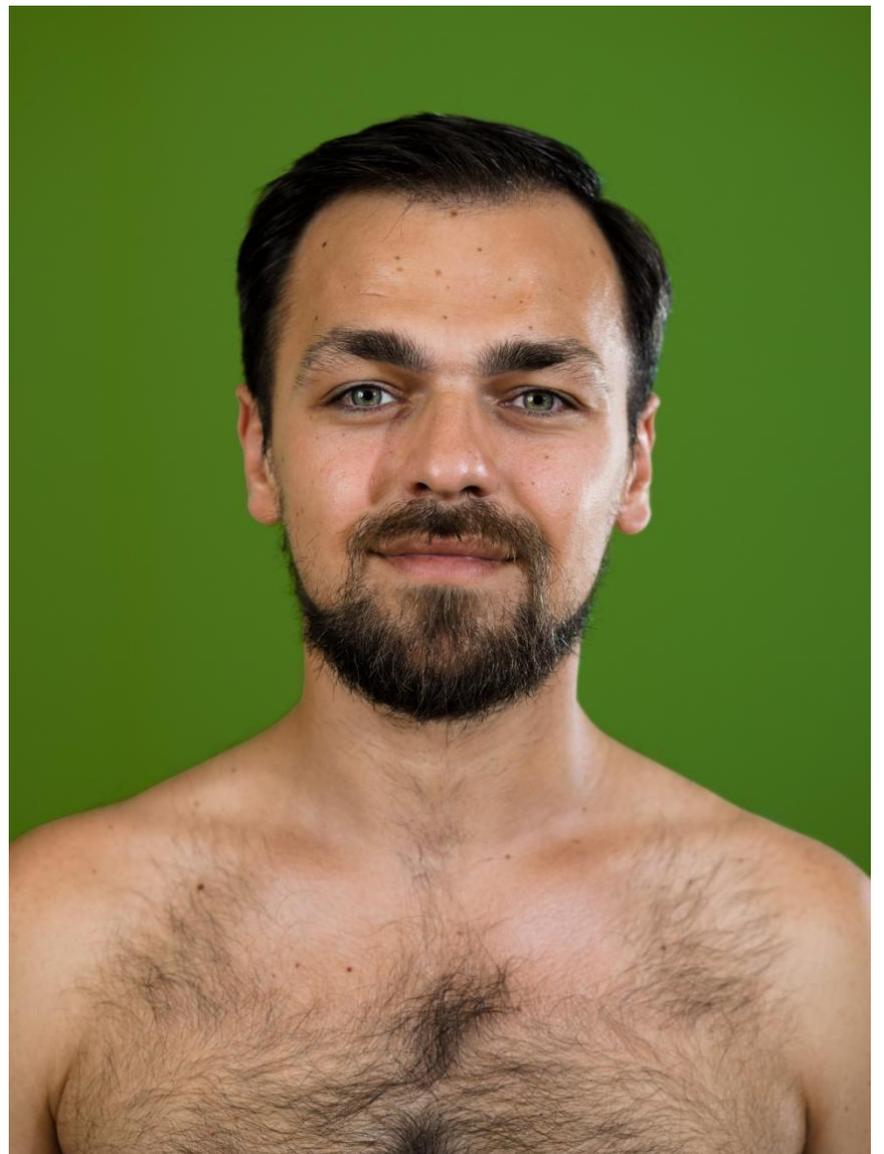


**NEUTRAL**



**TIRED**

### 33. TRANQUIL

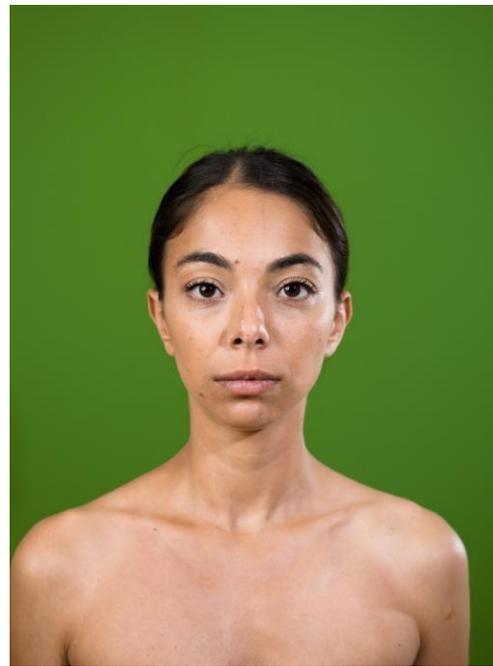


Tranquility is a state of mind free from commotion, turmoil, agitation. It is a physical and mental relaxation that is expressed by calmness on the human face.

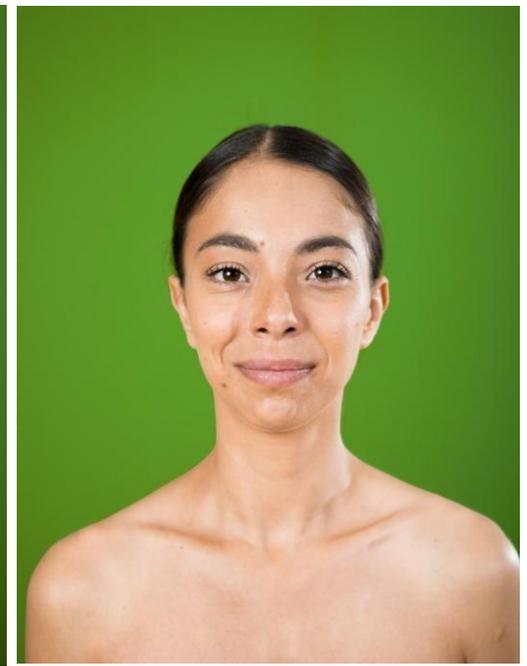
Tranquillity (also spelled tranquility) is the quality or state of being tranquil; that is, calm, serene, and worry-free. The word tranquillity appears in numerous texts ranging from the religious writings of Buddhism, where the term *passaddhi* refers to tranquillity of the body, thoughts and consciousness on the path to enlightenment, to an assortment of policy and planning guidance documents, where interpretation of the word is typically linked to engagement with the natural environment. It is also famously used in the Preamble to the US Constitution - "insure domestic Tranquility".

We will also discover that the tranquility the Stoics sought is not the kind of tranquility that might be brought on by the ingestion of a tranquilizer; it is not, in other words, a zombie-like state. It is instead a state marked by the absence of negative emotions such as anger, grief, anxiety, and fear, and the presence of positive emotions—in particular, joy.

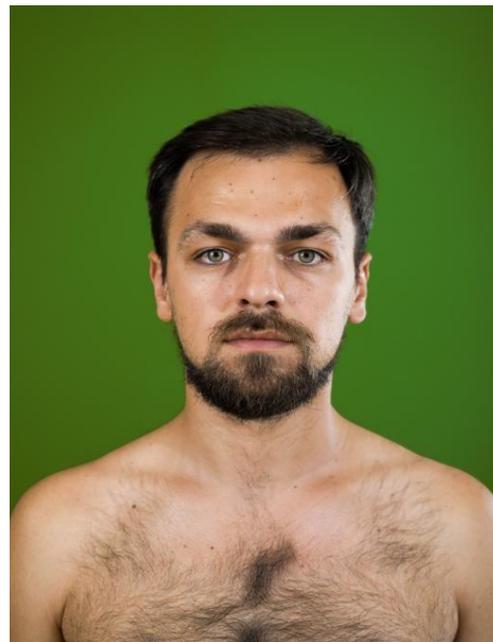
Humans experience tranquility as a mental state characterized by calmness and self-reflection (Kaplan and Kaplan, 1989). Tranquility can be conceptualized as cognitive “quiet” arising in contrast to the condition of effortful, sustained mental processing that is characteristic of day-to-day activity in the postmodern setting (Harvey, 1990). More specifically, tranquility can be thought of as a psychological state more likely to occur in the presence of environmental features that are associated with peace and quiet (Herzog and Barnes, 1999).



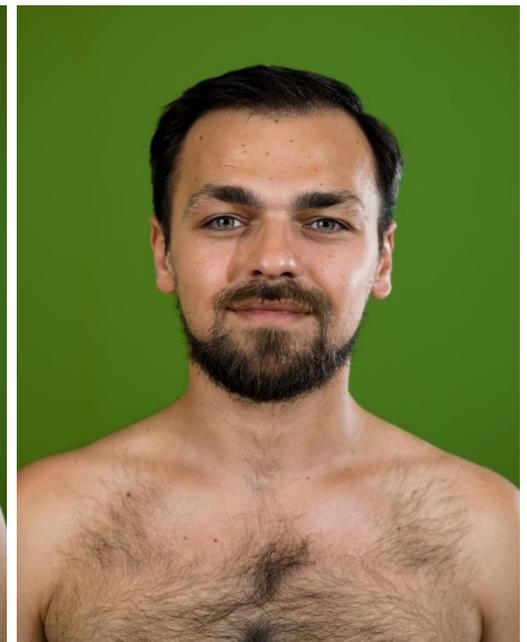
**NEUTRAL**



**TRANQUIL**

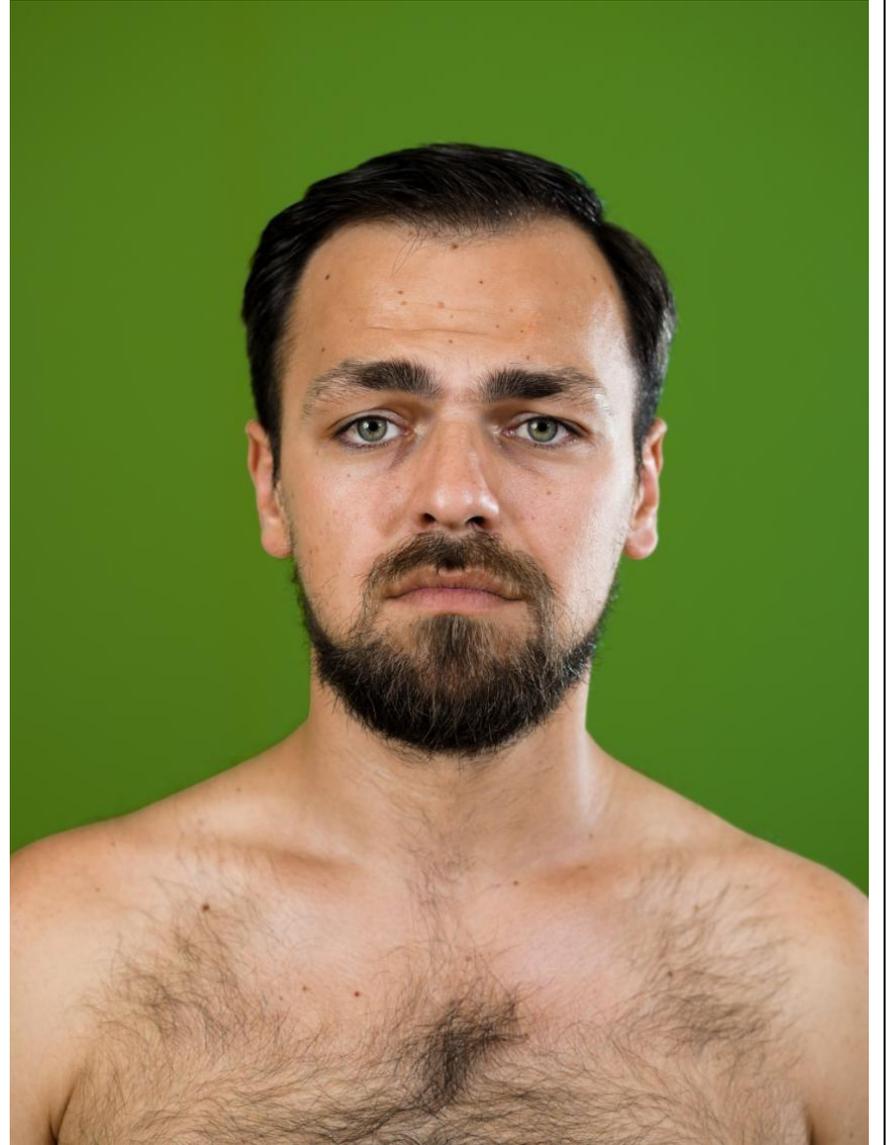


**NEUTRAL**



**TRANQUIL**

### 34. UNHAPPY

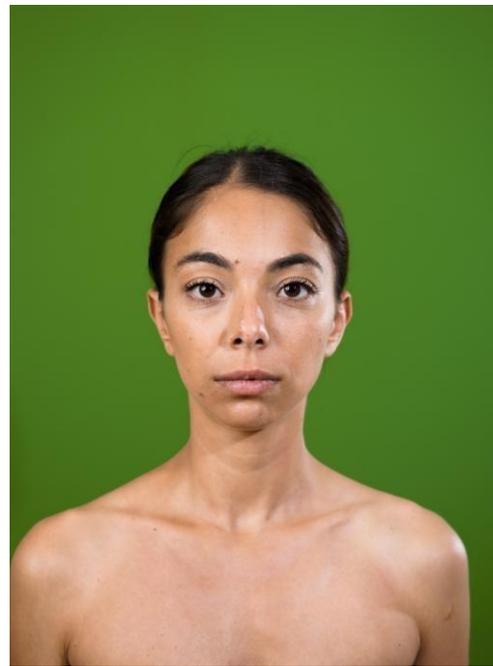


Unhappiness is the state, the situation of the unhappy; incident, circumstance that brings someone suffering, trouble, misfortune. An unhappy person is one who endures (moral) suffering; she is in pain.

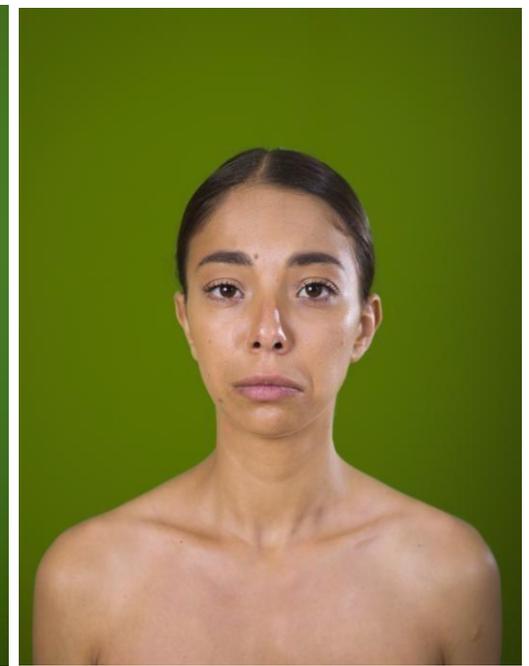
The main difference between unhappy and sad consists in the personal character of the former: If my neighbor's close friend dies, I may be sad but not unhappy, but if my own close friend dies I may well feel unhappy. Furthermore, unhappy suggests a more violent and less resigned frame of mind than sad. For example, if one says "I am unhappy about it" one may well intend to 'do something about it'. By contrast, if one says "I am sad" one doesn't intend to change the situation; and one can't even say "I am sad about it." This difference is accounted for by the unaccepting component 'I don't want this', and by the absence of the resigned component 'I can't do anything' in the explication of unhappy. The combination of a past event ('something bad HAPPENED') with a current rejection ('I don't want this') may seem illogical, but in natural language "illogicalities" of this kind are very common. (One characteristic example was provided recently by the sign "1940 Annexation NO!" displayed by Lithuanian demonstrators in Vilnius in January 1990.)

Unhappiness comes in many shades of gray. Sometimes people just lack joy. Is their emotional darkness their own choice? Or are life circumstances beyond their control?

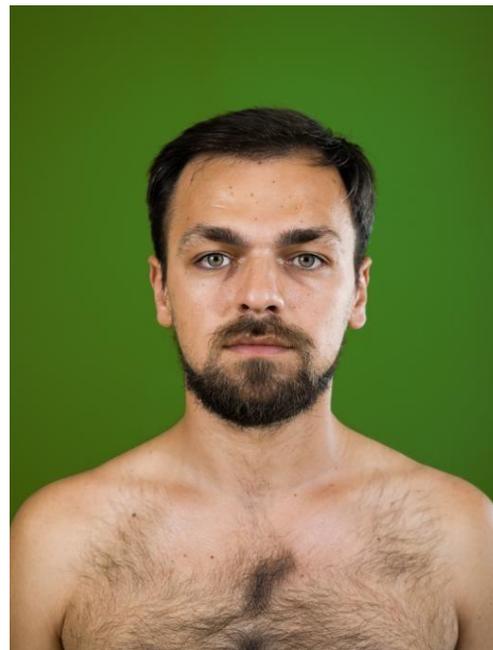
A feeling of being sad or discontent is unhappiness. Your unhappiness about having to get up early on Monday morning might fade a little when you realize there are pancakes for breakfast.



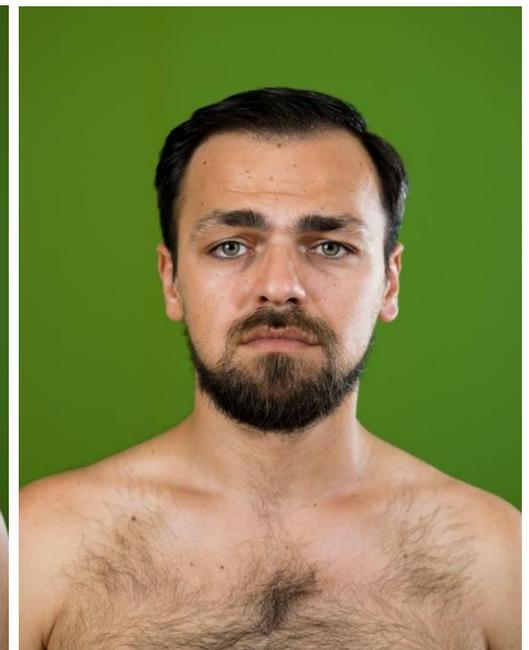
**NEUTRAL**



**UNHAPPY**

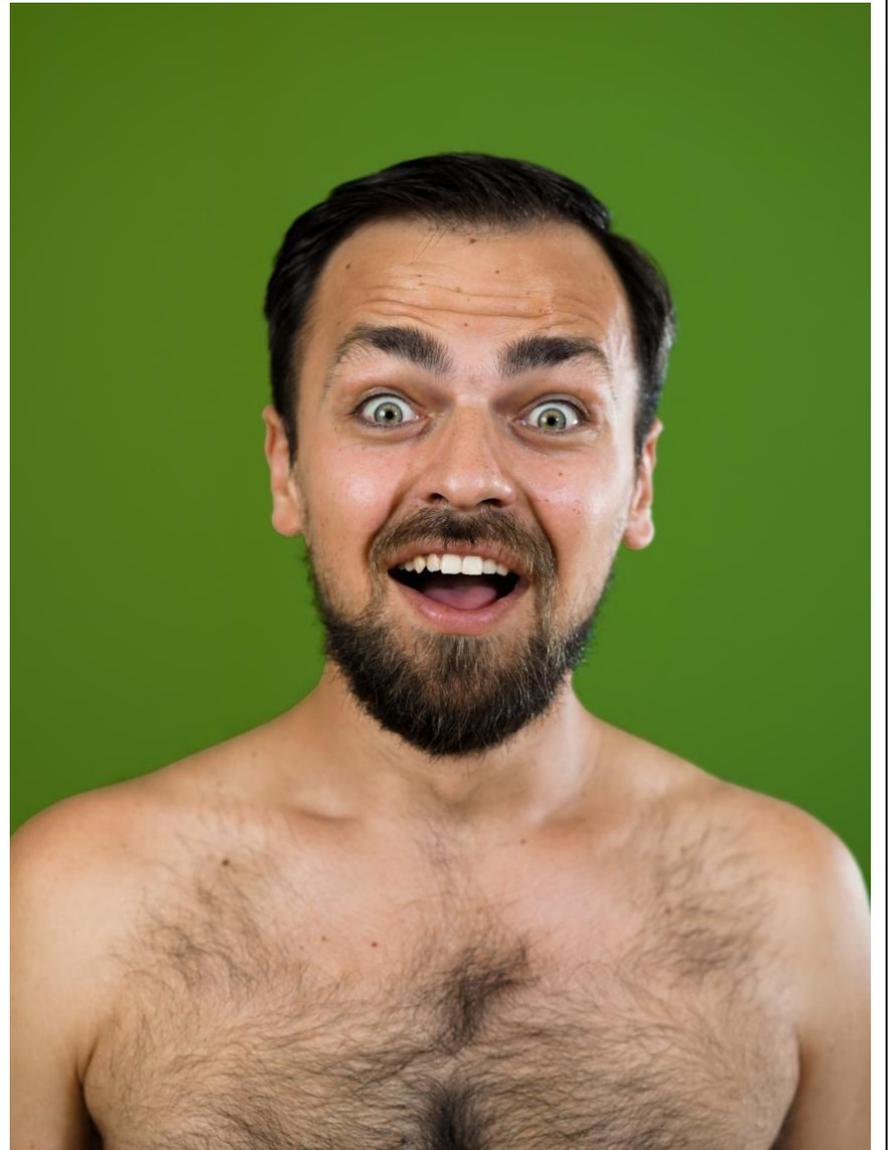
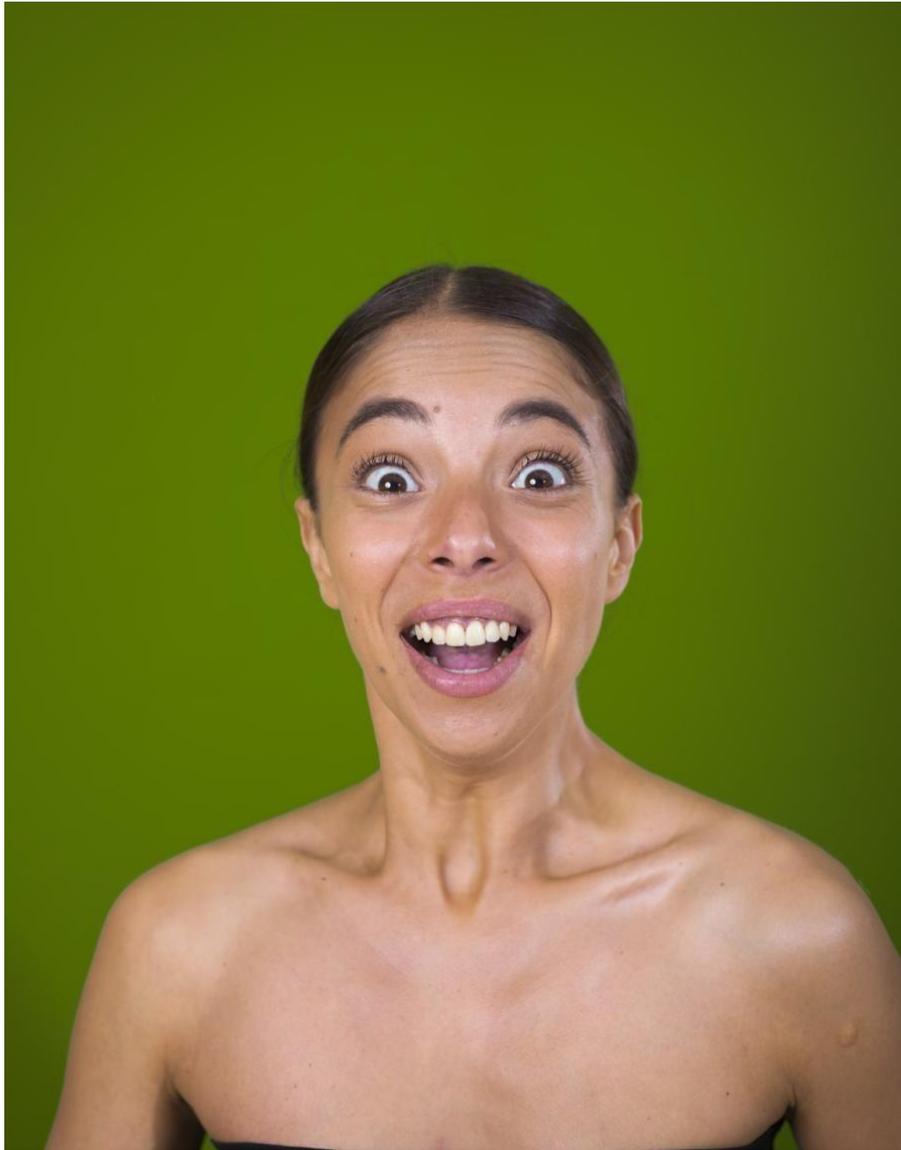


**NEUTRAL**



**UNHAPPY**

## 35. AMAZED



Awe is a profound and unexpected emotion. It is when you are overcome with great and unexpected wonder, admiration.

Overwhelming astonishment or wonder.

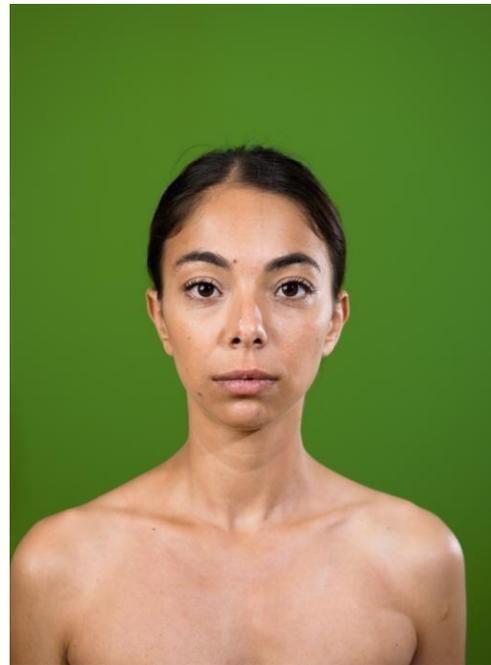
It's important to note that many people use "amazing" as slang to mean "very good," "awesome," "excellent" etc. But other forms of the verb "amaze" are taken literally.

Amazement is what you feel when you're shocked or astonished by something. When you feel amazement, you can't quite believe what you're seeing or hearing.

To amaze someone is to shock, surprise, and astonish them. Amazement is the emotion produced by truly unusual and surprising things. A juggler throwing around fire can produce amazement. A child reciting thousands of digits of Pi will create amazement. Parents feel amazement at the birth of their children. This is a strong feeling resulting from incredible events. No one feels amazement about average, boring stuff.

The definition of amazed is a reaction or feeling of surprise, awe and astonishment.

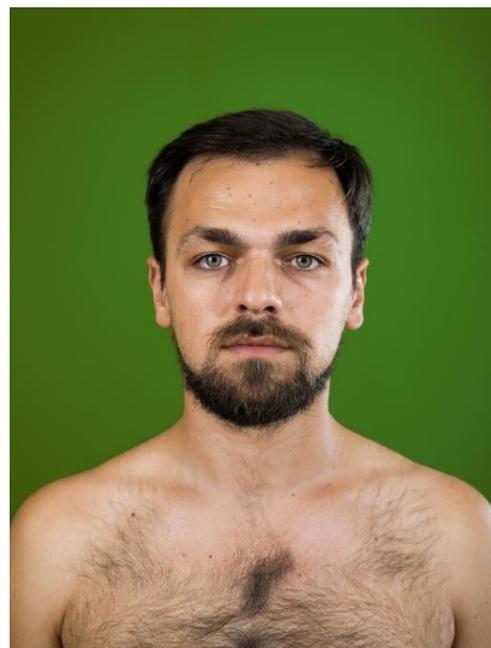
An example of a time when someone might be feeling amazed is a child looking at presents on Christmas morning.



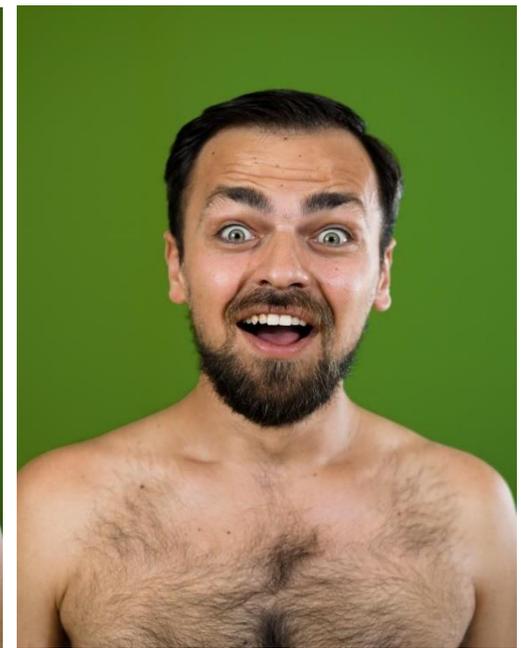
**NEUTRAL**



**AMAZED**

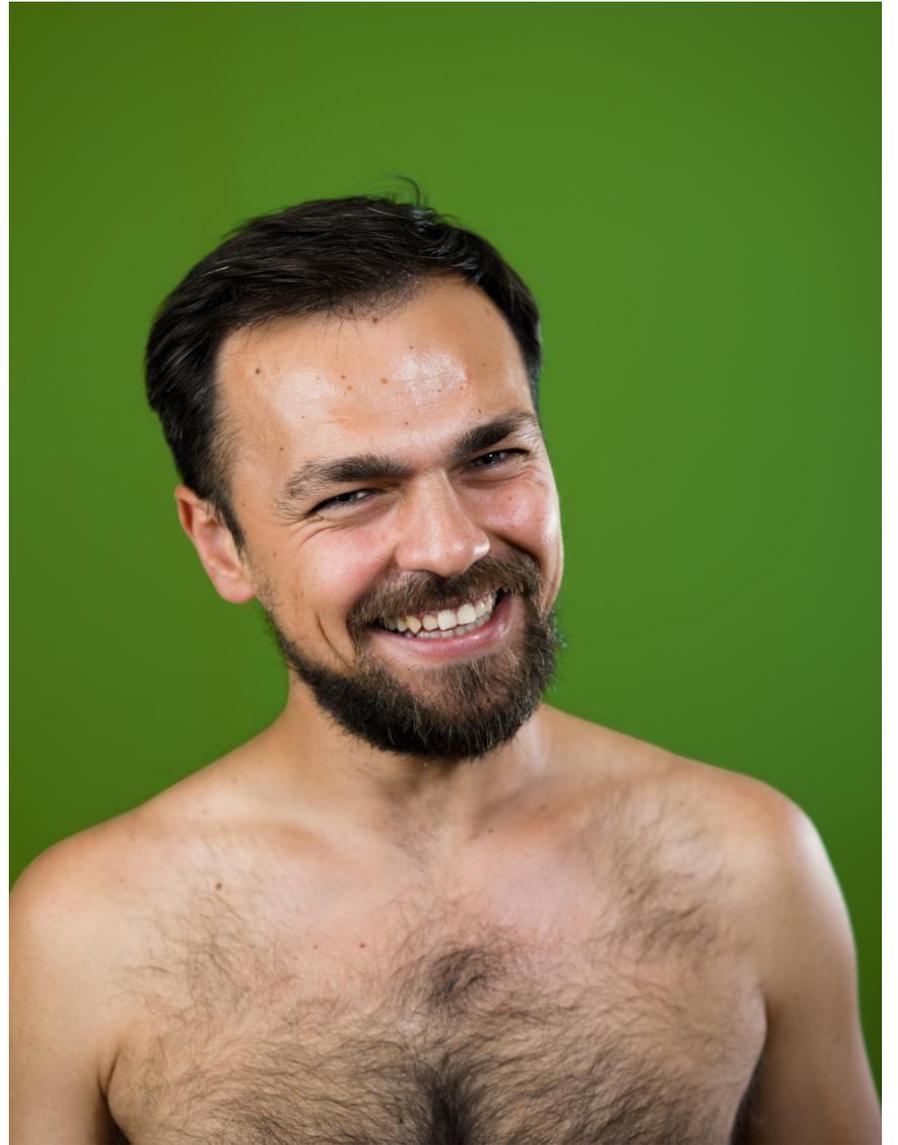


**NEUTRAL**



**AMAZED**

## 36. AMUSED



An amused person is a funny, cheerful, happy person.

One of the simplest enjoyable emotions is amusement. Most of us like to be amused by something that we find funny; some of us are very amusing, with jokes effortlessly flowing forth. Large parts of the entertainment industry are dedicated to bringing forth this emotion, so we can easily choose when we want to be amused. Amusement can vary from slight to extremely intense, with peals of laughter and even tears.

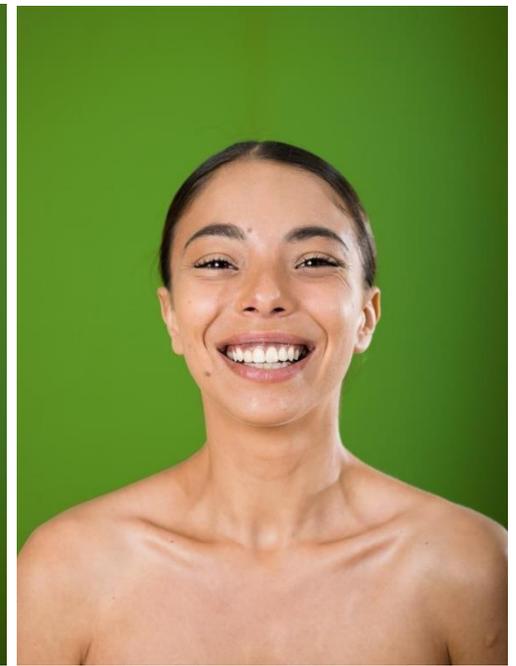
Amused participants, on the other hand, smiled more frequently and shifted their gaze to the right. The infrequency of enjoyment (Duchenne) smiles during amusement may have been due to participants' discomfort at having performed the task.

Usually when you are terrified you know it, but you may not be as familiar with the sensations that accompany slight worry, when the threat is in the future and is not severe. (I believe that the sensations are similar to terror, but much less intense. However, no research has yet been done to see if worry and terror are associated with different subjective experiences.)

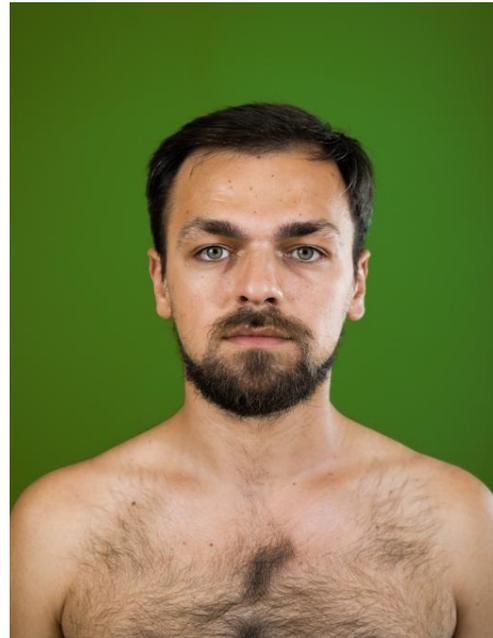
Amusement is one important emotion, which is a frequent target of regulation, such as when we down-regulate it by shifting our attention to avoid inappropriate laughter, or up-regulate it by focusing on a humorous aspect of a negative situation to reduce stress.



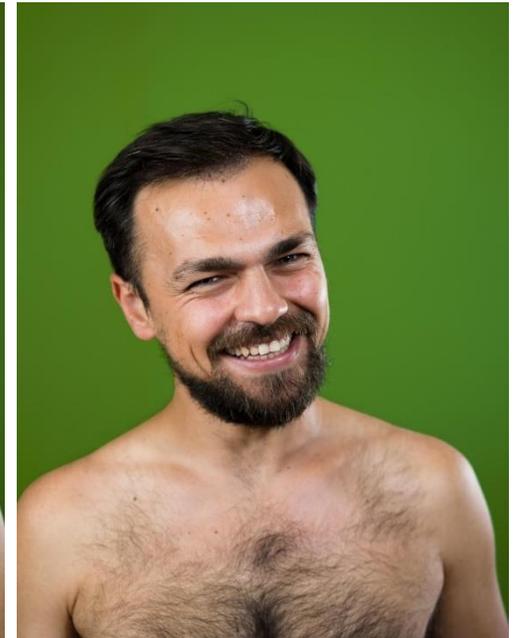
**NEUTRAL**



**AMUSED**

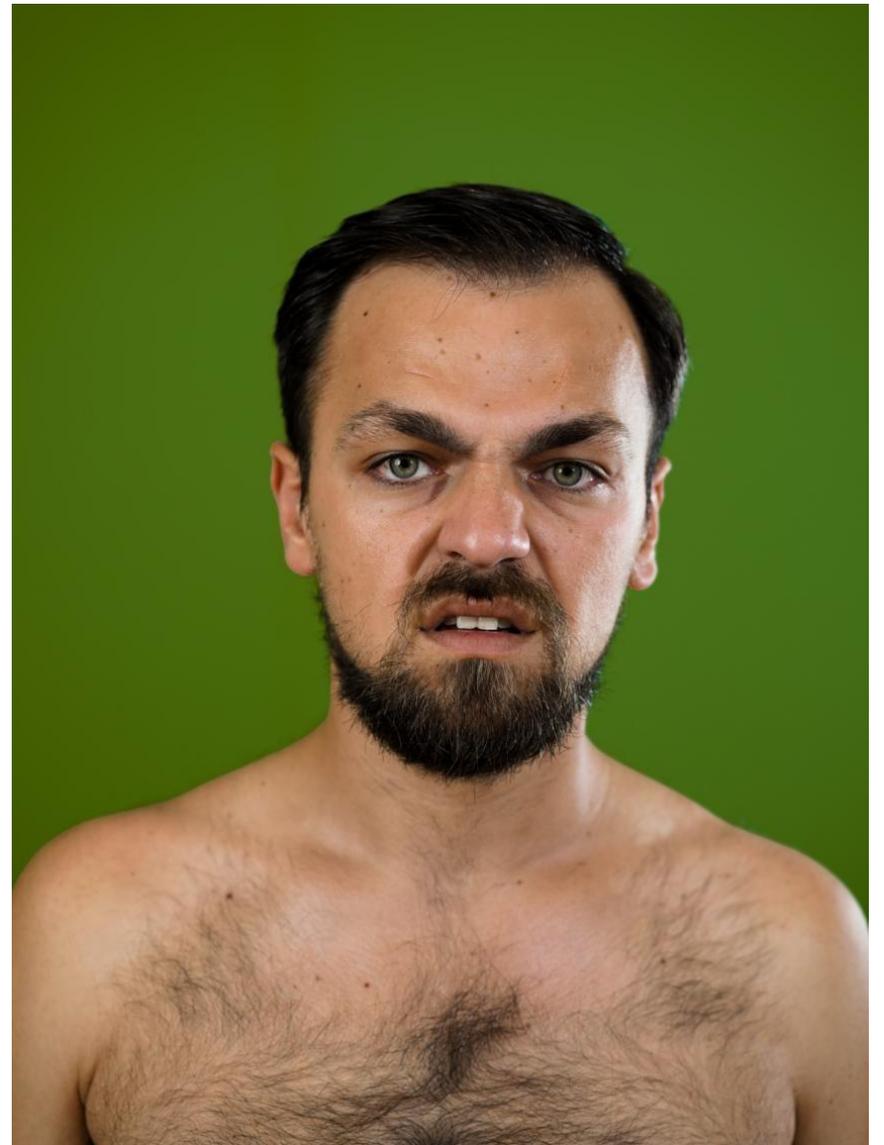


**NEUTRAL**



**AMUSED**

### 37. ANNOYED



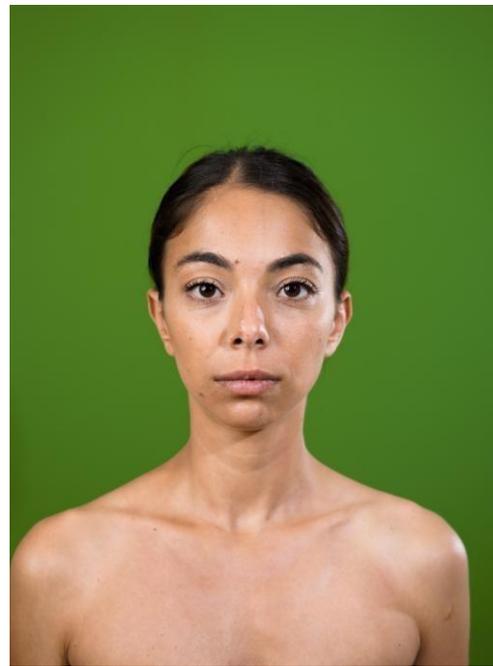
The feeling when something is happening that bothers you. You have the urge to say or do something to change it or make it stop.

You feel annoyed when something disturbs you or is against your wishes. The source of annoyance can be disturbing a number of things: your peace and quiet (the mosquito), your concentration (people talking when you are trying to work), your comfort (a very uncomfortable airplane seat), or your flow of activities (the misplaced coffee).

Unlike other anger-like emotions, annoyance is a bit volatile: it can change depending on your current mood or activities, and even on the time of day. For instance, the same talkative colleague may be a welcome guest when you have little work to do. What you get genuinely angry about, on the other hand, is relatively static.

There are several factors that influence how annoyed you get with something. Firstly, since the event itself is usually quite benign, its frequency or duration is an important factor. People talking for five minutes next to your desk when you are trying to work may be tolerated, but if they do it for an hour, you may feel differently.

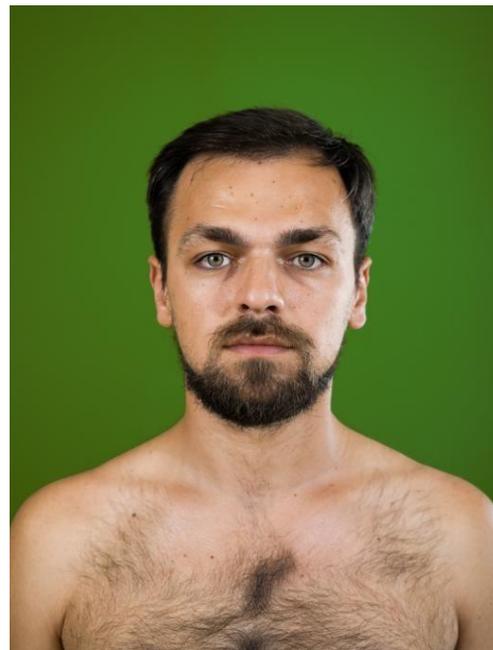
A second factor is your perceived control over the event. Often, just the idea of being able to stop something already makes it less bothering. For example, if a roommate plays loud music, you may be already less annoyed just knowing that if you asked her, she would instantly put it down. Thirdly, it can depend on your mood or tolerance level how quickly you get annoyed. This can be conceptualized as a tolerance level that goes up or down. Any event that goes over this line, will cause annoyance.



**NEUTRAL**



**ANNOYED**

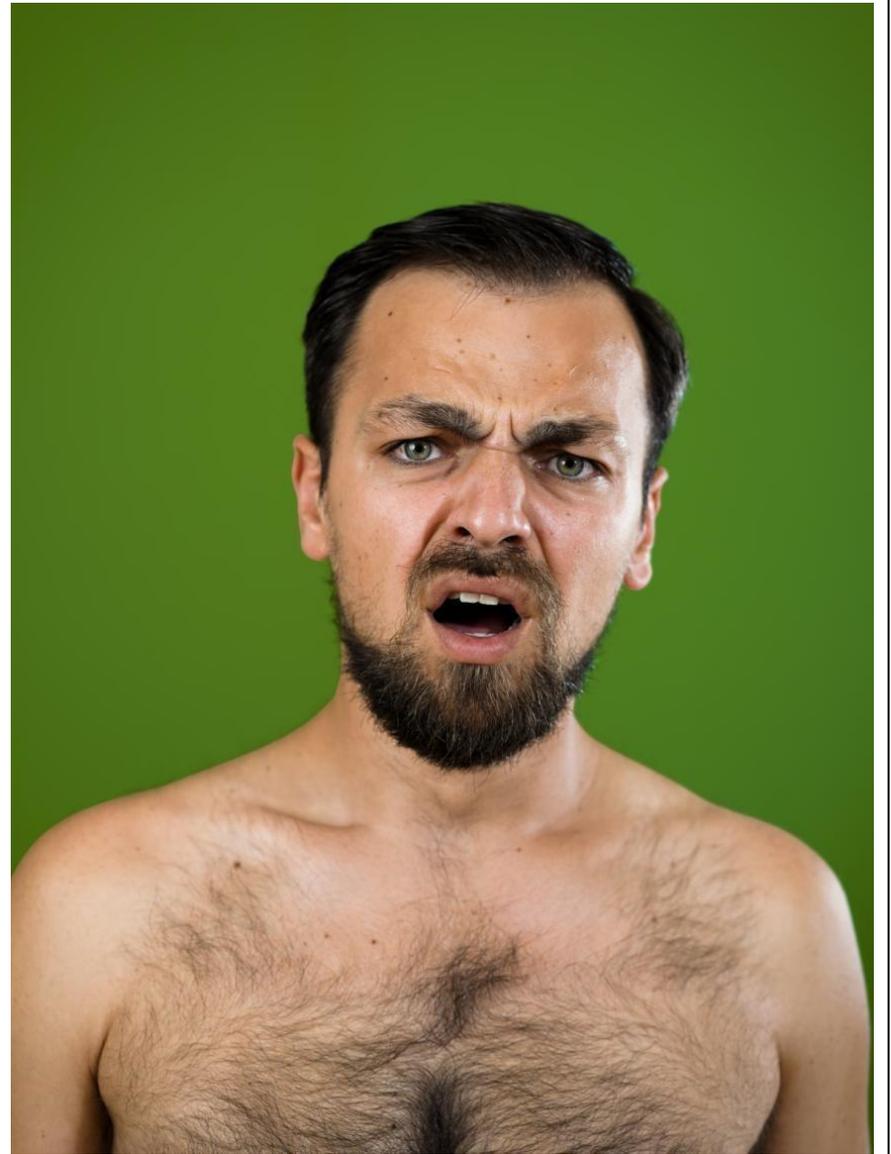


**NEUTRAL**



**ANNOYED**

## 38. APPALED

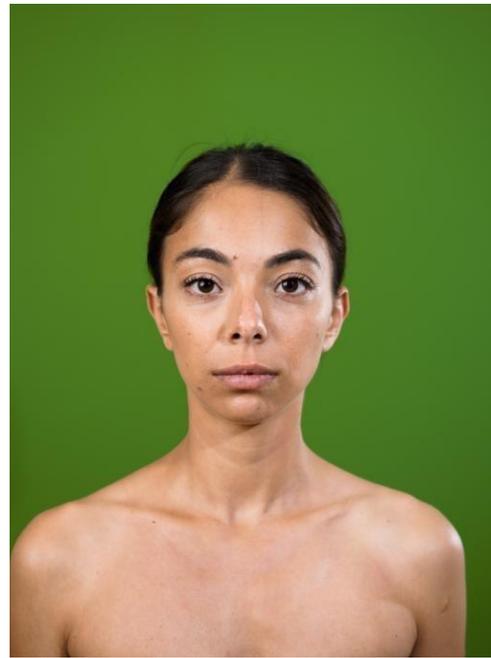


Affected by strong feelings of shock and dismay. Appalled is an adjective that describes feeling shocked and disappointed. Being appalled happens suddenly, like when you find out your little sister has been blogging about your family, telling embarrassing stories.

Appalled usually refers to something bad that happened (to someone's appalling living conditions) and that is seen as due to somebody's 'very bad' action (or 'very bad' failure to act). It may also refer to the 'very bad' action itself, if this action is seen as a bad event. For example, if one hears innocent-looking young children say nasty and vicious things about other people one may be appalled-not because their action is likely to result in 'something bad happening', but because it can be seen as something bad that has happened.

The bad action is certainly contrary to expectations and it goes beyond the limits of what one would have thought possible. In this respect, appalled is just like shocked. But appalled does not suggest that one is confused, or shell-shocked ('I don't know what I can think'), and it is more compatible with an impulse to counteract what has happened ('I don't want this', 'because of this, I would want to do something').

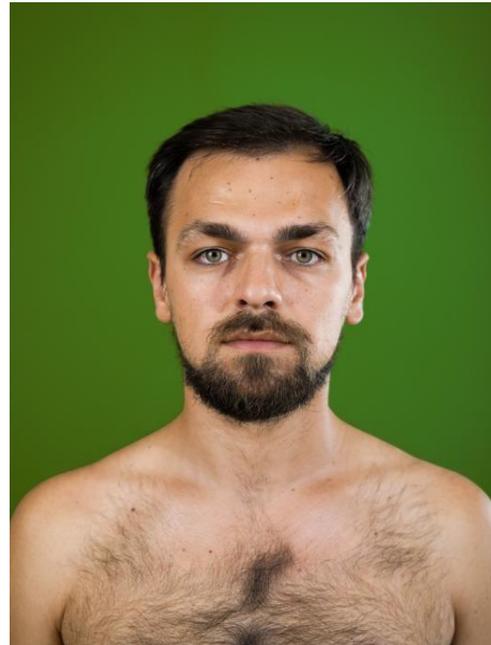
Appalled comes from the Latin word *palescere*, meaning "to grow pale" - the kind of shock that drains the color from your face. When you are appalled, you don't just disapprove of what you are seeing; you are emotionally disturbed by it, like being appalled by the wasted food at a cafeteria or restaurant or the rudeness of someone who lets the door slam in your face.



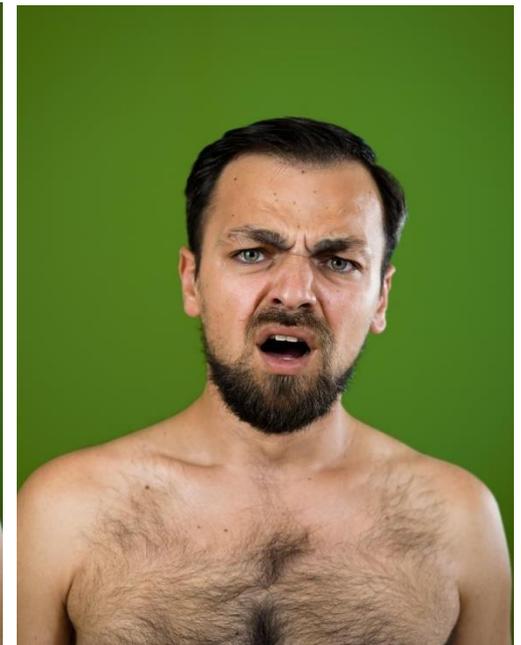
**NEUTRAL**



**APPALED**

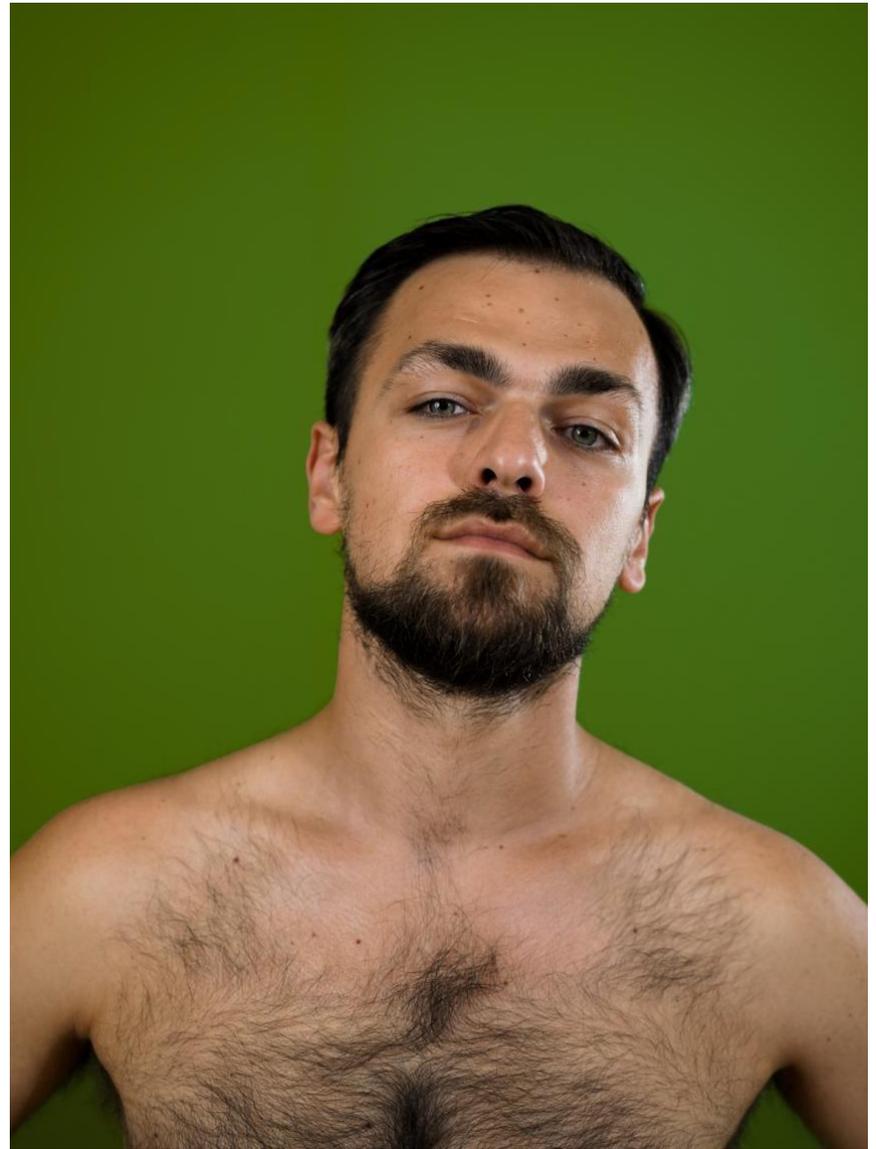
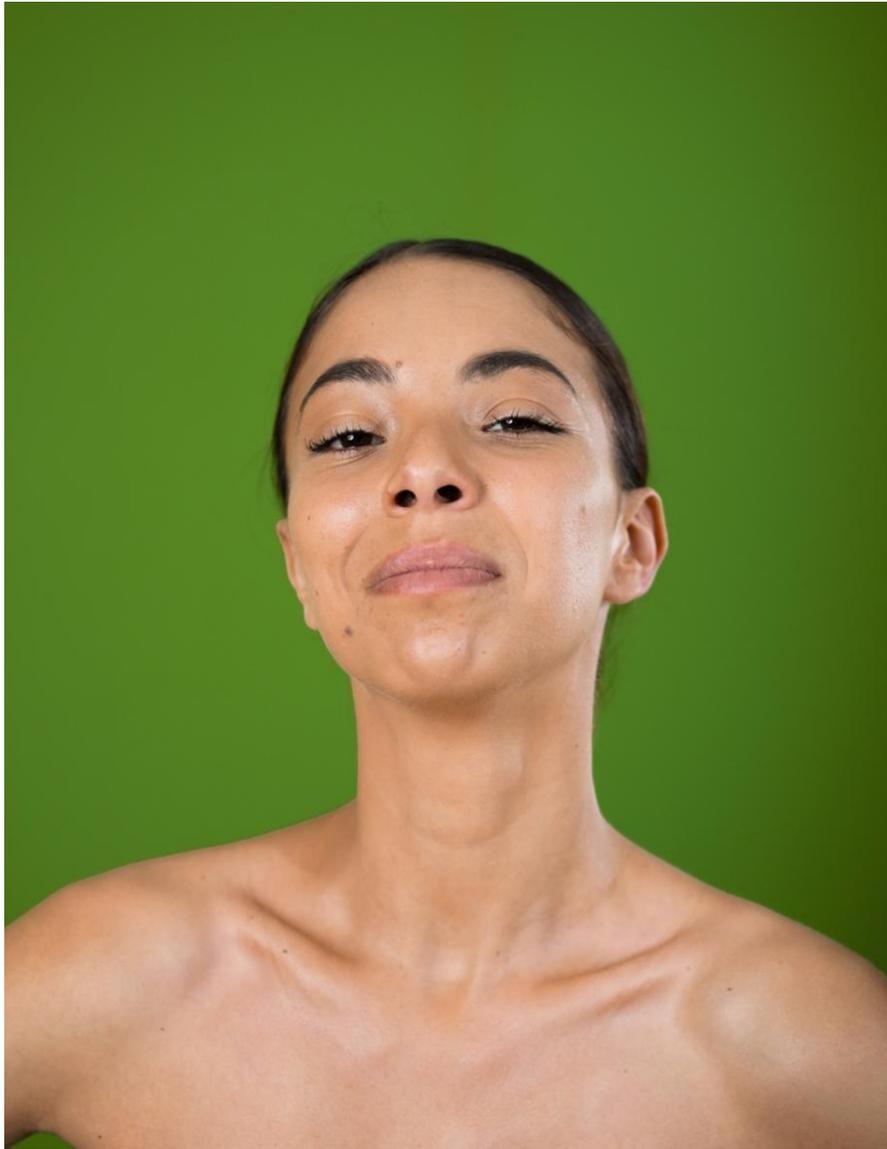


**NEUTRAL**



**APPALED**

## 39. ARROGANT



Person who behaves arrogantly; which shows, betrays arrogance; smoky, impertinent. Naughty and defiant behavior; attitude of contemptuous pride.

The arrogant man looks down on others, and with lowered eyelids hardly condescends to see them; or he may show his contempt by slight movements, such as those before described, about the nostrils or lips. Hence the muscle which everts the lower lip has been called the *musculus superbus*.

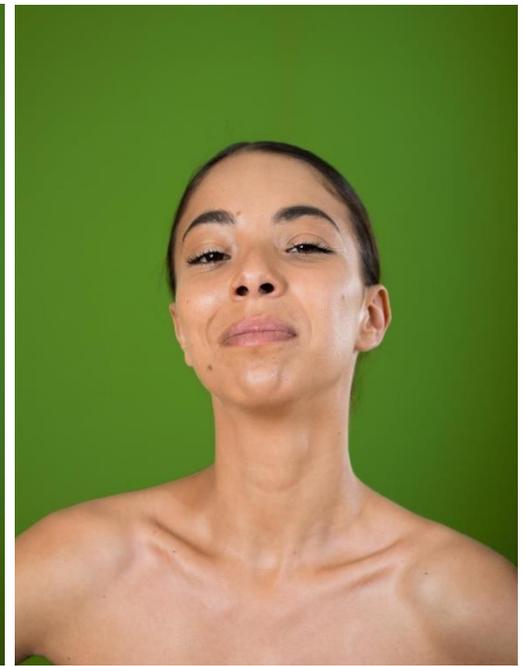
The definition of arrogant is someone who is full of self-worth or self-importance and who tells and shows that they have a feeling of superiority over others. An example of arrogant is when a guy on a date brags about himself all night, acting like he is the best thing to ever happen to a woman.

Common Body Language Habits That Are Making You Look Arrogant:

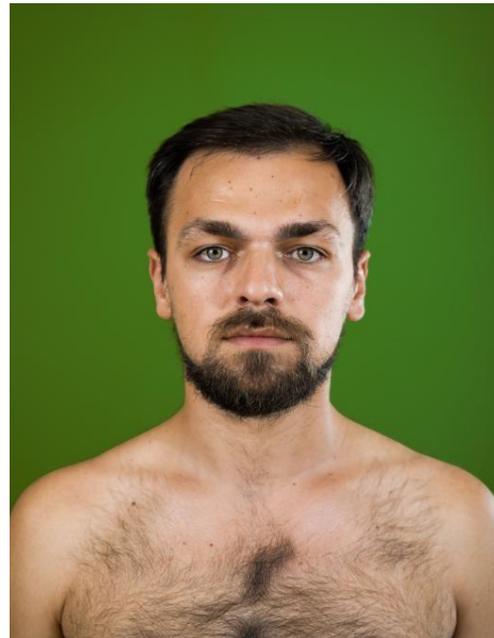
1. Avoiding Eye Contact
2. Crossing Your Arms
3. Holding Your Chin Too High
4. Pointing Your Finger
5. Checking Your Watch
6. Sighing
7. Forgetting About Your Facial Expressions



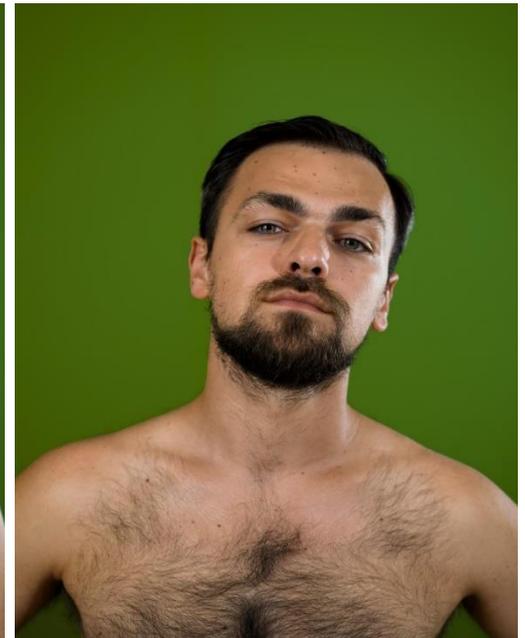
**NEUTRAL**



**ARROGANT**

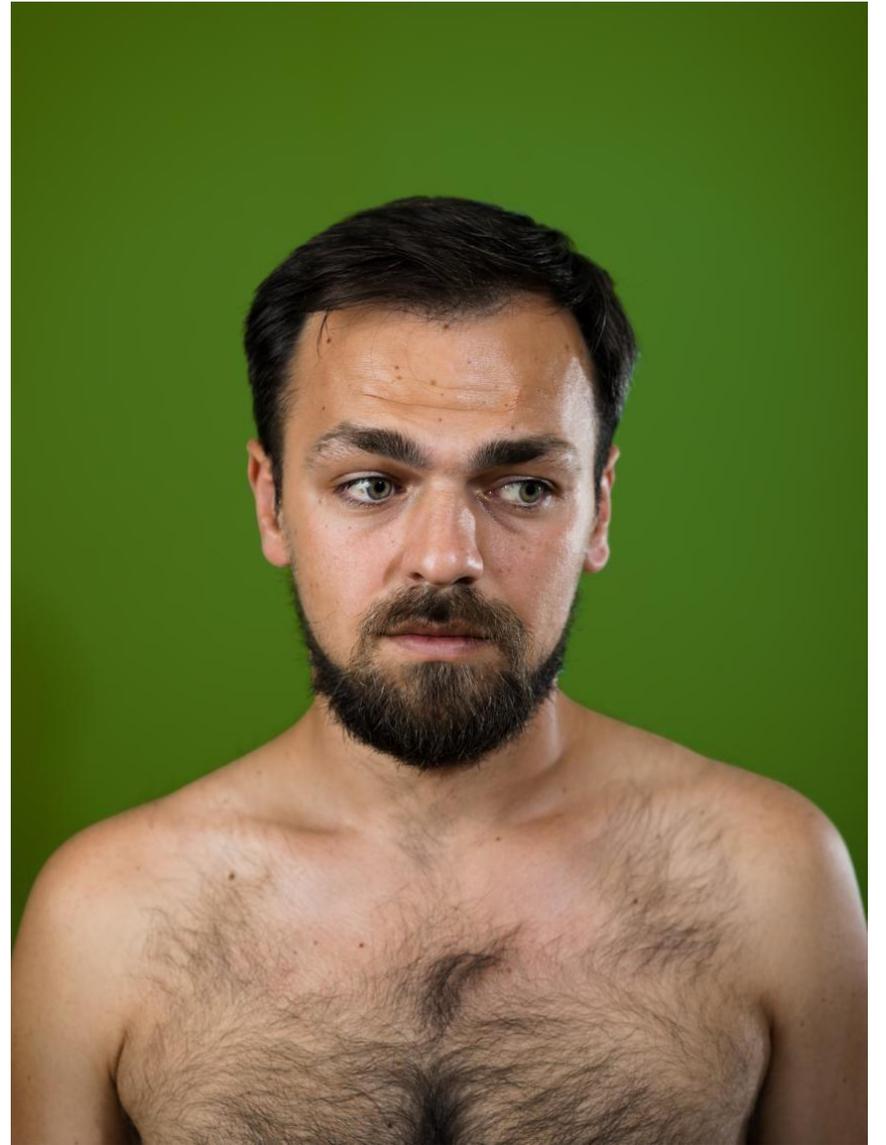
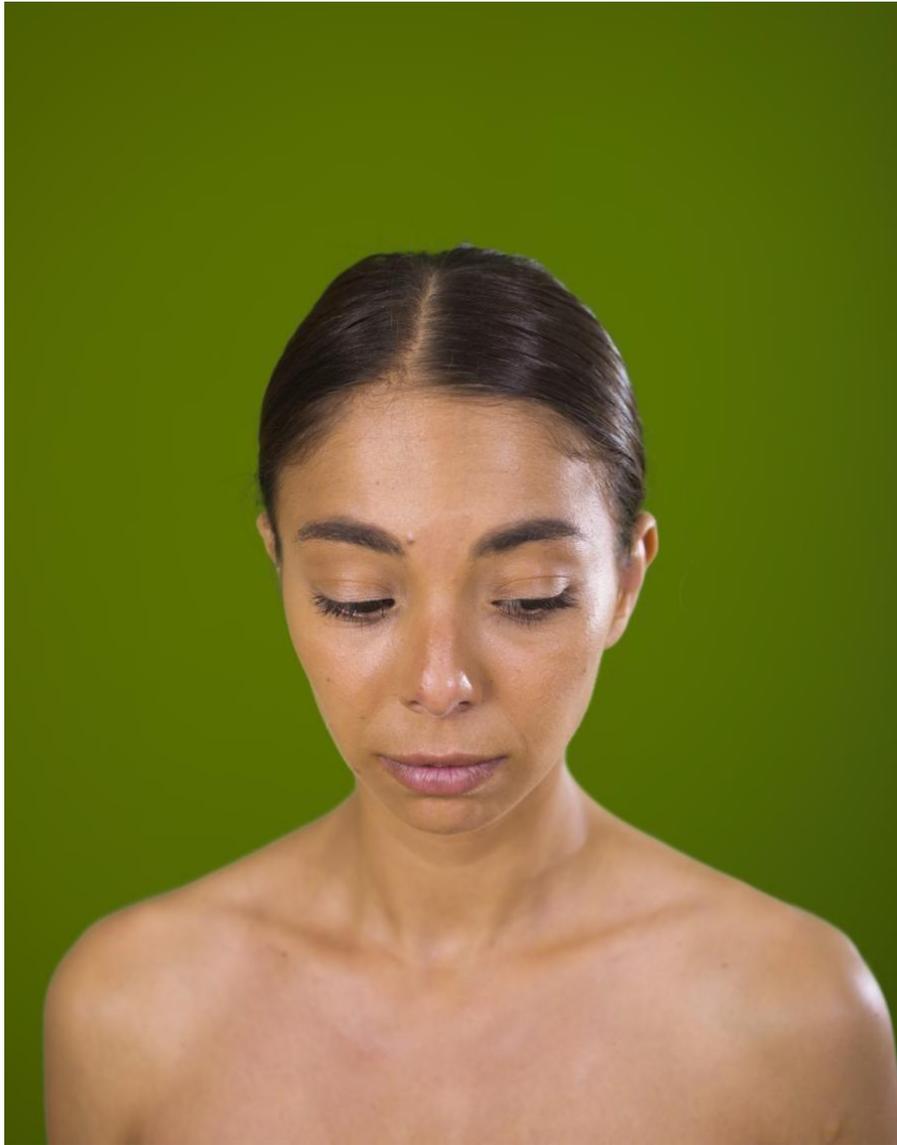


**NEUTRAL**



**ARROGANT**

## 40. ASHAMED



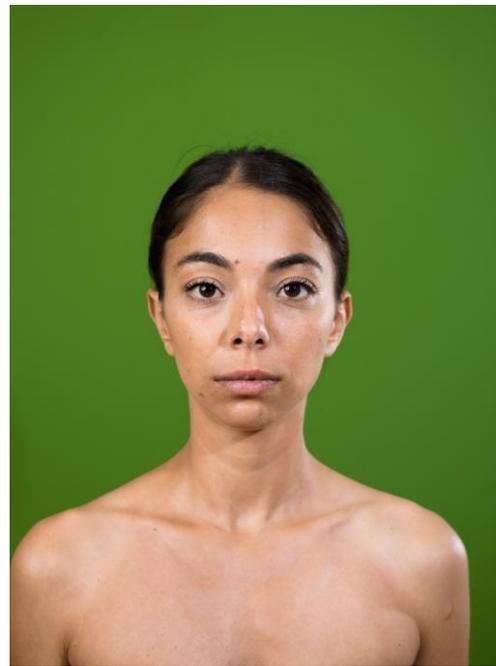
Embarrassed, overwhelmed with shame. Embarrassing feeling of shyness, embarrassment caused by a failure or a mistake. Under a keen sense of shame there is a strong desire for concealment. We turn away the whole body, more especially the face, which we endeavour in some manner to hide. An ashamed person can hardly endure to meet the gaze of those present, so that he almost invariably casts down his eyes or looks askant.

As there generally exists at the same time a strong wish to avoid the appearance of shame, a vain attempt is made to look direct at the person who causes this feeling; and the antagonism between these opposite tendencies leads to various restless movements in the eyes.

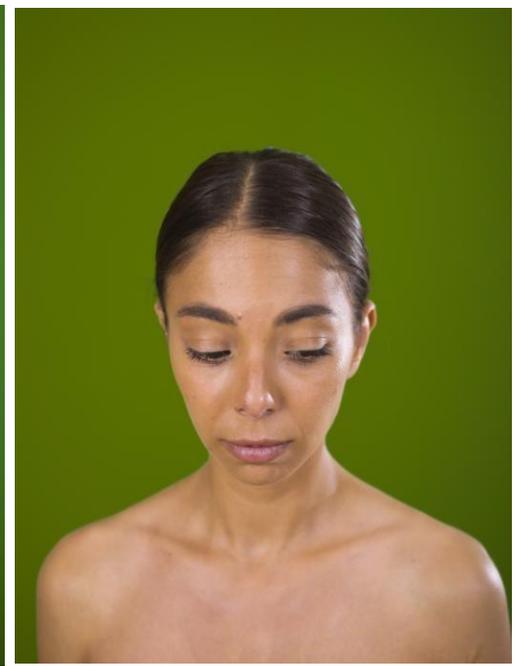
When a person is much ashamed or very shy, and blushes intensely, his heart beats rapidly and his breathing is disturbed. This can hardly fail to affect the circulation of the blood within the brain, and perhaps the mental powers. It seems however doubtful, judging from the still more powerful influence of anger and fear on the circulation, whether we can thus satisfactorily account for the confused state of mind in persons whilst blushing intensely.

The habit, so general with every one who feels ashamed, of turning away, or lowering his eyes, or restlessly moving them from side to side, probably follows from each glance directed towards those present, bringing home the conviction that he is intently regarded; and he endeavours, by not looking at those present, and especially not at their eyes, momentarily to escape from this painful conviction.

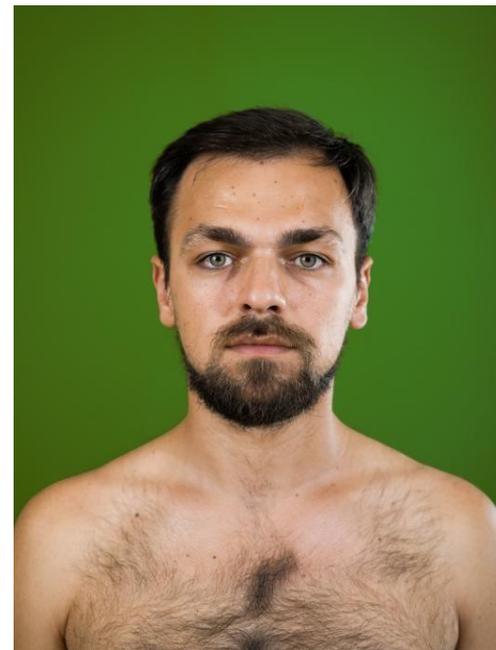
Typically, we are ashamed of something bad that we have done, and shame often goes hand in hand with remorse.



**NEUTRAL**



**ASHAMED**

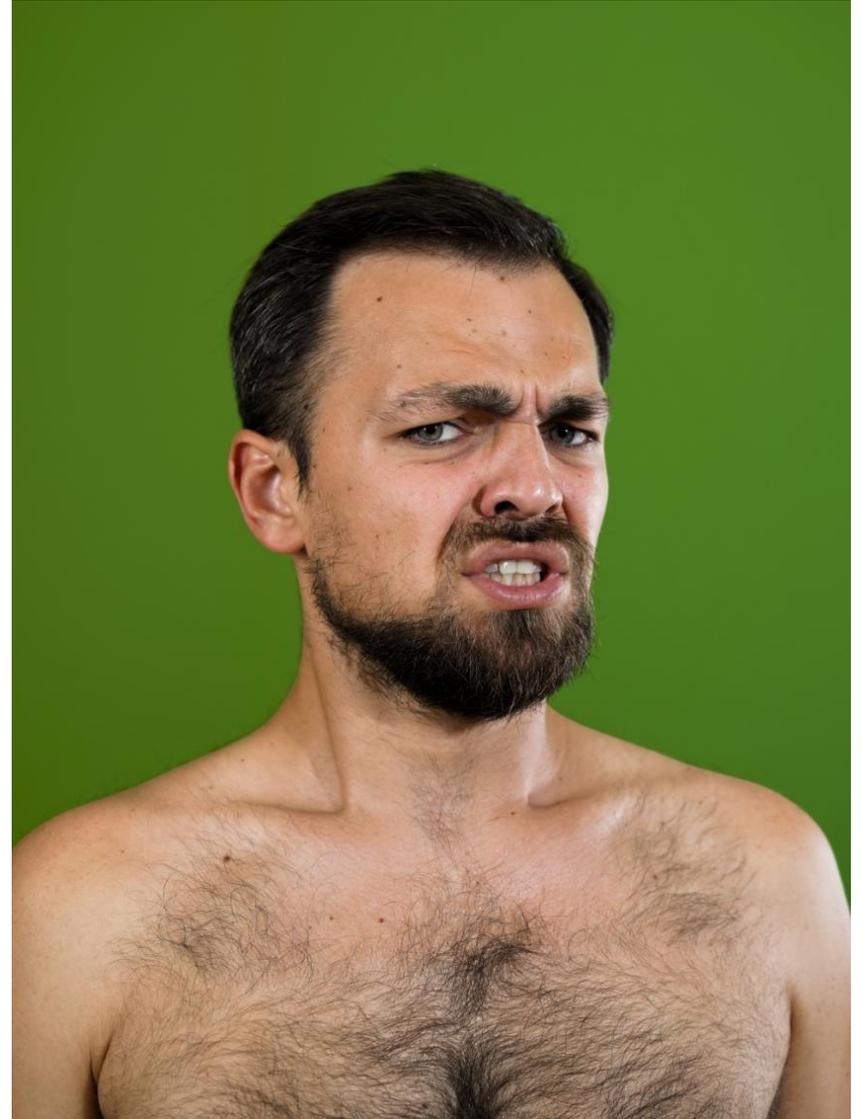
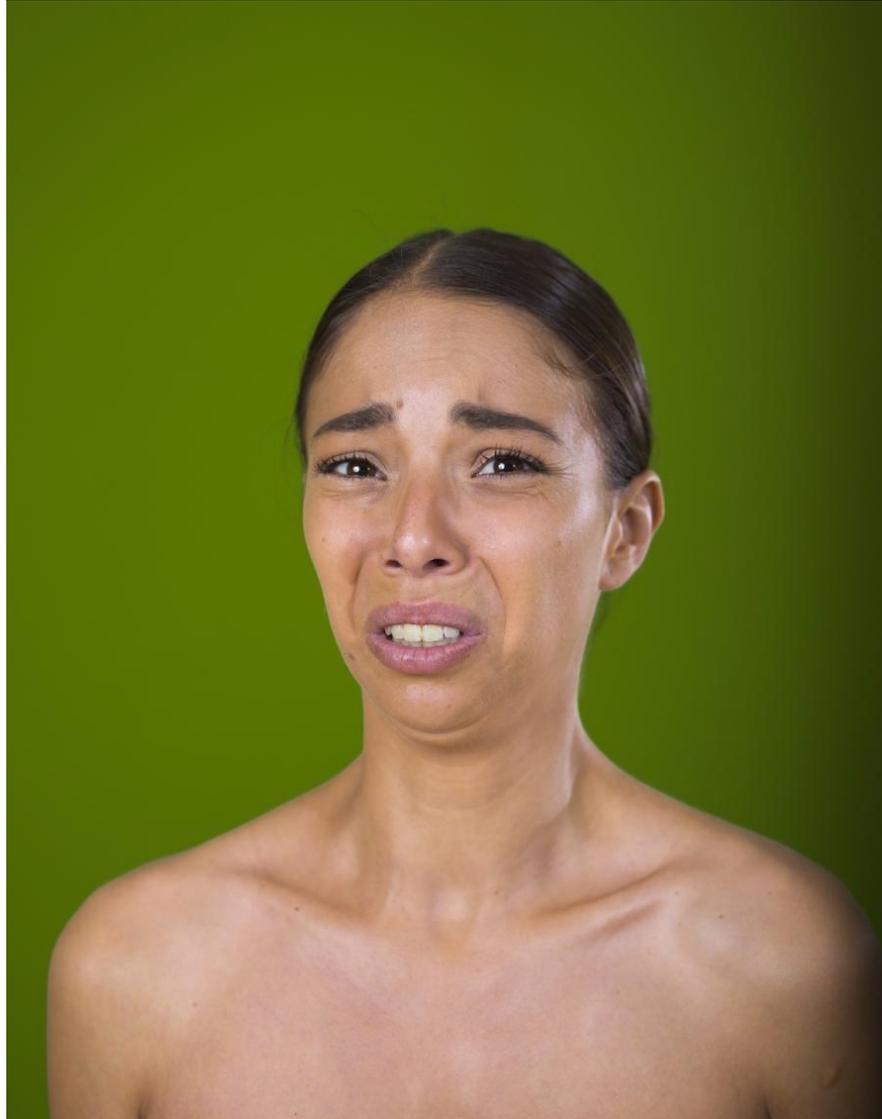


**NEUTRAL**



**ASHAMED**

## 41. DISGUST

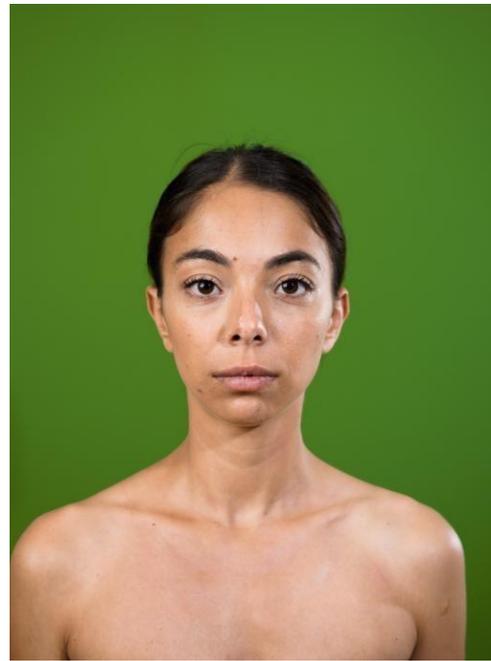


Disgust is a primary emotion. It is characterized by not feeling any pleasure for something, without reluctance, without feeling like it. Disgust can also manifest itself through physical reactions such as nausea, vomiting, sweating and a drop in blood pressure to the point of fainting.

From a scientific point of view, disgust is considered not only a sensation, but also an instinctive reaction. The latter manifests itself immediately in the presence of certain smells, tastes and visions and involves the desire to get rid of them. Subsequent feelings of disgust can also occur in the social sphere with moral disgust, for example towards ideas, behaviors and categories of people with whom one does not want to be associated.

Disgust is a primary emotion. It is characterized by not feeling any pleasure for something, without reluctance, without feeling like it. Disgust can also manifest itself through physical reactions such as nausea, vomiting, sweating and a drop in blood pressure to the point of fainting. From a scientific point of view, disgust is considered not only a sensation, but also an instinctive reaction. The latter manifests itself immediately in the presence of certain smells, tastes and visions and involves the desire to get rid of them.

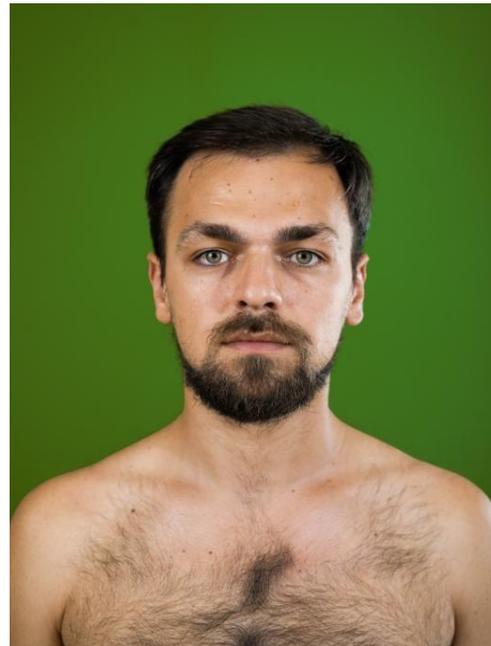
Physical signals and behaviors: a curling lip; lowered eyebrows; an open mouth, the tongue pushing slightly forward; wrinkling one's nose; flinching; swallowing hard; leaning back; stroking the throat and grimacing; eyes that appear cold, dead, flat; refusing to look; shaking one's head, muttering; walking away to regain composure” (Emotion Thesaurus, 2022).



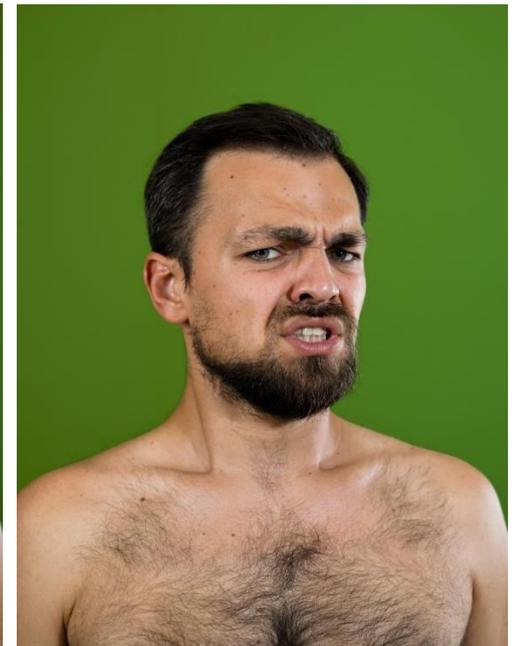
**NEUTRAL**



**DISGUST**



**NEUTRAL**



**DISGUST**

## 42. DISMISSIVE



Feeling or showing that something is unworthy of consideration. Persoană care disprețuiește, care exprimă sau dovedește dispreț. A avea sau a manifesta dispreț față de cineva sau de ceva; a trata cu dispreț pe cineva sau ceva, a nu lua în seamă. Disprețul este un amestec de dezgust și furie.

To be dismissive is to be indifferent and a little rude. Being dismissive is a sign of disrespect.

If you're dismissive, you show little consideration for others. If a teacher laughs at a student's earnest answer to a question, that's dismissive. An employer throwing a resume in the trash without reading it? Dismissive.

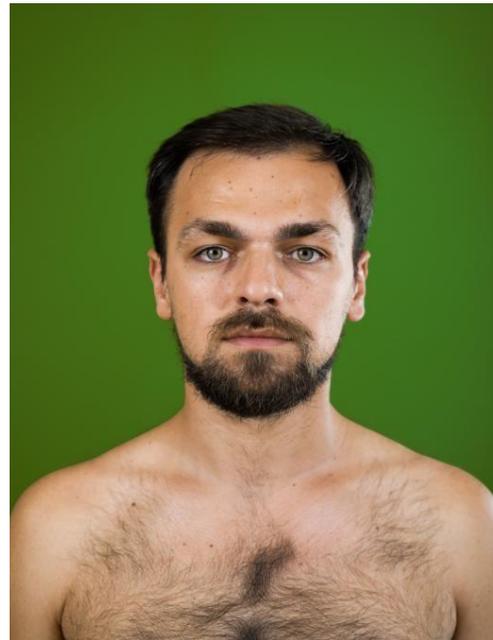
People are dismissive to others they think are beneath them. You can also be dismissive to ideas and suggestions. It's like waving someone or something away and saying, "whatever."



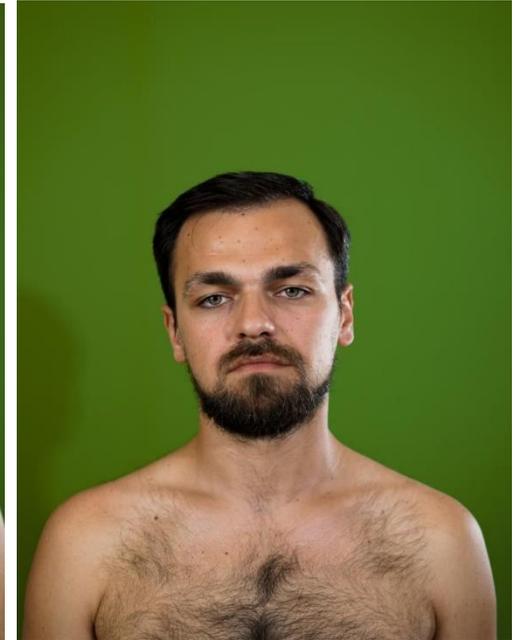
**NEUTRAL**



**DISMISSIVE**

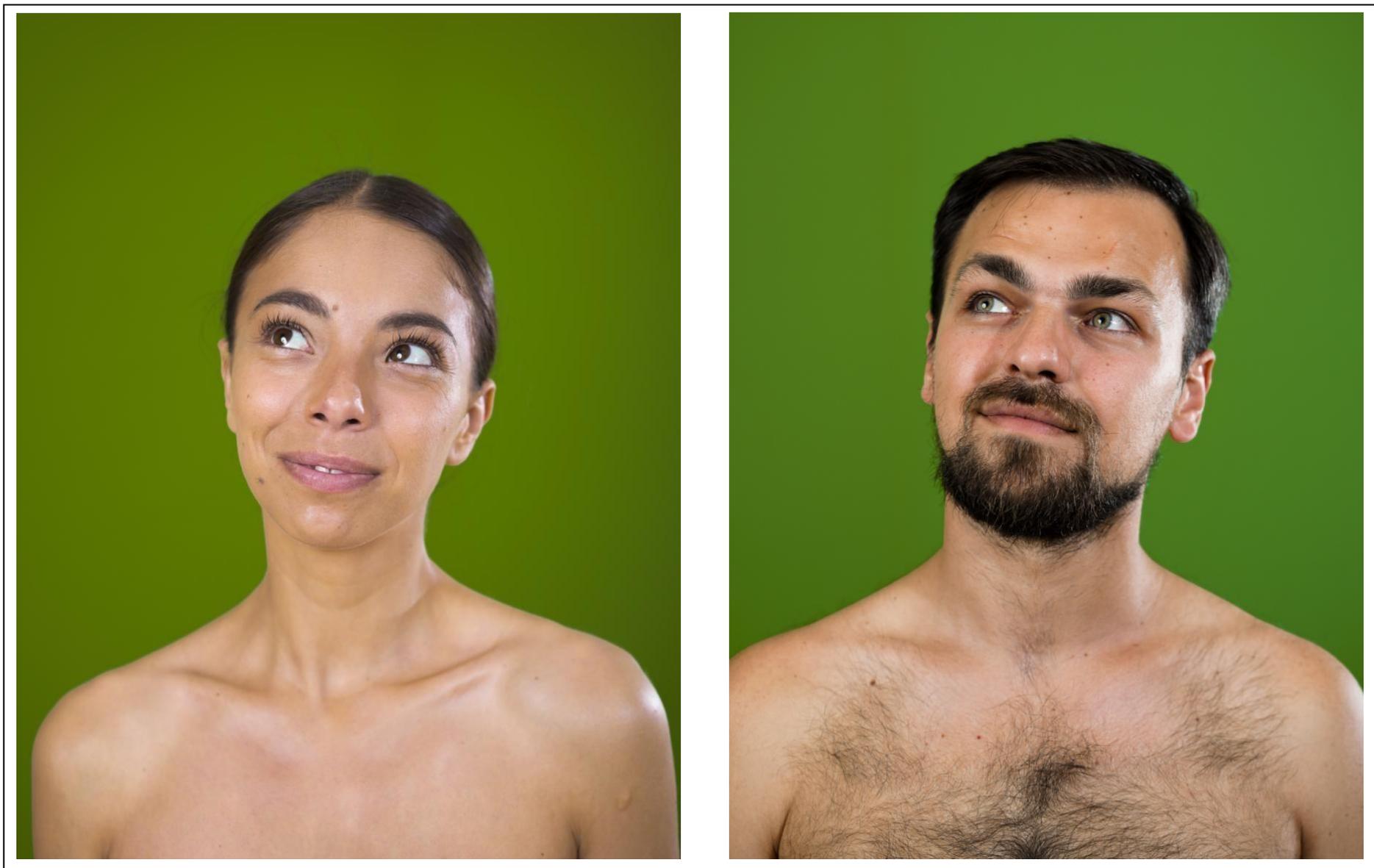


**NEUTRAL**



**DISMISSIVE**

## 43. DREAMY

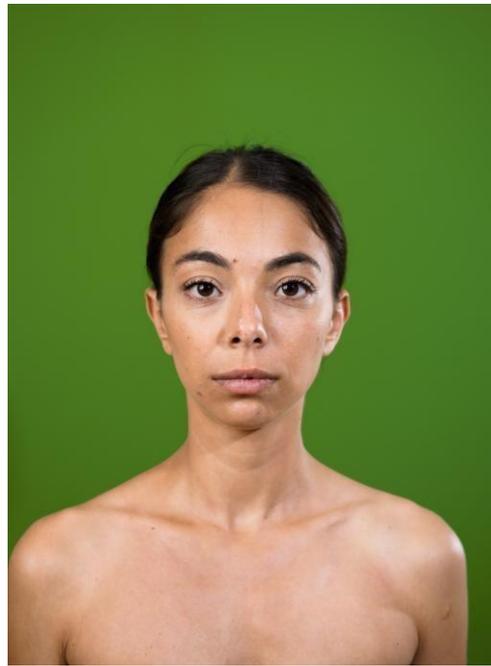


A person who dreams, who is inclined to reverie, to meditation. Seeming to be in a dream and not paying attention to what is happening around you.

Physical signals and behaviors: ceasing all movement; tension leaving one's body; the shoulders dropping; one's mouth falling open slightly (a slack jaw); the neck tipping back; a deeper intake of breath; unabashed staring; slowly releasing a deep breath; being rendered speechless (or becoming less articulate); forgetting to blink; having a fixed gaze (Emotion Thesaurus, 2022).

When you're idealistic, you dream of perfection, whether in yourself or other people. For example, you might have the idealistic goal of bringing an end to childhood poverty in the world.

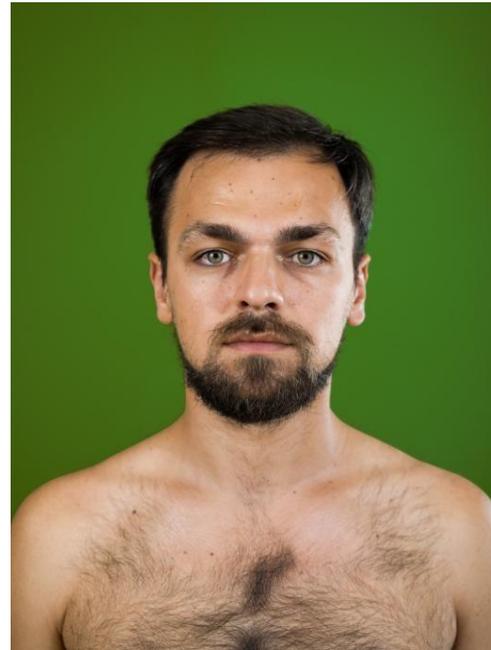
The adjective idealistic describes someone whose plans or goals of helping others are lofty, grand, and possibly unrealistic. Do you think world peace is within reach? You're idealistic. If your vision of the world is idealistic, you believe all problems can be solved and that all people can reach their full potential. Idealistic comes from the Greek idea, or "ideal prototype."



**NEUTRAL**



**DREAMY**

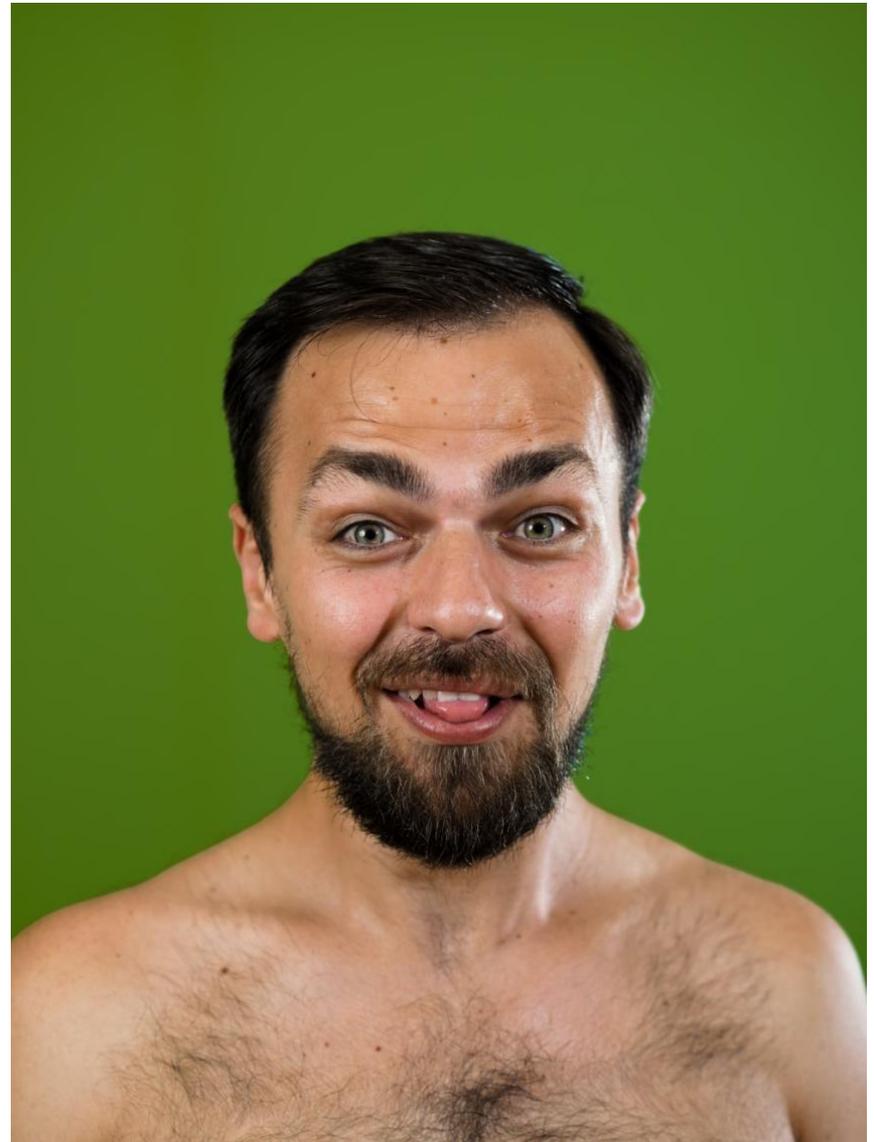


**NEUTRAL**



**DREAMY**

## 44. GOOFY



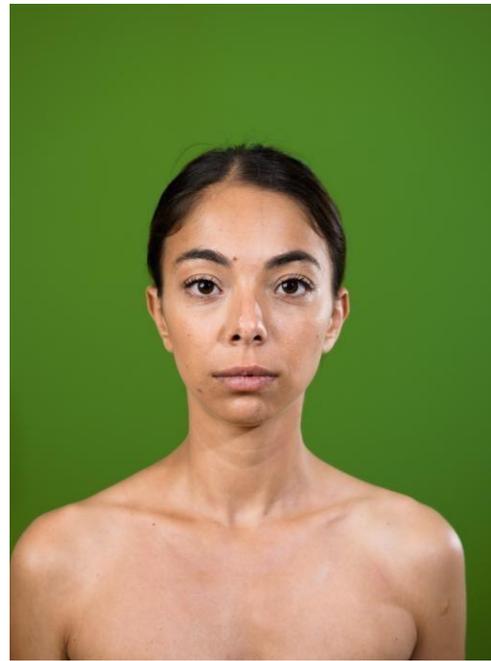
Anything goofy is ridiculous and cute, like a squirrel on a skateboard or a big football player snuggling a teddy bear after every touch down. Goofy things are often well-intentioned but weird.

Being awkward, telling dumb jokes and stories, or wearing crazy clothes are all great ways to be goofy. A goofy smile is sweet, unless you're in England where it means you have big crooked teeth.

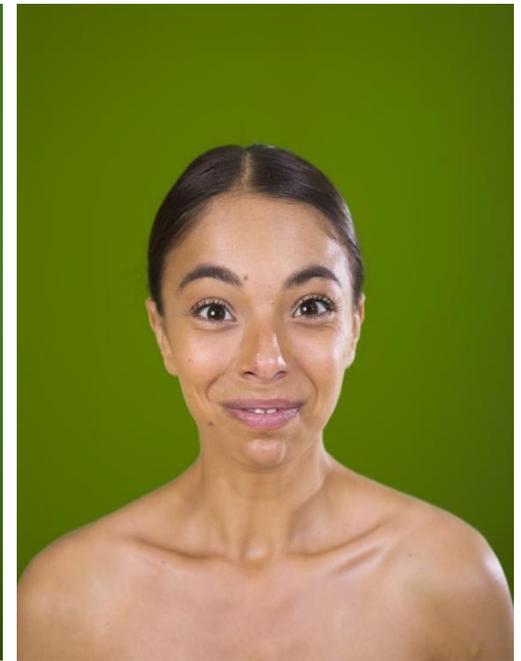
Goofy, the dopey Disney dog who is all of these things, was created in 1929 when the word was brand new. It comes from a variation on the English dialect goff, "foolish clown."

Sometimes people perceive goofy persons as ridiculous. The adjective ridiculous comes from the Latin word ridere, which means "to laugh," but it's also related to the word ridicule. Laughter, is a common reaction to ridiculous situations. However, there are all different kinds of ridiculous, like seeing a fish holding an umbrella while riding a bike.

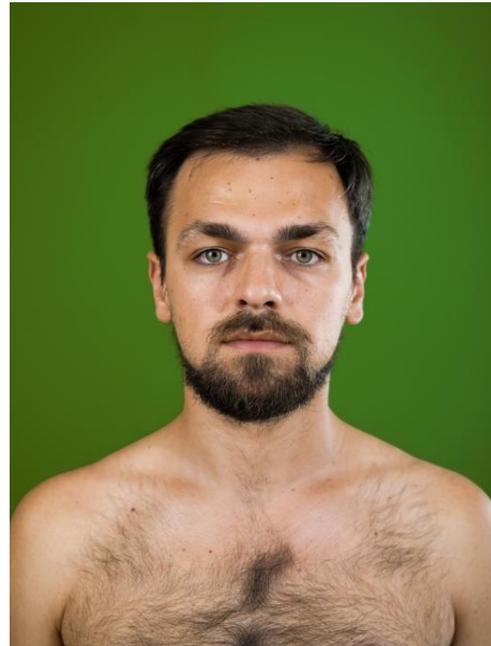
Most of the people are goofy by choice, in order to receive attention or to make other people feel better regarding a negative situation.



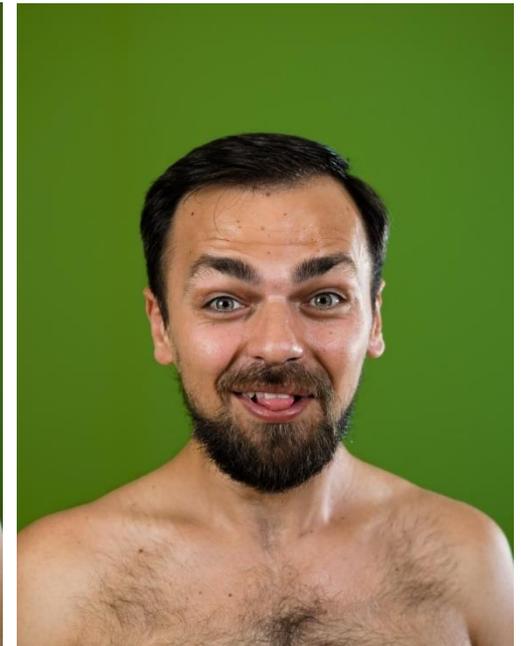
**NEUTRAL**



**GOOFY**

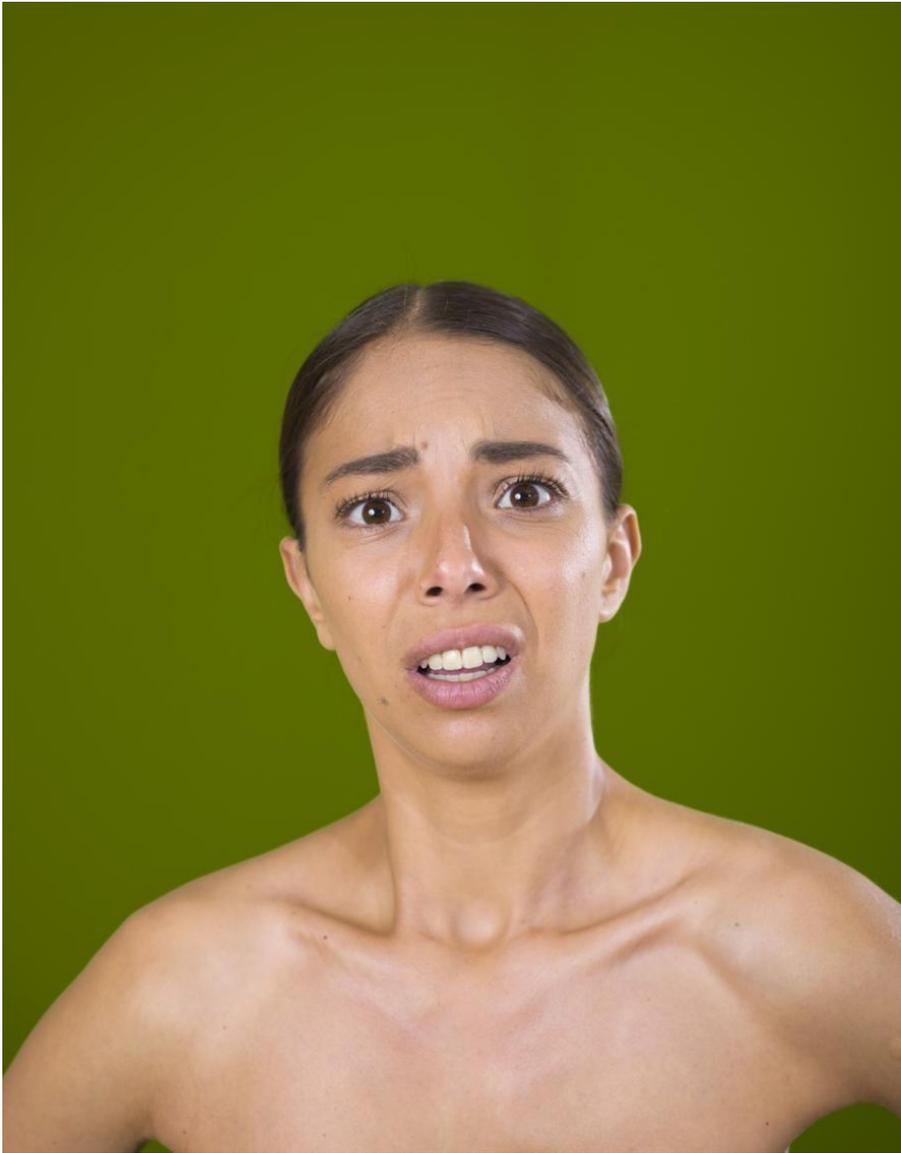


**NEUTRAL**



**GOOFY**

## 45. REVOLTED



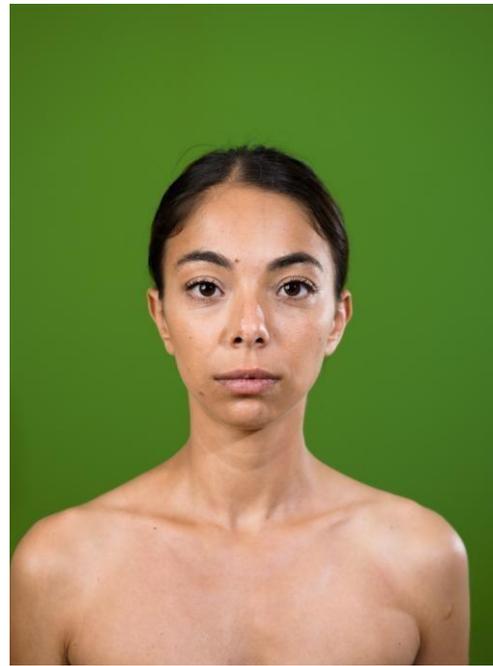
Person who is indignant, who rebels.

Physical signals and behaviors: pursing the lips and shaking the head (Rozin, Haidt, & McCauley, Disgust, 2008); the head jerking back on the neck; muscles tightening around the mouth and nose; the face wrinkling, lips pressed together; pulling the extremities in; making the body compact; exhaling through the nose or mouth, as if expelling something bad; covering the mouth (with a hand, sleeve, napkin, etc.)” (Emotion Thesaurus, 2022)

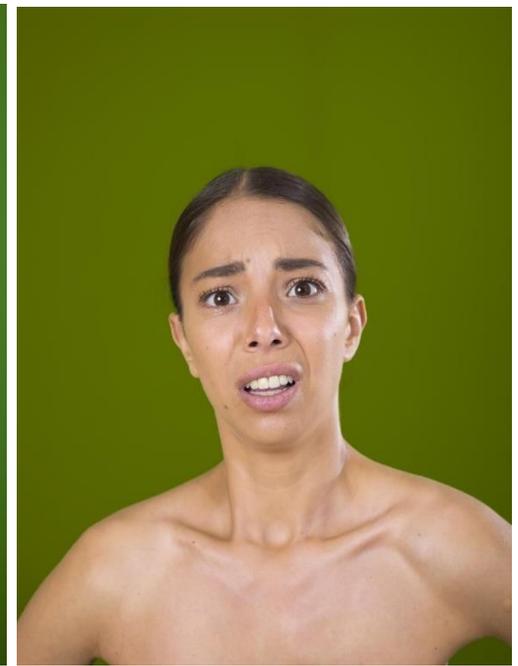
Something revolting is disgusting or distasteful; it turns your stomach and can offend your senses.

Things that are revolting are physically upsetting, like finding hair in your soup or stepping in dog poop. Eating spoiled food is revolting. Also, revolting things can be less physical. Learning that a friend lied to you is revolting. Corruption in government is revolting. Injustice is revolting. Many people find obscenity revolting. If it offends, disgusts, or upsets you, it's revolting.

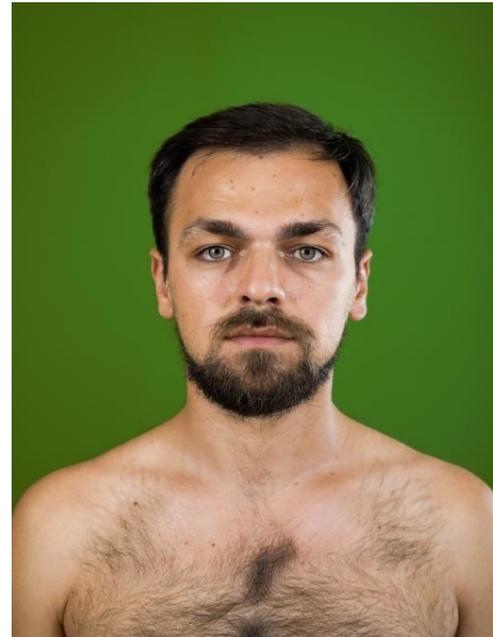
“Qualia, the mental or feeling component of emotion, may be at once the most central component of disgust and the most difficult to study. The qualia of disgust is often described as revulsion. In comparison to other emotions, the experience of disgust appears to be rather short in duration (Scherer & Wallbott, 1994).”



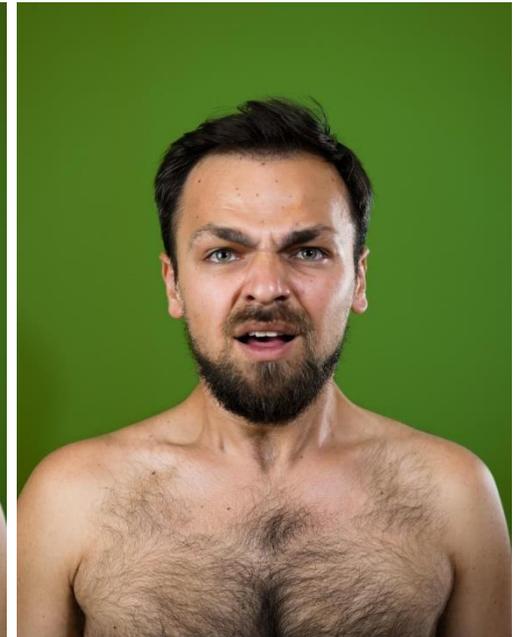
**NEUTRAL**



**REVOLTED**

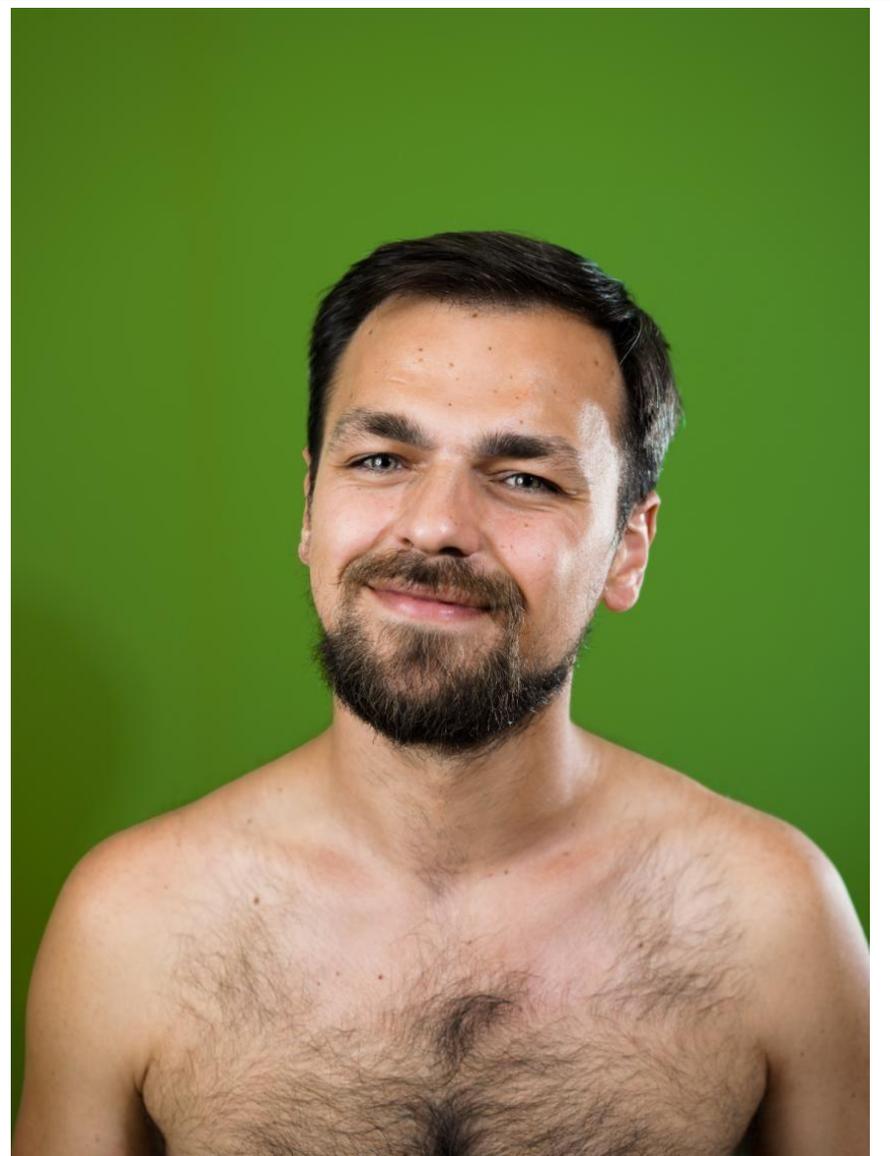
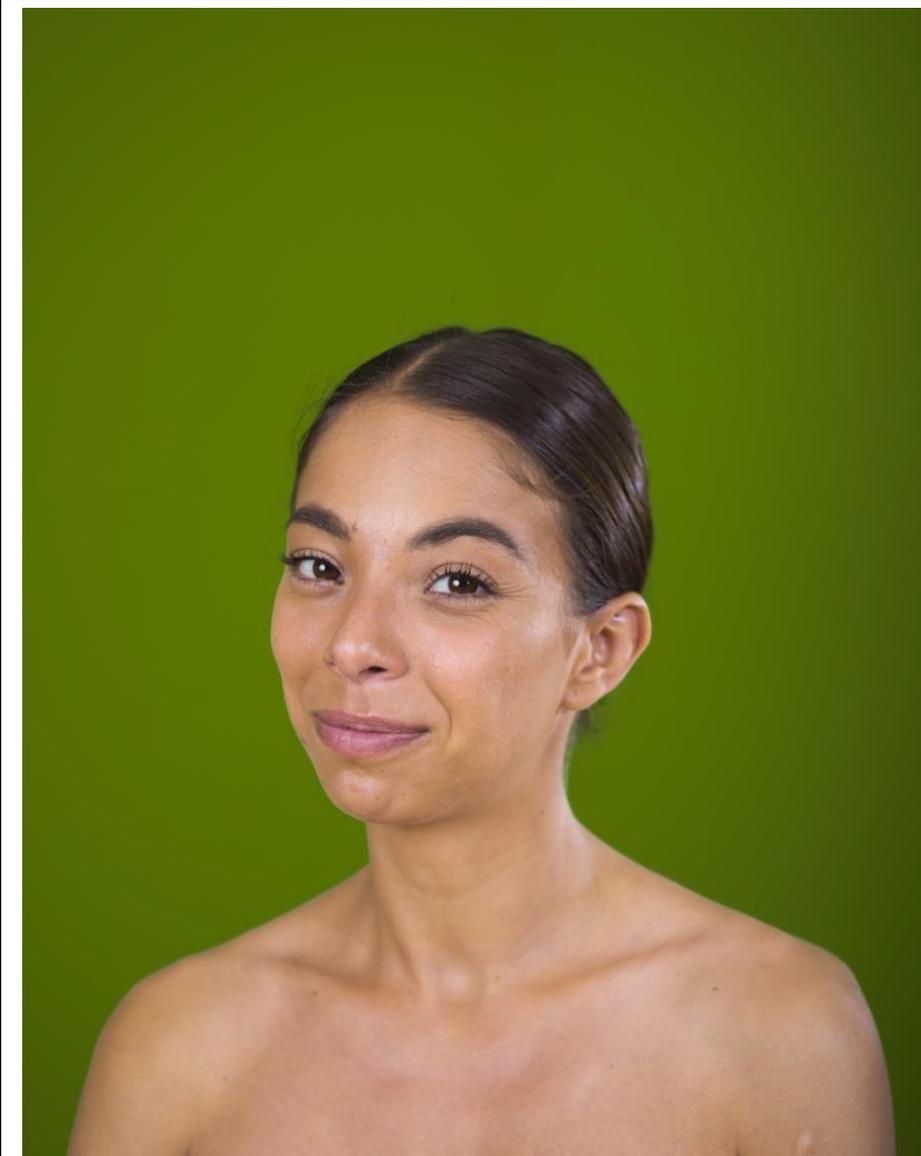


**NEUTRAL**



**REVOLTED**

## 46. PLEASED



Who feels good, who lacks nothing. Peaceful person, satisfied with what he has or has achieved. You are pleased if you're satisfied, you're contented, and you don't need anything more. You're not overjoyed, but you're not complaining either.

Physical signals and behaviors: A relaxed smile crossing the face; An overall lifting of the facial countenance; The head tilting slightly to the side; The cheeks going lightly pink with pleasure; Rubbing a hand self-consciously through one's hair; Lifting the chin; The chest puffing out; Leaning back in one's seat; Maintaining an open body posture (not tense or defended); Sighing in satisfaction; Placing the palm of a hand over one's heart" (Emotion Thesaurus, 2022)

"In order to understand the experience of happiness, we need to distinguish it from two closely related states which often occur with happiness—pleasure and excitement. Although our language assigns almost synonymous meanings to the words pleasure, happiness, and enjoyment, here we want to restrict the term pleasure to refer solely to positive physical sensations.

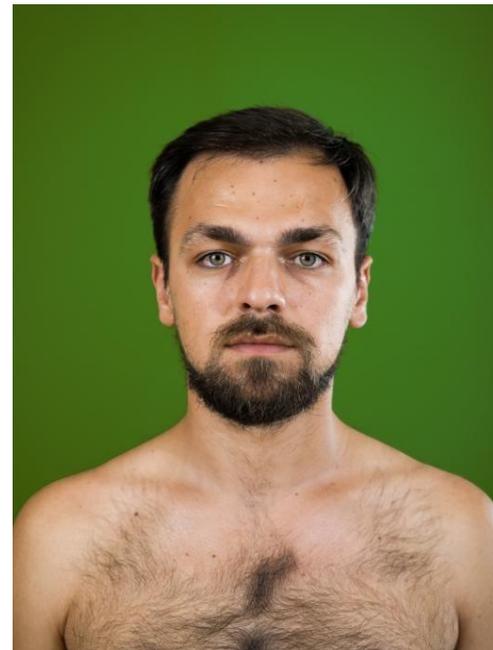
This pleasure is the opposite of the physical sensation of pain. Pain hurts, while pleasure is intrinsically good or rewarding in the way it feels. You value, appreciate, and prefer pleasurable sensations. We do not know all the ways that pleasure sensations can be evoked. Certainly, tactile stimulation and taste can bring on pleasurable sensations, and so can some sounds and sights. Usually, you feel happy when you experience pleasurable sensations, unless you have been punished for having such sensations and feel guilty about them or about your way of obtaining pleasure.



**NEUTRAL**



**PLEASED**

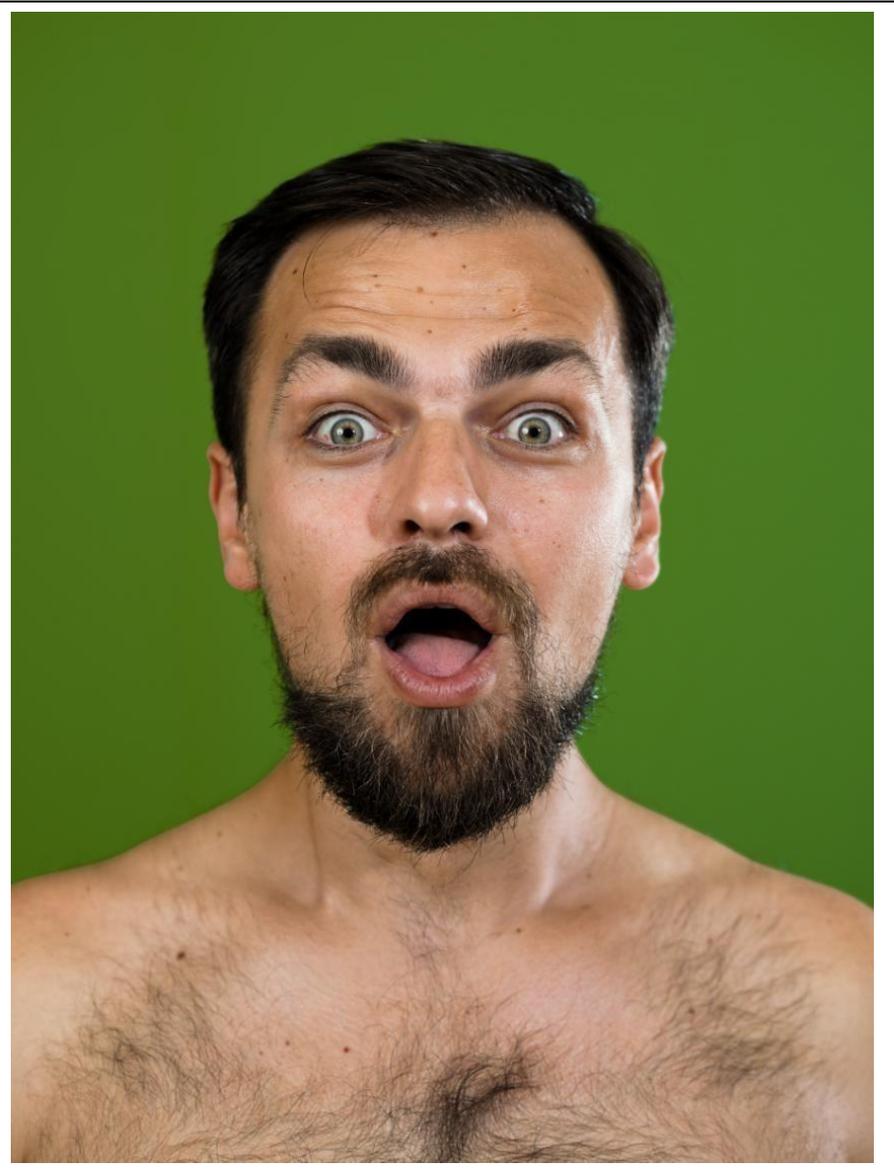
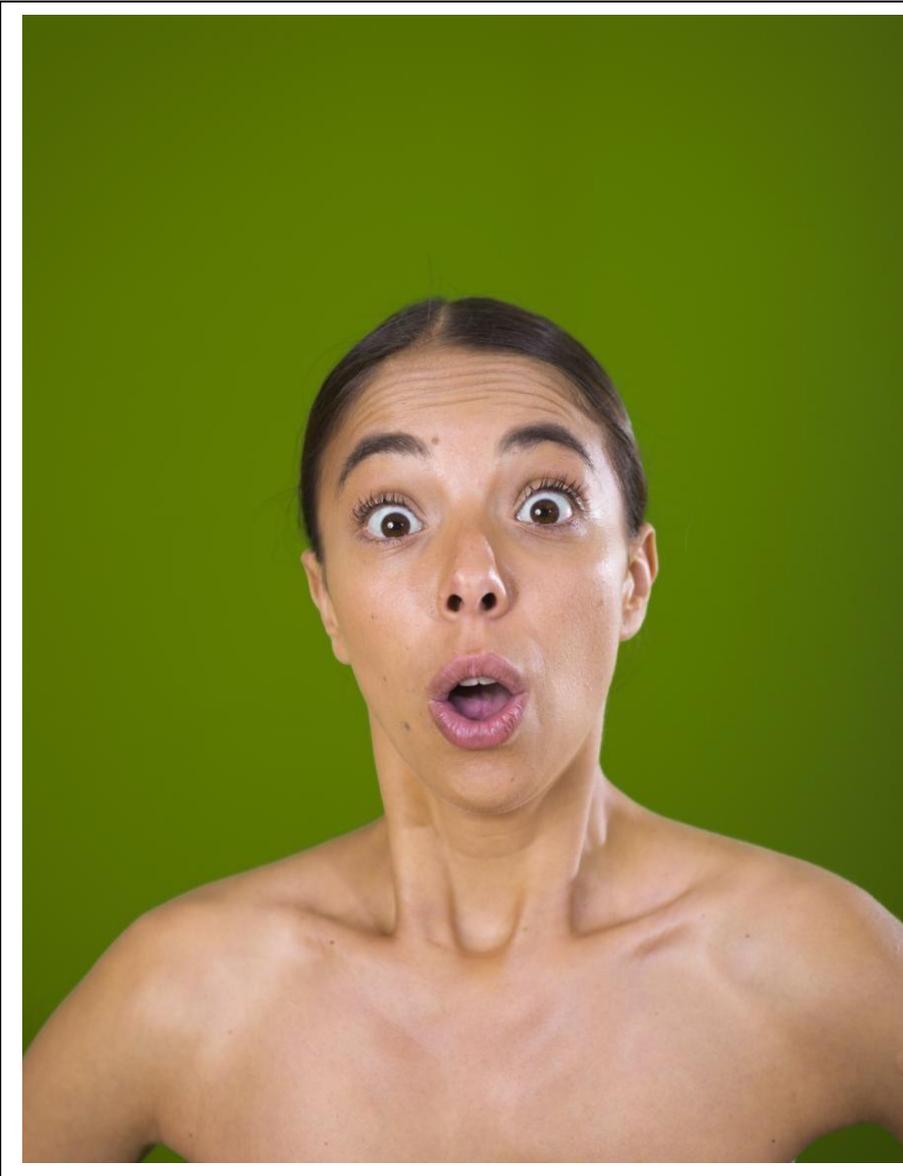


**NEUTRAL**



**PLEASED**

## 47. SHOCKED



Person who has suffered a shock (manifested by a physical and mental imbalance); unpleasantly impressed; contradicted by words, gestures, attitudes.

Physical signals and behaviors: taking a step or two back; eyes widening or bulging; body movements that freeze momentarily; becoming speechless; rapid blinking as one tries to process what one has seen or heard; the mouth falling open; raising the eyebrows; one's head drawing back quickly; covering one's mouth with the palm; a shaky or disbelieving voice; not knowing where to look; a wandering gaze that doesn't settle" (Emotion Thesaurus, 2022)

Eyes bulging, followed by rapid blinking; looking away or down while stepping back; the eyebrows drawing close together; the jaw going slack; slowly yet forcibly expelling all breath as one tries to process what's happening; one's lips moving as words refuse to immediately form; one's posture straightening, the muscles visibly tightening" (Emotion Thesaurus, 2022)

"Emotional shock may just represent disorganization due to sudden impact that cannot be managed; that is how Dumas (1984) and Hebb (1949) interpreted it. Many emotional events are simply beyond human and animal coping resource"

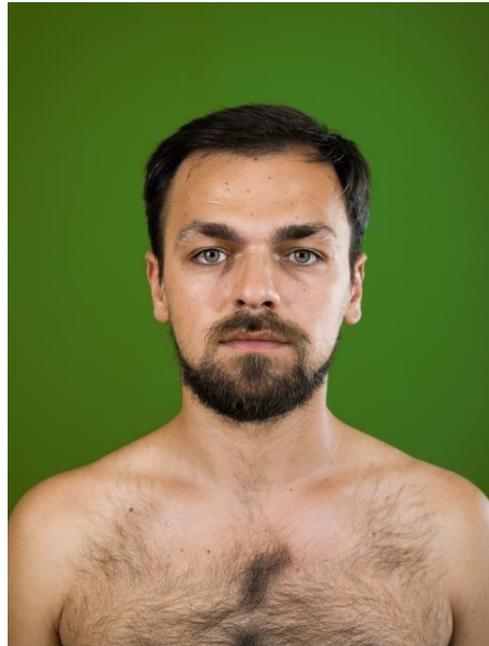
Someone who's shocked is unpleasantly surprised. A shocked audience might gasp and cover their faces as the sword swallower begins to actually swallow a sword.



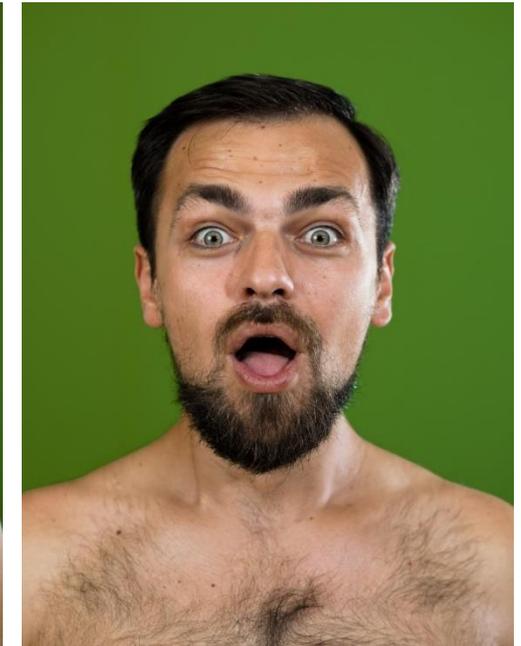
**NEUTRAL**



**SHOCKED**

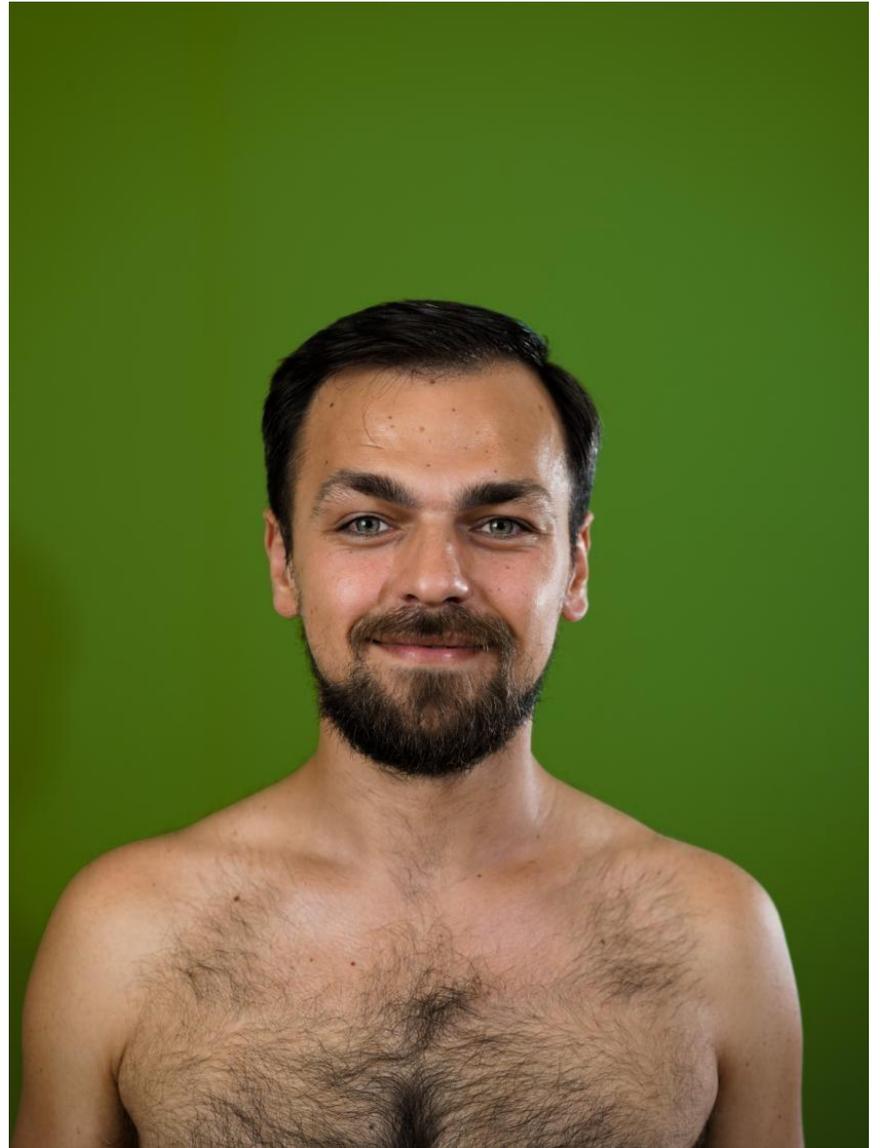


**NEUTRAL**



**SHOCKED**

## 48. CURIOUS



Curious means nosy, prying, or prying; strange, strange; surprising, unusual; original.

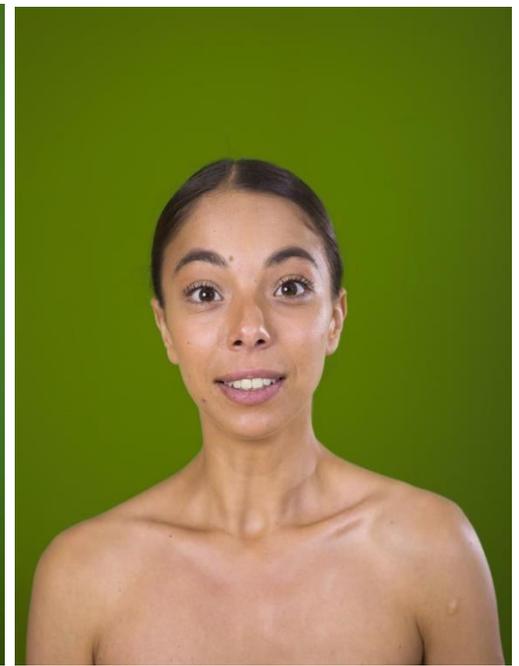
Physical signals and behaviors: tilting the head to the side; raised eyebrows; body posture that perks up; a slow smile that builds; repeating a statement as a question; leaning forward, sliding one's chair closer; pausing to examine; eyebrows furrowing and then releasing; blinking; gazing with focus; shifting from casual conversation to pointed questions; a softened voice or tone that may contain wonder” (Emotion Thesaurus, 2022)

If you’re curious, you really want to know something - like the secret ingredient that makes these cookies so crunchy. You may wish you hadn’t been so curious when you find out it’s roasted crickets.

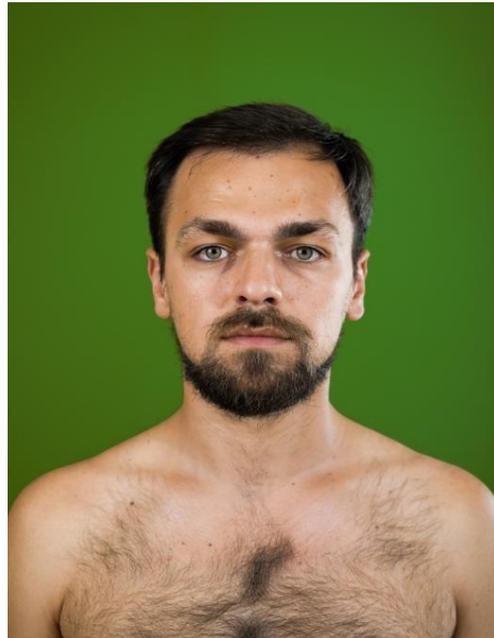
Curious describes someone who is eager to find out answers and to explore and learn. A curious student asks lots of questions. A curious little monkey, like the famous Curious George from the children’s book series, may be so curious to know how a clock works that he breaks it trying to get a closer look inside. Curious can also describe something unusual, like a house that is painted a curious shade of purple.



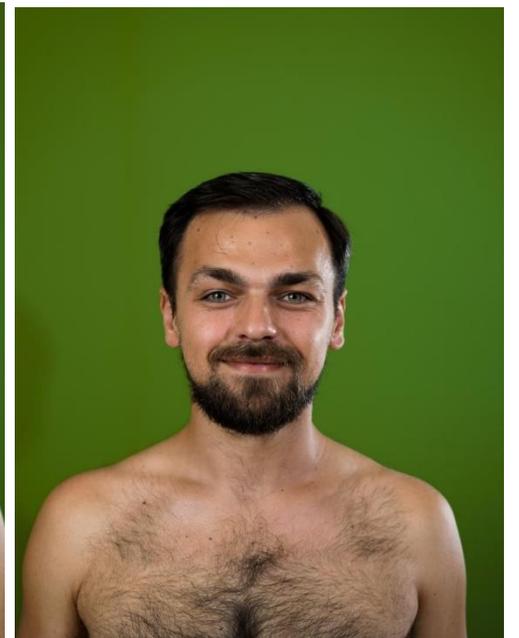
**NEUTRAL**



**CURIOUS**

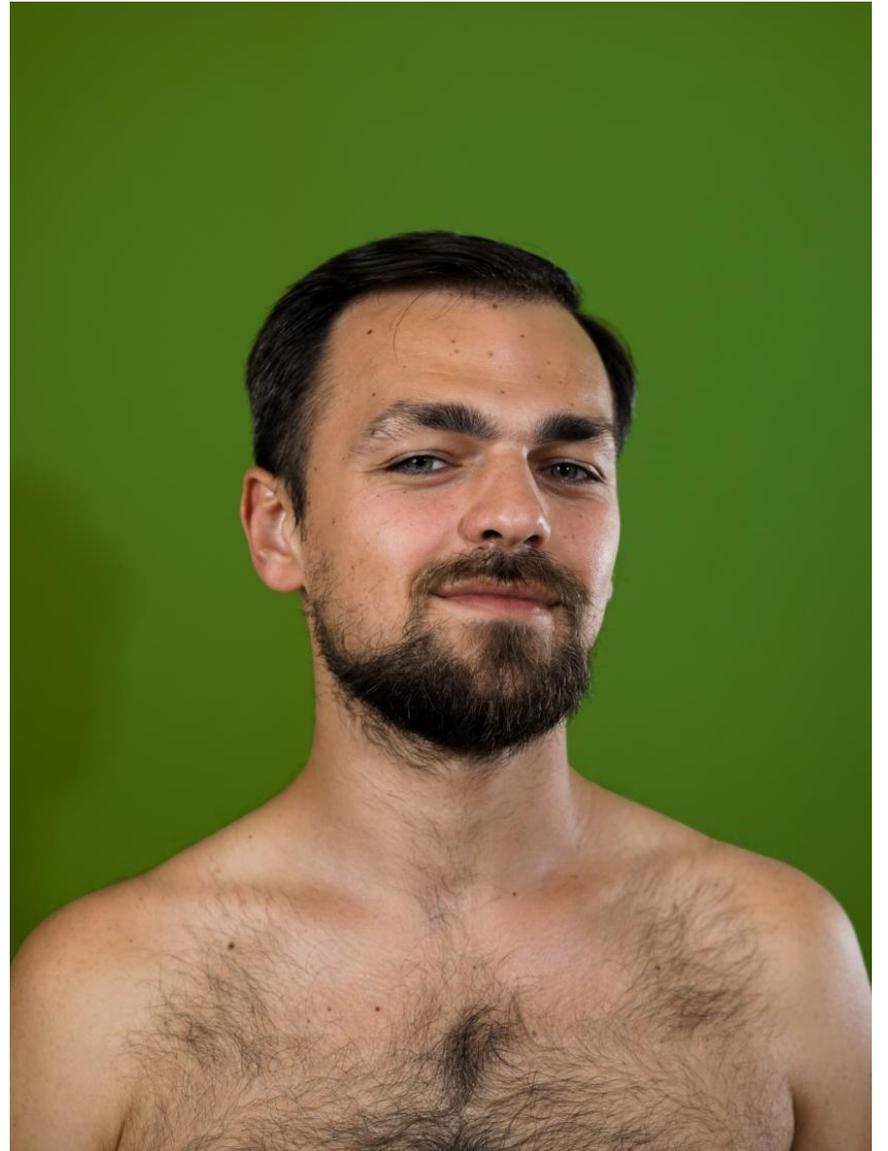
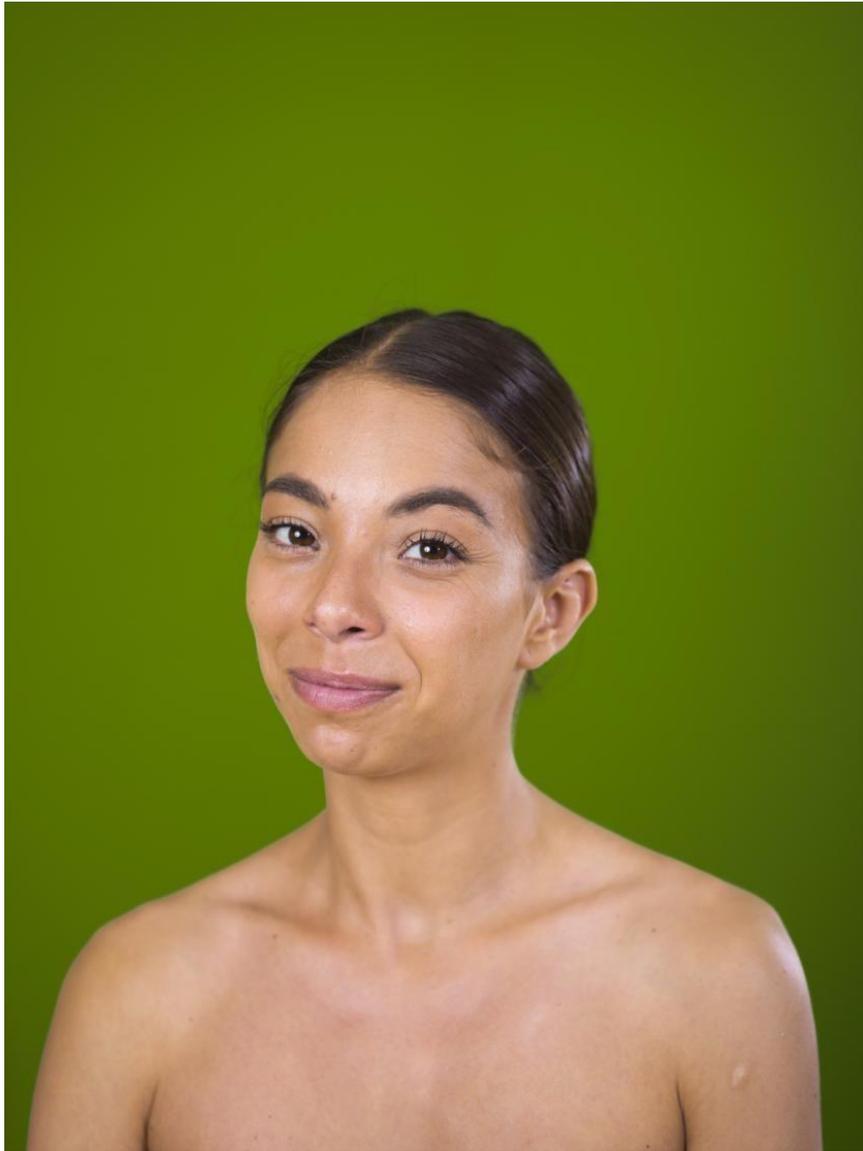


**NEUTRAL**



**CURIOUS**

49. LOVELY

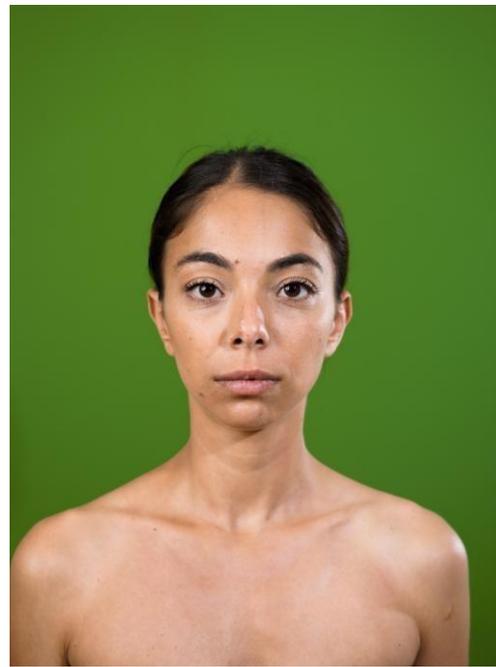


Which is out of the ordinary (by appearance, characteristics, etc.); magnificent; which amazes with beauty; delightful, splendid.

You've probably heard the adjective lovely to describe something good looking, but did you know that, as a noun, lovely refers, specifically, to a beautiful girl employed as a photographer's model?

From the Old English *luflic* "affectionate, loveable," comes lovely, an adjective that describes a person's or thing's attractiveness. Find the word love in there — it's something so attractive you can't help but love it.

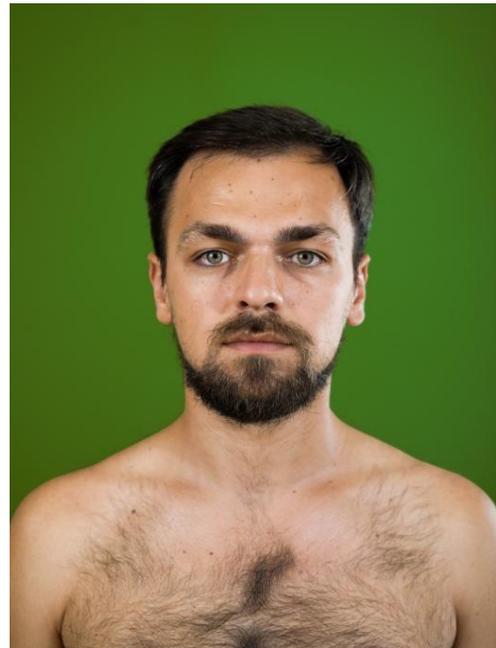
Lovely can also refer to something delightful. For example, a pretty selection of cakes and pastries arranged on a doily could be described as lovely. Anything from your girlfriend to a fresh coat of red paint on your motorcycle can be lovely.



**NEUTRAL**



**LOVELY**



**NEUTRAL**



**LOVELY**

50. SAD

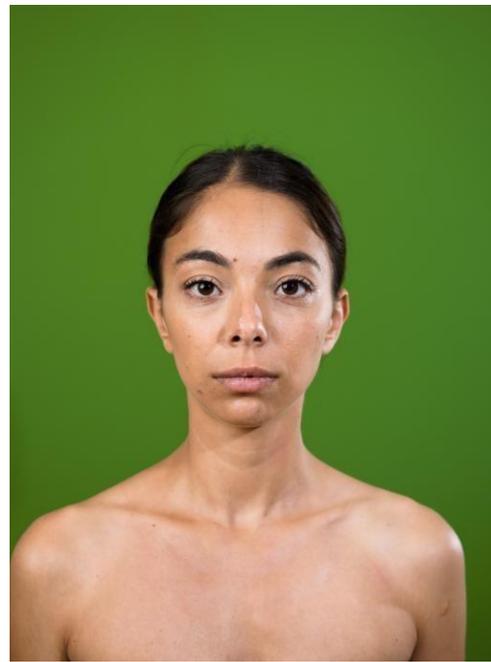


Sadness is an emotion characterized by the feeling of disadvantage, loss, helplessness. Sadness isolates a person from the rest, that person being focused only on the reason that caused the state of sadness. Thus, they consider the things and people around them worthless, not paying attention to them.

“We argue that sadness is a basic emotion, but that grief represents a broader and more elaborate construct similar to (though not identical with) depression. Moreover, there is emerging evidence that the amygdala also responds to sadness-related stimuli (Wang, McCarthy, Song, & LaBar, 2005). The emotion of sadness in particular is generally associated with the appraisal of permanent loss. Grief is, of course, also associated with the cognitive understanding of loss. However, in contrast to the relatively simple way this appraisal manifests itself in sadness, the sense of loss that informs grief is typically far more profound and all-encompassing.”

When you're sad, you feel unhappy. If you've ever experienced the death of a pet you loved deeply, you know exactly what it means to feel sad.

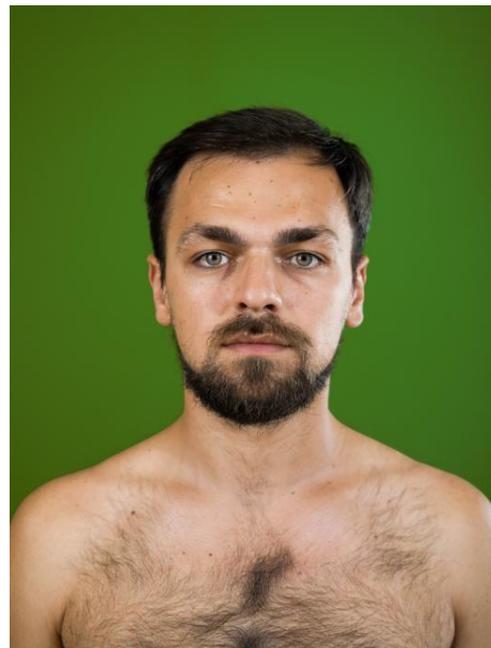
You might use the adjective sad informally to describe something that's pathetic or that you feel scornful or disdainful about. For example, you might comment on your friend's elaborate homemade hat by saying, "That hat is just sad," though it wouldn't be very nice of you to say it. The term "sad sack" became popular during World War II and has been used ever since to refer to an incompetent, slightly pitiful person.



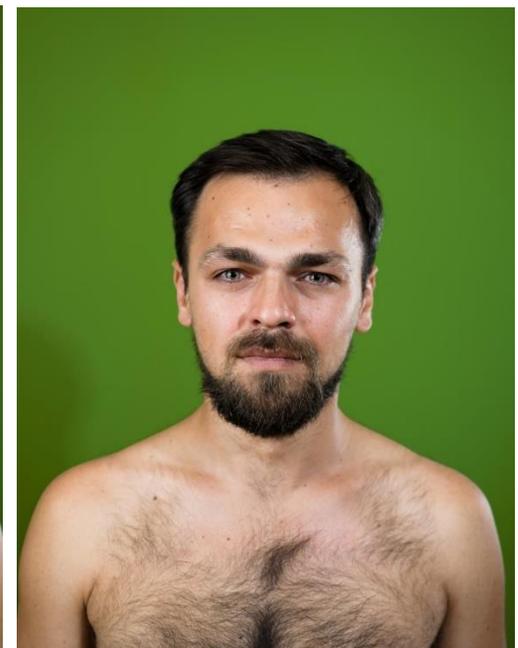
**NEUTRAL**



**SAD**



**NEUTRAL**



**SAD**

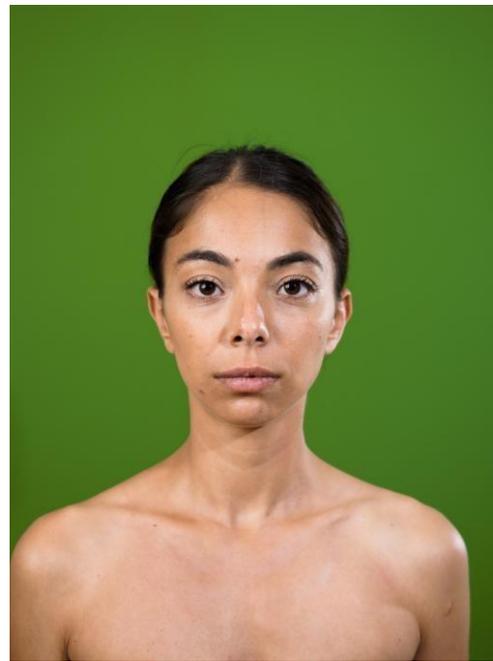
## 51. SCARED



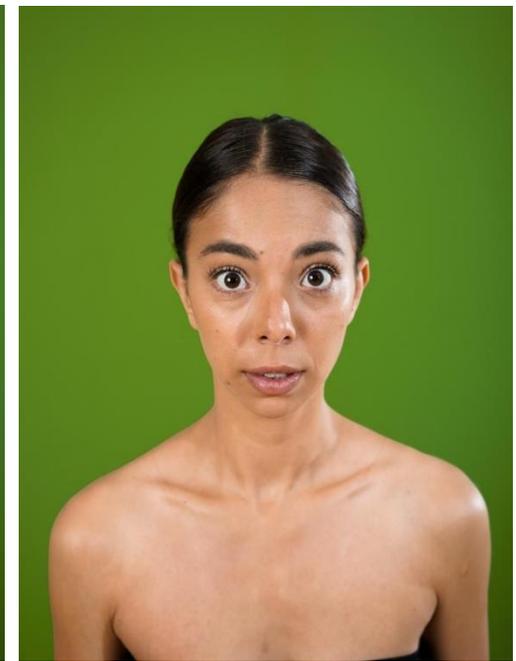
You feel scared when you are filled with fear, filled with anxiety. A worried, restless, troubled man.

Physical signals and behaviors: face turning ashen, white, pallid; hair lifting on the nape and arms; body odor, cold sweats; clammy hands; trembling lips and chin; tendons standing out in the neck, a visible pulse; elbows pressing into the sides, making one's body as small as possible; freezing, feeling rooted to the spot; rapid blinking; tight shoulders; Staring but not seeing, eyes shut or crying; hands jammed into armpits or self-hugging; breath bursting in and out; leg muscles tightening, the body ready to run; looking all around, especially behind; a shrill voice; lowering the voice to a whisper; keeping one's back to a wall or corner; shaking uncontrollably; gripping something, knuckles going white; stiff walking, the knees locking; beads of sweat on the lip or forehead; grabbing onto someone; eyes appearing damp and overly bright; stuttering and mispronouncing words, tremors in the voice; jerky movements, squirming; licking the lips, gulping down water; sprinting or running; sweeping a hand across the forehead to get rid of sweat; gasping and expelling one's breath as if pained; uncontrollable whimpering; pleading, talking to oneself; flinching at noises” (Emotion Thesaurus, 2022)

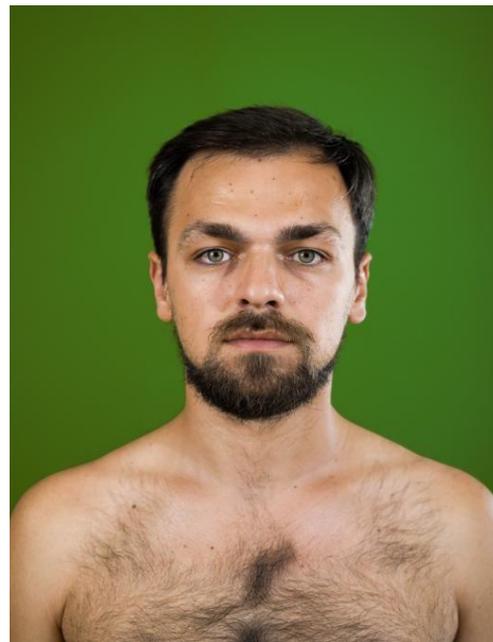
When you are scared, you are frightened or alarmed. It can be a momentary thing: hearing a car screech outside your house and worrying that your dog just got hit. It can be longer: you might be scared for weeks or months after a medical diagnosis. While the verb is usually associated with a single person or small group, you might also apply it more generally: a fast-moving tornado could have scared a whole town.



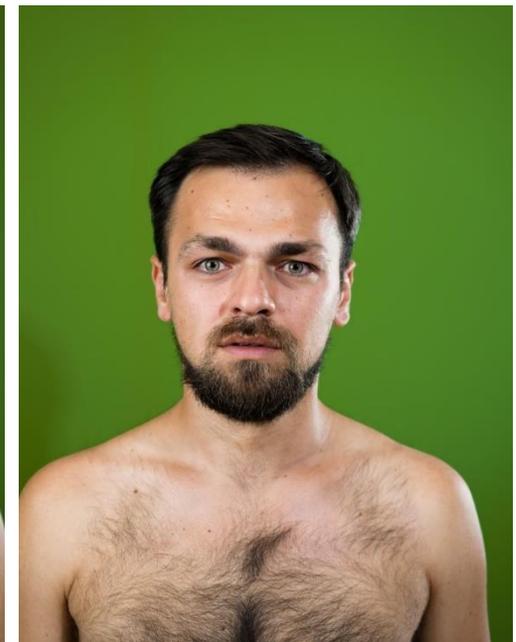
**NEUTRAL**



**SCARED**

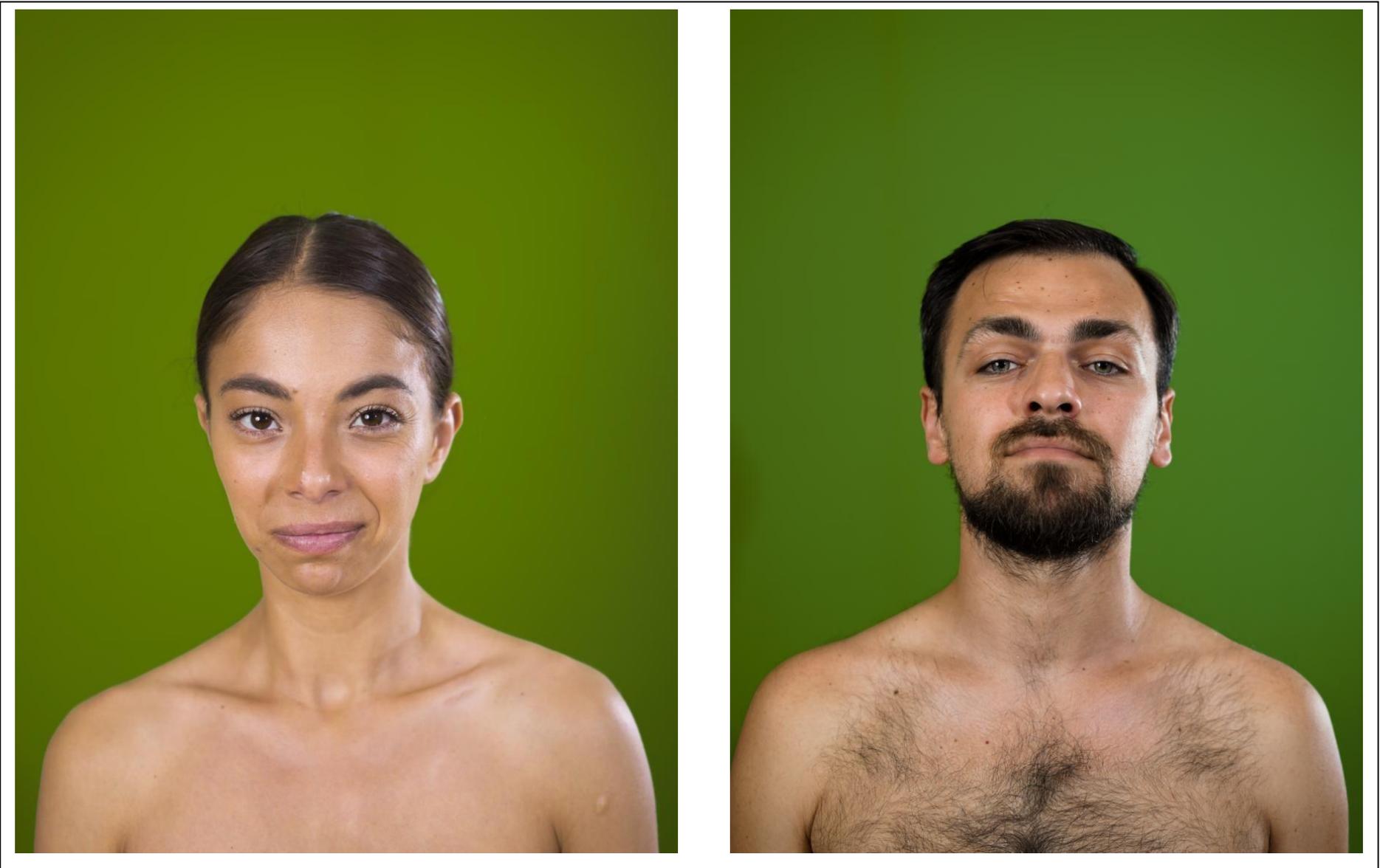


**NEUTRAL**



**SCARED**

## 52. SUPERIOR

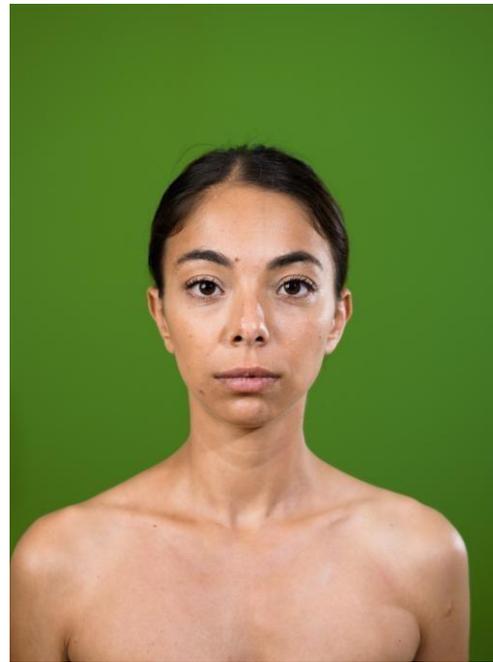


Superior comes from the Latin word meaning above and it literally means something that is above others in quality or status. Sometimes being superior can be perceived as a negative, as in the woman who acts superior to all of her friends, having a high opinion of herself just because she has millions of dollars in the bank after winning the lottery.

Someone who feels better, more capable, more competent, more intelligent, more powerful than someone else.

Direct, probing eye contact; squinting and a hard smile; a dismissive nod or glance; rolling the eyes; aggressive teasing intended to put another in their place; a sigh conveying annoyance (a huff)" (Emotion Thesaurus, 2022)

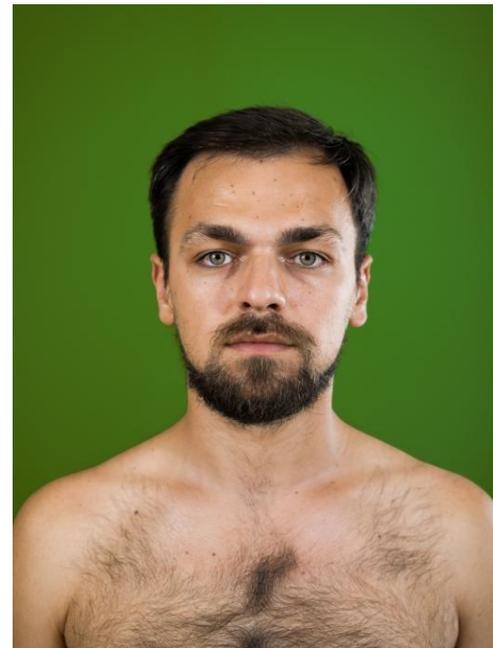
physical signals and behaviors: strong posture (shoulders back, chest out, chin high); walking with wide steps; strong hygiene and personal grooming; holding the hands loosely behind the back; touching one's fingertips together (tapping, forming a steeple); a gleam in one's eye, an inner light; smiling, a playful grin; winking or giving someone an easy nod; keeping one's hands out of the pockets; appearing relaxed (drumming fingers against a leg, humming); taking up space (legs spread wide, arms loose at the sides); Approaching people with ease" (Emotion Thesaurus, 2022)



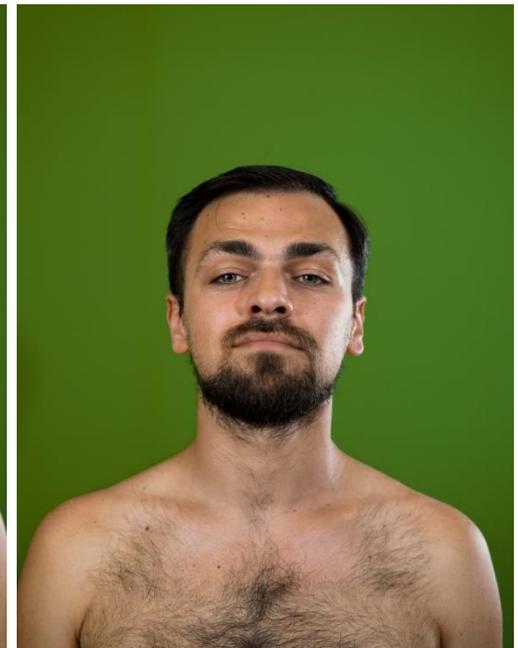
**NEUTRAL**



**SUPERIOR**



**NEUTRAL**



**SUPERIOR**

## 53. TRIUMPHANT



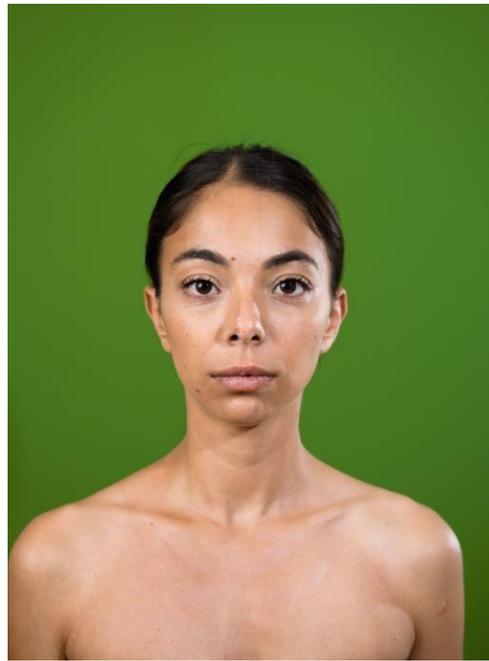
Person who triumphs is victorious, victorious, victorious. Which expresses pride in the success achieved, which shows the satisfaction of being victorious.

Physical signals and behaviors: a smile taking over one's face; one's breaths becoming steadier and deeper; a brightening countenance; expounding on the idea that was accepted; going into further detail; nodding the head vigorously; listening eagerly to others; sharing one's ideas more readily; a lifting of the chin and shoulders; the chest puffing out; standing taller; looking people in the eye" (Emotion Thesaurus, 2022)

If you're triumphant, you're proud of a huge success, like your triumphant victory at your ping-pong tournament.

Winning an honor or a competition means that you're triumphant. The joy you feel about your win is described as triumphant. You might flash a triumphant smile at the audience during the curtain call after your excellent performance in the school play.

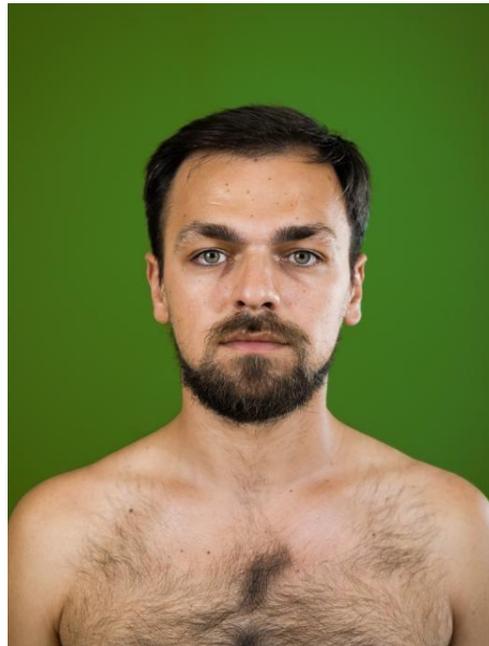
Triumphant comes from the Latin word triumphus, which means triumph, but also describes a procession for a victorious general or admiral.



**NEUTRAL**



**TRIUMPHANT**

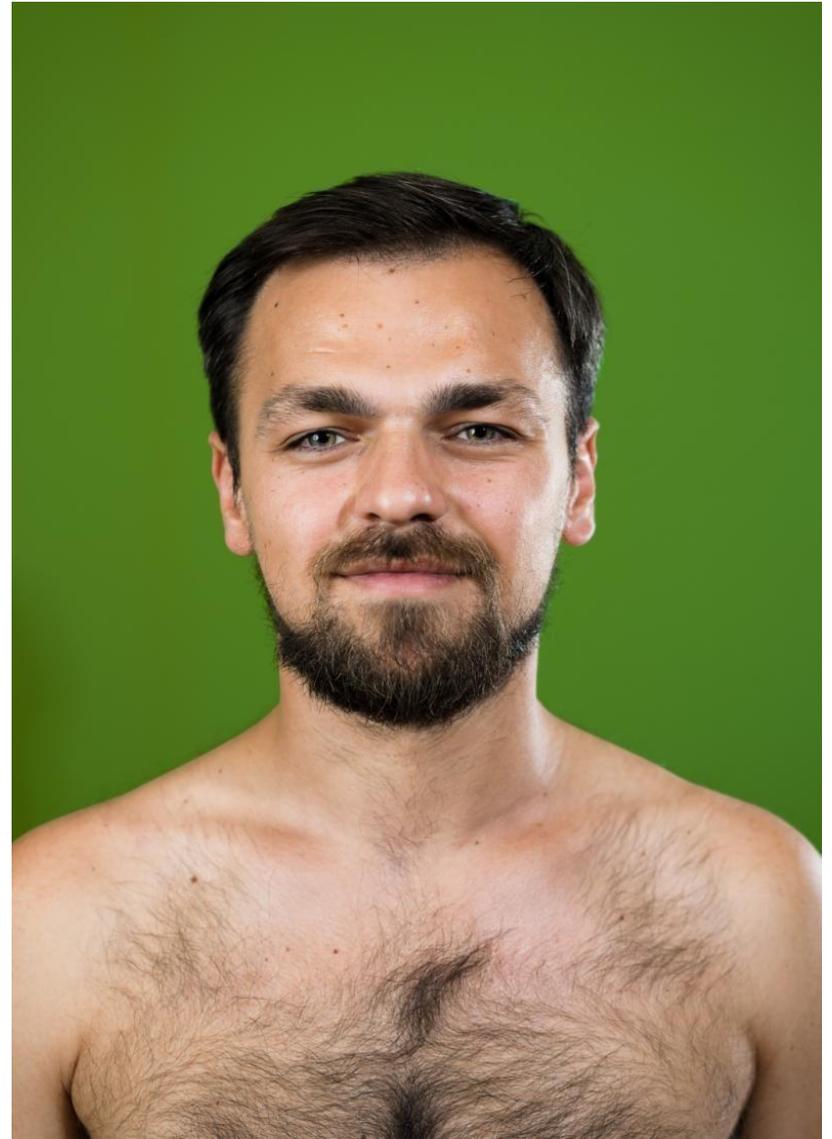


**NEUTRAL**



**TRIUMPHANT**

## 54. APPRECIATIVE



A person who appreciates, who realizes the (moral) value of (a thing or a) person, who values at fair value. You are appreciative when you have a good idea about someone, you value him, you admire him, you respect him.

A person who appreciates, who realizes the (moral) value of (a thing or a) person, who values at fair value. You are appreciative when you have a good idea about someone, you value him, you admire him, you respect him.

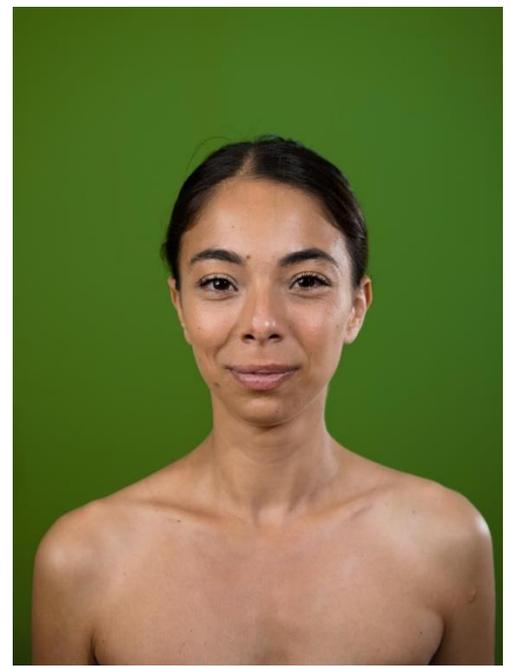
Physical signals and behaviors: a smile that reaches the eyes (which are glossy and bright); prolonged eye contact; eyebrows that flash up and hold; head tilting slightly to the side; leaning forward; nodding slightly while grinning; a flush visible in the cheeks; reaching out to the one who is admired; offering a compliment; lowering the head briefly; an enthusiastic, warm greeting” (Emotion Thesaurus, 2022)

If you do a friend a favor, your friend will probably be appreciative, meaning grateful. Use appreciative to describe words and actions that are positive, either out of gratitude or respect.

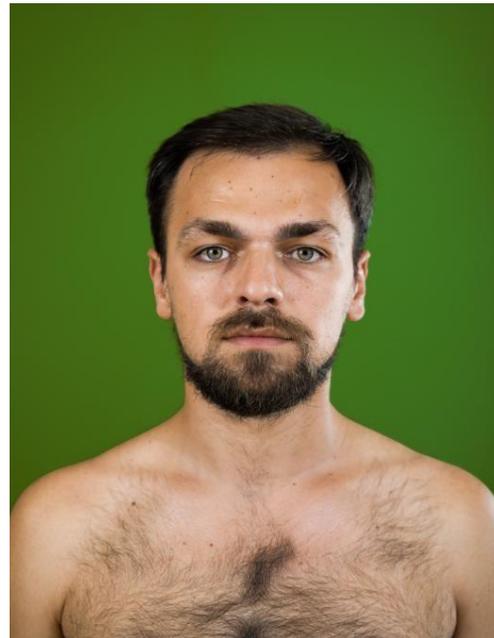
If you know that appreciation is a type of respect and admiration, then you won't be surprised by the meanings of appreciative. Children should be appreciative of everything their parents do to take care of them. We can also say a positive review is appreciative, showing that the critic likes and appreciates the subject of the review. Appreciative words and gestures are always positive and respectful.



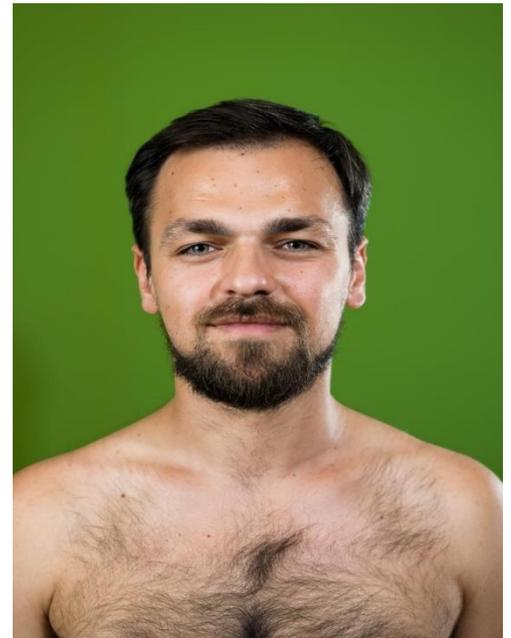
**NEUTRAL**



**APPRECIATIVE**

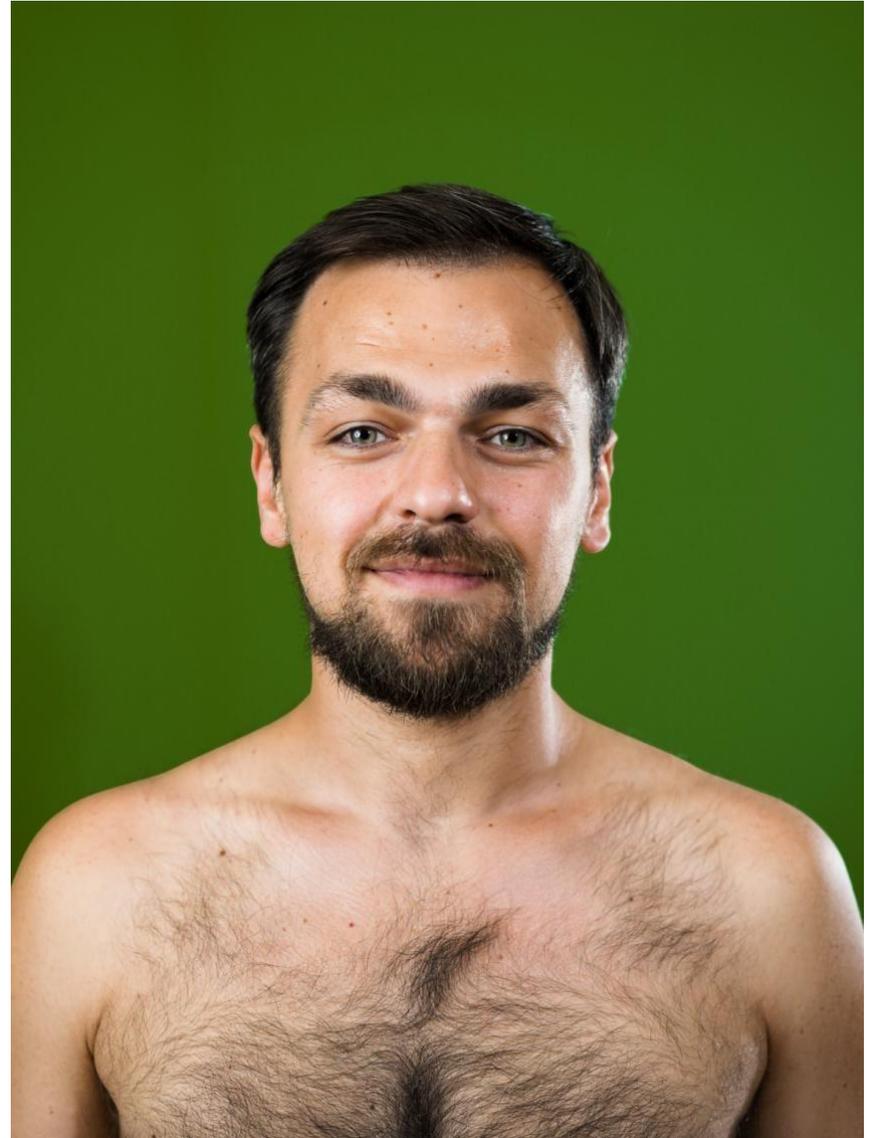


**NEUTRAL**



**APPRECIATIVE**

## 55. COMPASSIONATE



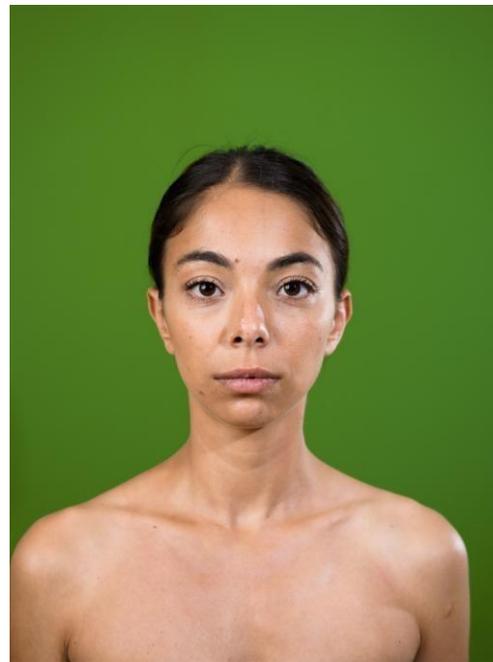
A compassionate man, sensitive to the troubles or misfortunes of another, gentle, good, compassionate, merciful.

Physical signals and behaviors: a softening of the features; eyebrows drawing together;

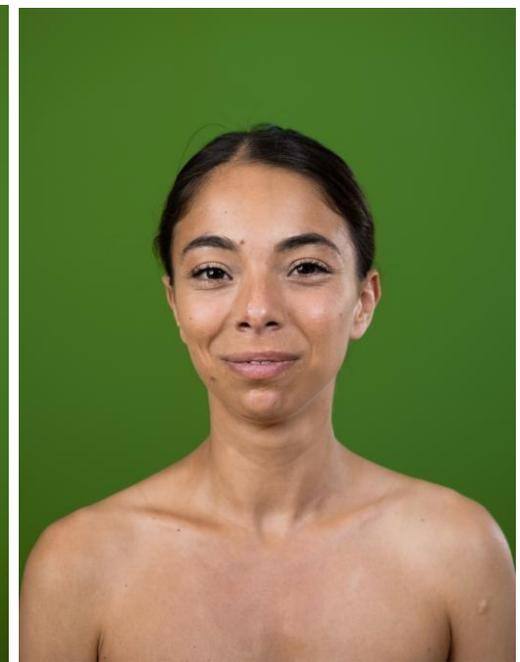
A pained look (if one is sharing another's negative feelings); steady eye contact that is comforting, not invasive; offering a small smile that communicates acceptance; reaching out to touch (to show connectedness)" (Emotion Thesaurus, 2022)

If you are compassionate, you feel other people's pain and struggles as though they were your own. Compassionate people are often moved to work to end the suffering of others, perhaps by feeding the hungry or educating the poor.

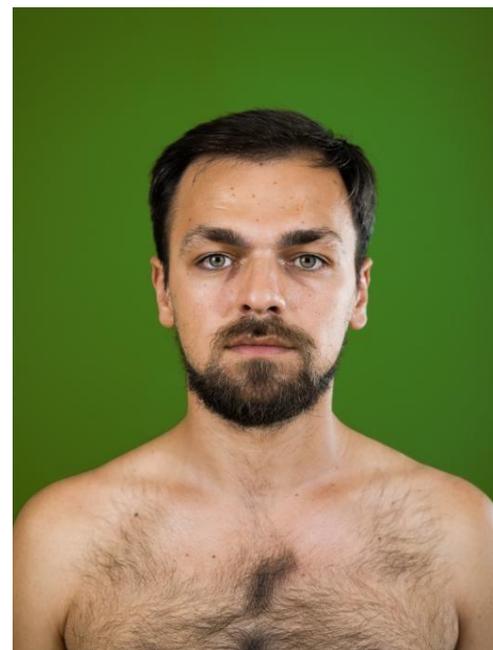
Compassionate comes from the Old French noun compassion noun compassion which means "sympathy, pity." The adjective, means "sympathetic," like a compassionate friend who shares in your joys and sadnesses, wanting the best for you. As a verb, compassionate, here pronounced "cuhm-PASH-uh-nate," means "pity," as in your ability to compassionate with stray dogs and cats.



**NEUTRAL**



**COMPASSIONATE**

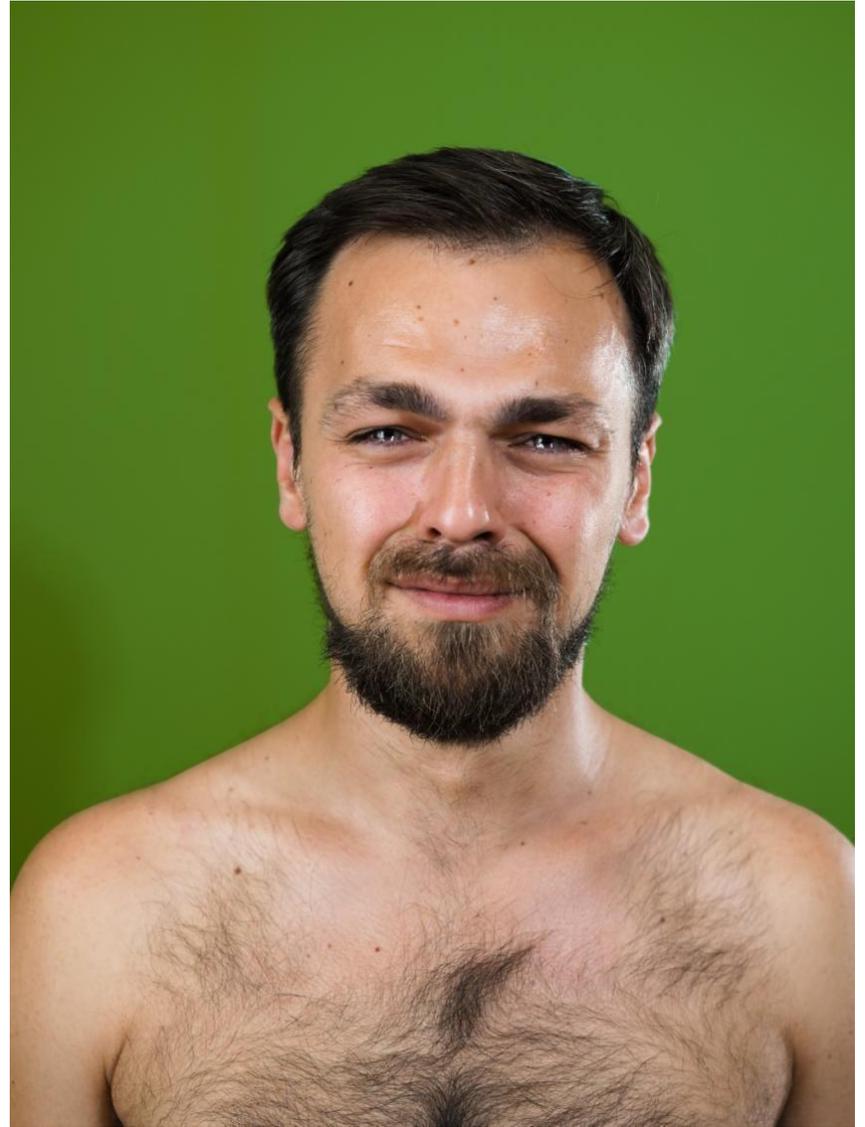
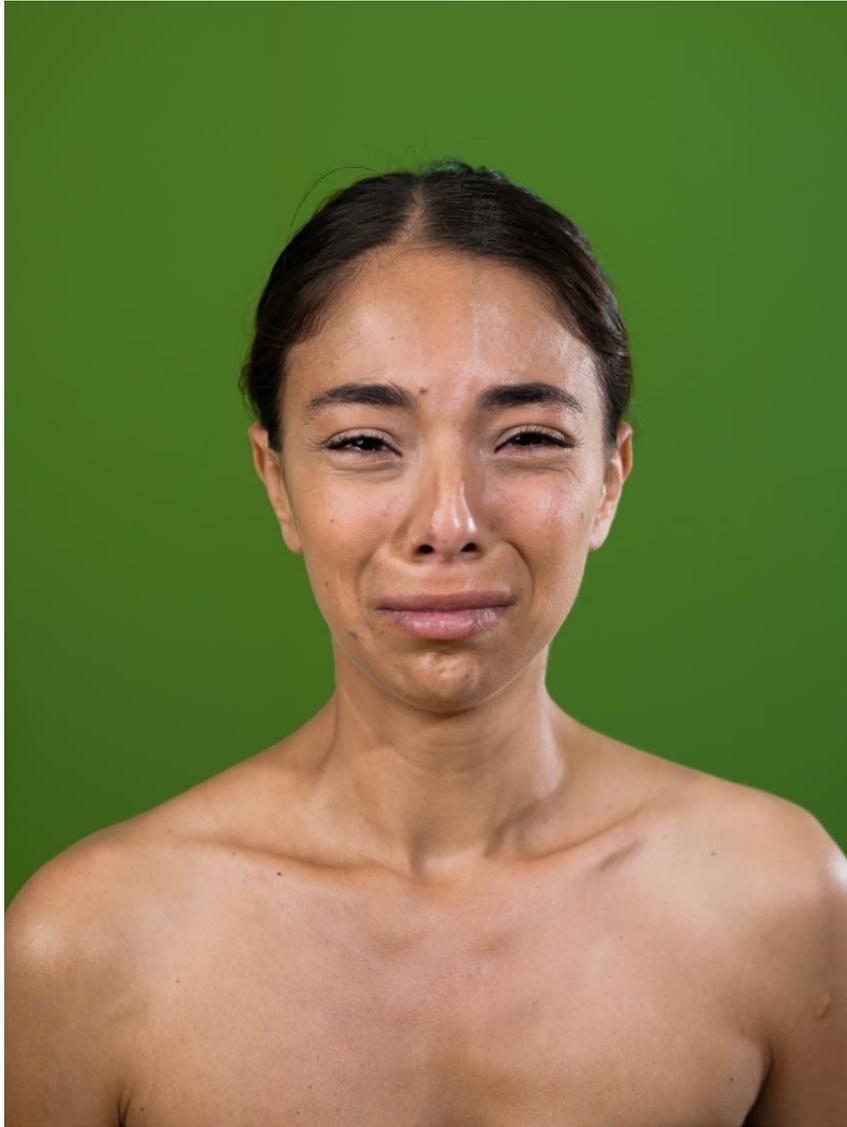


**NEUTRAL**



**COMPASSIONATE**

## 56. MISERABLE

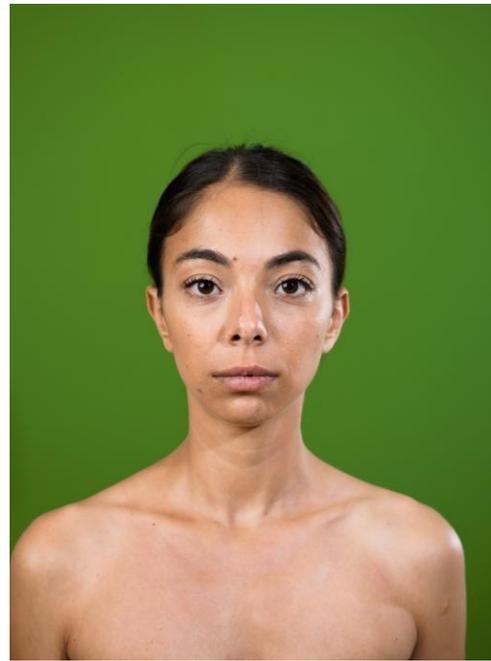


He/she who feels devoid of (any) value, significance; very poor quality.

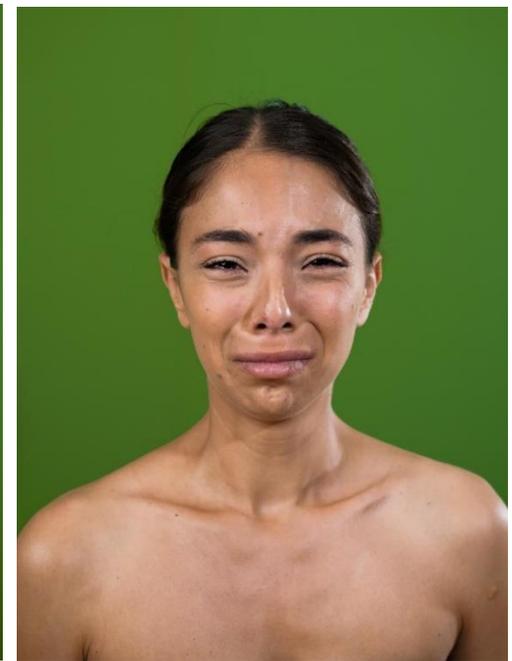
Physical signals and behaviors: Looking dishevelled, worn-out, sallow, or unhealthy; a downward gaze; avoiding eye contact; low energy when speaking (mumbling, saying little, no force behind one's words, etc.); a voice that cracks; scrubbing a hand through the hair or over the back of the neck; swallowing excessively; eyes that appear red or wet (glistening more than usual); a pained expression (down turned mouth, a forehead crease, eyebrows pulled low, etc.)” (Emotion Thesaurus, 2022)

Miserable goes way beyond sad - it means absolutely wretched. Someone who's miserable feels absolutely awful.

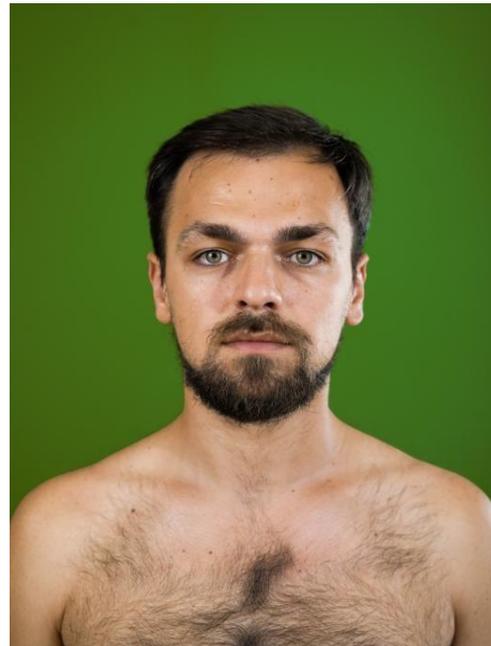
If you were caught in the pouring rain, missed your own birthday party, and then got food poisoning, you wouldn't just feel bad. You'd be miserable - which means exceptionally unhappy. Victor Hugo's novel, *Les Miserables* ("The Miserable Ones"), is the story of people who live a wretched life filled with death and unhappiness. You might want to bring some tissues if you're heading to the musical!



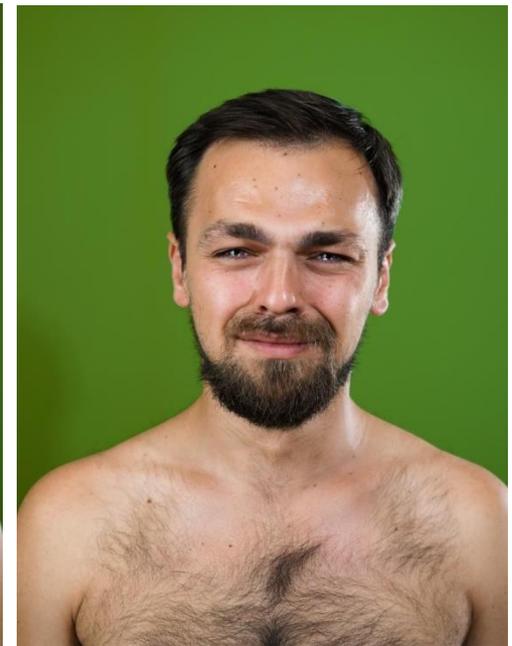
**NEUTRAL**



**MISERABLE**

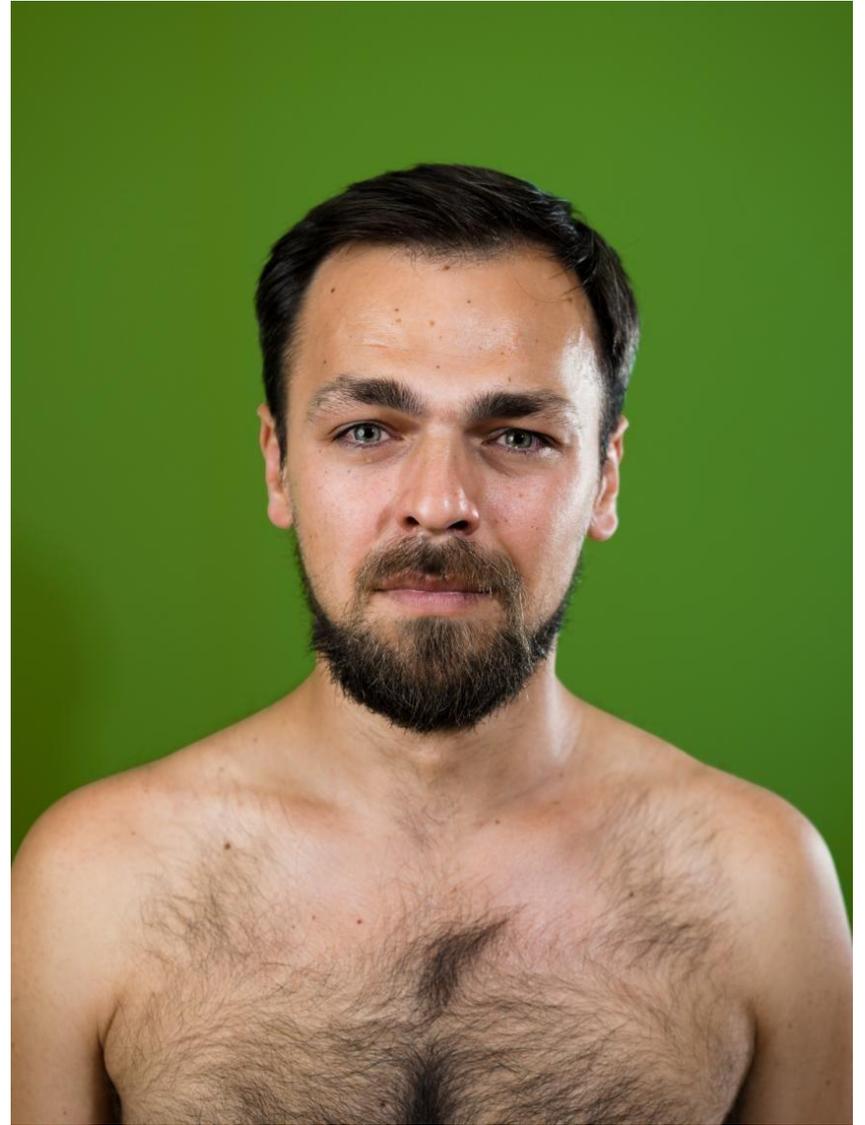
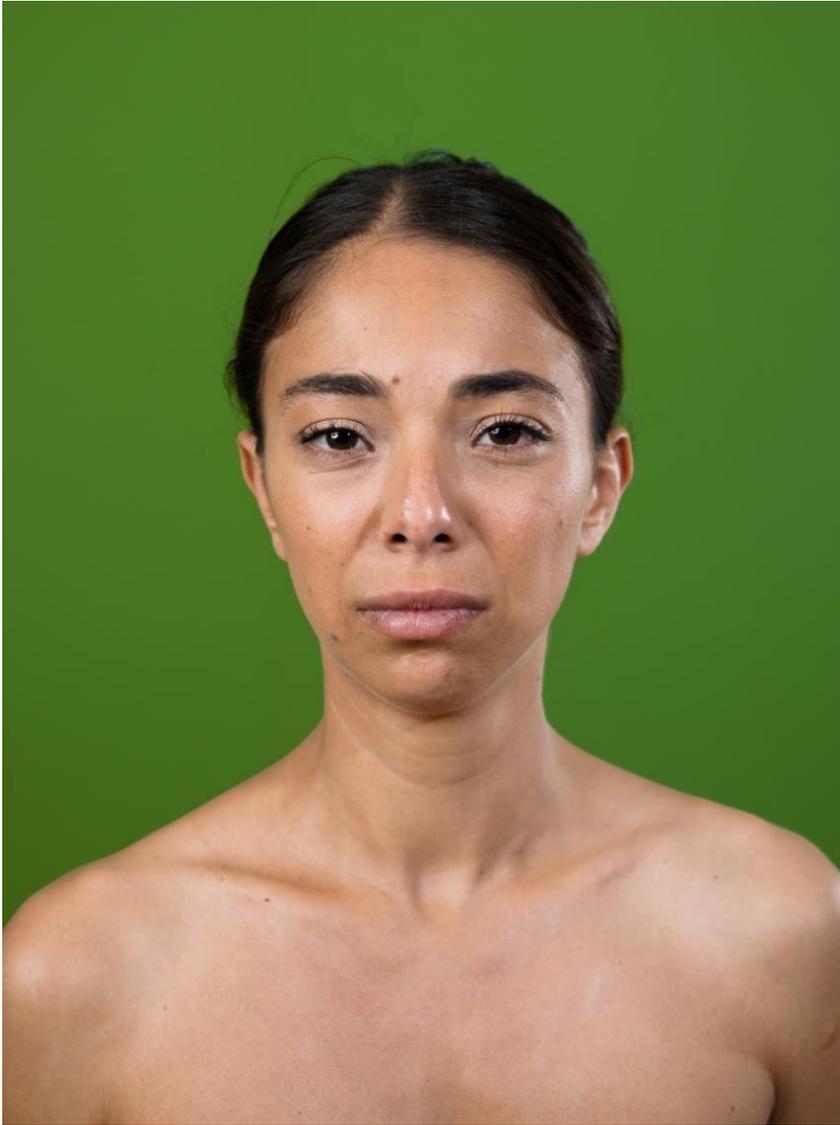


**NEUTRAL**



**MISERABLE**

## 57. REGRETFUL

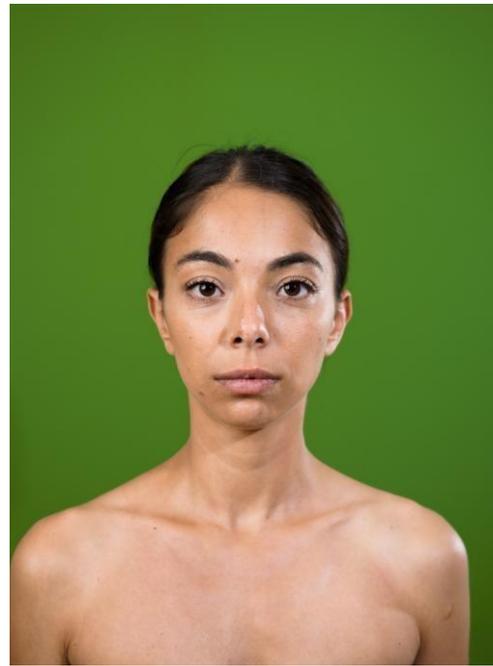


Regret is a regret caused by the loss of a thing or a being, by a failure or by the commission of a reckless act; remorse, remorse.

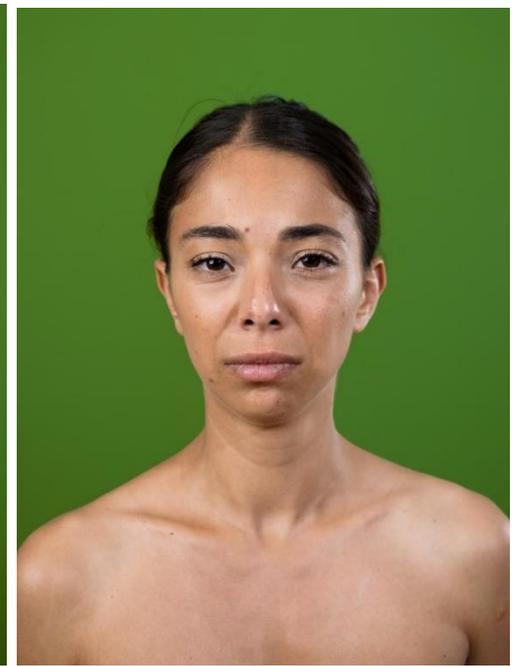
Physical signals and behaviors: scrubbing a hand over the face; laying a hand against the breastbone; a heavy sigh; a downturned mouth; bent posture; heavy arms, the shoulders pulled low; apologizing; trying to reason or explain; eyebrows gathering in; a pained expression; hands falling to the sides; staring down at one's feet" (Emotion Thesaurus, 2022)

Regretful describes the feeling of being sorry for something you did — or didn't do — or something that happened. If you are regretful about how you treated your brother when you were little, you now wish you had been nicer.

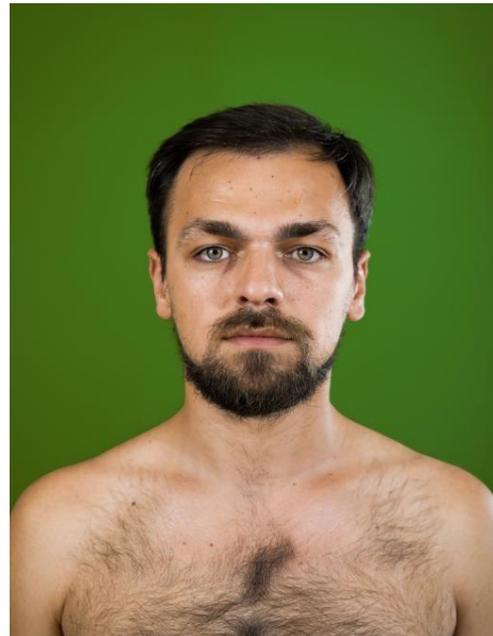
Regret is a feeling of sorrow — wishing you could do something differently or undo an action. So, when you are regretful, you might feel frustrated, disappointed with yourself, embarrassed, or even sad. In fact, regretful comes from the Proto-Germanic word for weep, gretan. It can be hard to do, but the point is to learn from regretful experiences so you don't repeat them.



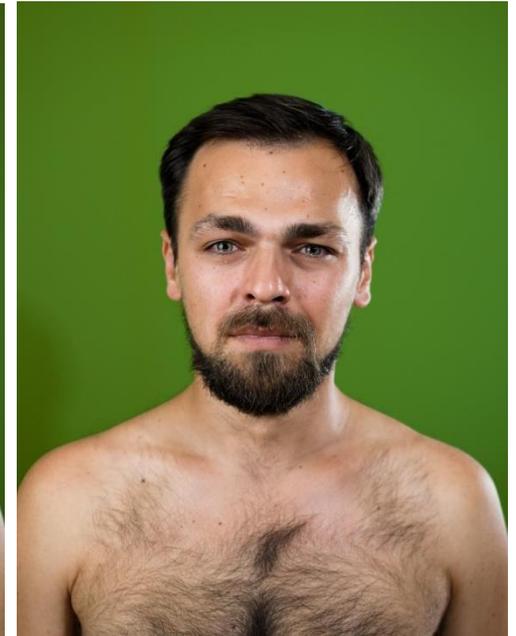
**NEUTRAL**



**REGRETFUL**

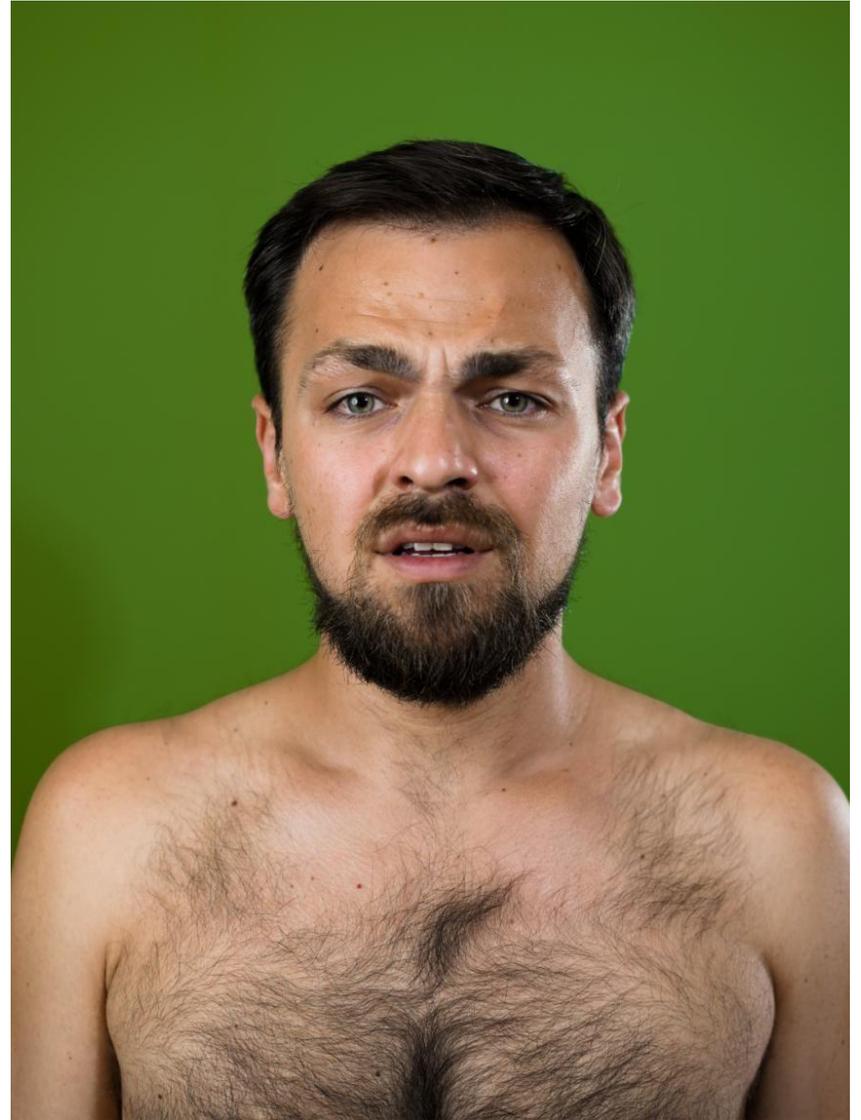
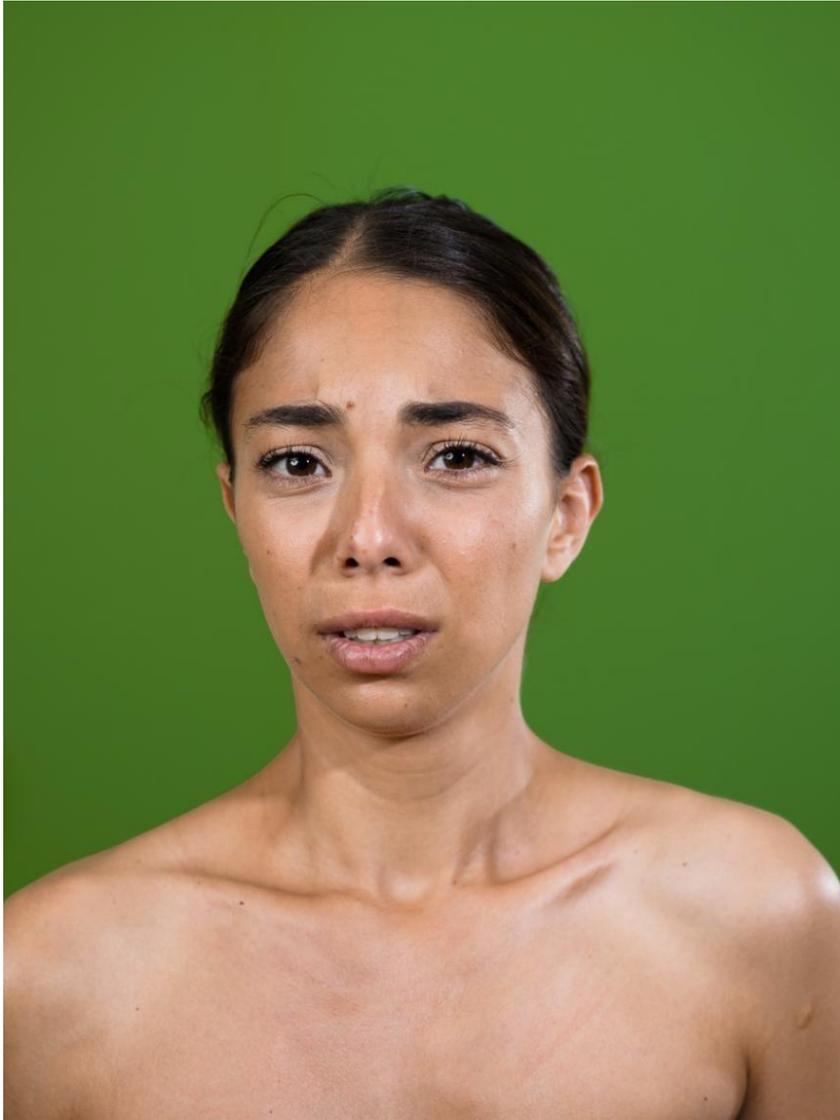


**NEUTRAL**



**REGRETFUL**

58. WORRIED



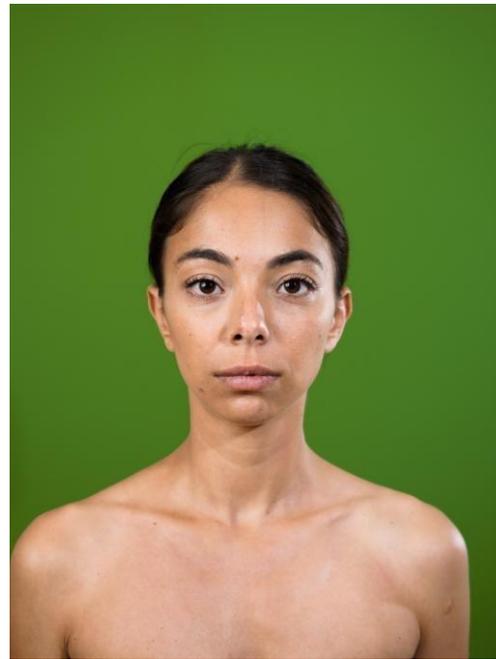
Worried, restless, alarmed. Care or concern is a disposition to empathize with someone in a state of need, a behavior with a positive value connotation, denoting an anticipation of a possible danger; willingness to show attention to someone or something. A worried man, he is both cautious and prudent.

Physical signals and behaviors: wrinkling the brow; biting one's lip; pinching the skin at the throat; feet that bounce or tap; pulling or twisting at one's hair; pacing; drinking too much coffee, smoking too much; circles under the eyes; eyebrows drawing together; tossing and turning in bed, an inability to sleep; asking too many questions; stroking or rubbing an eyebrow" (Emotion Thesaurus, 2022)

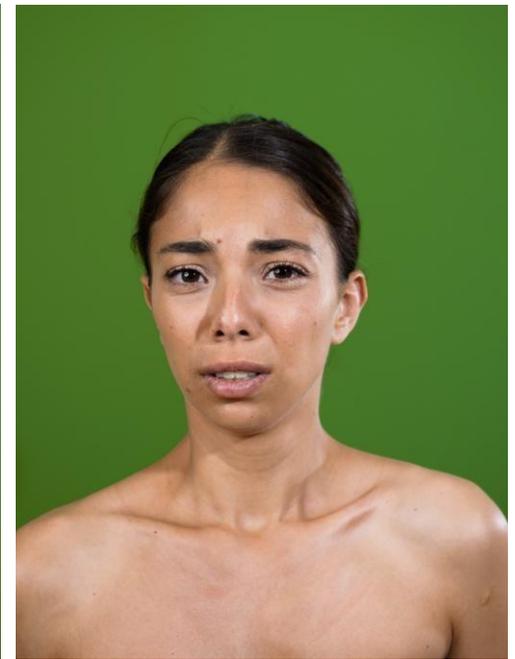
The adjective worried describes someone who's uneasy or troubled about something. Imagine worried parents, up late, waiting for their teenager to arrive home from a party.

Someone with a worried frown on his face always seems concerned. A worried email to your cousin who's traveling in the Middle East expresses your concern for her safety.

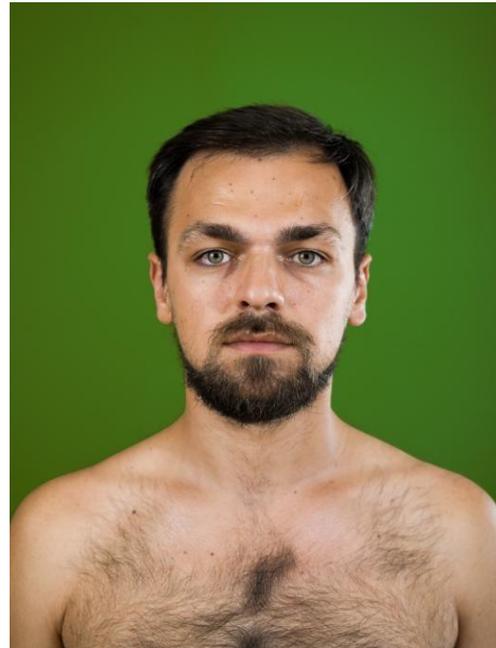
The root of worried is the Old English word *wyrgan*, or strangle. It wasn't until the late 1800s that worried was used to describe feeling anxiety.



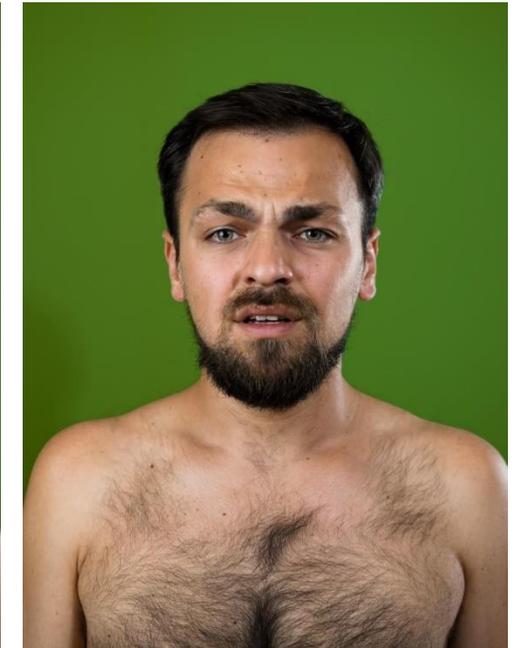
**NEUTRAL**



**WORRIED**

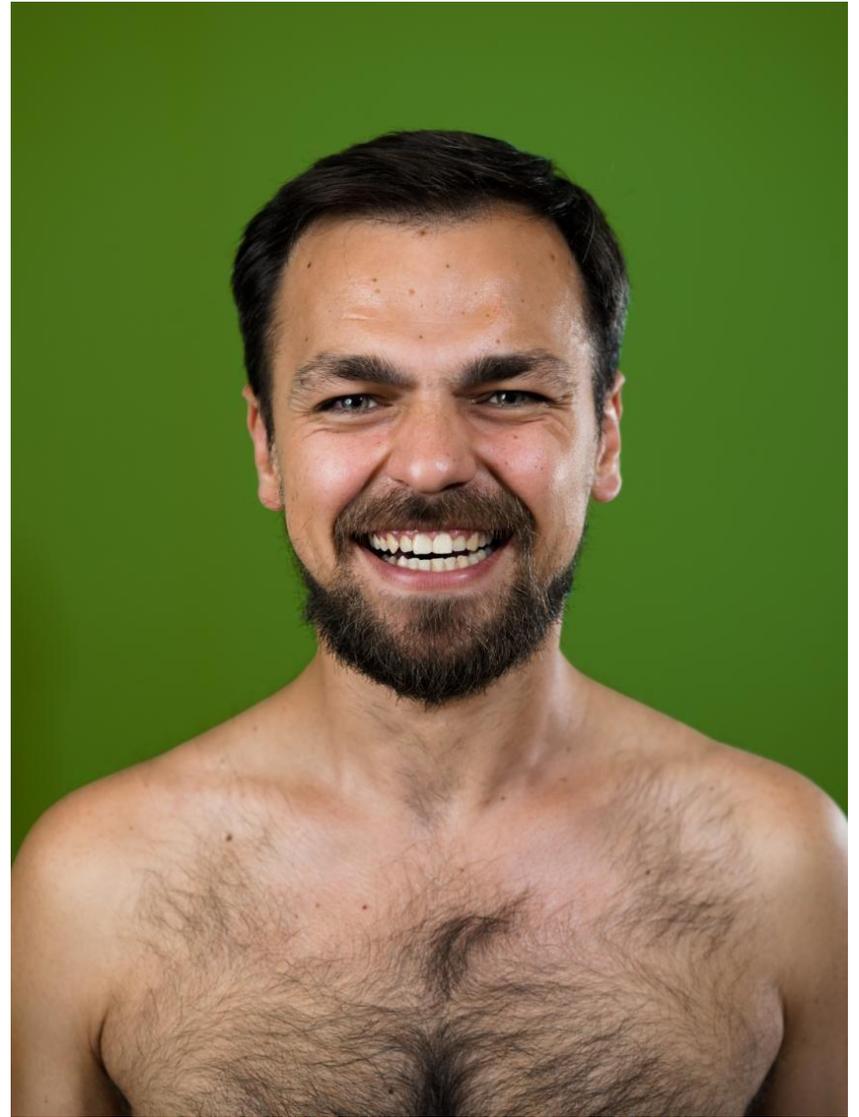


**NEUTRAL**



**WORRIED**

## 59. ZEALOUS

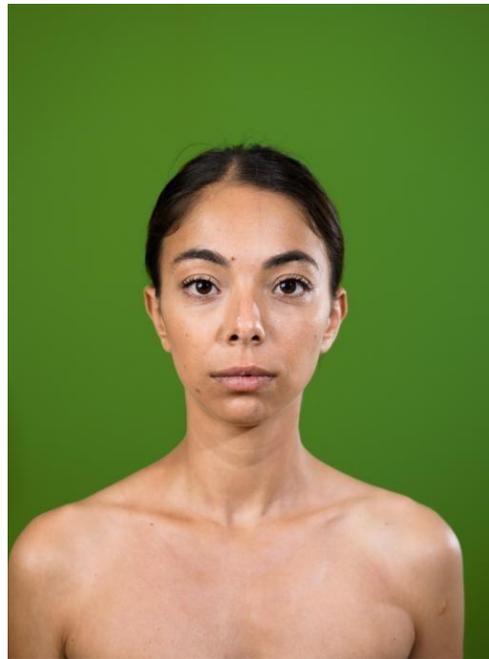


Person who is full of zeal, of zeal, of ardor; diligent; zealous  
Special effort (in an action).

Physical signals and behaviors: leaning forward; eyes that glow; rushing one's words; speaking in a bubbly or loud tone; rapt attention, nodding; using excitable language; agreeability to whatever is suggested; fiddling with an object to keep the hands busy; squeezing the hands at one's sides; strong eye contact; talking over others; raising a hand immediately to be called on" (Emotion Thesaurus, 2022)

Use the adjective zealous as a way to describe eagerness or enthusiastic activity. If you are too zealous in your efforts to decorate the house with Christmas lights, you might cause a power outage for the whole neighborhood.

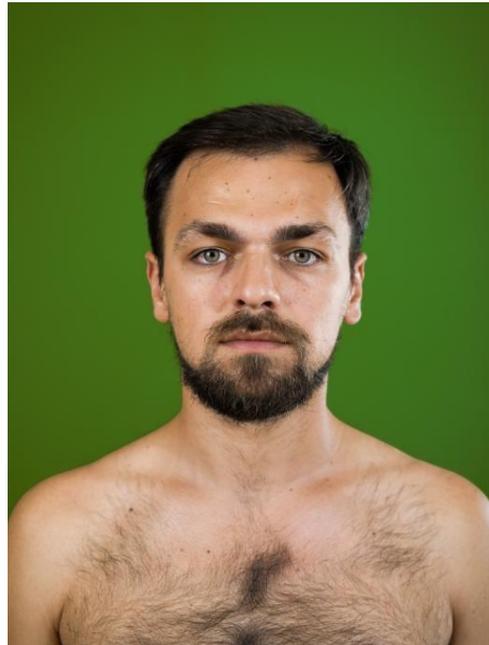
Zealous is the adjective for the noun zeal, "eager partisanship"; the latter has a long e, but zealous has a short one: ZEL-uhs. It can have a slightly negative connotation, and people are sometimes described as overzealous, meaning they try too hard. Zealous rhymes with jealous (and in fact they both derive from the same Greek word), but don't confuse them: a jealous person might be resentful of someone who makes zealous efforts to achieve success.



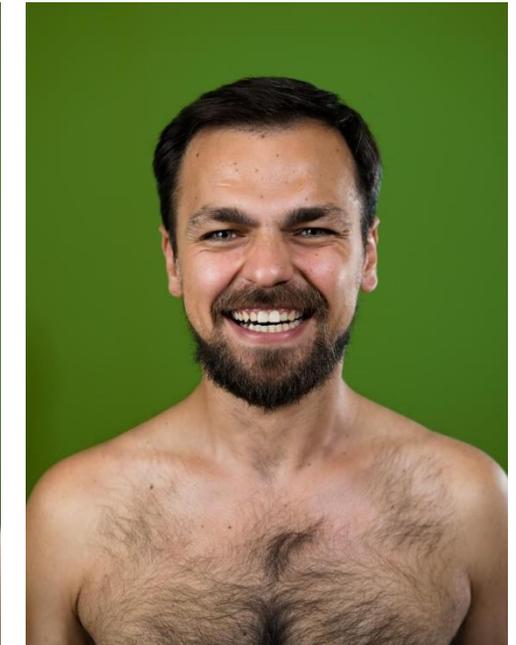
**NEUTRAL**



**ZEALOUS**

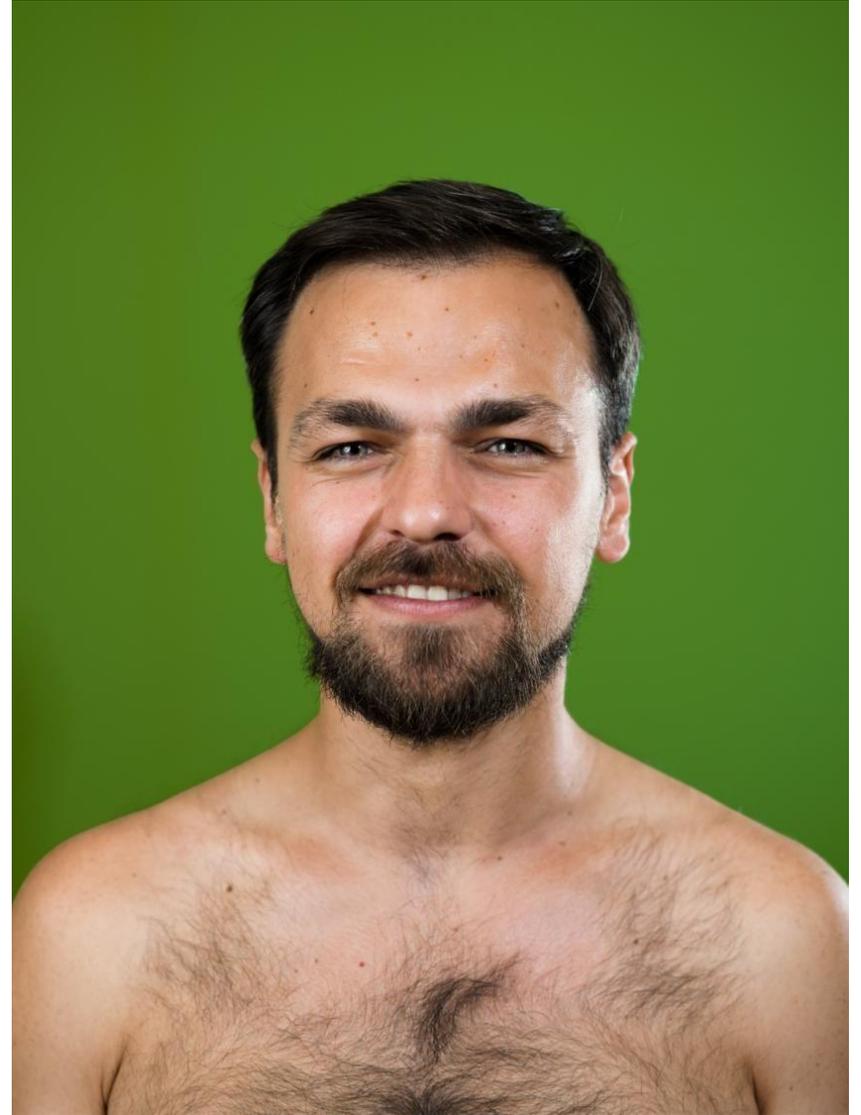


**NEUTRAL**



**ZEALOUS**

## 60. PROVOKED



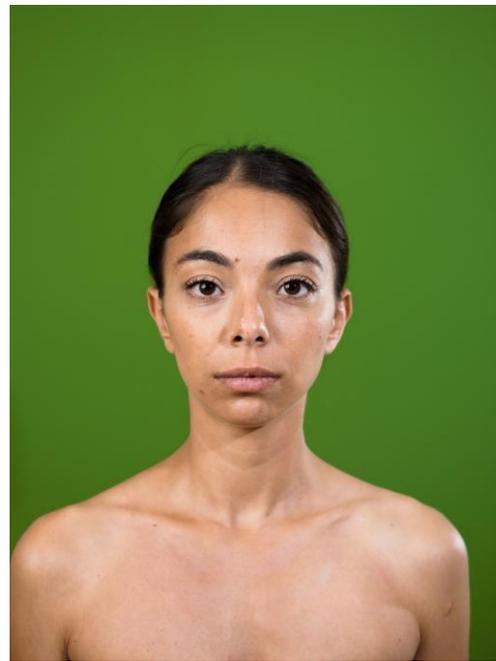
Person who is incited, incited, instigated, aroused, thwarted, agitated. State of disturbance or emotion favorable to committing actions intended to provoke certain reactions in other people.

Physical signals and behaviors: drawing oneself up to full height (erect posture, tense muscles, etc.); a sharp chin thrust or lift; crossing the arms; a gaze or stare that is challenging and full of judgment; a curled lip; smirking; refusing to obey (or behaving the opposite way one is expected to); shoulders pushing back and the chest jutting out;

Refusing to be the first to break eye contact; Jerking one's head sharply ("tossing" the head);

Inhaling deeply, the nostrils flaring; Visible tightness in the jaw and neck" (Emotion Thesaurus, 2022)

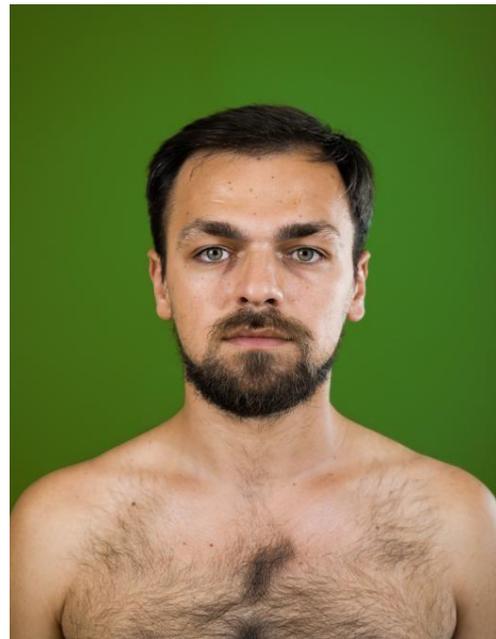
A darting gaze; licking one's lips" (Emotion Thesaurus, 2022)



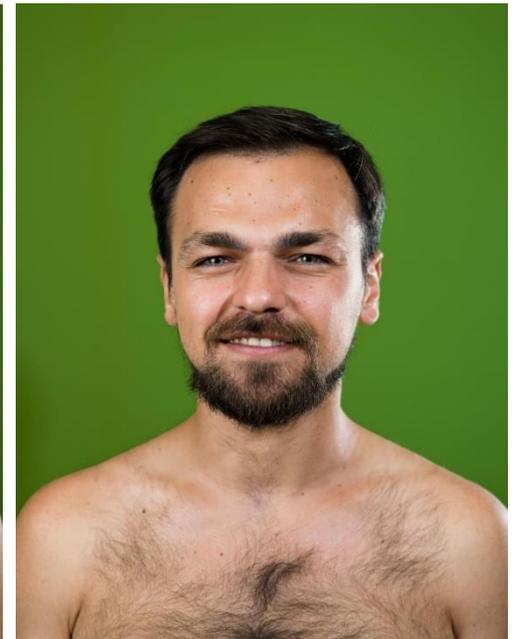
**NEUTRAL**



**PROVOKED**

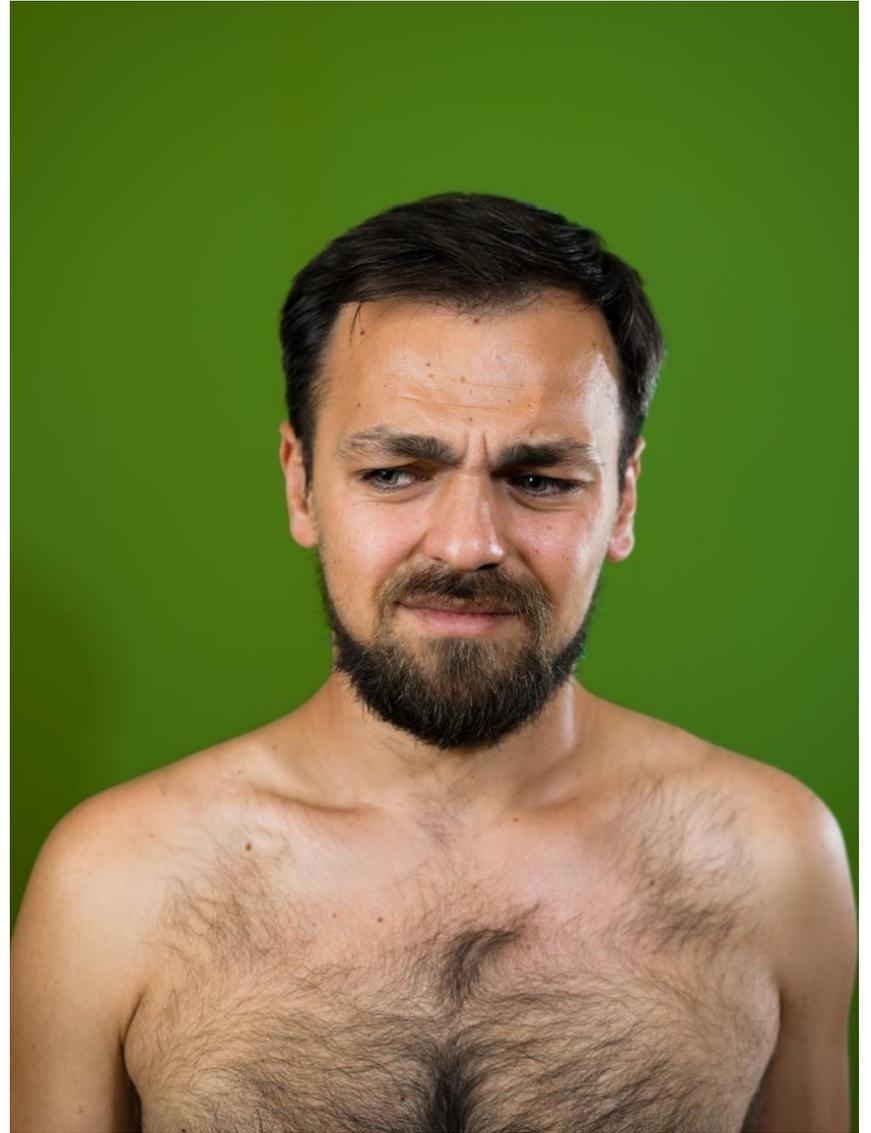
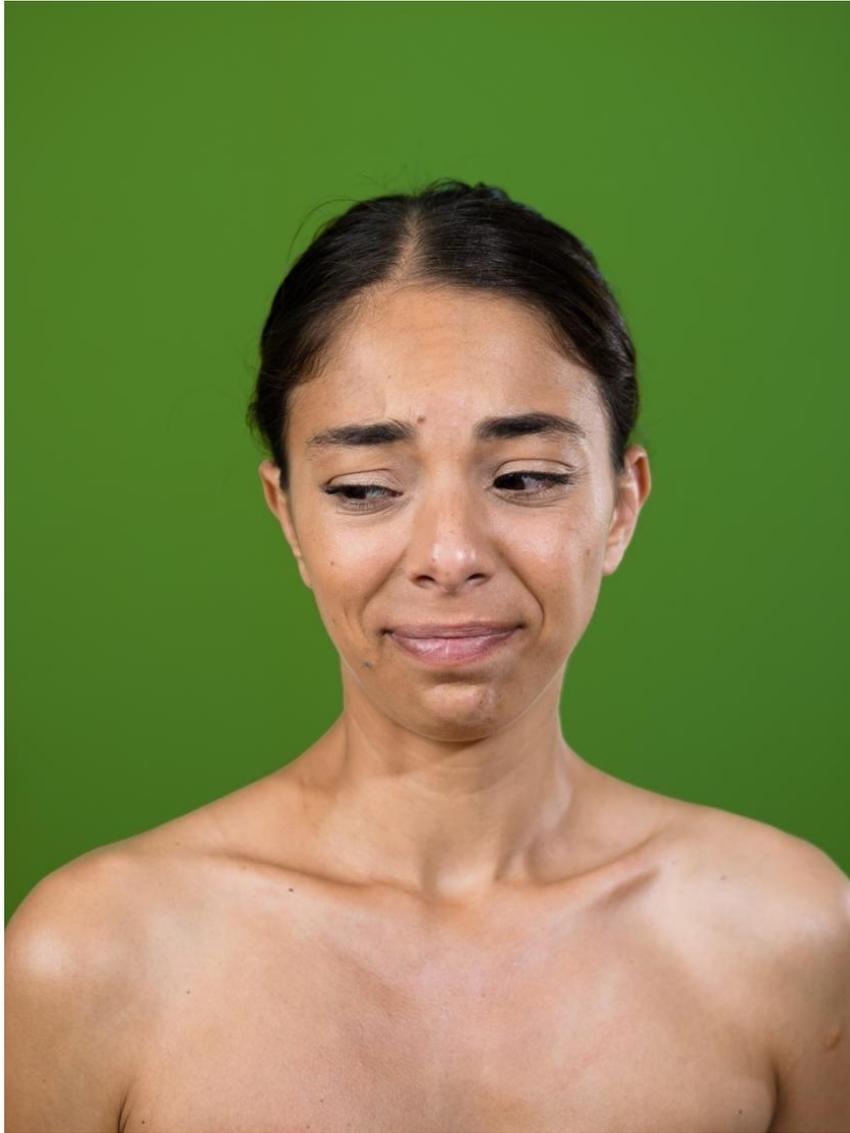


**NEUTRAL**



**PROVOKED**

## 61. EMBARRASSED

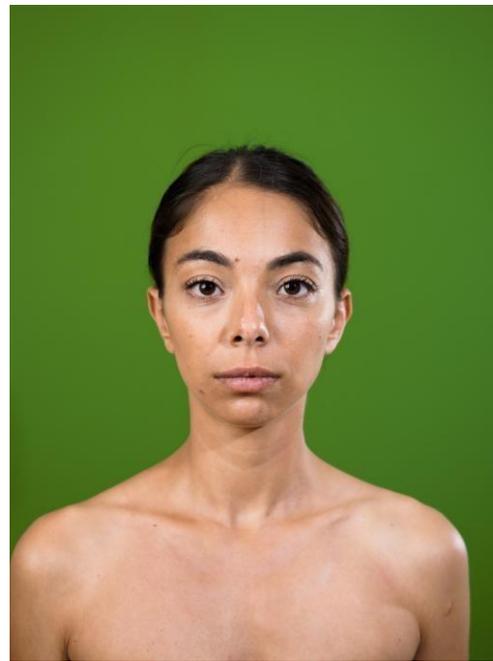


Embarrassed, overwhelmed with shame. Shame can be defined as a feeling of embarrassment or humiliation arising from the perception that one has done something dishonorable, immoral or improper. It is distinguished from other emotions by its social, secret, bodily and spiritual dimension. It is sometimes defined as a social version of blame that plays an important role in social phobia.

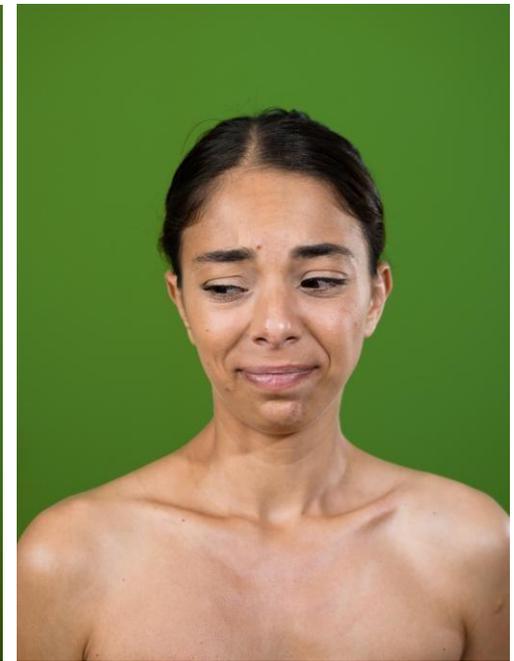
It is most often the result of humiliation, failure or an unwanted body image such as dirt, body nakedness, ugliness, inappropriate clothing, but also a consequence of an increased emotionality in the case of shy people, shame often having no real justification.

Shame is a painful but important emotional state. Most researchers believe that the purpose of embarrassment is to make people feel bad about their social or personal mistakes as a form of internal (or social) feedback so that they learn not to repeat the error. Accompanying physiological changes, including flushing, sweating, or stuttering, can signal to others that a person recognizes their own mistake and is therefore not cold-hearted or ignorant.

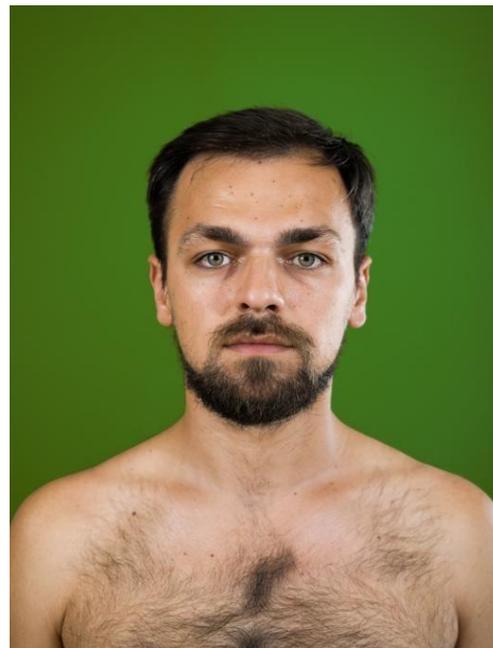
Virtually everyone finds themselves in an awkward or humiliating situation at some point in their lives. The question is: how strongly does it affect them? Some people can escape embarrassment when they make a mistake or break a social norm. Others who fear group disapproval may be consumed with shame.



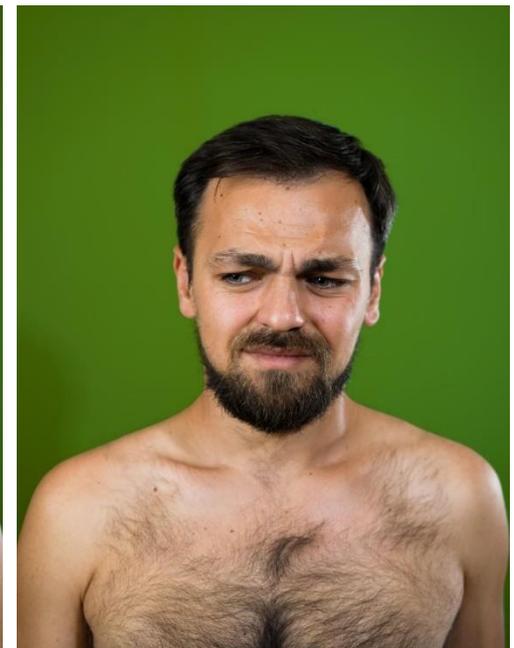
**NEUTRAL**



**EMBARASSED**

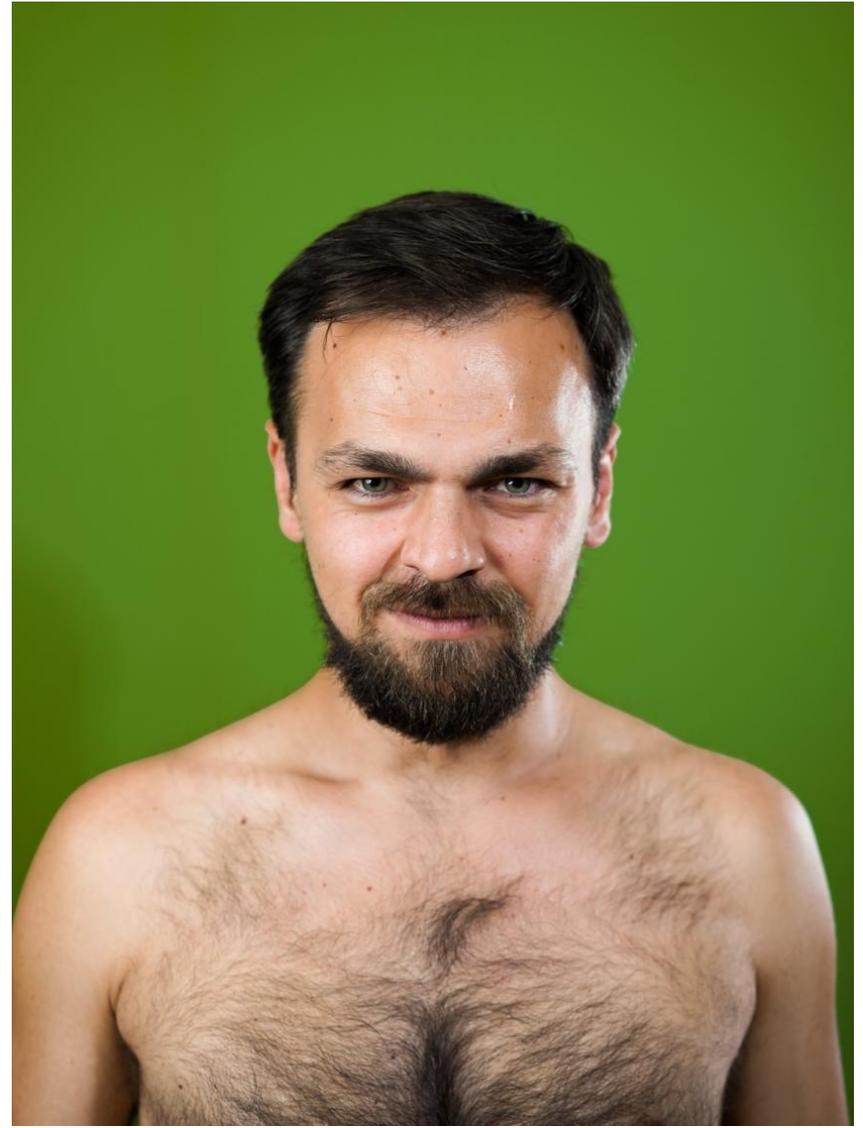


**NEUTRAL**



**EMBARASSED**

## 62. EVIL

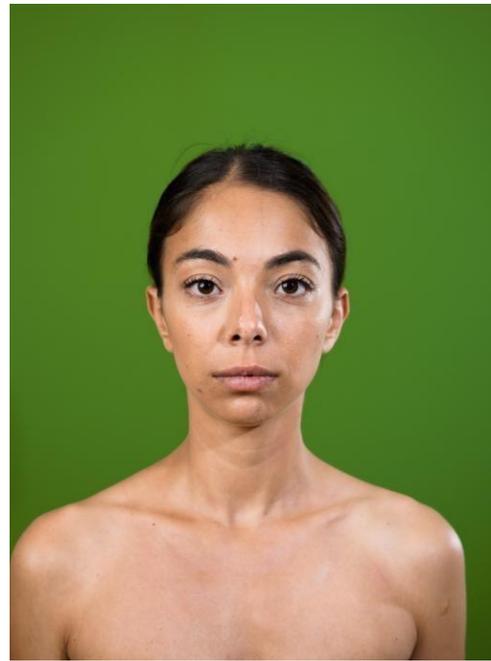


Person who has negative attributes; devoid of positive qualities; who habitually causes inconvenience to others.

Those with this trait seek to achieve their goals at any cost, even if they harm others in the process. Their goals might also be specifically to harm others. Such people would not want to help others in need if it does not benefit them and they will not gain any "utility" in the success of others. They won't be truly happy if something good happens to anyone but them.

Psychologists have determined that the D (dark trait) factor observed in the human population not only serves as a unifying theme among dark traits, but also works with the principle of "indicator indifference." This term is commonly used in the context of "general intelligence factor" (g-factor), whereby scoring high on one intelligence test usually means you will score higher on other intelligence tests. Intelligence types are related, and no matter what tests you administer to measure it, the g-factor will still be there - its existence is independent of the tests used to measure it.

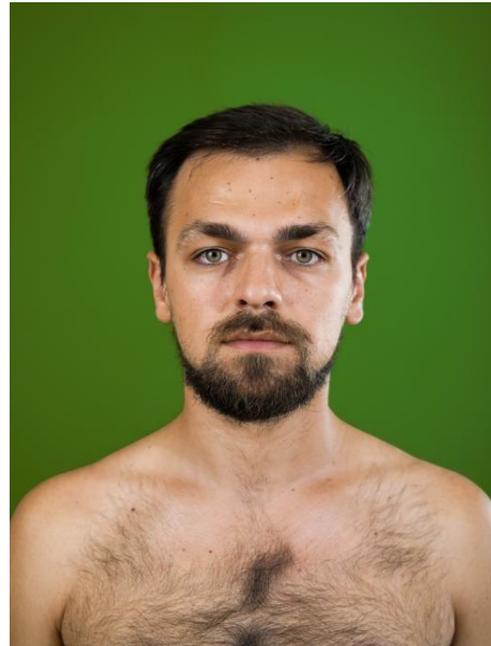
The same is true for the 9 malevolent traits in the D factor. Researchers have found that people who score high on one dark trait tend to score high on several other dark traits as well, suggesting that there is a common core of darkness: dark traits are bound.



**NEUTRAL**



**EVIL**

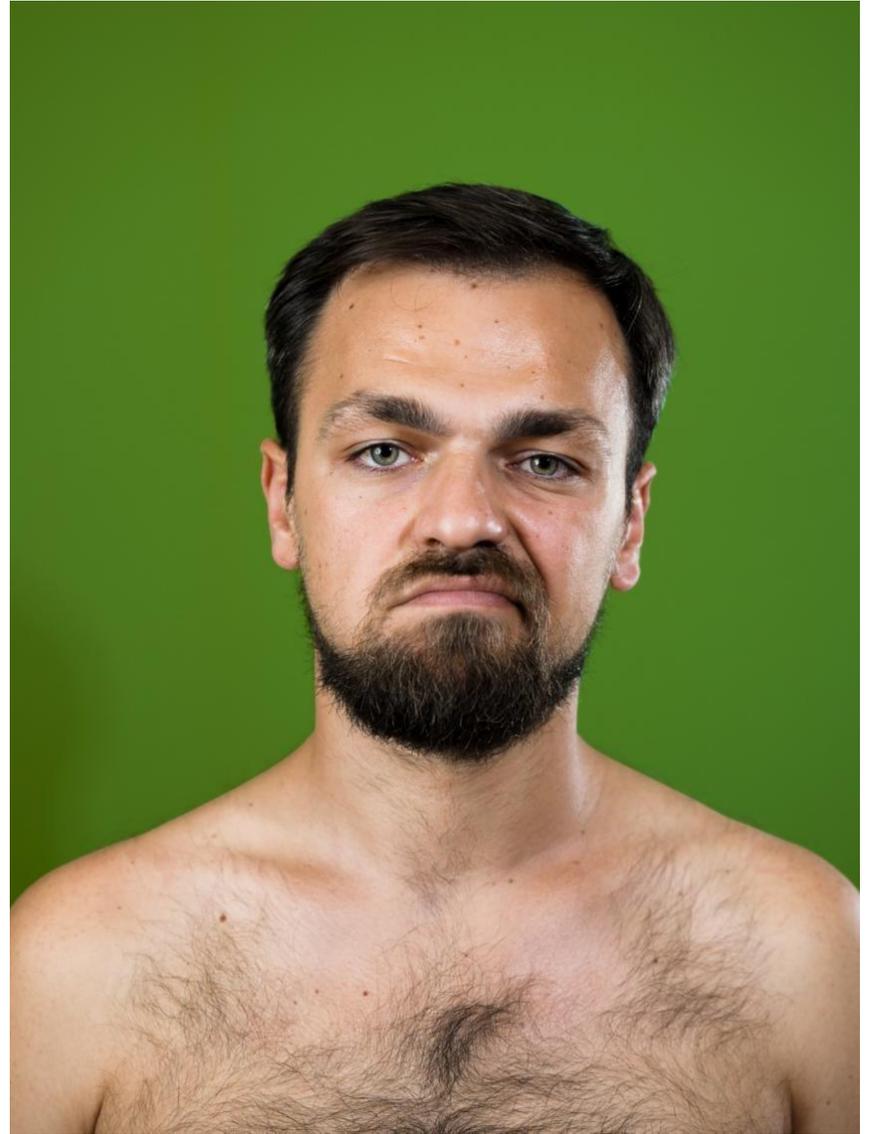


**NEUTRAL**



**EVIL**

### 63. DISAPPOINTED



A person deceived in his expectations, disillusioned, disappointed, who has lost his hopes. Disappointment is the state of a person when his expectations are disappointed about other people or events or changes that take place in the world. Disappointment means disillusionment, disappointment.

Disappointment is a part of everyday life. The only way to avoid it is to have no expectations, desires or values.

The most common disappointment is related to expectations. Whenever expectations are not met, we experience disappointment. The higher the expectations, the higher the disappointment. Many people try to manage disappointment by lowering expectations. While expectations should be realistic, lowering them too much sacrifices excitement and fun.

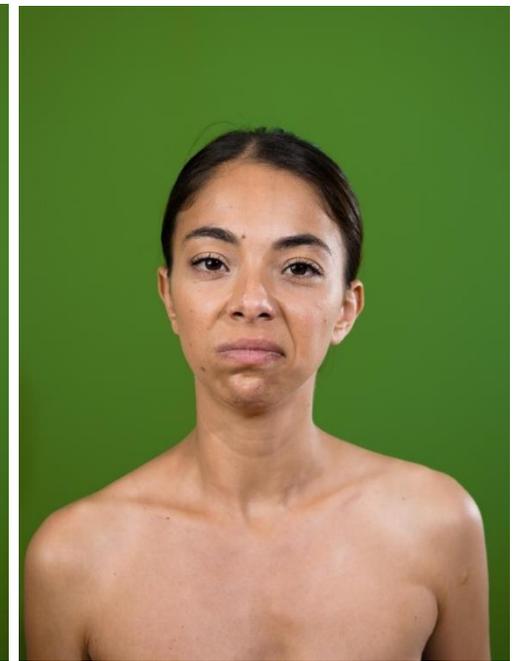
Disappointment is so unpleasant that when it happens, we are often unaware of anything other than sadness, irritability, resentment, anger, or aggressive impulse.

Disappointed preferences are perceived as a threat to the ego, triggering value-violating retaliation. Emotions start a no-win civil war with ego defense at odds with values.

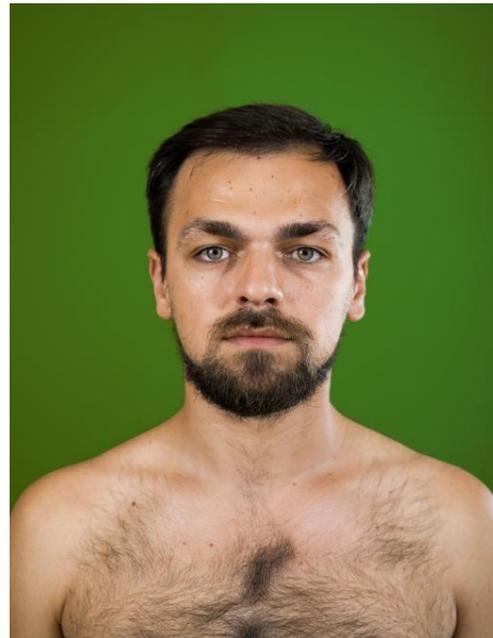
The more we violate our deeper values in ego defense, the more we try to avoid more guilt, shame, and anxiety, usually by blaming someone else. The result is self-loathing and a tendency to act against our long-term interests.



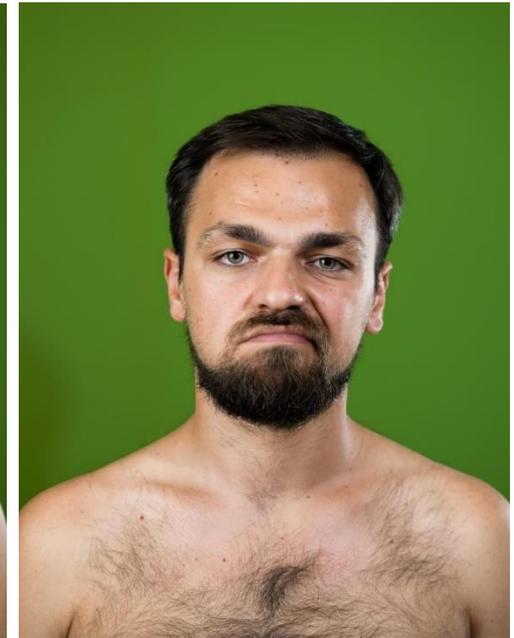
**NEUTRAL**



**DISAPPOINTED**

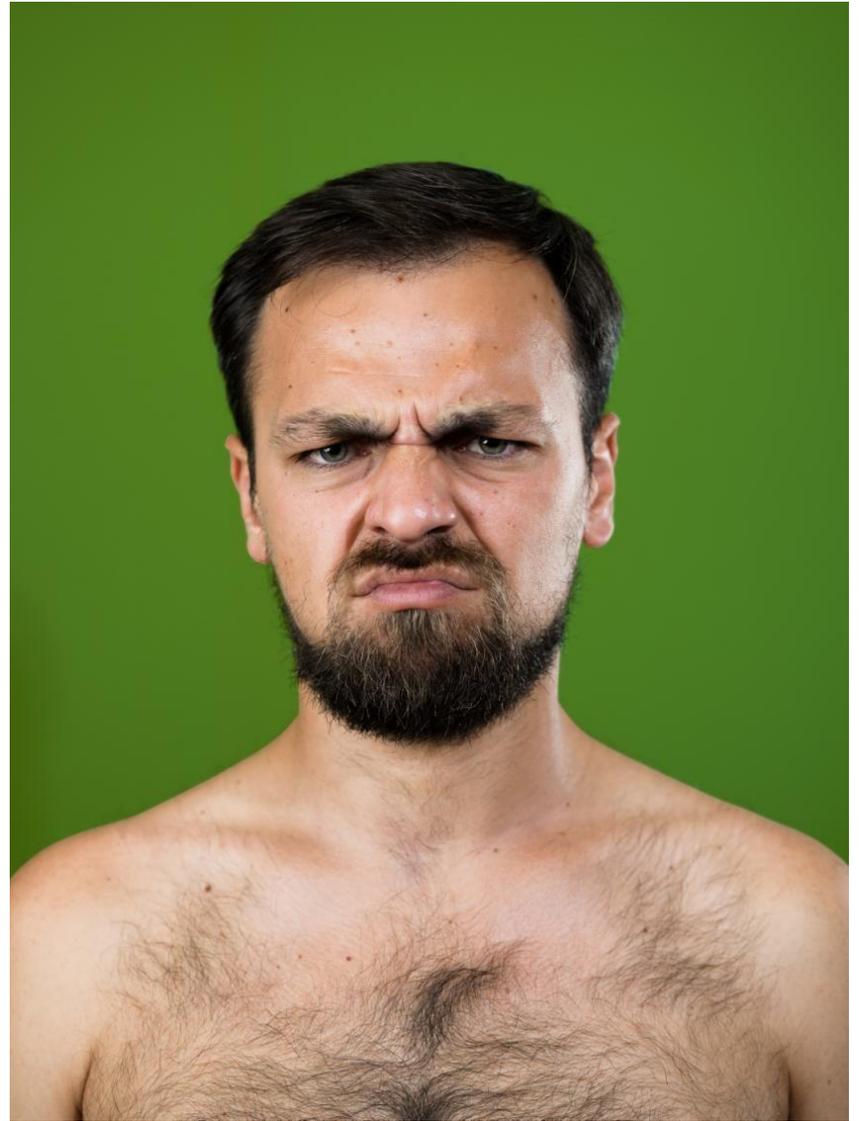
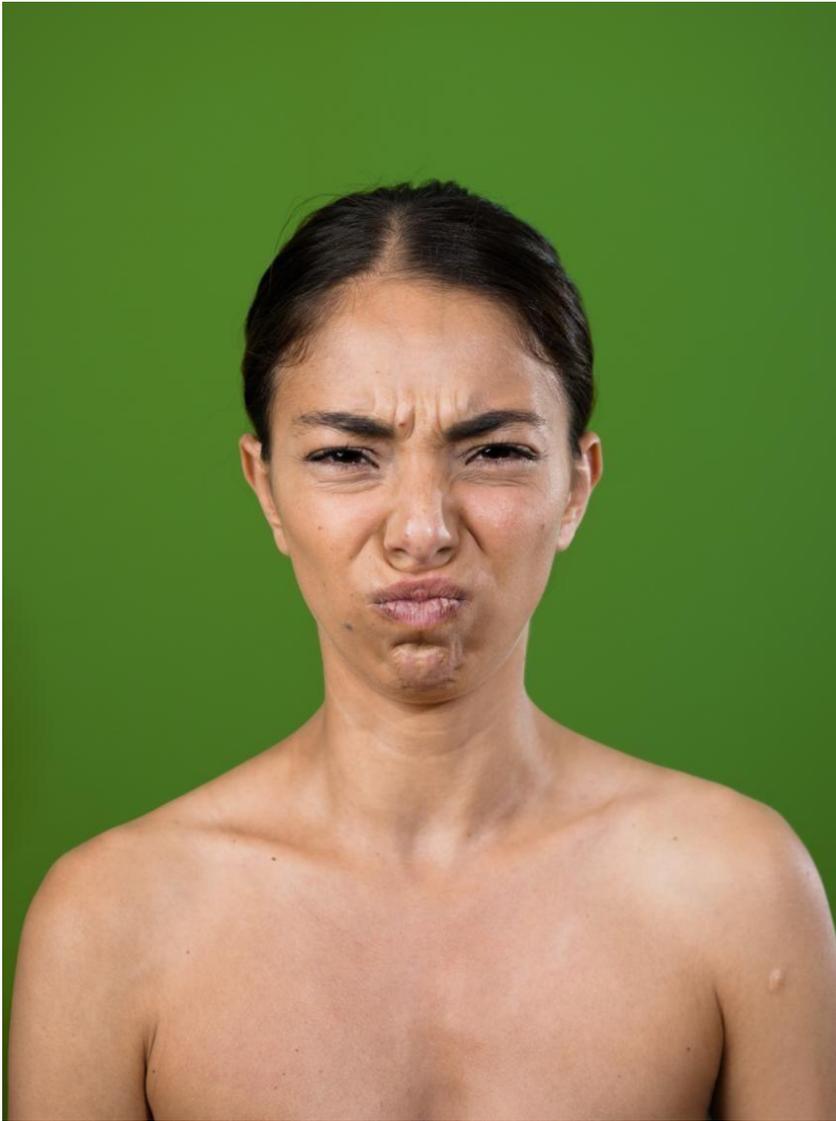


**NEUTRAL**



**DISAPPOINTED**

## 64. GRUMPY



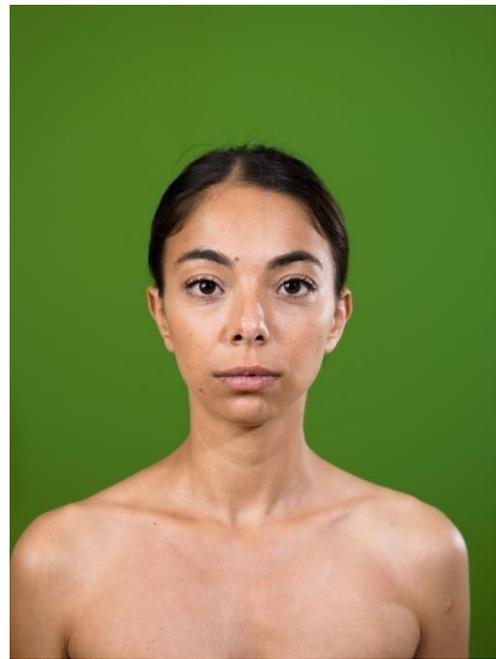
A person who betrays expresses a bad mood; sullen, gloomy, silent, sullen.

Which shows displeasure; in a bad mood; bag sullen; sour; gloomy

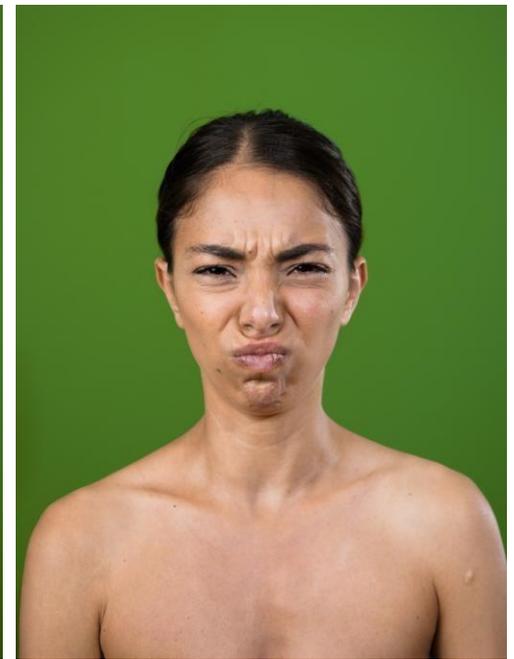
Sullen, gloomy, silent, poor; (about the appearance, manifestations of people) that betray, express a bad mood

When your friend suggests a restaurant but you're in a bad mood so you say "That's a stupid restaurant" - even though you don't really mind it - then you're being grumpy, meaning irritable or grouchy.

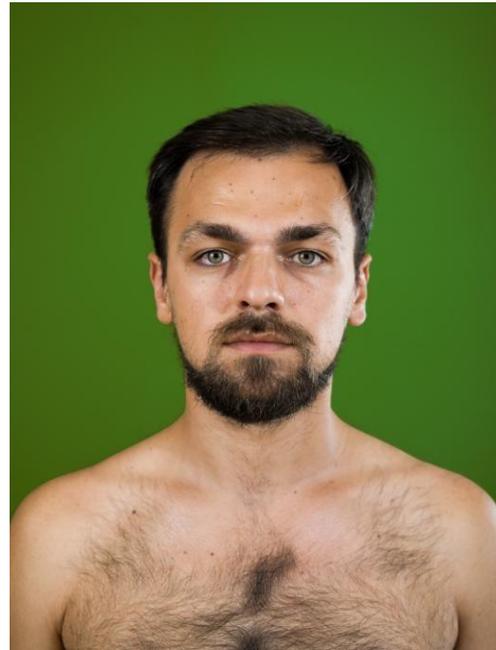
There are all kinds of reasons for feeling grumpy: maybe you're tired or annoyed or you have a headache. Whatever the cause, when you're grumpy you just want to sulk in a corner. Even though it's a negative word, it's a pretty gentle one. When you're grumpy, you're not mad or mean — you're just unpleasant for the moment. But don't tell someone who's grumpy that he's being grumpy. He likely won't respond kindly to that.



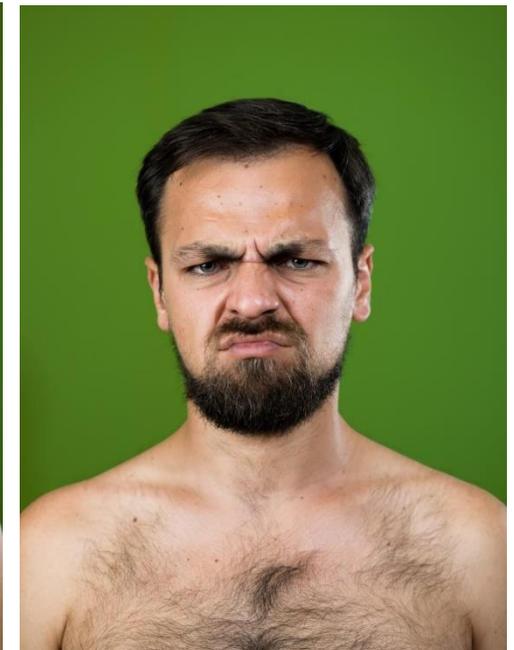
**NEUTRAL**



**GRUMPY**

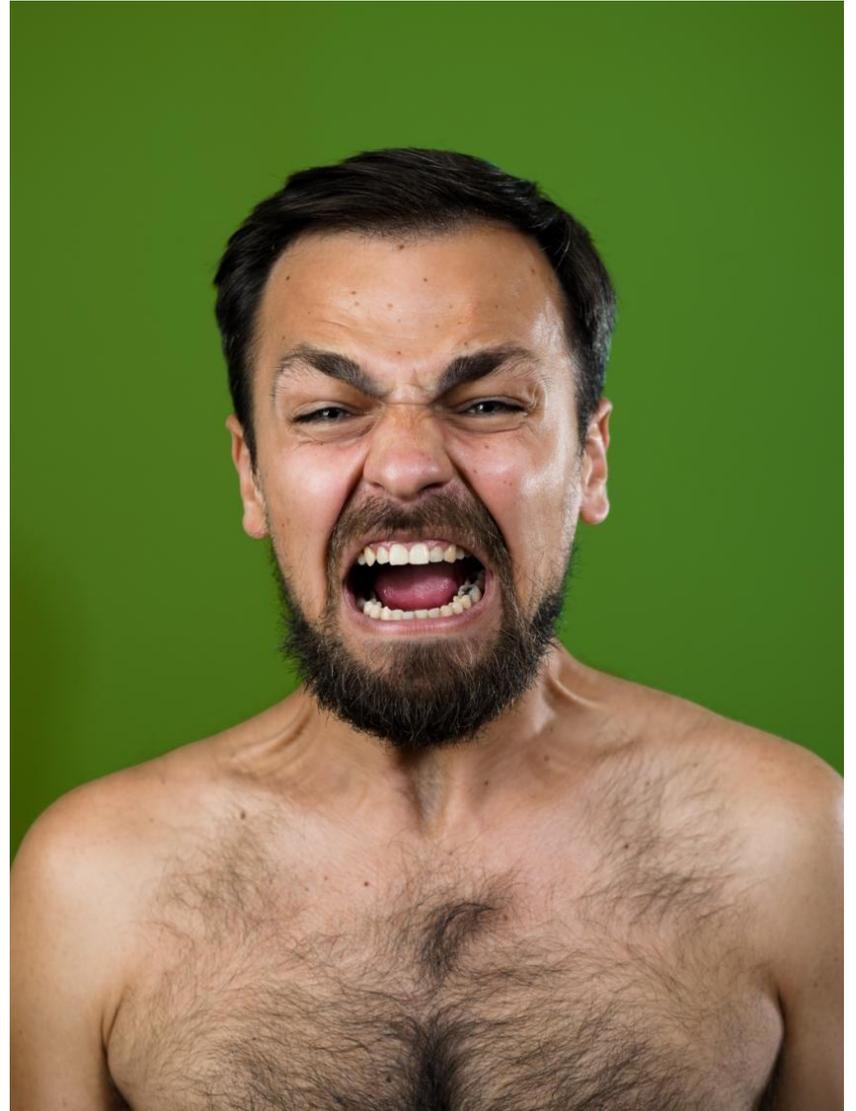


**NEUTRAL**



**GRUMPY**

## 65. HYSTERICAL

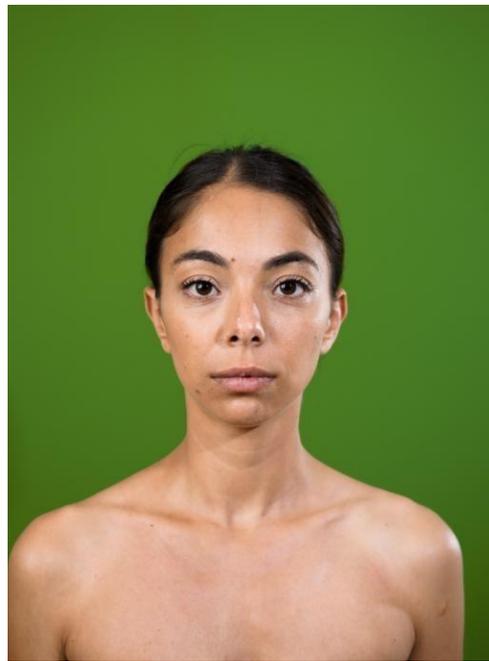


Those who present the manifestations of hysteria, present an excess of emotion that they externalize through states of excessive anger, screaming or even violence.

The state of hysteria is caused by unpleasant situations or news.

A hysterical person can manifest as follows:

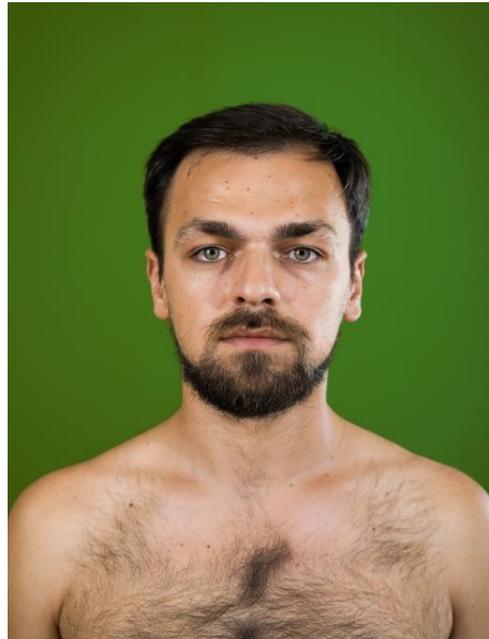
- to change emotions quickly
- acting very dramatically, as if performing in front of an audience, with exaggerated emotions and expressions, but seems to lack sincerity
- to be overly sensitive to criticism or disapproval
- have a low tolerance for frustration and get easily bored with routine, often starting projects without finishing them or skipping from one event to another
- not to think before acting
- to make hasty decisions
- to be self-centered
- threaten or attempt to kill themselves to get attention



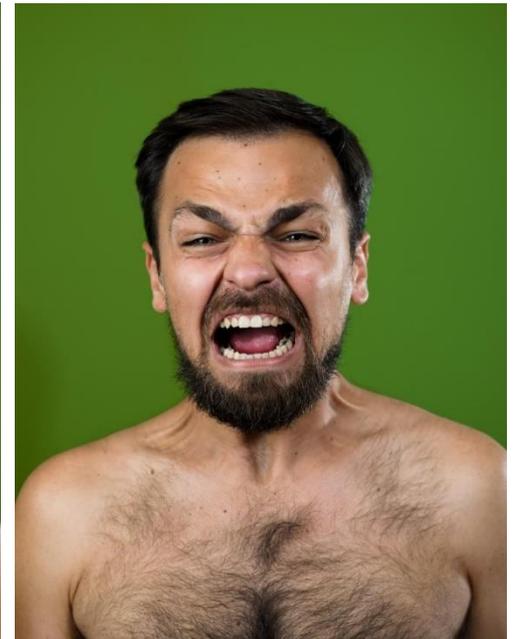
**NEUTRAL**



**HYSTERICAL**

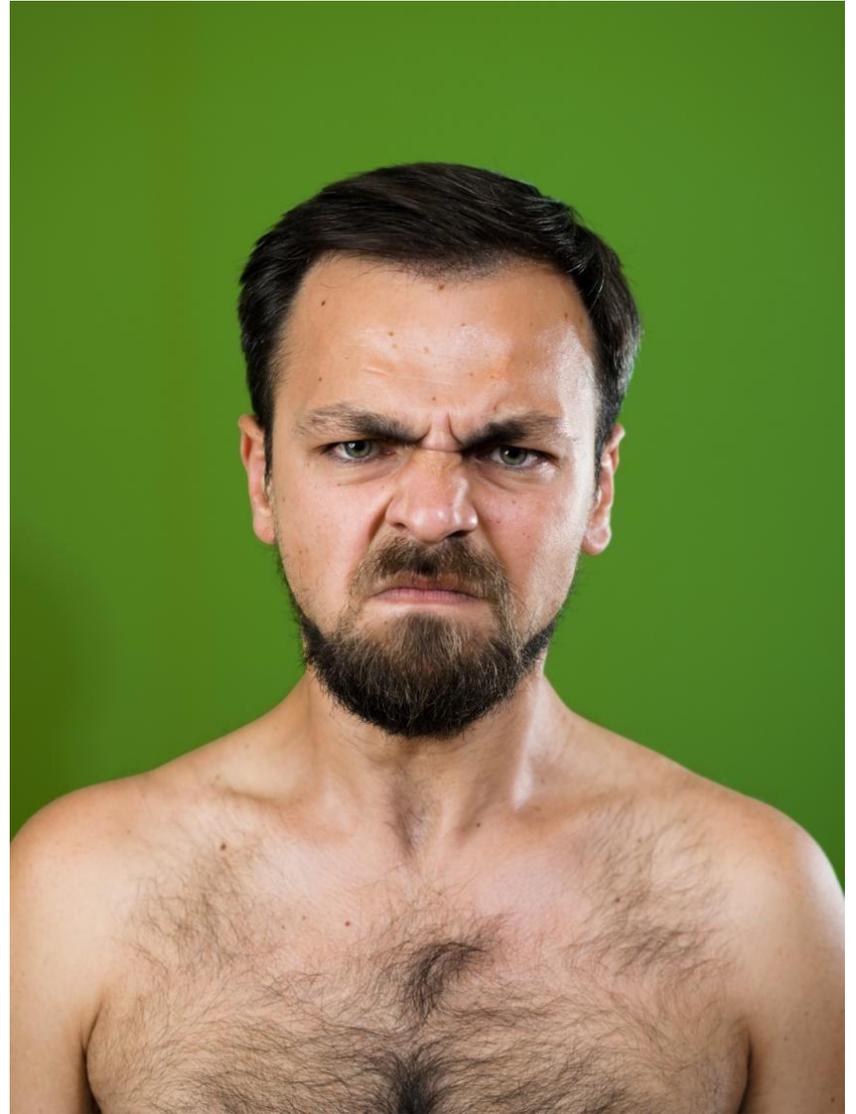
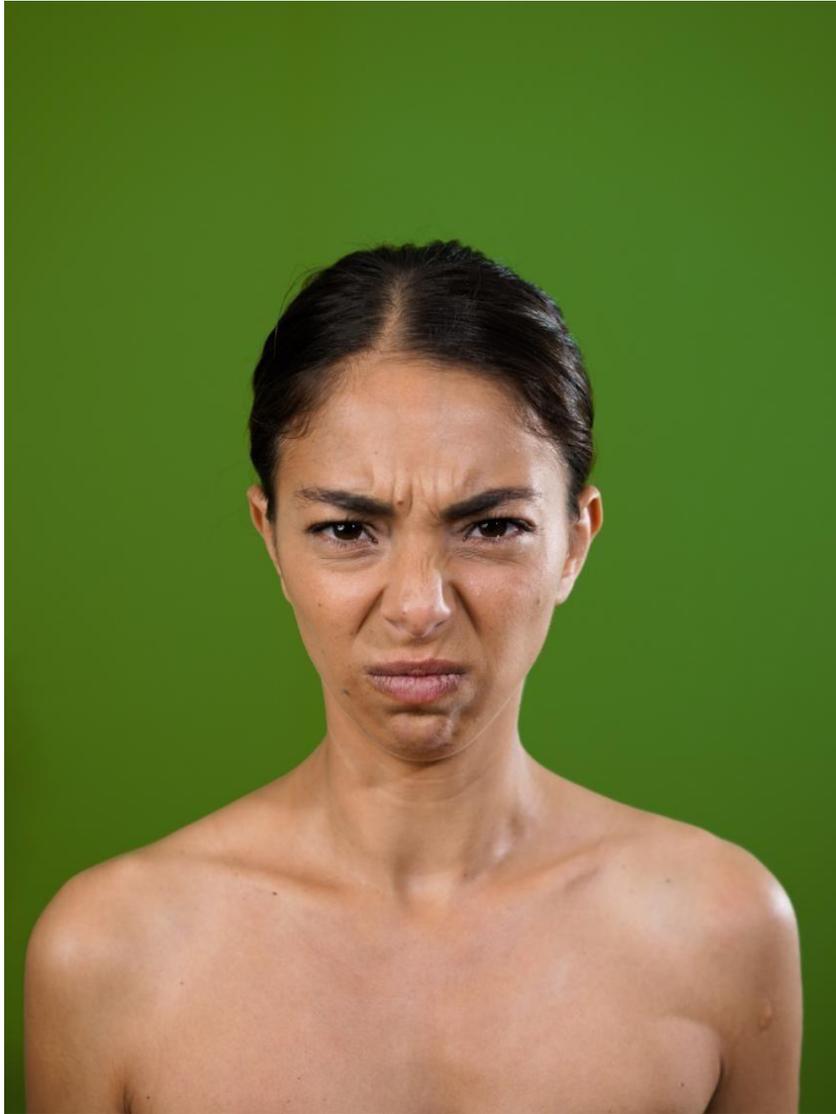


**NEUTRAL**



**HYSTERICAL**

## 66. ANGER



According to the circle of emotions made by Robert Plutchik (American psychologist), anger is a basic emotion. This represents an emotional state that varies in intensity from mild irritation to intense anger: uncontrollable anger, violence.

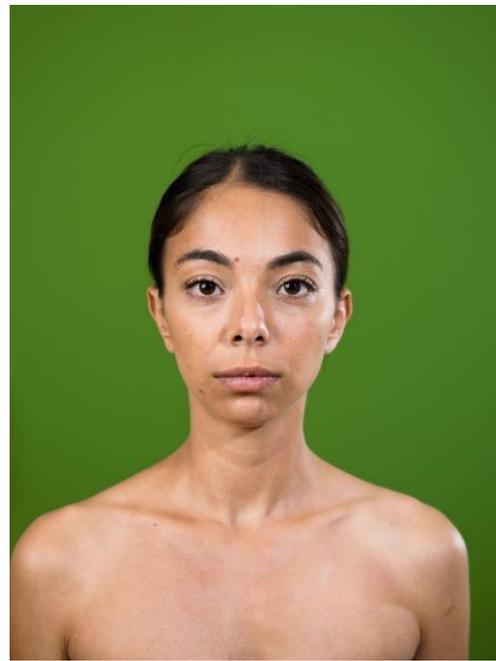
Anger is an intense emotion usually characterized by feelings of stress, frustration and irritation. Everyone feels anger from time to time. It is a perfectly normal response to frustrating or difficult situations.

Anger only becomes a problem when it is displayed excessively and begins to affect your daily functioning and the way you relate to people. Anger can range in intensity from mild annoyance to rage. Sometimes it can be excessive or irrational. In these cases, it can be difficult to keep your emotion under control and it may cause you to behave in ways you would not otherwise behave.

Anger doesn't look the same to everyone because we all express it differently. For some people, yelling might be an outlet for their anger, while others may express it by physically hitting an object or even another person.

Verbal: When a person expresses their anger verbally, you may see them raise their voice. They may become abusive and say hurtful things if their anger is directed at another person.

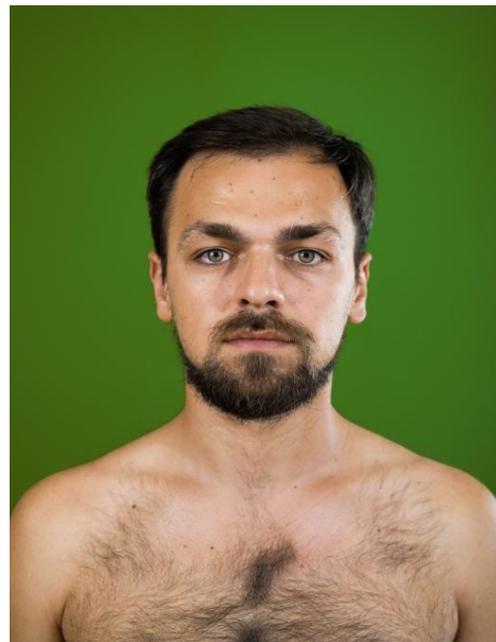
Nonverbal: You will notice some slight physical changes in a person who expresses their anger nonverbally. They may scowl or frown and clench their jaws and fist. They might also attack another person or object, sometimes causing physical damage to the person or object and in some cases even injuring themselves.



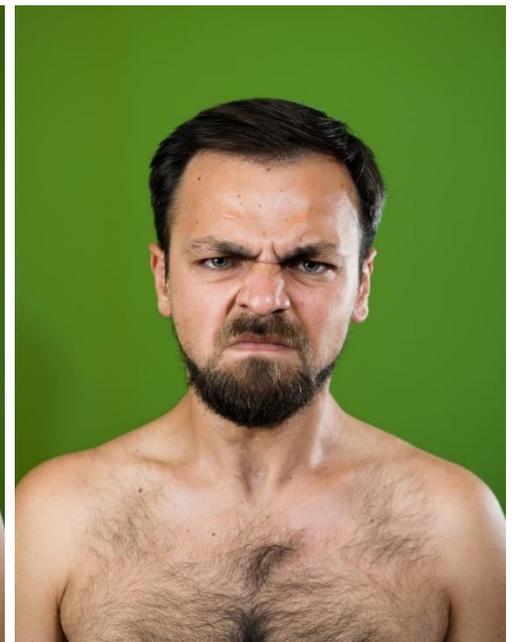
**NEUTRAL**



**ANGER**

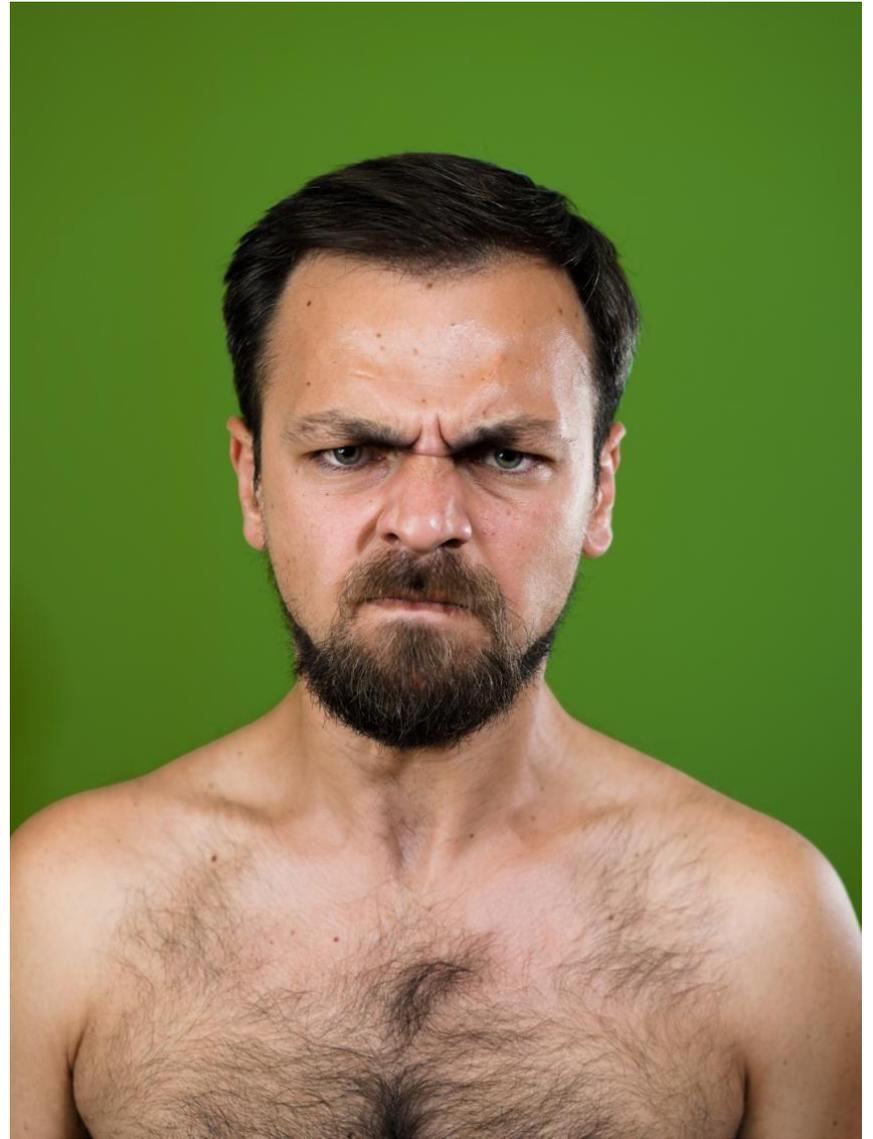


**NEUTRAL**



**ANGER**

## 67. IRRITABLE



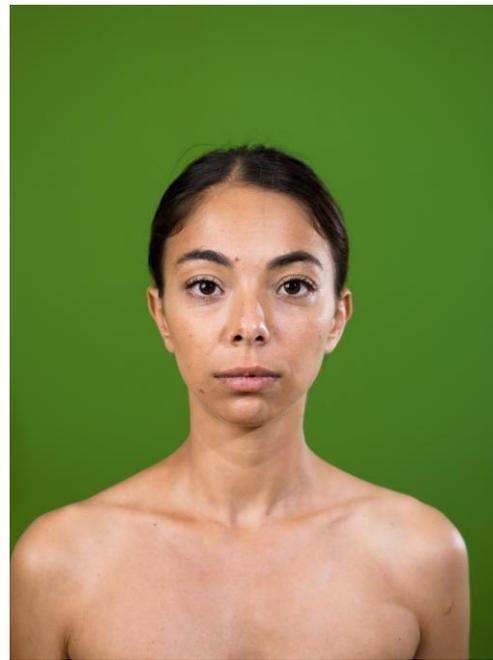
Who gets irritated, gets upset easily; irascible, nervous, upset.

Irritability is often described as a trait. Specifically, it is a personality dimension characterized by a tendency to be angry and reactive to mild provocation and disagreement (Caprara et al., 1985). This differs from anger, which is an affective state, and reactive aggression, which is a behavior. The concept of irritability was operationalized in 1957 in a series of studies validating an omnibus assessment of aggression, the Buss-Durkee Hostility Inventory (Buss & Durkee, 1957).

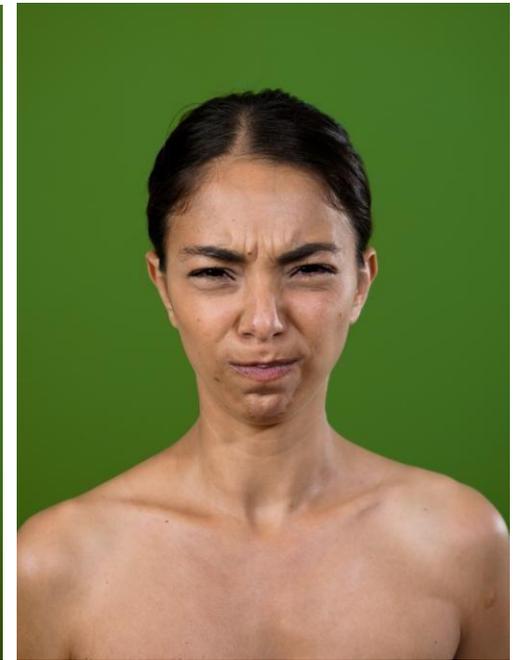
Irritability can lead to a number of different behaviors and feelings. Some of the common signs of irritability include:

- agitation, frustration and anger
- confusion and difficulty concentrating
- difficulty making accommodations or changing plans
- excessive sweating
- fatigue
- increased respiratory rate
- fast heartbeat
- hypersensitivity
- short temper
- voltage

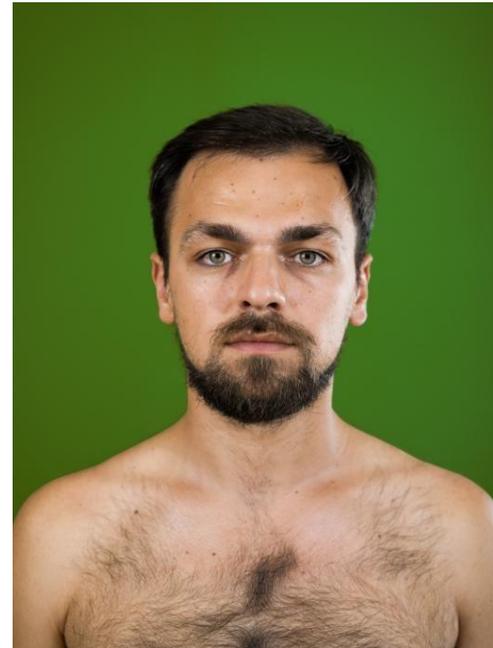
People who feel irritable will not necessarily experience all of these symptoms or feel symptoms all the time. They might feel good at one moment, but a little annoyance could set them off. The reaction that follows may seem out of proportion to the situation. This often leads to additional tension that makes the individual even more sensitive and responsive to stress.



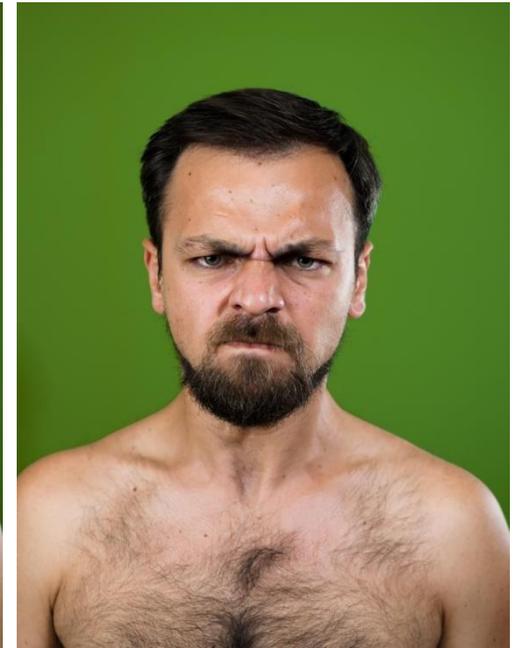
**NEUTRAL**



**IRRITABLE**

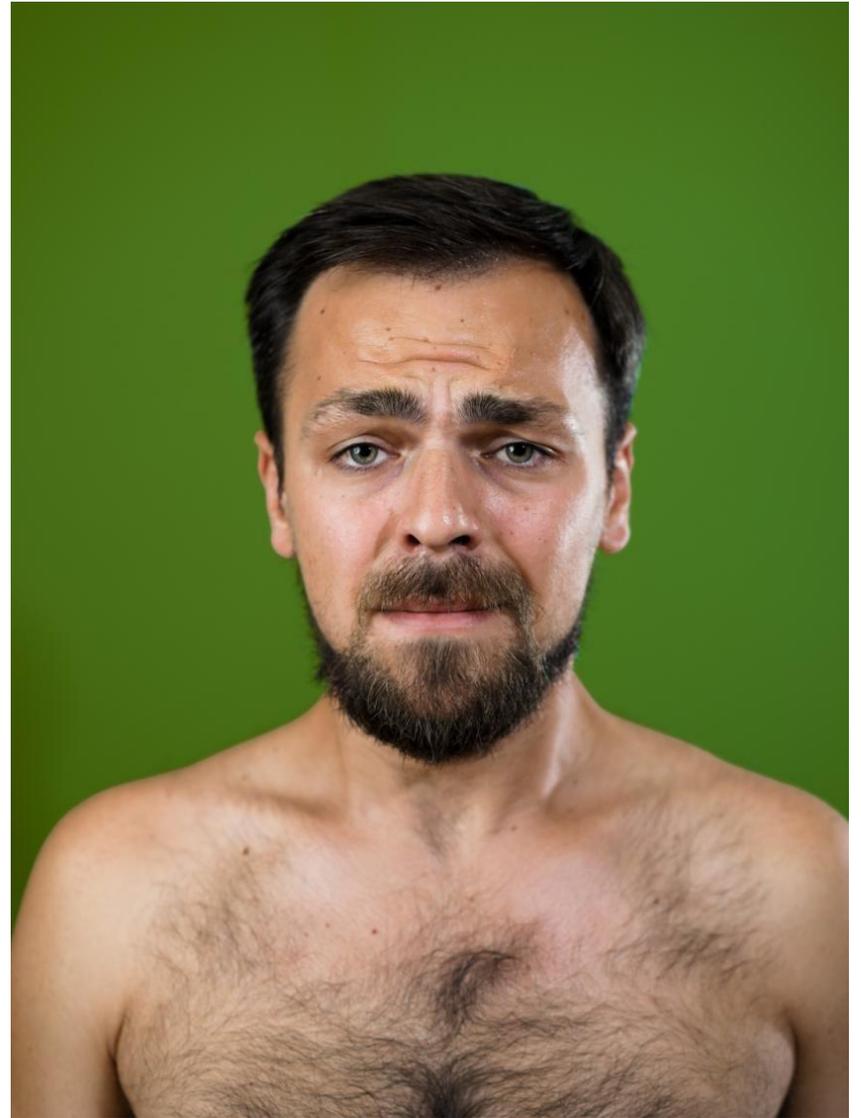


**NEUTRAL**



**IRRITABLE**

## 68. ANXIOUS

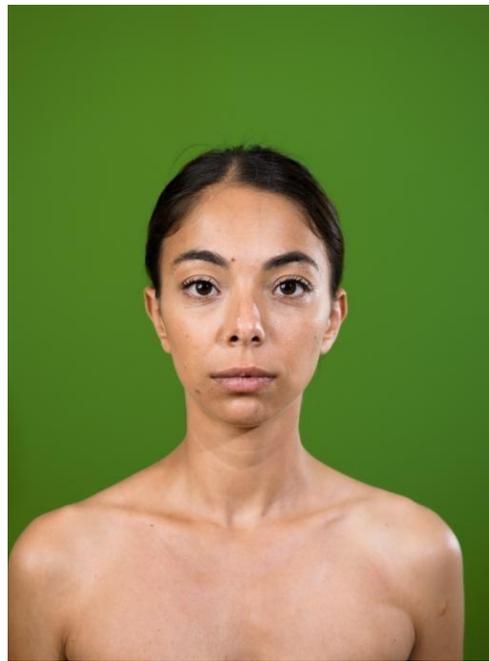


Restless, tense, worried man. Person who worries (or fears) for no reason. Anxiety is a state of restlessness, of tense expectation, accompanied by palpitations, difficulty in breathing, found in some nervous diseases.

Experiencing occasional anxiety is a normal part of life. However, people with anxiety disorders frequently have intense, excessive, and persistent worry and fear about everyday situations. Often, anxiety disorders involve repeated episodes of sudden feelings of intense anxiety and fear or terror that reach a peak within minutes (panic attacks).

Common signs and symptoms of anxiety include:

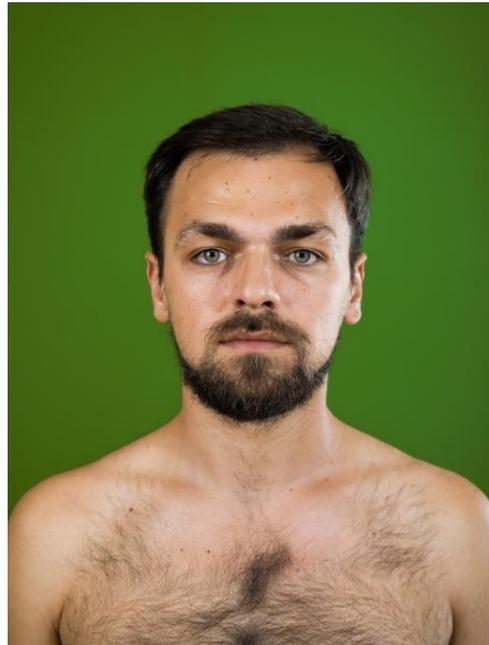
- feeling of nervousness, agitation or tension
- having a sense of imminent danger, panic or doom
- having an increased heart rate
- rapid breathing (hyperventilation)
- perspiration
- trembling
- feeling weak or tired
- difficulty concentrating or thinking about anything other than the present concern
- with sleep problems
- you experience gastrointestinal (gi) problems.
- you have difficulty controlling your worries
- having a desire to avoid things that trigger anxiety



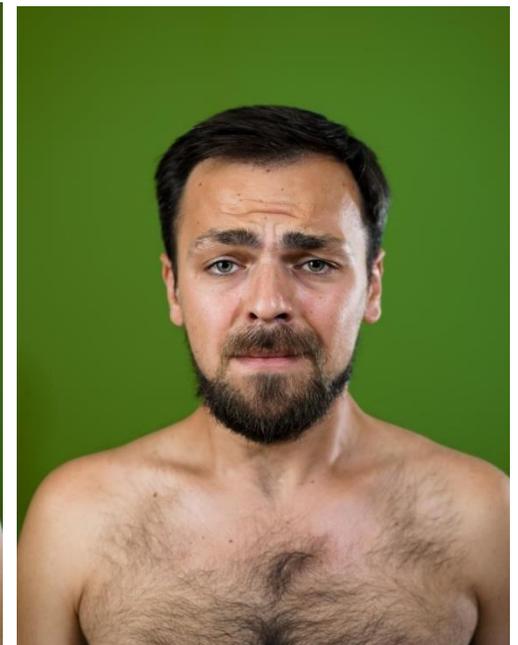
**NEUTRAL**



**ANXIOUS**

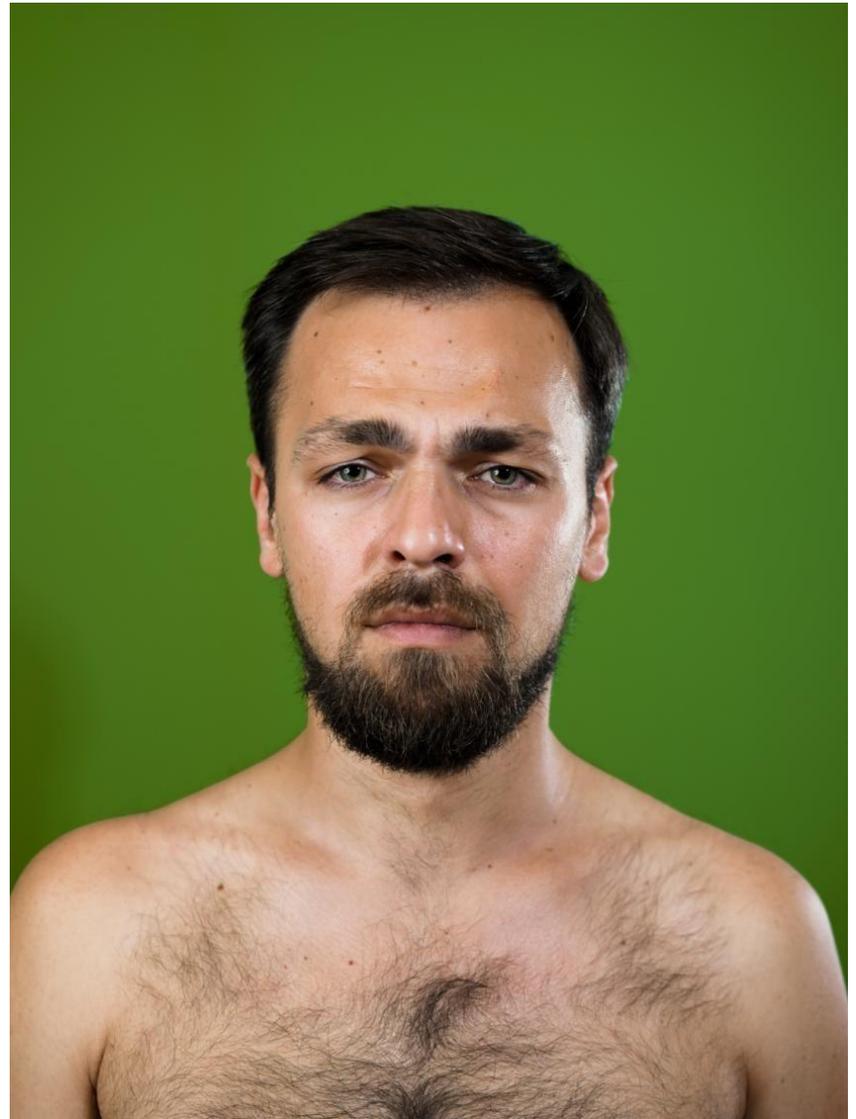


**NEUTRAL**



**ANXIOUS**

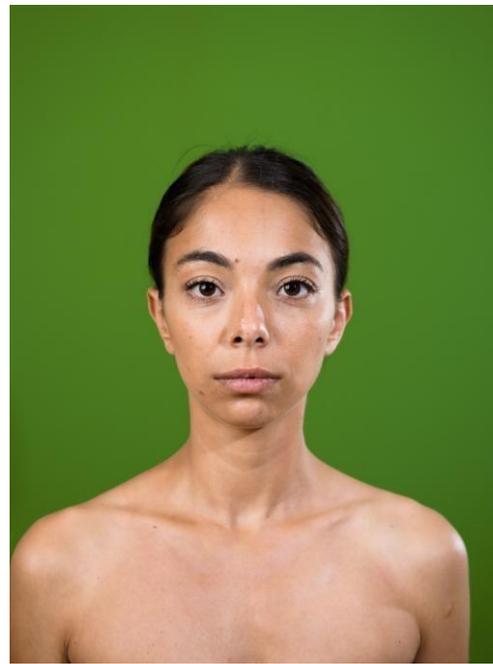
## 69. DEPRESSED



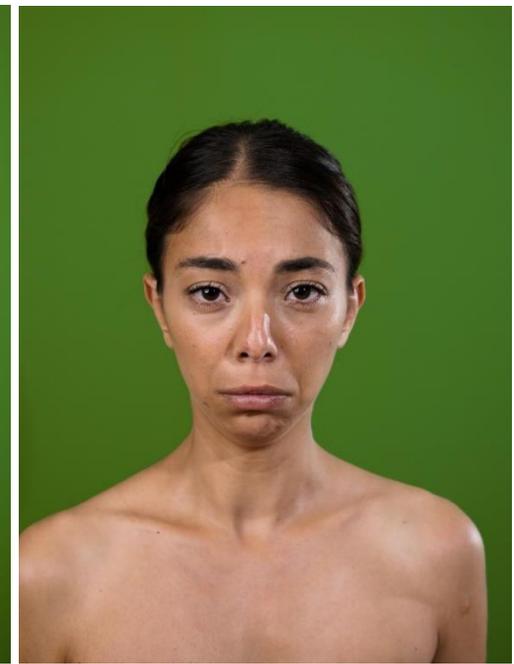
Dejected, demoralized, discouraged. Depression is the result of a sequence of unpleasant events or it can even be the result of physical and mental exhaustion.

Traits of demoralized people include:

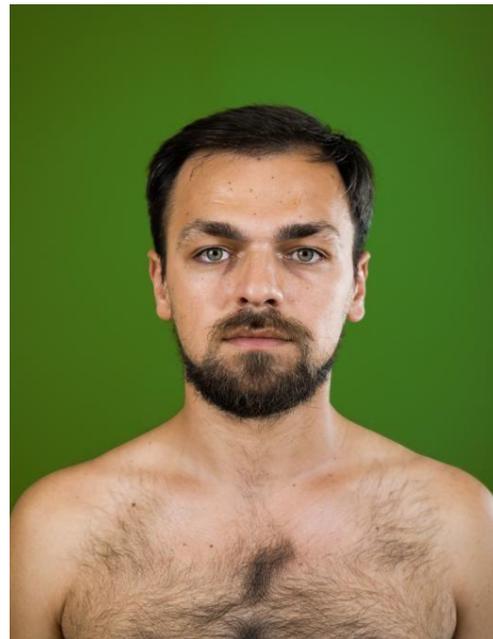
- feelings of sadness, crying, emptiness or hopelessness
- loss of interest or enjoyment in normal activities such as hobbies or sports
- fatigue and lack of energy, so even small tasks require extra effort
- reduced appetite
- anxiety, agitation or restlessness
- slowed thinking, speech or body movements
- feelings of worthlessness or guilt, fixation on past failures or self-blame
- problems with thinking, concentrating, making decisions and remembering things
- unexplained physical problems, such as back pain or headaches



**NEUTRAL**



**DEPRESSED**

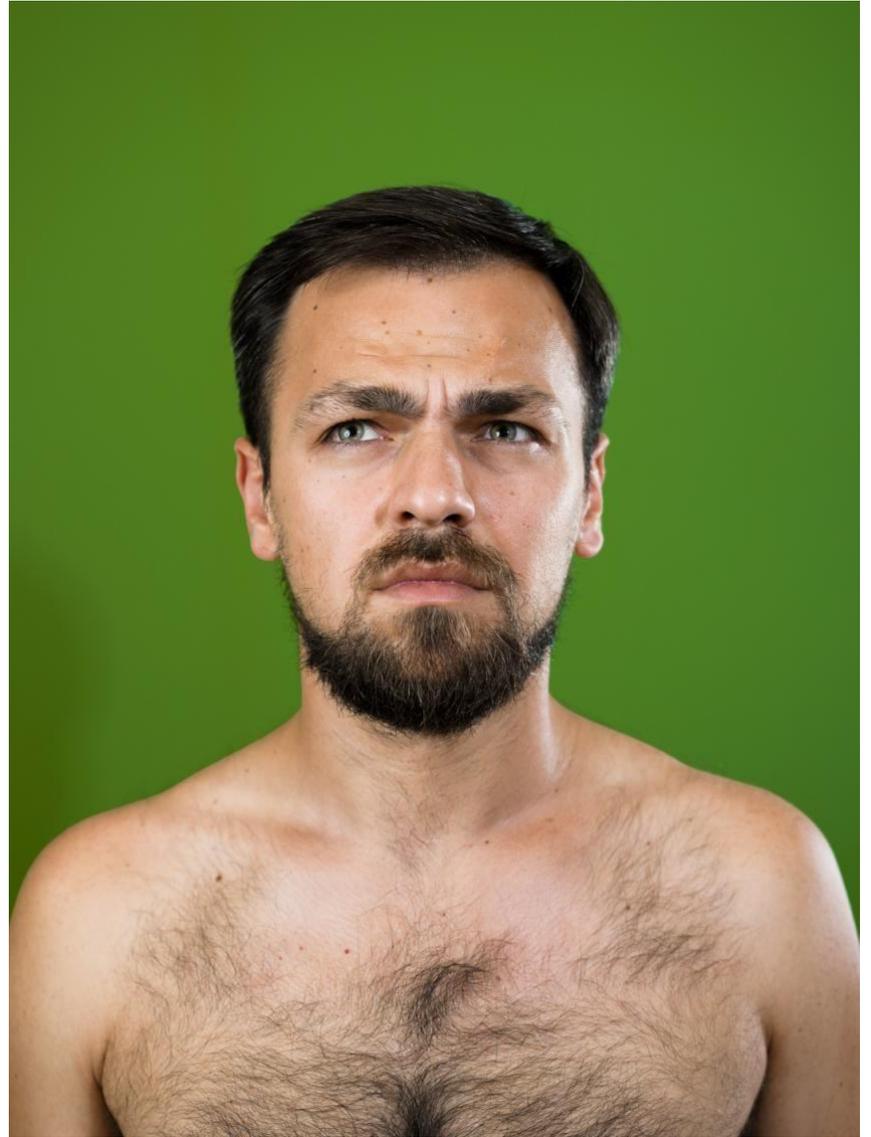
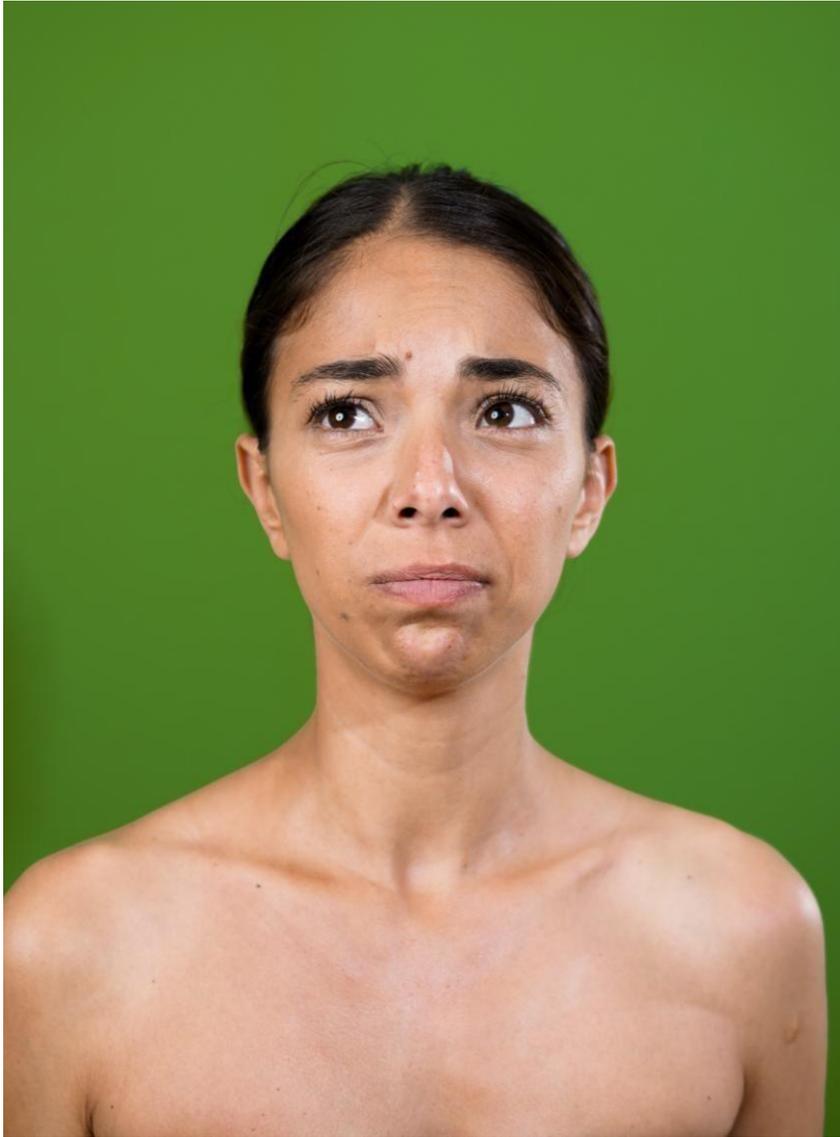


**NEUTRAL**



**DEPRESSED**

## 70. CONFUSED



Imprecise, unclear, indistinct, unclear, imprecise, vague.  
Person who feels confused, disturbed, bewildered.

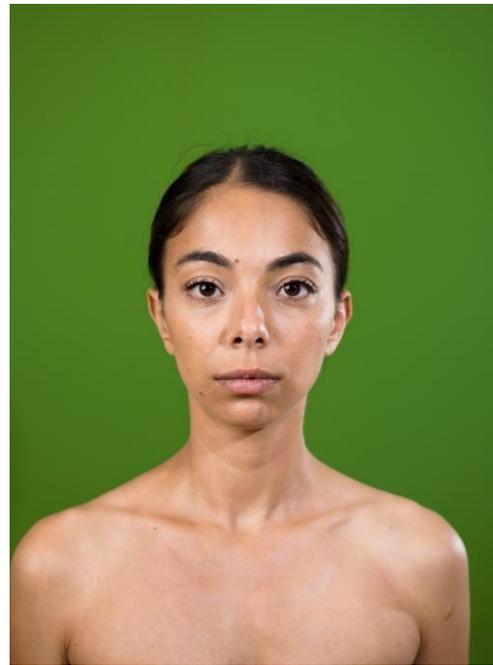
Confusion is a symptom that makes you feel like you can't think straight. You may feel disoriented and have difficulty concentrating or making decisions.

Confusion is also called disorientation. In its extreme state, it is called delirium.

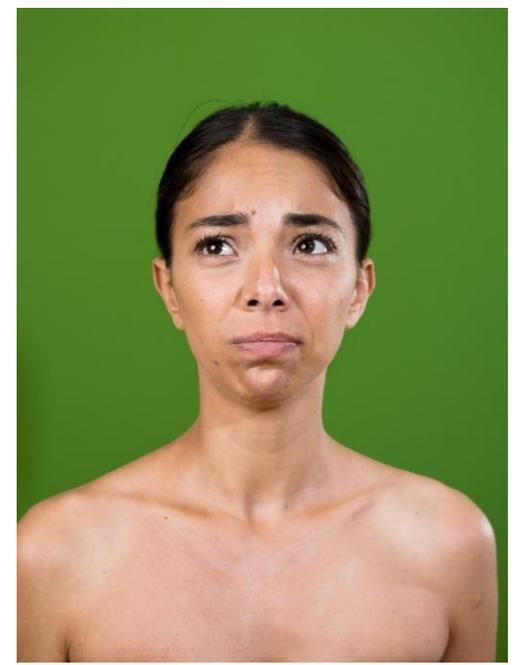
If you or someone you care about is confused for a long time, dementia could be the reason. Dementia is a progressive condition caused by the decline of brain function that results in the loss of the ability to perform everyday functions. It also affects judgment, memory, and behavior.

Noticing confusion when it first appears will help you or your loved one get prompt treatment.

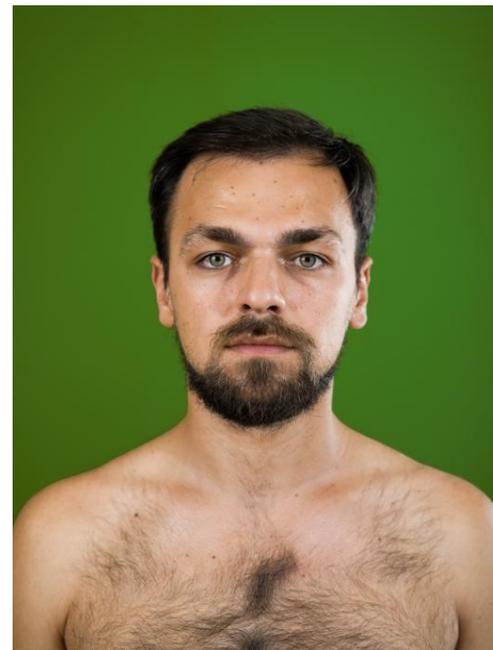
Not to be confused with concussion, which is a concussion is a brain injury that occurs as a result of head trauma. A concussion can change someone's level of alertness, as well as their judgment, coordination, and speech.



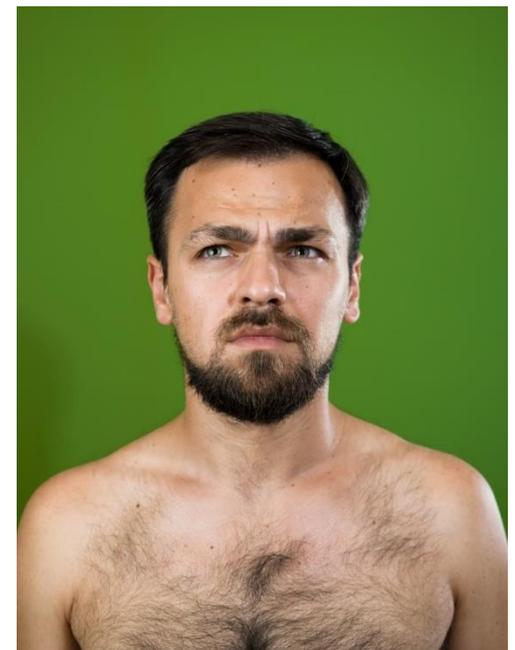
**NEUTRAL**



**CONFUSED**

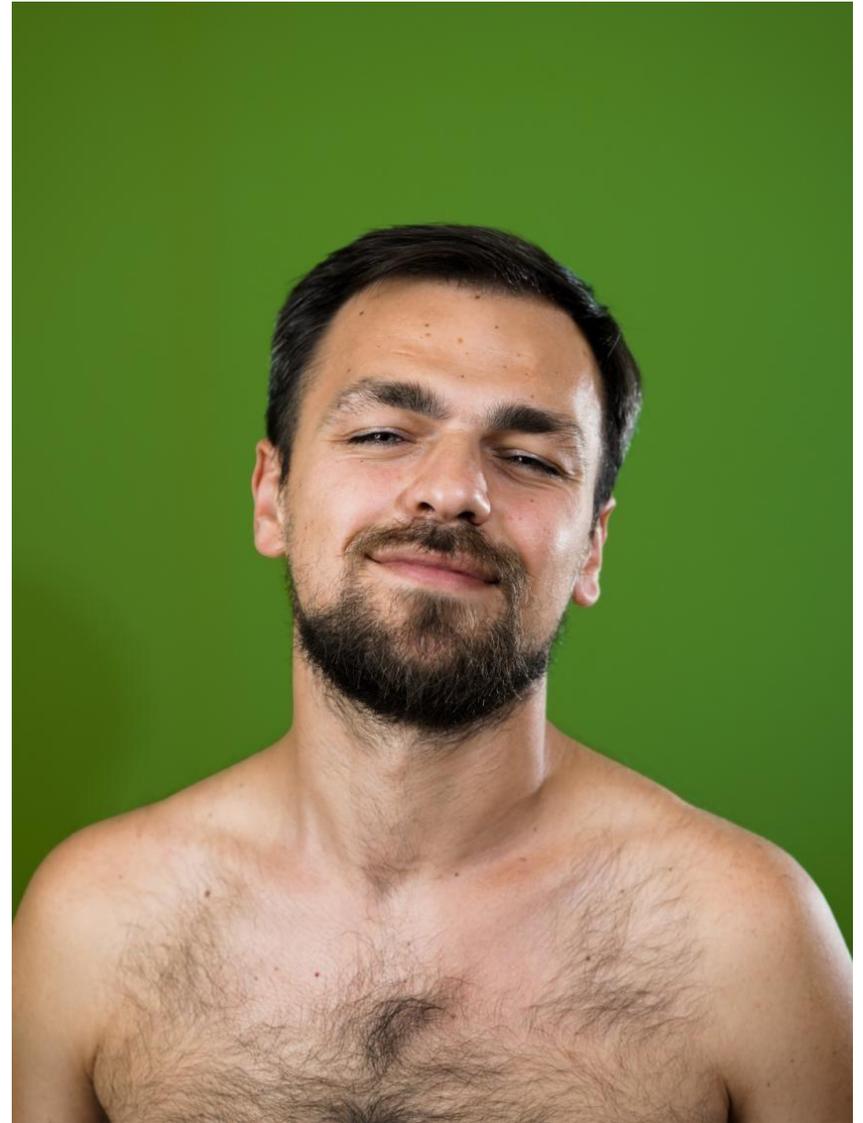
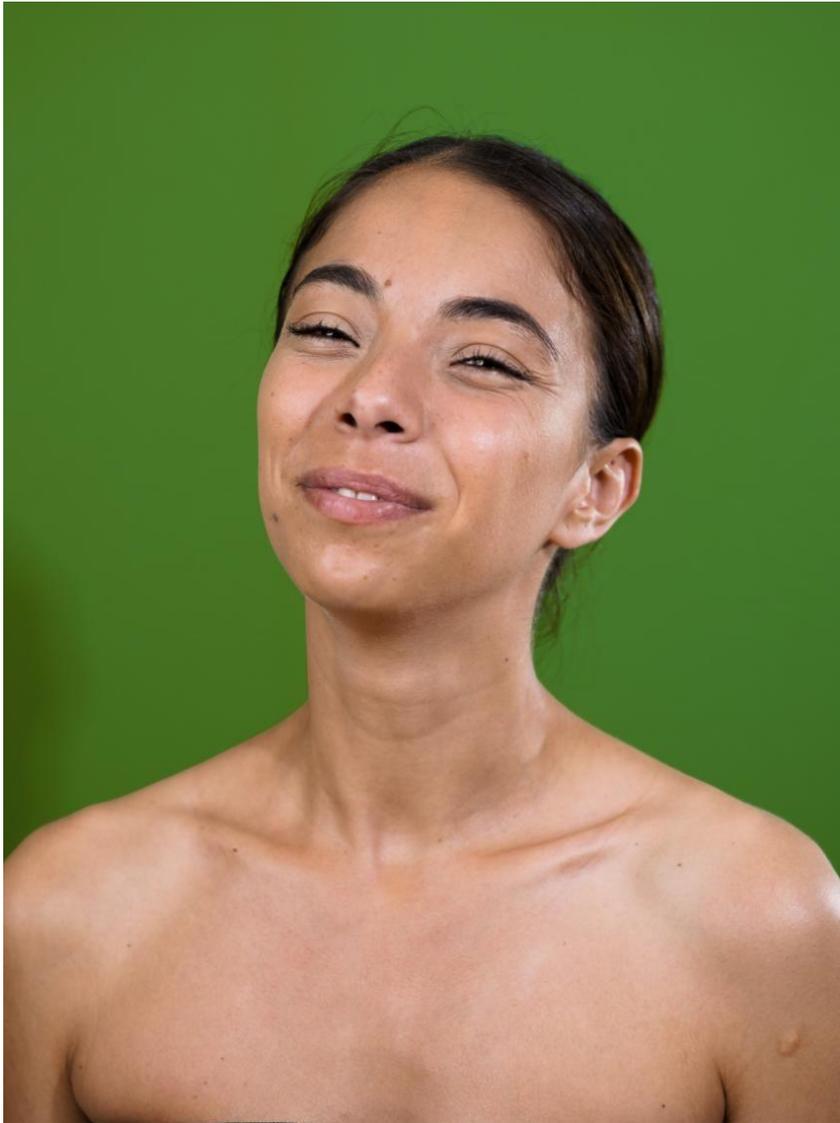


**NEUTRAL**



**CONFUSED**

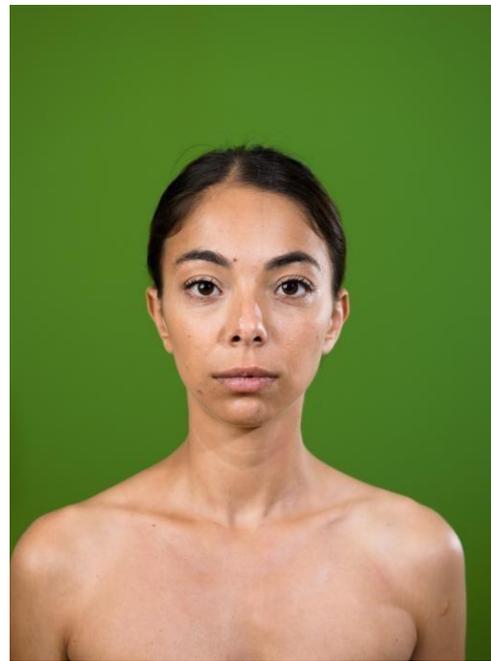
## 71. JOVIAL



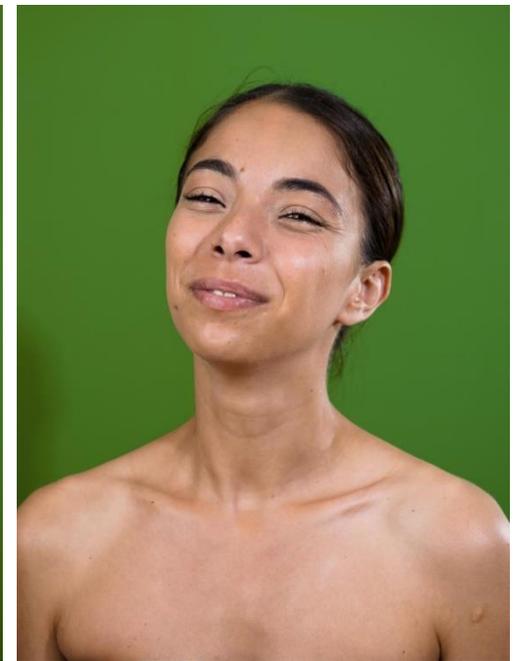
A good-natured person, ready for jokes, cheerful, cheerful, who likes gaiety and good will.

Signs of a jovial character:

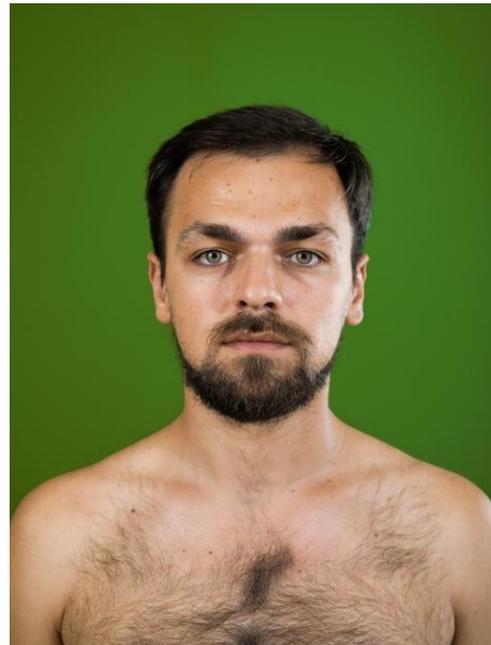
- optimism: if you want to be in a state of joy, you need to look for opportunities and believe and feel positive that you can achieve what you want from life. few people would call a pessimistic person happy.
- cheerful people live in the moment. they understand that they can feel joy now – during their journey through everyday life experiences.
- spirituality: there is a strong correlation between an individual's spiritual grounding and orientation and their happiness. believing and recognizing that there is more going on than meets the eye creates peace of mind and liberation.
- cheerful people know where they are going and have written goals to prove it! without direction or ambition, it's hard for you to be happy.
- gratitude: joyful individuals are grateful for what they have and take advantage of almost any situation or condition.
- usefulness/generosity: joy comes from the gift of giving, not taking. the research is clear: happy people give more, on all levels, including time, resources and money.



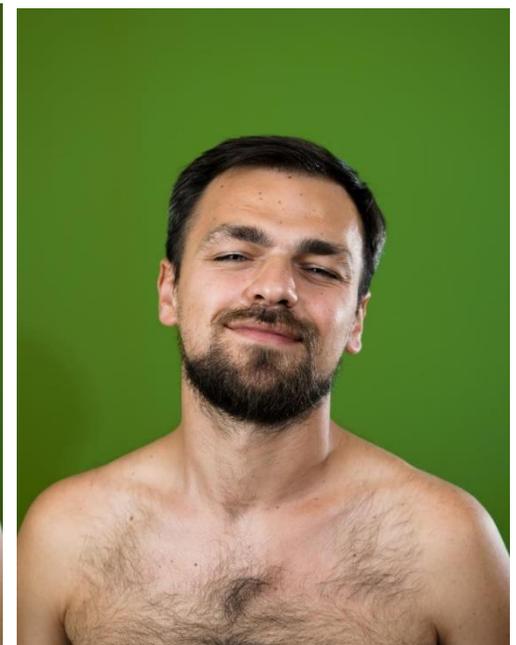
**NEUTRAL**



**JOVIAL**

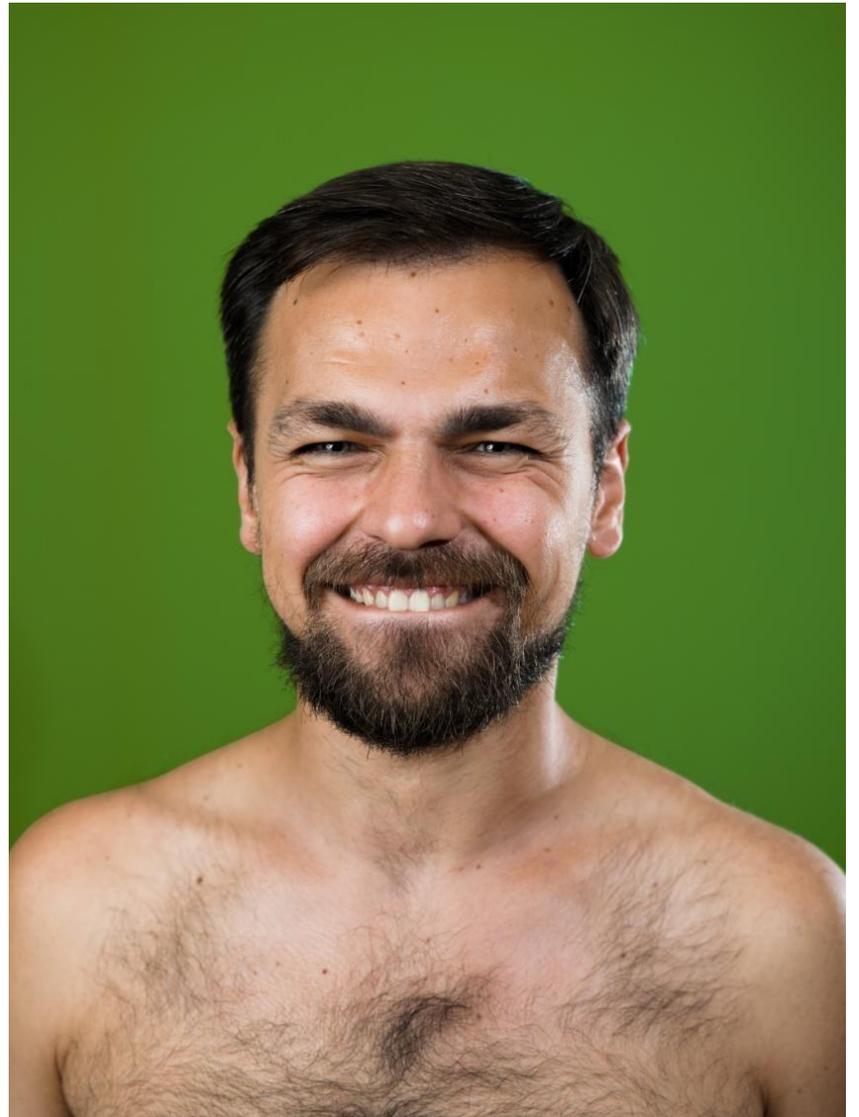
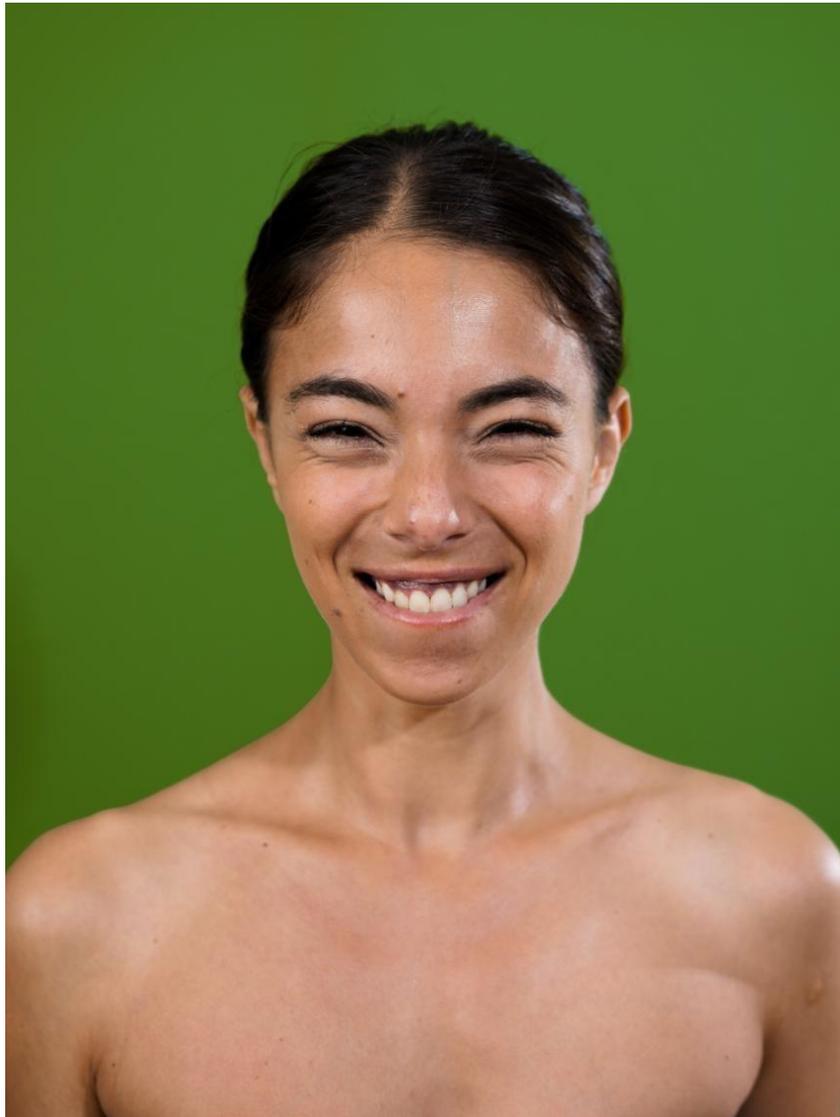


**NEUTRAL**



**JOVIAL**

## 72. EAGER



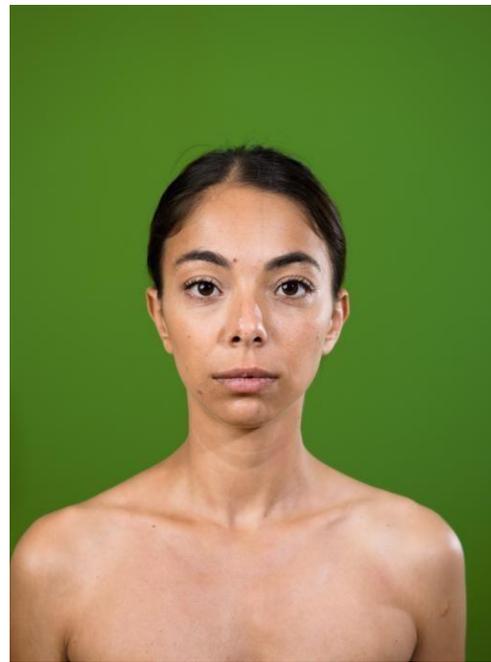
Full of longing; desirous, anxious to do, to obtain something.

Impatience is a motivational factor characterized by approach motivation (Tauer and Harackiewicz, 1999), while the formation of metaperceptions is a cognitive process. Therefore, finding a variable to build a bridge between these two factors is a solution to our question. Existing theories describe a close relationship between motivation, emotion, and cognition. On the one hand, the theory of feelings as information proposes that judgments depend on feelings, even if these feelings are irrelevant to current judgments (Schwarz, 2012).

On the other hand, emotion has a motivational root (Cacioppo et al., 1999). We therefore investigate the effect of impatience (motivation) on metaperception (cognition) through the emotions experienced by perceivers.

Specifically, based on the idea that people with approach motivation are likely to experience positive emotions (Brockner & Higgins, 2001), we predict that impatience will induce positive emotions. According to the theory of feelings as information, positive emotions are hypothesized to elicit optimistic self-evaluations and metaperceptions. Assuming that the judge's rating is not influenced by the perceiver's level of impatience, the difference between metaperception and the judge's rating (metaperception - judge's rating) will increase with impatience.

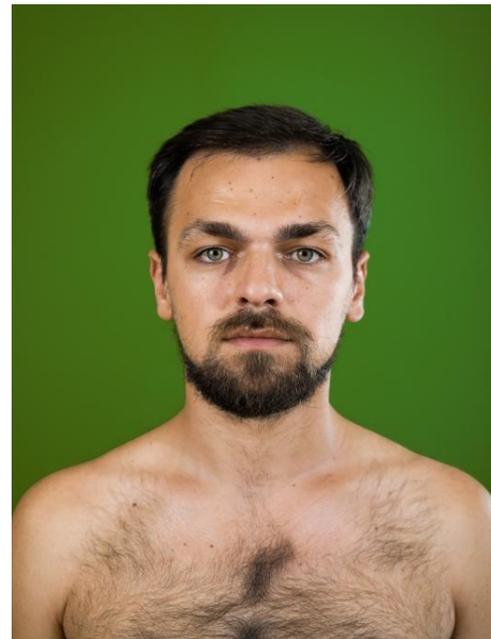
Looking forward induces positive emotions. Impatience is an incentive defined as how long people expect to achieve a goal (Lee and Chiou, 2015).



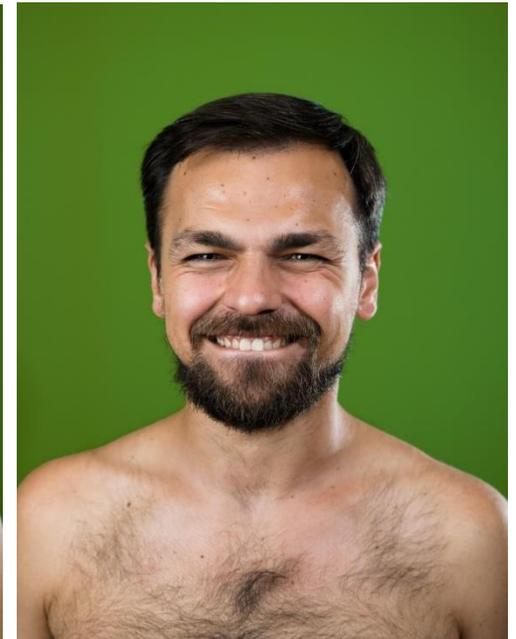
**NEUTRAL**



**EAGER**

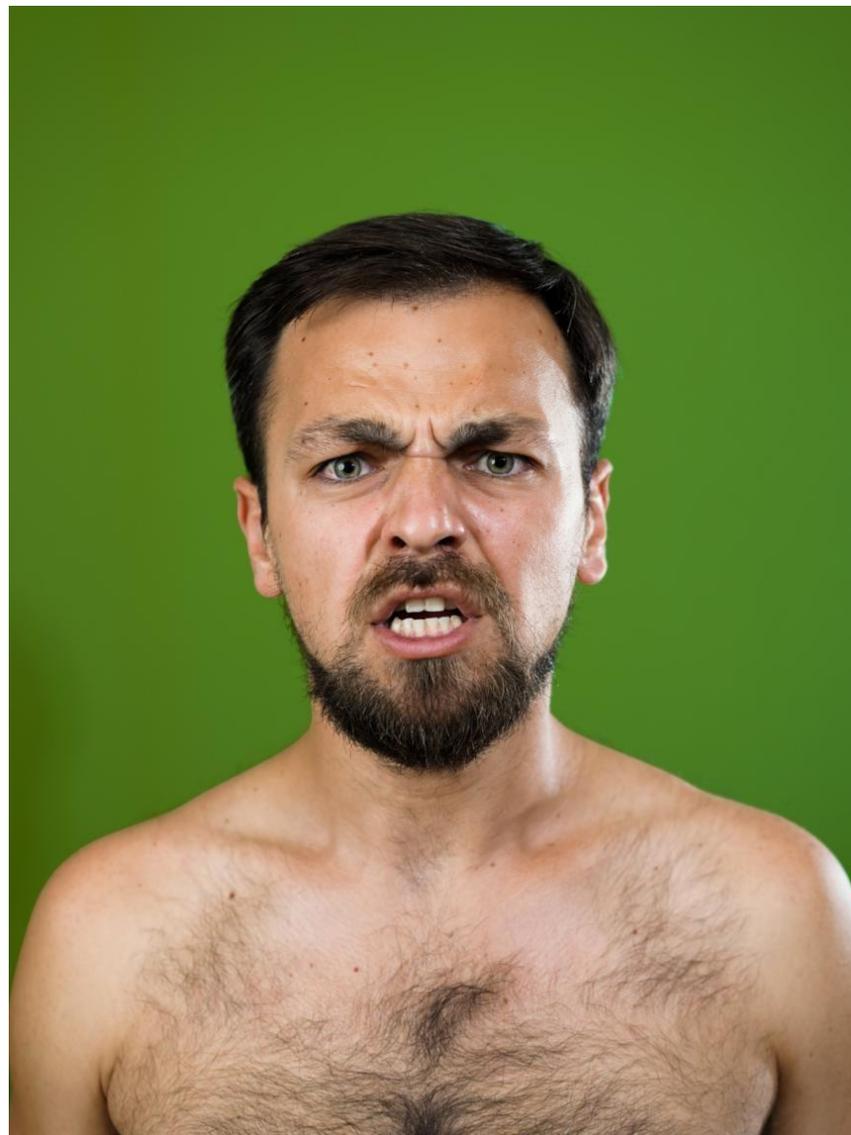
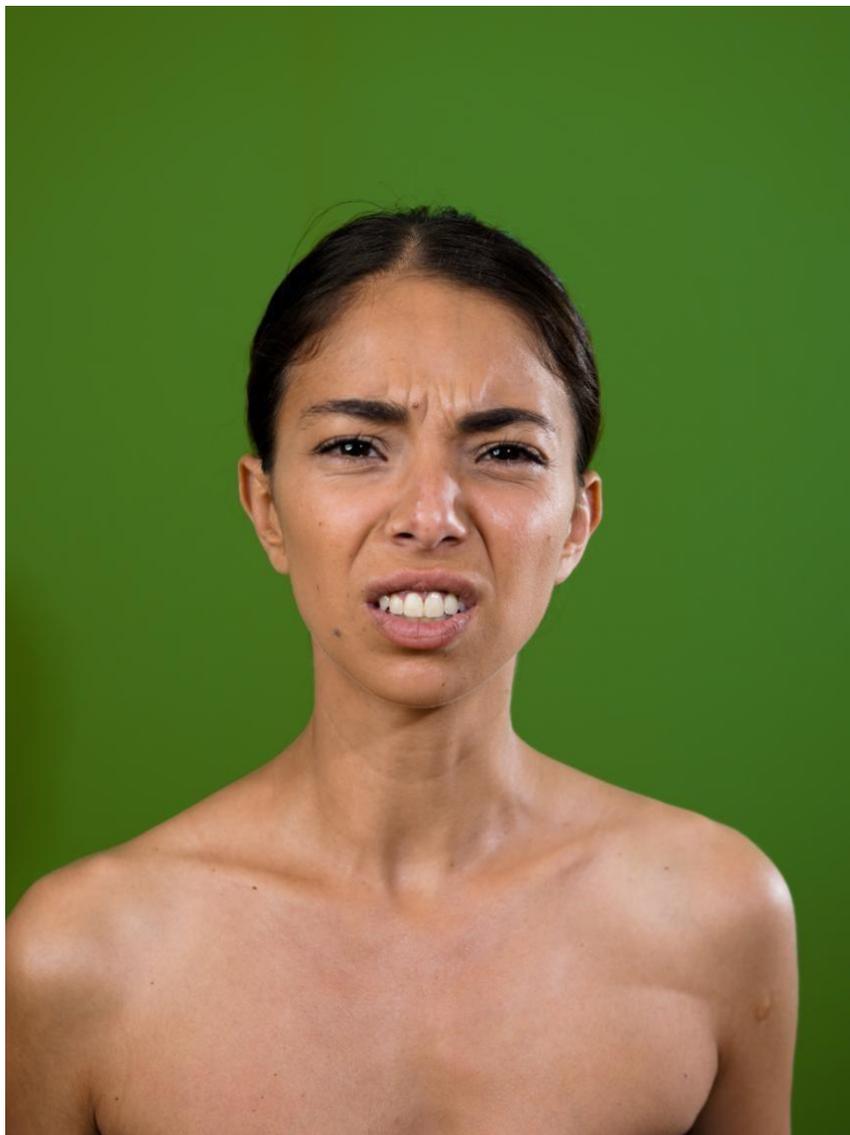


**NEUTRAL**



**EAGER**

### 73. REVOLTED



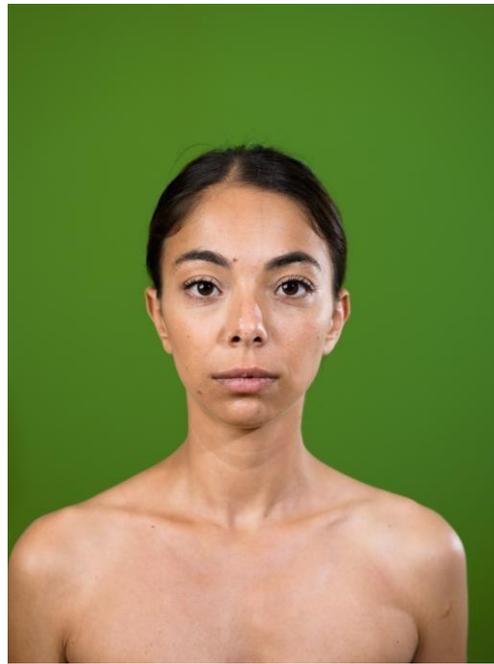
Indignant, rebellious, rebellious man.

Things that are revolting are physically upsetting, like finding hair in your soup or stepping in dog poop. Eating spoiled food is revolting. Also, revolting things can be less physical. Learning that a friend lied to you is revolting. Corruption in government is revolting. Injustice is revolting. Many people find obscenity revolting. If it offends, disgusts, or upsets you, it's revolting.

Revolt means to rise up against an authority in an act of rebellion. You might see an opposition group revolt against a government, or you might revolt against your oppressive 10:00 curfew.

Revolt has a noun form as well to describe that kind of rebellious uprising. Your revolt is successful if you get permission to stay out past 11:00. Revolt can also mean to disgust or sicken, either physically or in terms of your sensibilities. Your stomach may revolt at the idea of eating cauliflower again. You could combine the two meanings of revolt if you stage a revolt in the kitchen to stop from having to eat vegetables that revolt you.

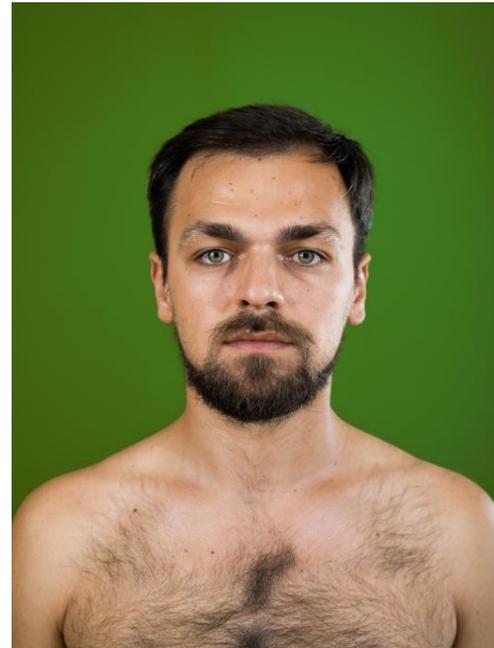
Things that are revolting are physically upsetting, like finding hair in your soup or stepping in dog poop. Eating spoiled food is revolting. Also, revolting things can be less physical. Learning that a friend lied to you is revolting. Corruption in government is revolting. Injustice is revolting. Many people find obscenity revolting. If it offends, disgusts, or upsets you, it's revolting.



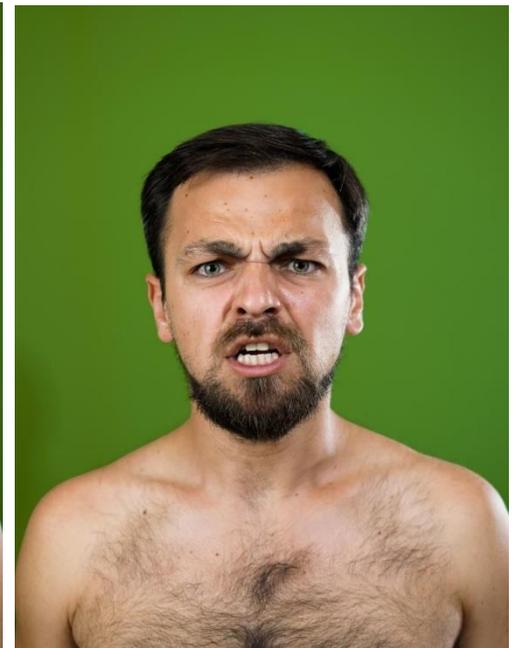
**NEUTRAL**



**REVOLTED**

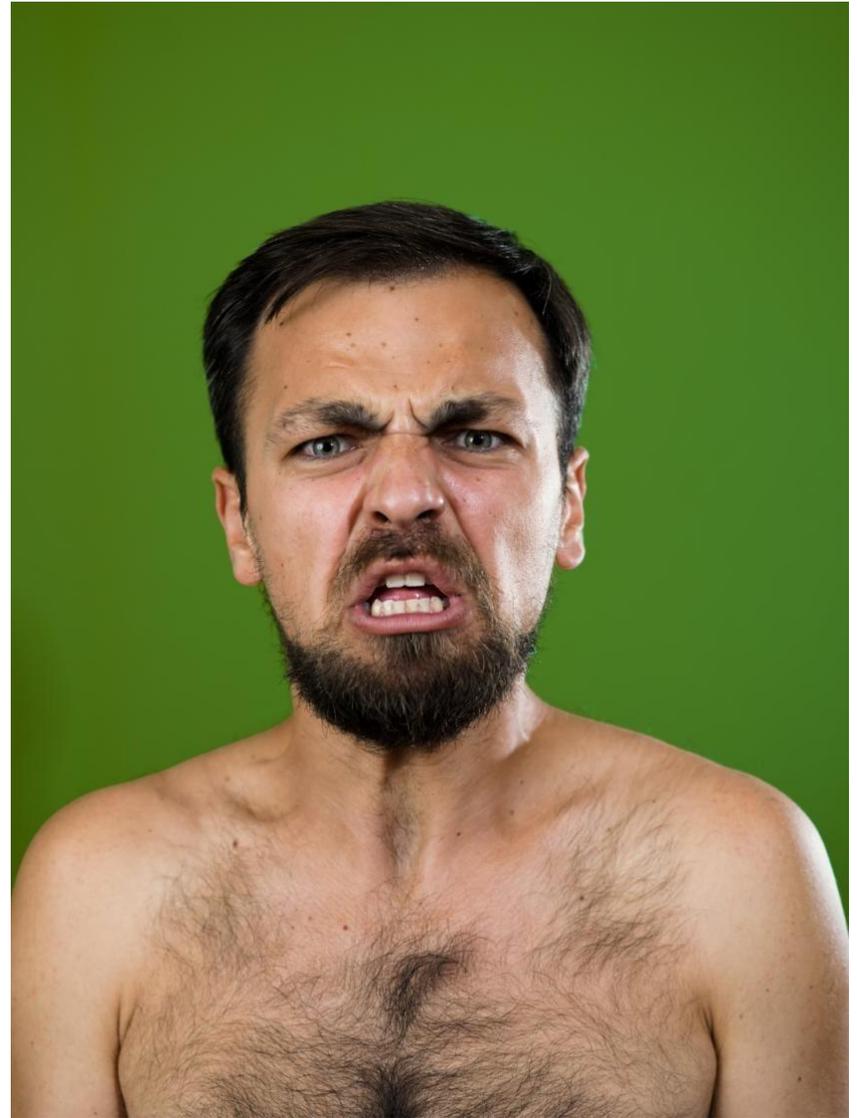


**NEUTRAL**



**REVOLTED**

## 74. REVULSION



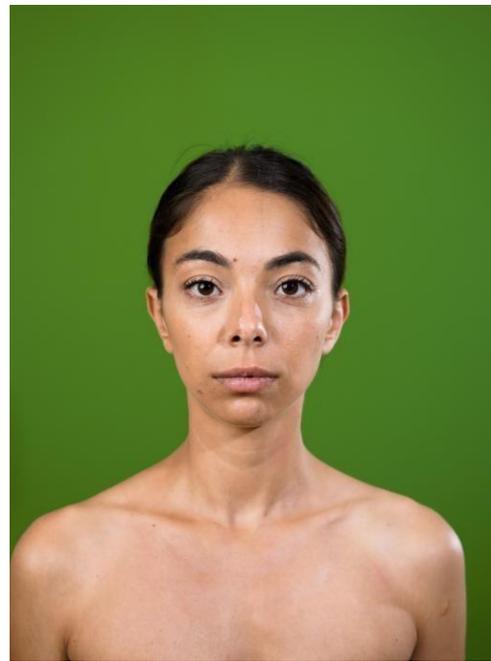
Instinctive aversion; horror, disgust, resentment, the action of rejection.

Revulsion means an intense, violent, sometimes physical dislike of something. People feel revulsion to different things. You may feel revulsion at the thought of seeing a horror movie, but other people can't wait to be scared by the latest zombie or slasher flick.

The noun revulsion comes from the Latin word revellere, meaning to pull away or to pull back. So, if you think of pulling back in horror when someone suggests going on a roller coaster after lunch, you'll remember the definition for revulsion is an intense aversion. Synonyms for revulsion include abhorrence, disgust, horror, and repugnance. After getting the stomach flu after eating raspberries, you now feel a revulsion to anything raspberry flavored.

Repulsion is getting grossed out. If the thought of great green globs of greasy grimy gopher guts makes you recoil in horror, then you've experienced repulsion, or an intense aversion to something.

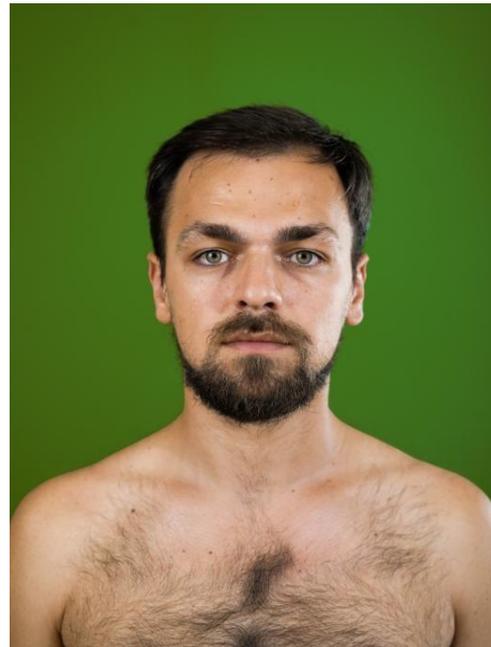
Where there's repulsion, there's disgust. Maybe gagging. Perhaps a few screams. In physics, repulsion describes how two magnets with the same charge jump away from each other, kind of like how most of us leap from the table when mom puts down a plate of Brussels sprouts.



**NEUTRAL**



**REVULSION**

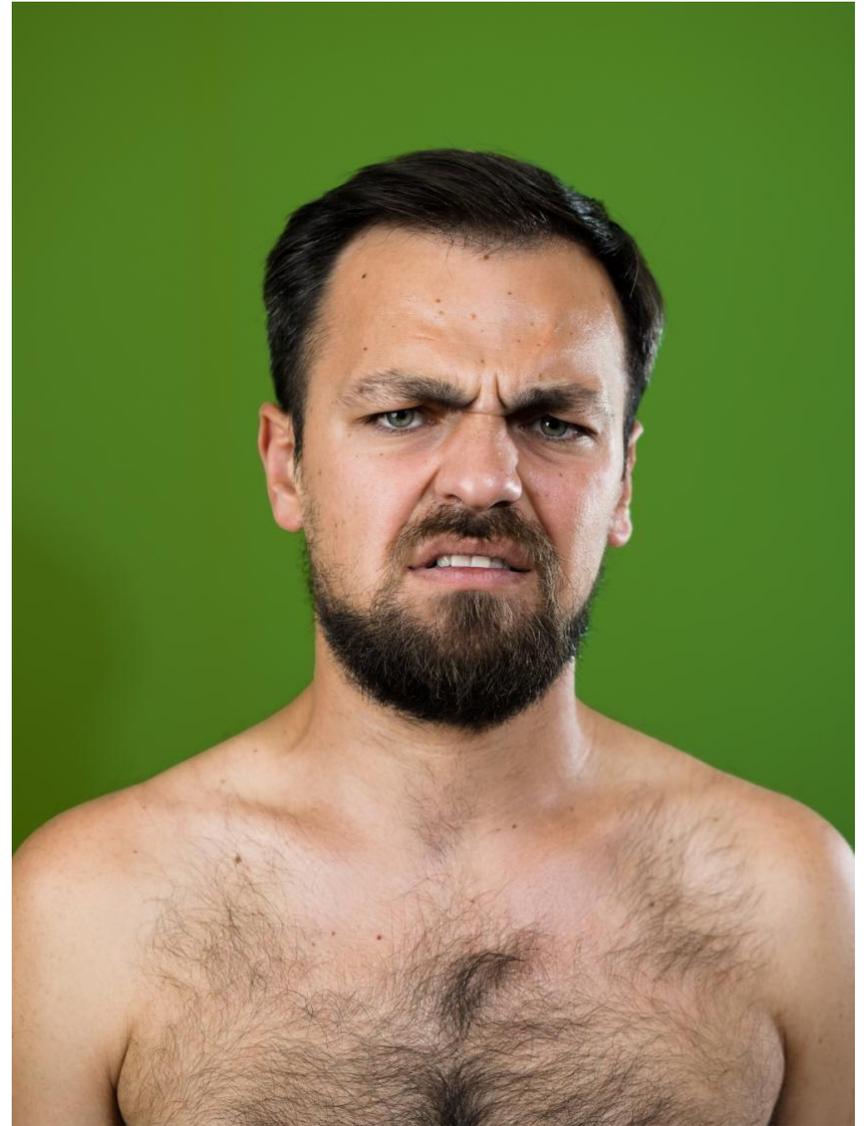
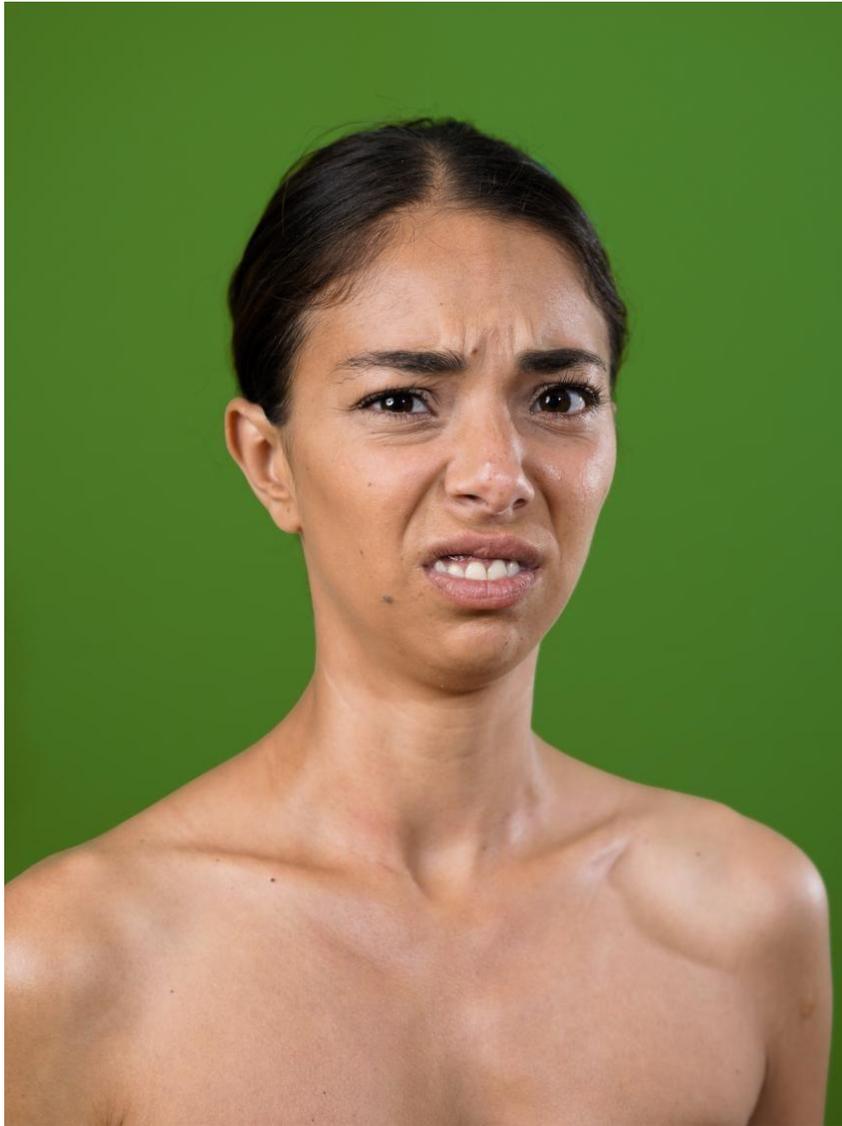


**NEUTRAL**



**REVULSION**

## 75. REPUGNANT



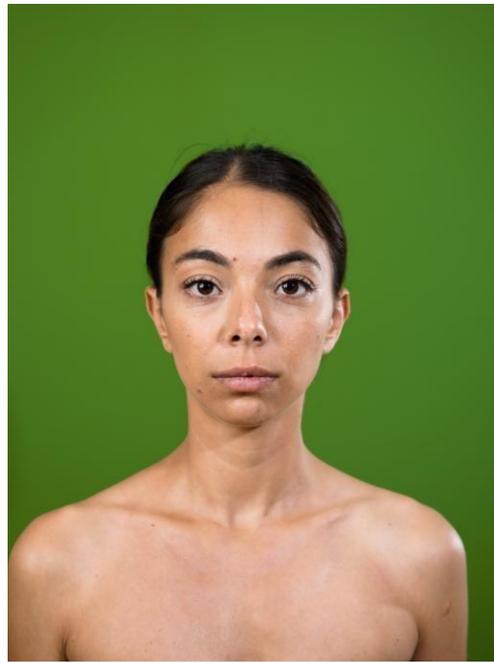
Which inspires revulsion, which causes force.

Repugnant refers to something you detest so thoroughly it threatens to make you physically sick, like the idea of marrying your sister. Or wearing last year's jeans.

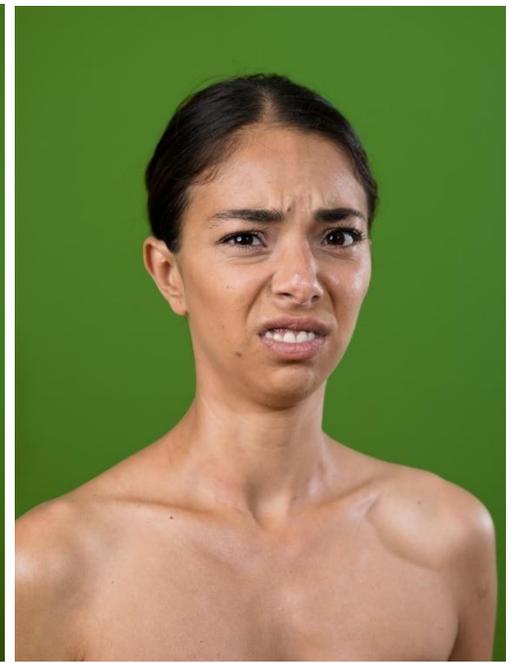
A repugnant thing is a thing offensive, detestable, or obscene. It can be repugnant to your mind or your morals.

It can also be physically repugnant, like the smell that comes from a restaurant's dumpster, which hasn't been emptied since the very exciting "Omelet Week," way back at the beginning of August. Makes you want to "re-PLUG-nant" your nose!

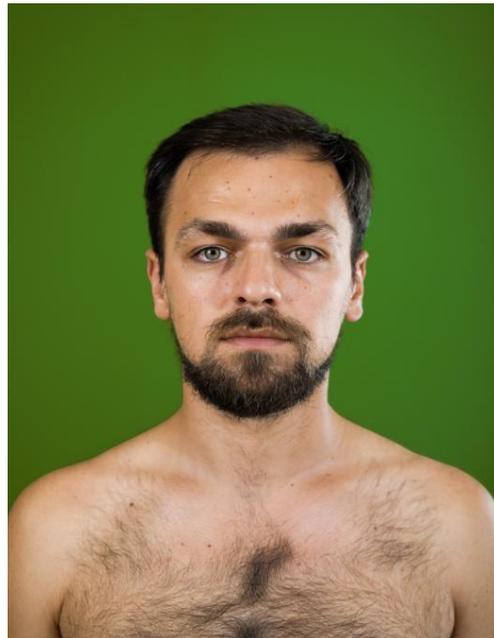
If behaviour or beliefs are repugnant, they are very unpleasant, causing a feeling of disgust



**NEUTRAL**



**REPUGNANT**

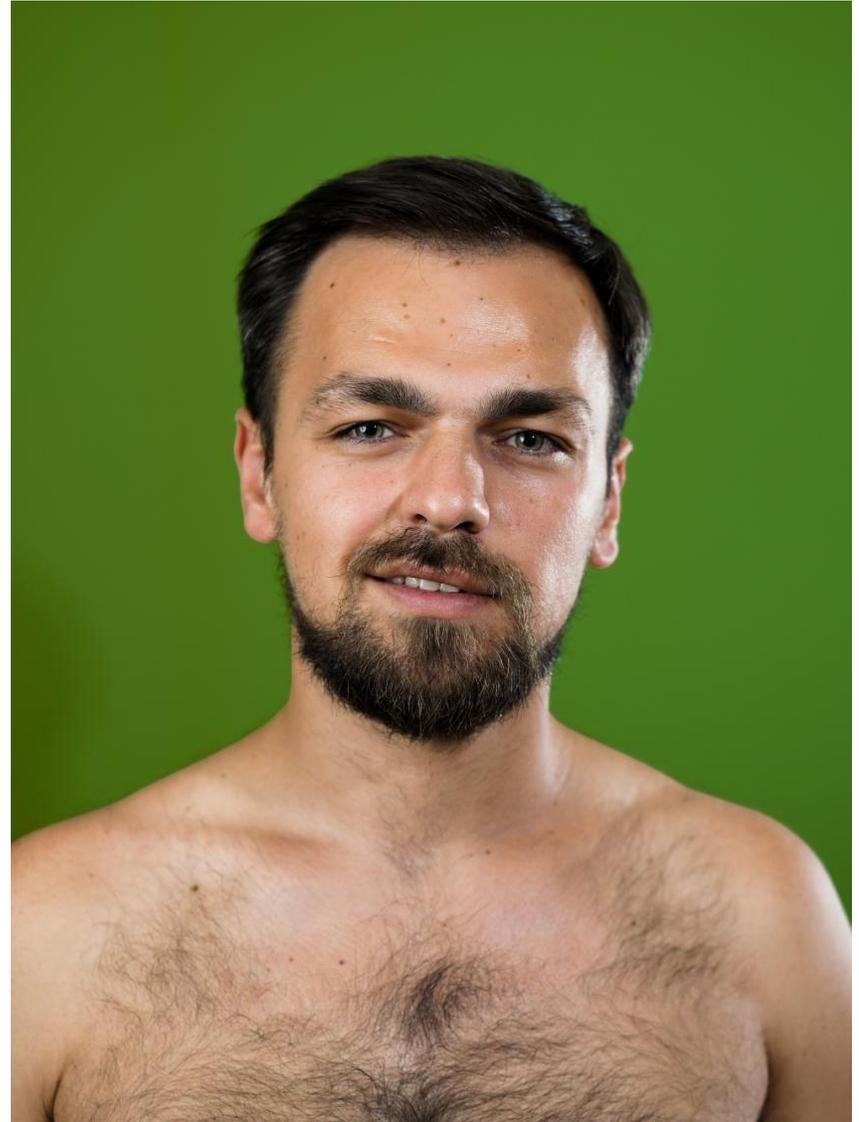


**NEUTRAL**



**REPUGNANT**

## 76. PROVOCATIVE

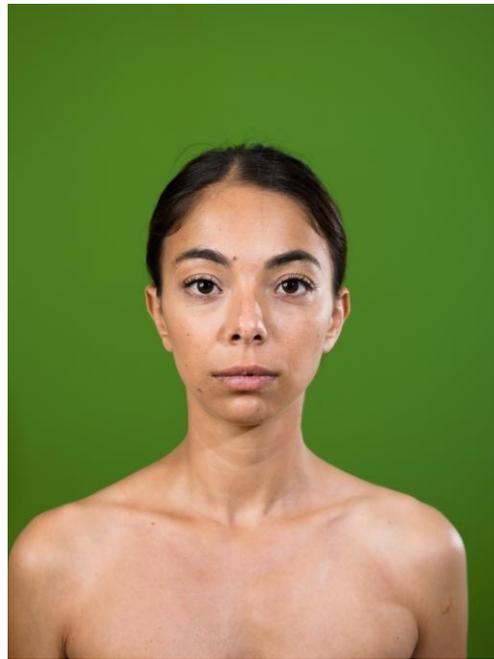


Which provokes, stirs, incites, attacks; who draws attention to himself by dress, extravagance, impertinence, impudence; defiant, cheeky. Person who instigates the production of a reprehensible act. Which constitutes the cause of something, which determines, which causes something.

If something is provocative, it provokes a reaction. A provocative book might get people talking about a controversial idea. A provocative statement, such as "I hate babies," will get another kind of reaction.

The action, thought, or feeling is often a desired one, called forth on purpose. In fact, provocative is often used to describe actions or ways of dressing that cause sexual feelings.

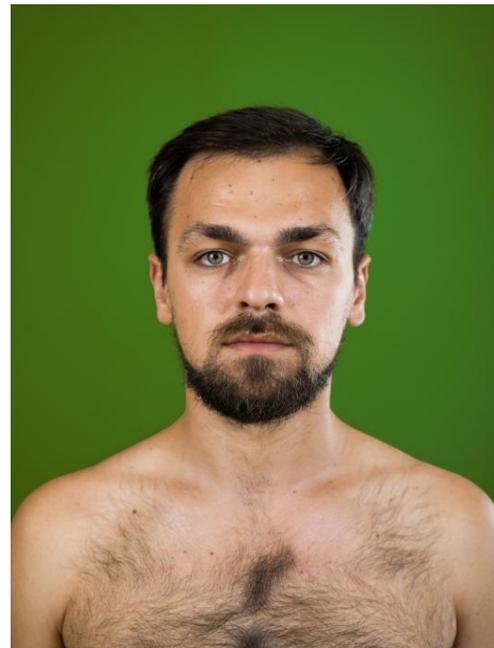
But provocative things can also call forth something unwanted: "She was angered by the provocative remarks." This adjective was borrowed from French provocatif, from Latin provocativus "calling forth," from Latin provocare "to call forth, challenge."



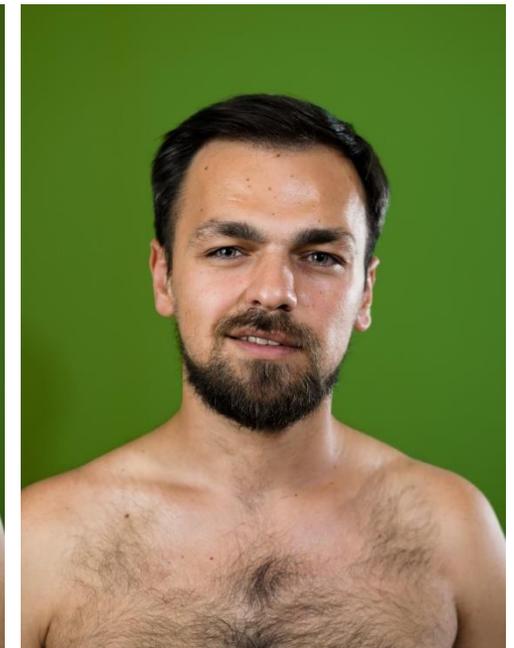
**NEUTRAL**



**PROVOCATIVE**

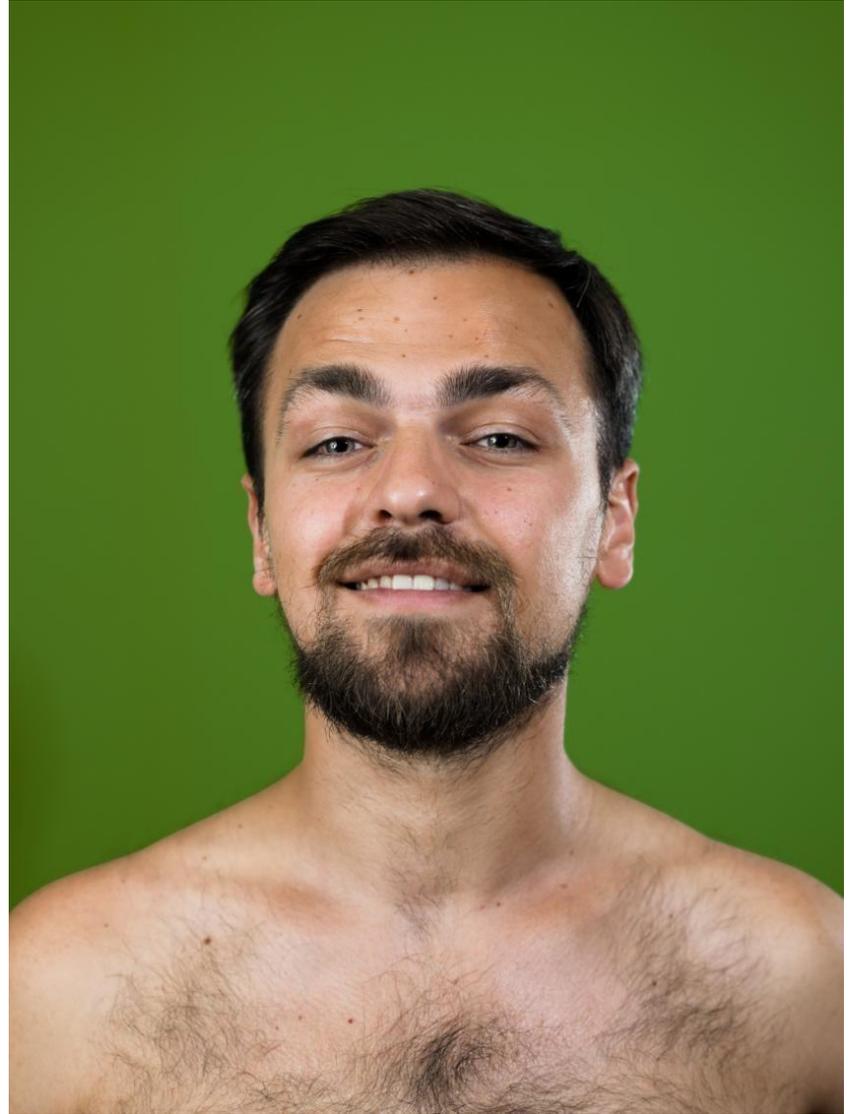
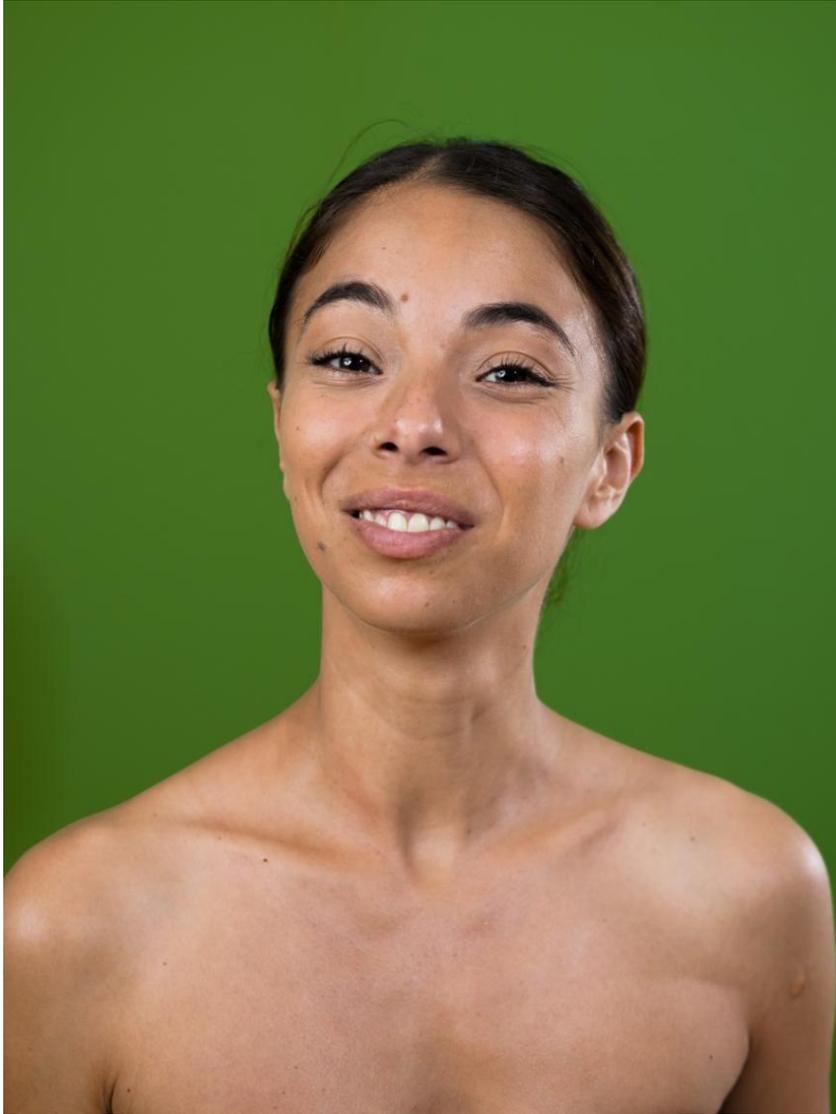


**NEUTRAL**



**PROVOCATIVE**

## 77. INQUISITIVE



Which shows curiosity. Person who arouses curiosity; strange, strange; surprising, unusual; original.

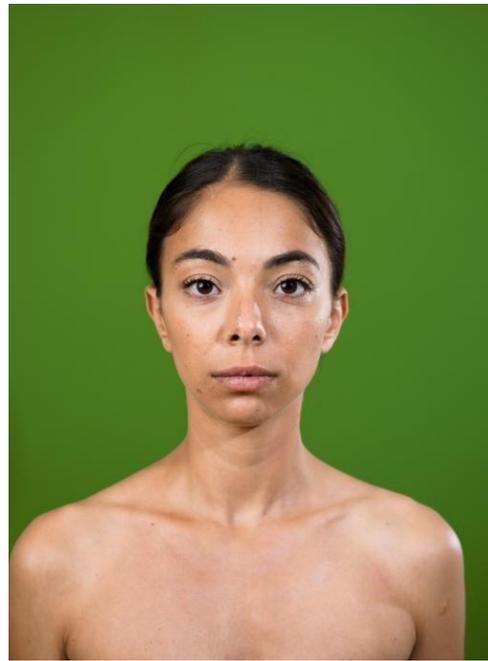
Over the millennia, curiosity has been credited as the driving force behind human progress and advances in science, language and industry. It is a vital quality that helps us learn, grow and discover.

Curiosity is associated with an inquisitive way of thinking that includes investigation, experimentation and knowledge. Our personal development is also linked to curiosity and facilitates a deeper relationship with ourselves, others and our interaction with the world.

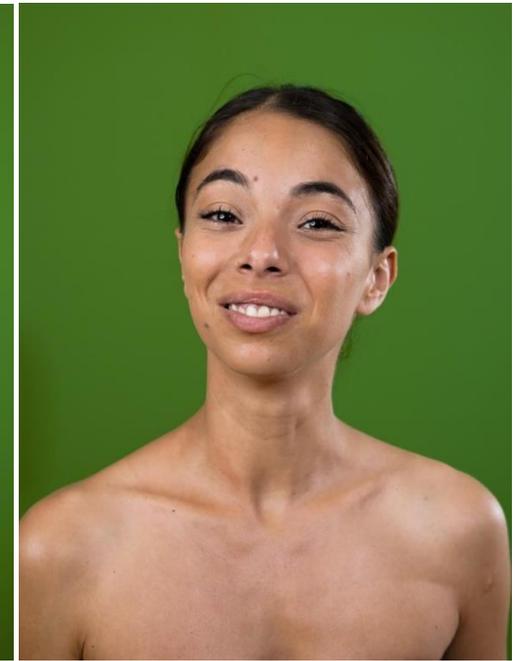
People who are inquisitive are possessing the following attributes:

- they tend to be more optimistic than their less curious counterparts.
- they find their own entertainment.
- they are willing to make mistakes and are open to correction.
- they like to dialogue.
- they like to learn.
- they are easily motivated.
- they are empathetic.
- they think creatively.

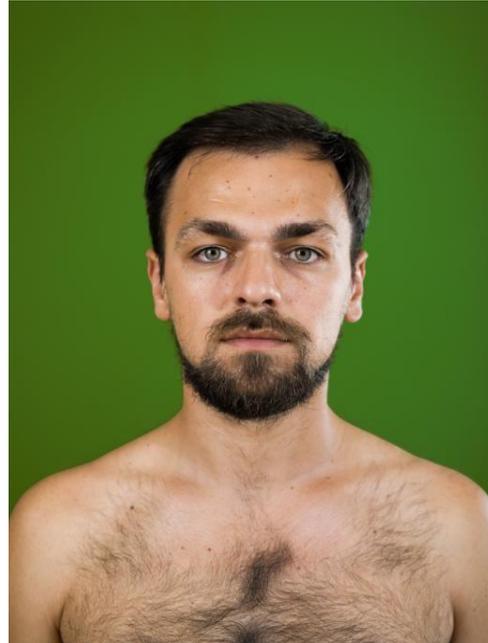
For all his achievements, Albert Einstein, one of the most inventive minds in history, is known to have said, "I have no special talent; I'm just passionately curious." This is true, not only for him, but also for any other person who has achieved remarkable things in this world, because curiosity is where it all begins.



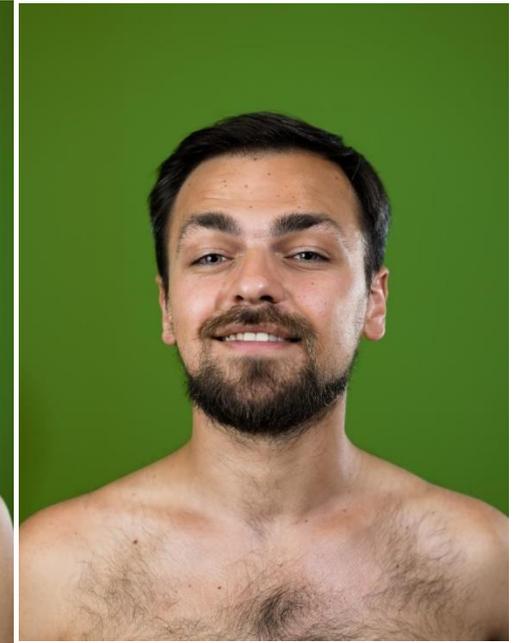
**NEUTRAL**



**INQUISITIVE**

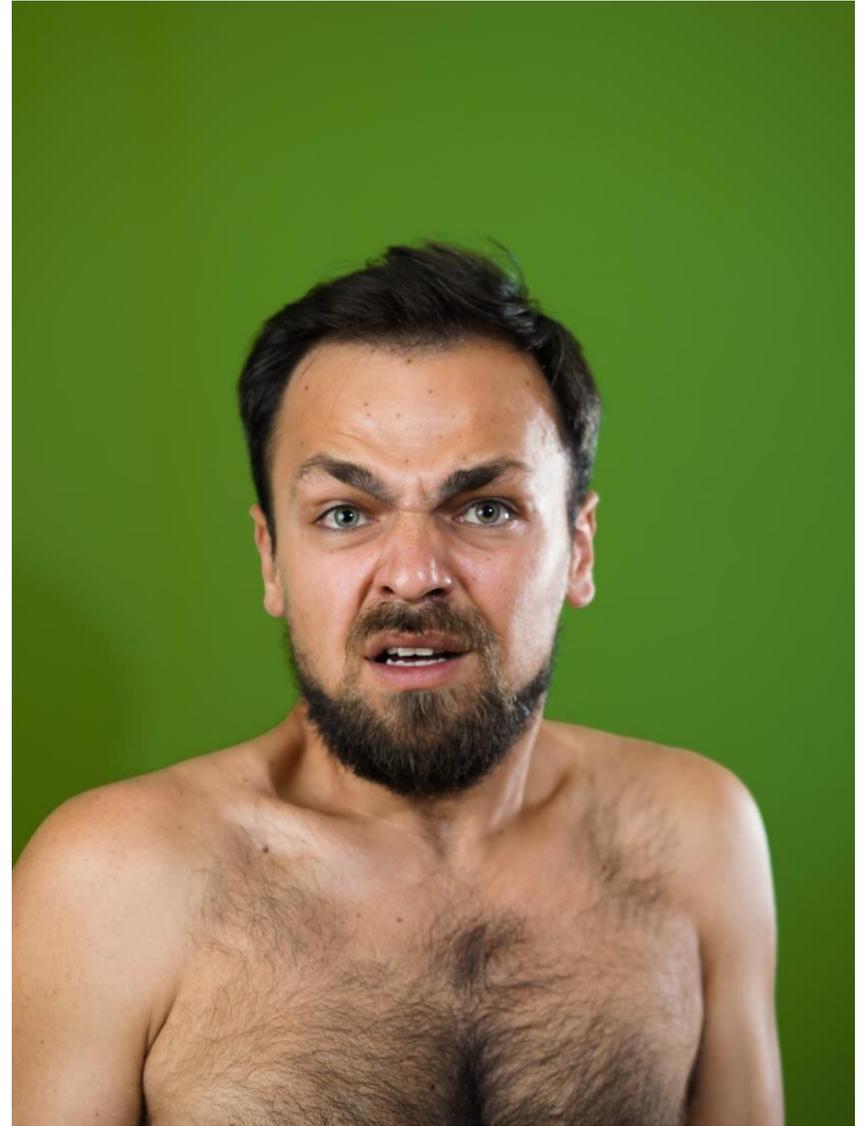


**NEUTRAL**



**INQUISITIVE**

## 78. THREATENED



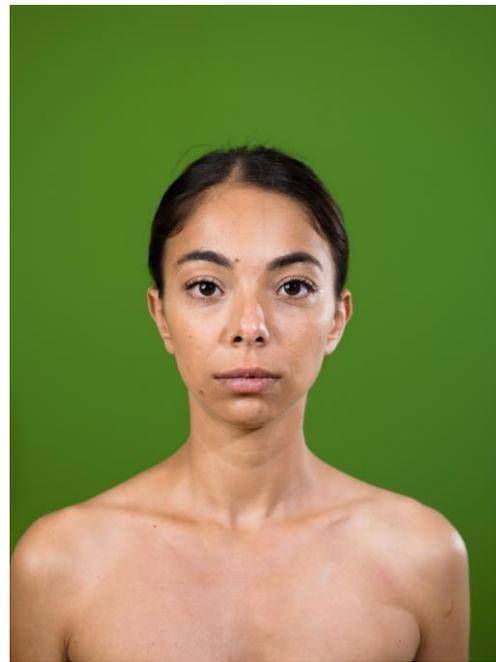
Someone that is vulnerable or at risk; endangered because of something/someone.

In a situation in which loss of life or serious harm is possible.

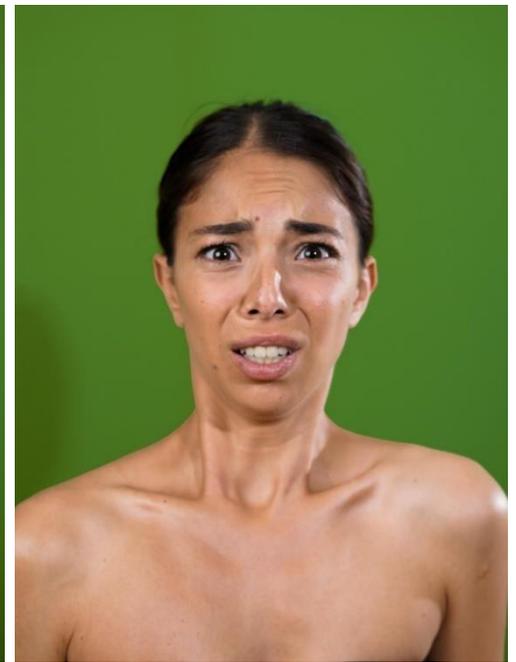
Something that threatens makes its danger known. Storm clouds threaten rain, and bullies threaten other kids.

Unfortunately, there are lots of people and things that threaten - it's a dangerous world. If someone threatens you with violence, you should call the police. The police may then threaten the criminal with arresting them.

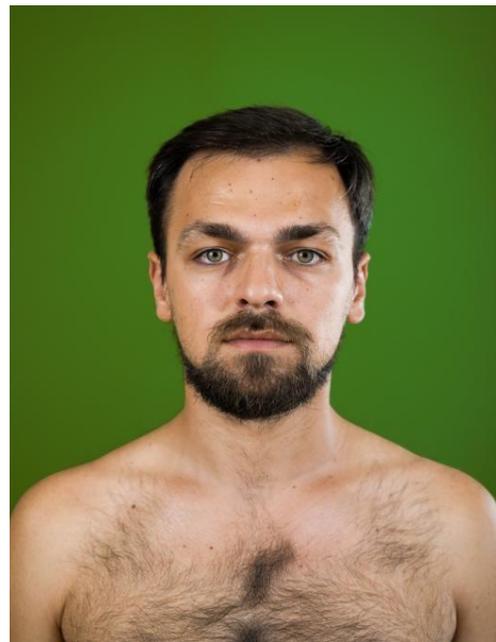
Nations threaten each other before going to war. You can also say a dangerous situation is threatening, like gloomy weather. Sometimes this word is used more lightheartedly, like if an old friend threatens to hug you to death.



**NEUTRAL**



**THREATENED**

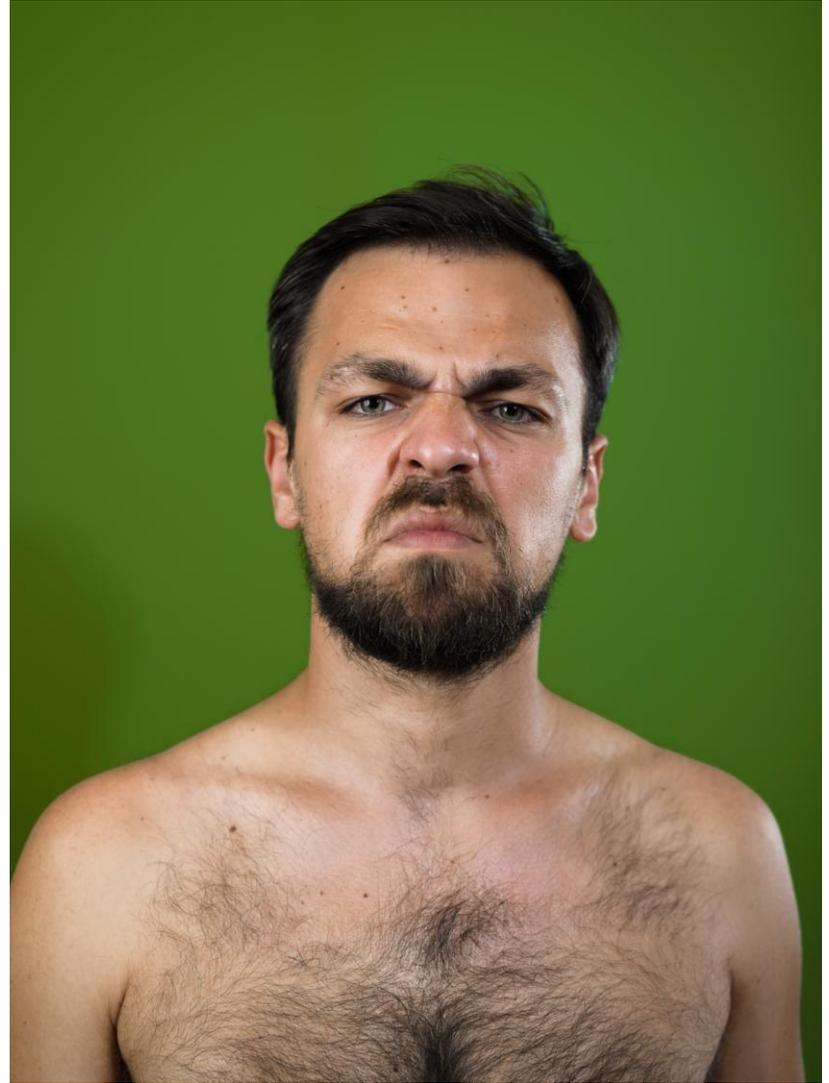


**NEUTRAL**



**THREATENED**

## 79. CONTEMPTUOUS

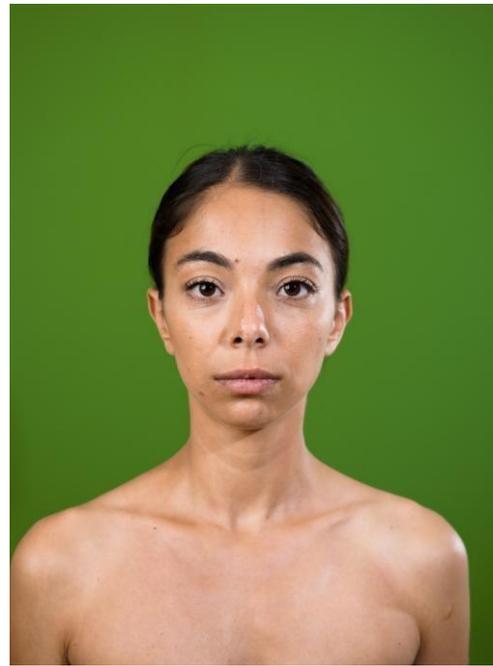


Contemptuous, expressing or showing contempt.

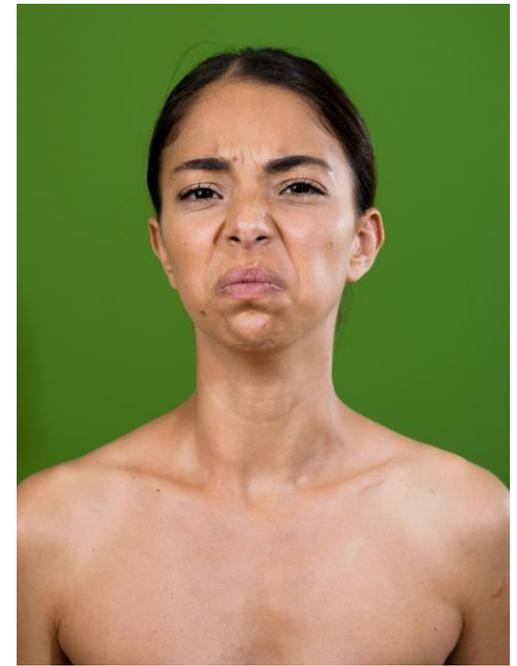
Contempt differs from other hostile emotions by combining disgust with disrespect. The disgust component is not the kind of disgust that most people feel when they smell vomit or look at rotting flesh infested with maggots, but rather social disgust - the kind of disgust that most people feel about social practices like cannibalism, body suspension, incest, zoophilia, female circumcision, the practice of eating the placenta after birth or traits such as greed, laziness and opportunism.

But you can feel disgust at a person's practices or traits without feeling contempt for them. For example, you might find your keto friend's eating excessive amounts of meat disgusting, but don't disrespect them. But if you're a committed vegetarian, watching your friend devour the huge amount of fatty meat piled on his plate might make you feel contempt for him.

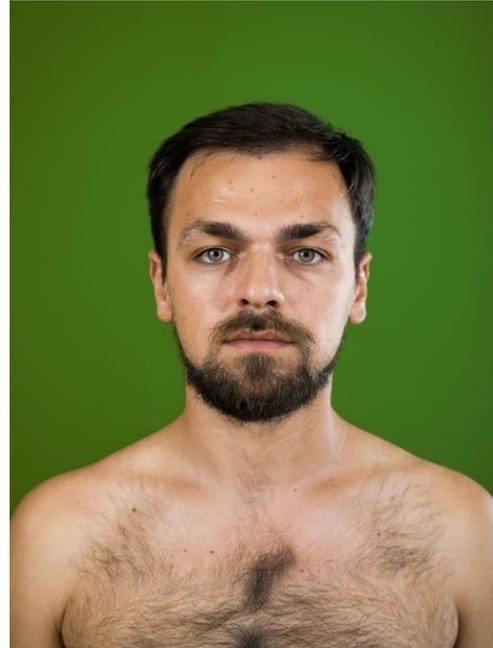
Contempt is too often an irrational response to other people's traits or practices. People may be the target of scorn because they are seen as poor, uneducated, disabled, stupid, lazy, obese, nerdy, awkward, clumsy, arrogant, or lacking in competence or status, or because they engage in unfamiliar or embarrassing social practices.



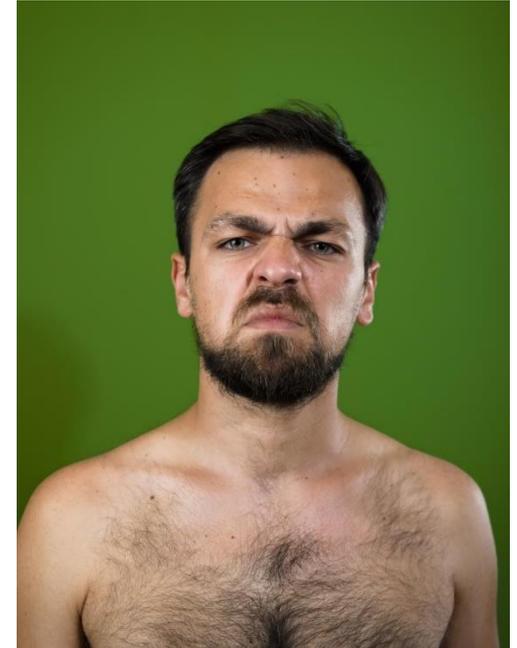
**NEUTRAL**



**CONTEMPTUOUS**

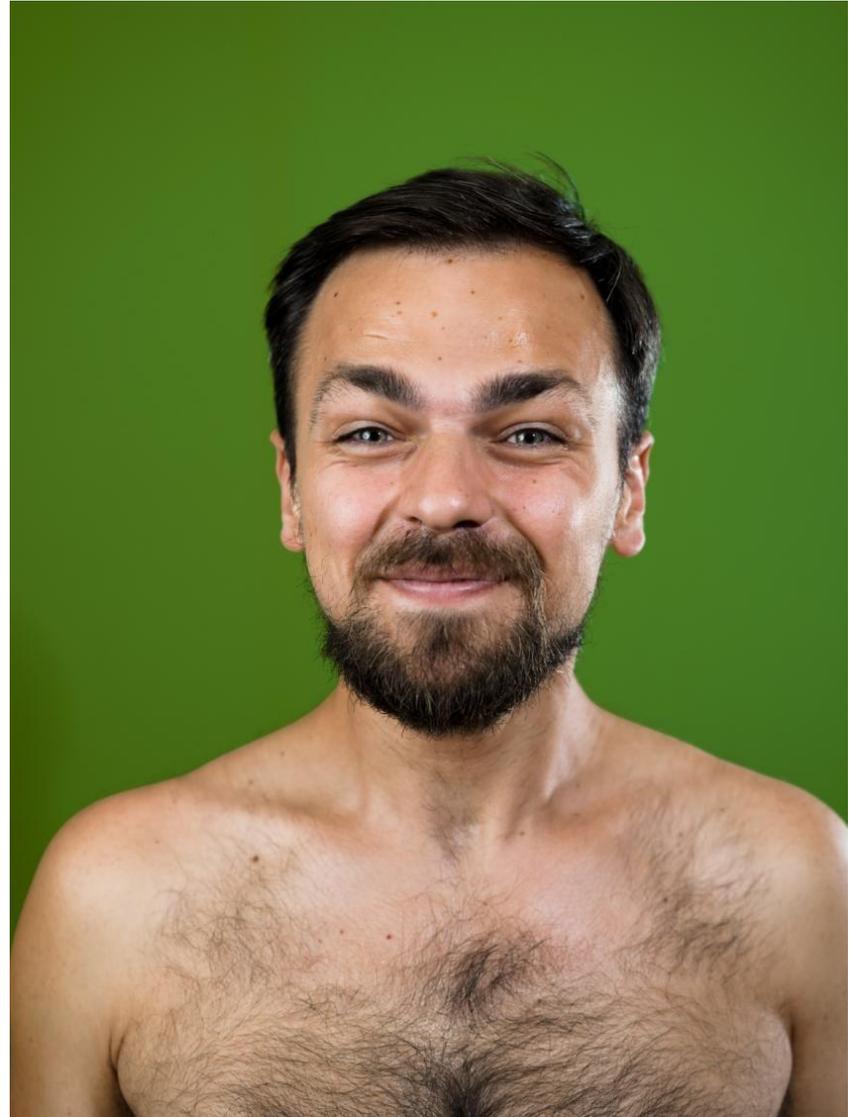


**NEUTRAL**



**CONTEMPTUOUS**

## 80. PLAYFUL



Who likes to play, to dance. Person who moves quickly and is capricious; lively, lively, cheerful.

Being playful is a personality trait that is expressed differently in people. "Particularly playful people face boredom with difficulty. They manage to turn almost any everyday situation into a fun or personally engaging experience," explains Professor René Proyer, psychologist at MLU. For example, they like word games and mind games, are curious or just like to play.

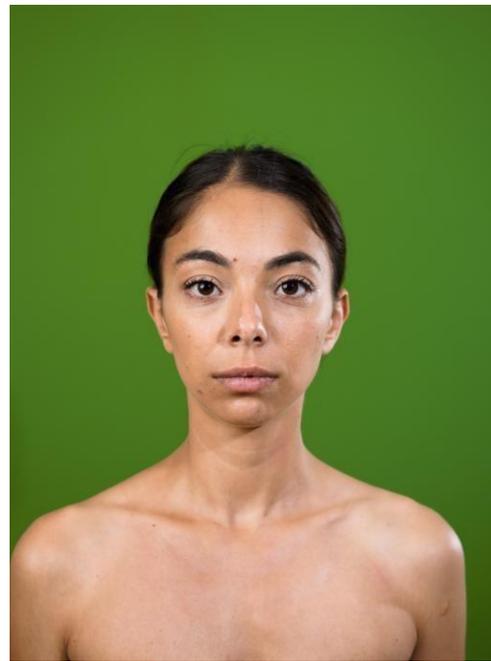
According to Proyer, this does not mean that these people are particularly stupid or frivolous. On the contrary, previous studies by MLU researchers have shown that adults can put this inclination to positive use in many situations: they have an eye for detail, they easily adopt new perspectives and can make a monotonous task interesting to them.

The trait has been linked to good observational skills and even the ability to see situations from a new perspective or turn monotonous tasks into something interesting.

The game should not be confused with humor, explains the team from the Luther University Halle-Wittenberg in Germany.

In adults, they say, it's a poorly studied trait that requires a new vocabulary just to describe it.

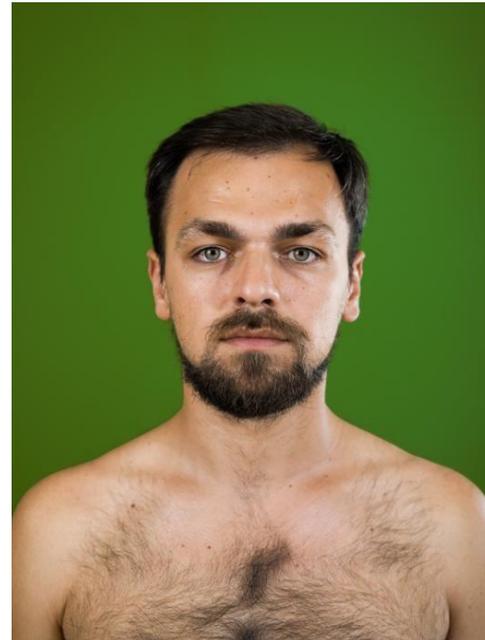
"Patterns of play from childhood were often transferred to adults," said Dr. René Proyer.



**NEUTRAL**



**PLAYFUL**



**NEUTRAL**



**PLAYFUL**

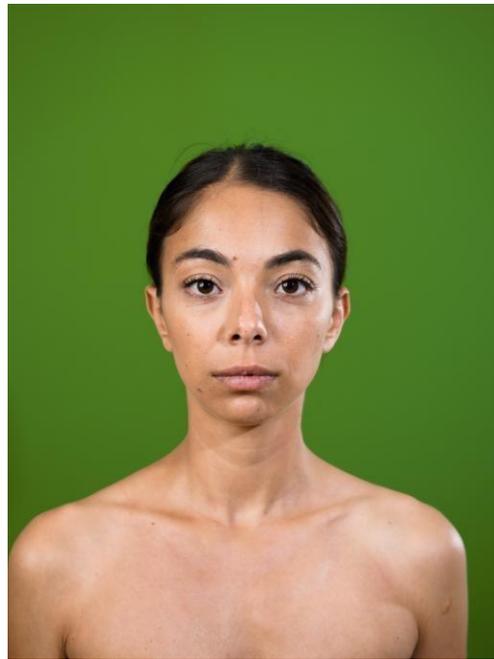
## 81. ENAMORED



To fall in love with someone, to start loving someone; to fall in love, to fall in love. Feeling of affection for someone or something.

When falling in love, analyzing the flow of neurotransmitters may be the last thing on one's mind. However, its role is central when falling head over heels for someone. Fry's recent research has followed both violent behavior as well as peace across cultures. He said that the association of passion and romance to lasting love in Western culture is not shared in every society.

Second, comes attraction. According to the Neuroendocrinology of love, a study done by the National Institute of Health, this stage is mediated by hormones of stress and reward, which results in an increased heart rate. This mix is meant to solidify bonds between mammals. Oxytocin, specifically, is released in large amounts to new mothers, increasing chance of survival for all members of a family unit. The process of imprinting combines both a person's experiences and their own personal chemistry, the study said.



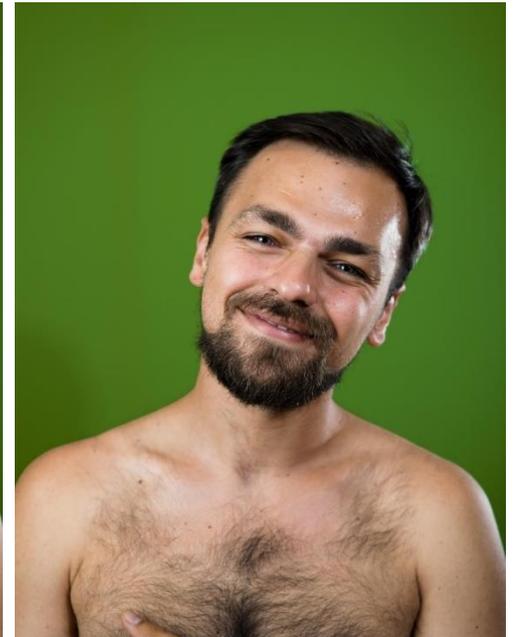
**NEUTRAL**



**ENAMORED**

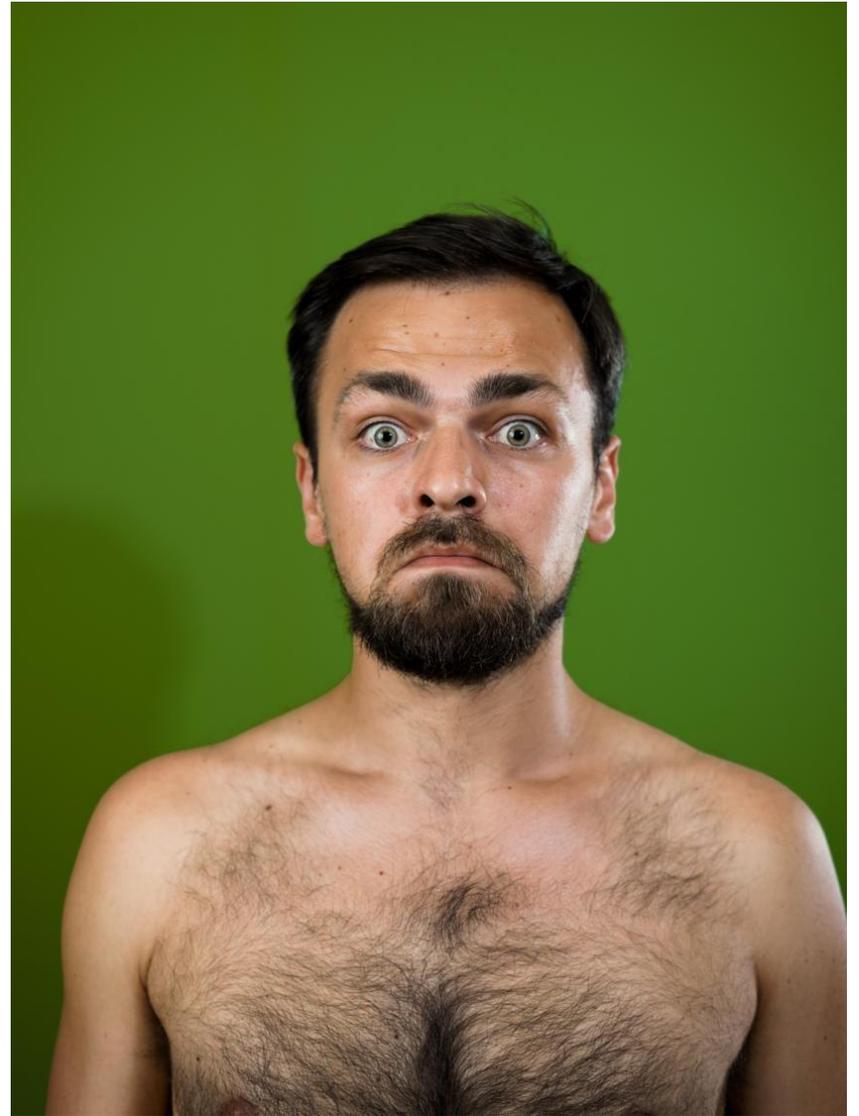


**NEUTRAL**



**ENAMORED**

## 82. SPEECHLESS



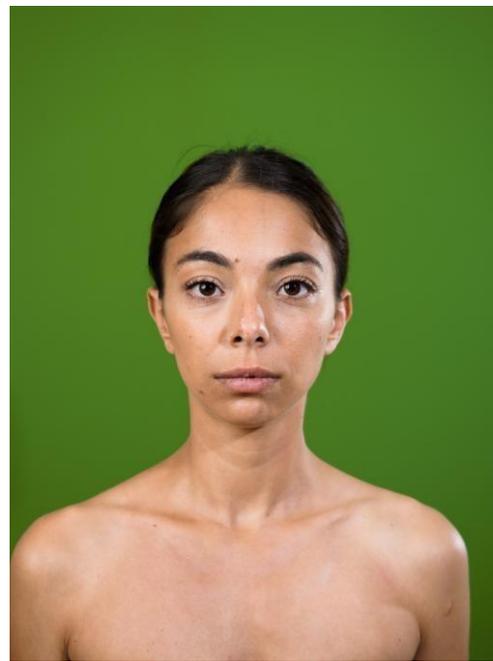
Who cannot speak, who is speechless and can no longer express himself verbally.

Stuck in a news cycle that seems particularly shocking? Reacting to a bizarre bit of gossip? When life throws you for a loop, what exactly do you say? Chances are, nothing! Sometimes we're caught unprepared, and even though you have thousands of words at your disposal, none of them seem quite right.

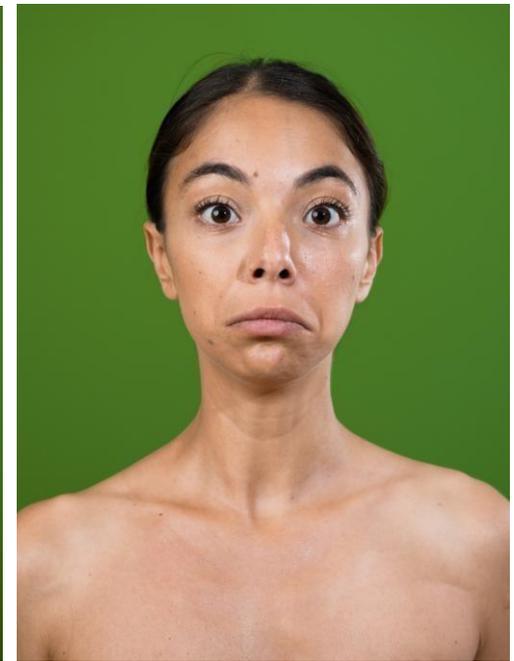
Speechlessness, however, comes in varying, nuanced forms. Here are some of the most useful synonyms for speechless you can add to your arsenal. Maybe you'll remember them the next time you scan the headlines.

If you're speechless, you can't talk, usually because something surprising and crazy happened. You might be rendered speechless if you win the lottery or find a whale on your front lawn.

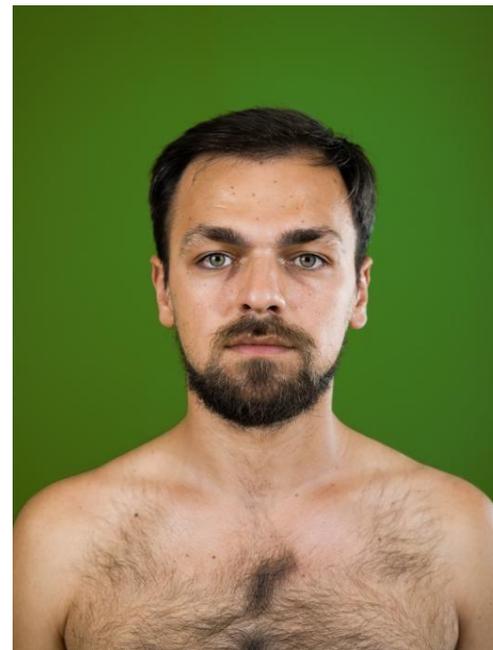
When you're speechless, you're at a loss for words. For example, people often say things like "I was speechless when I received the news about my brother!" or "The music left me speechless!" It's an exaggeration. People use speechless in these cases to show how stunned or moved they were, even though they were probably still capable of speech. "I'm speechless" often really means "I'm shocked!"



**NEUTRAL**



**SPEECHLESS**

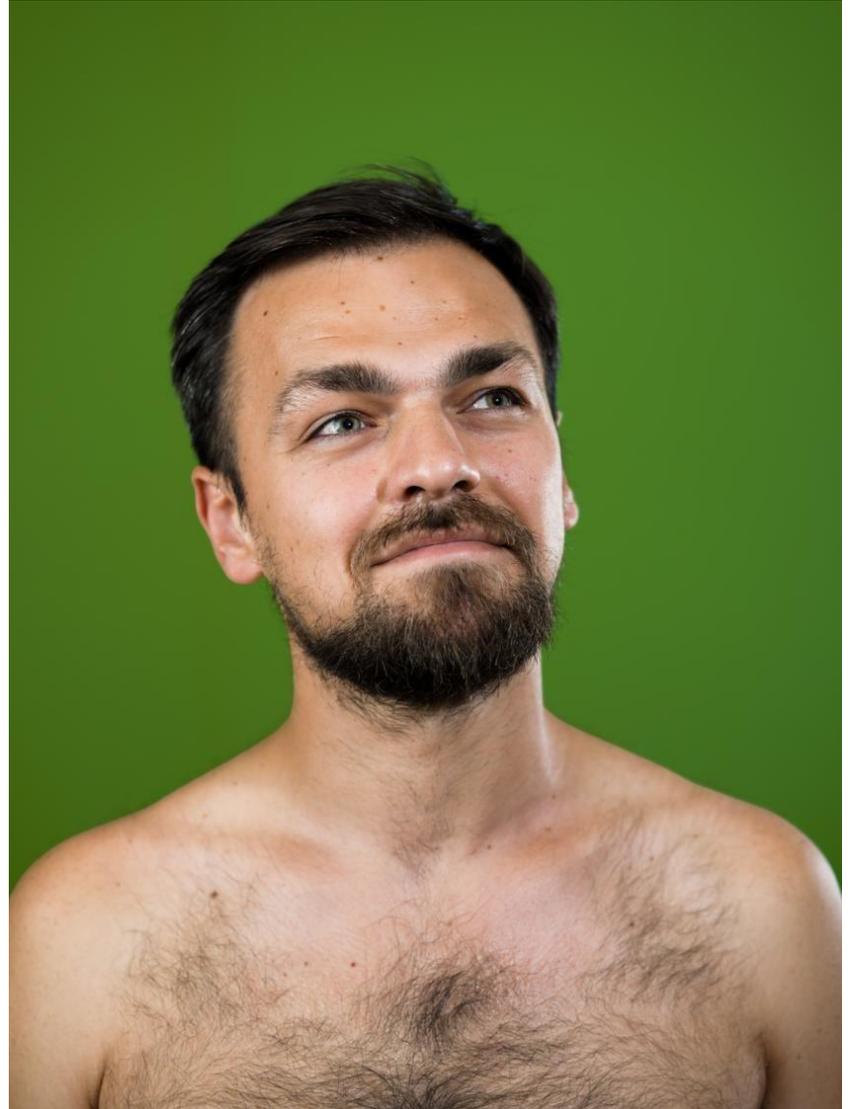
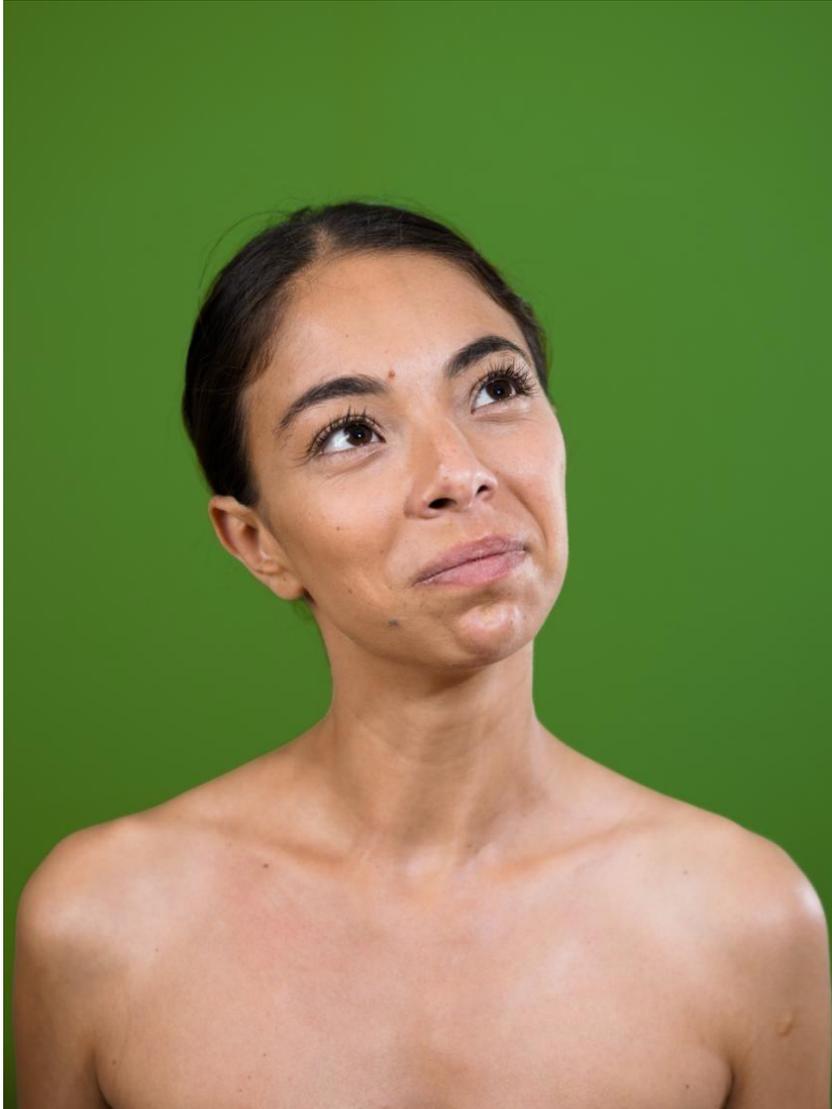


**NEUTRAL**



**SPEECHLESS**

### 83. NOSTALGIC

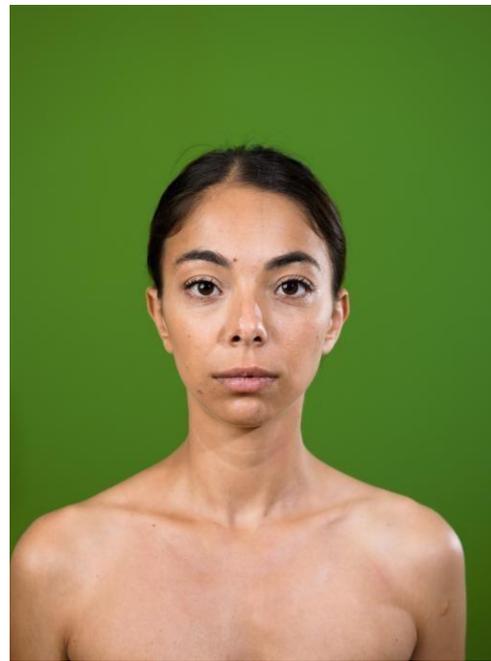


Full of nostalgia, which predisposes to nostalgia. Feeling of sadness, of melancholy caused by the desire to revisit a loved place, a close person or to relive an episode from the past.

Recent work has built from this contemporary conceptualization to elucidate dynamic functions of nostalgia. Initial research found negative affect and loneliness to be specific catalysts of nostalgic reverie (*Wildschut et al., 2006*), inspiring subsequent forays into the possibility that nostalgia functions to restore positive moods and feelings of social connectedness.

Consistent with this possibility, experimental inductions of nostalgia increase positive affect and feelings of affiliation (*Wildschut et al., 2006; Wildschut, Sedikides, Routledge, Arndt, & Cordaro, 2010*). Research has also shown that nostalgia confers more direct benefits to the self by amplifying explicit self-esteem (*Wildschut et al., 2006*) and buffering individuals from the negative impact of existential threats on perceptions of meaning in life, deathrelated anxiety, and associated defenses (*Juhl, Routledge, Arndt, Sedikides, & Wildschut, 2010; Routledge, Arndt, Sedikides, & Wildschut, 2008*).

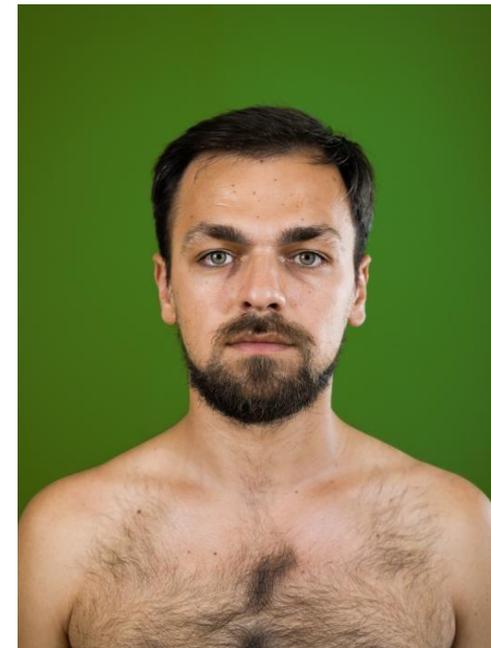
This research has notably contrasted the effects of nostalgia with relevant control topics, including: autobiographical memories for ordinary events (*Routledge et al., 2008*) and memories for positive past events (*Hepper, Ritchie, Sedikides, & Wildschut, 2010*).



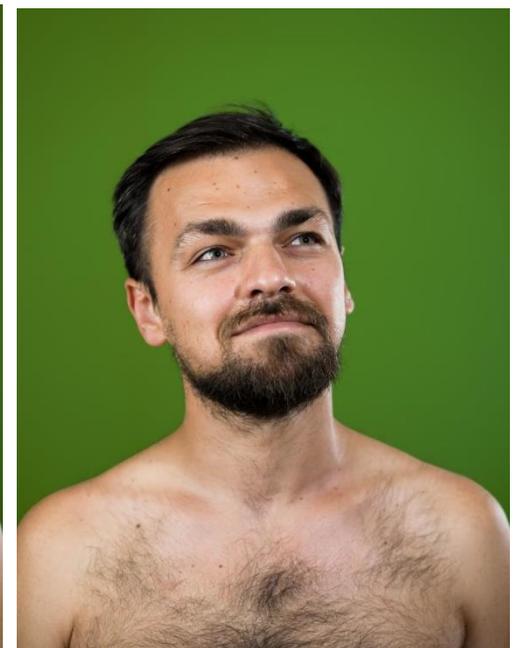
**NEUTRAL**



**NOSTALGIC**

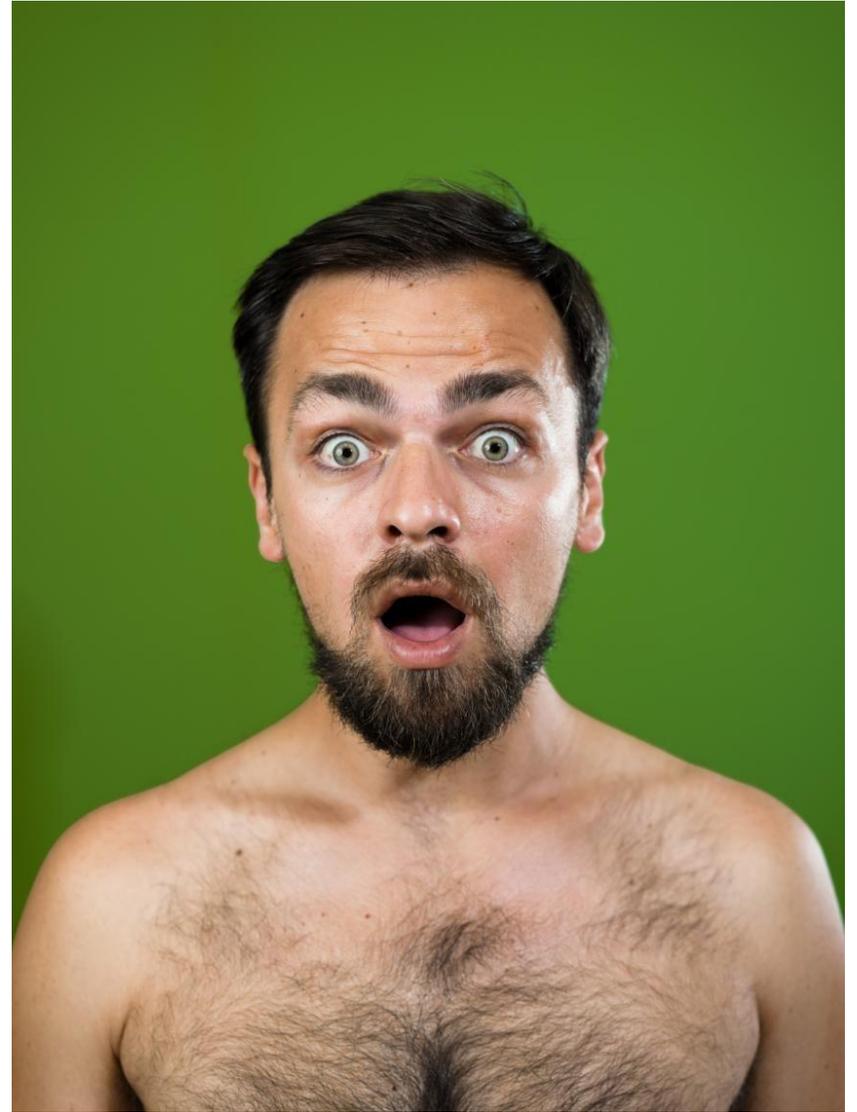


**NEUTRAL**



**NOSTALGIC**

## 84. SHOCKED



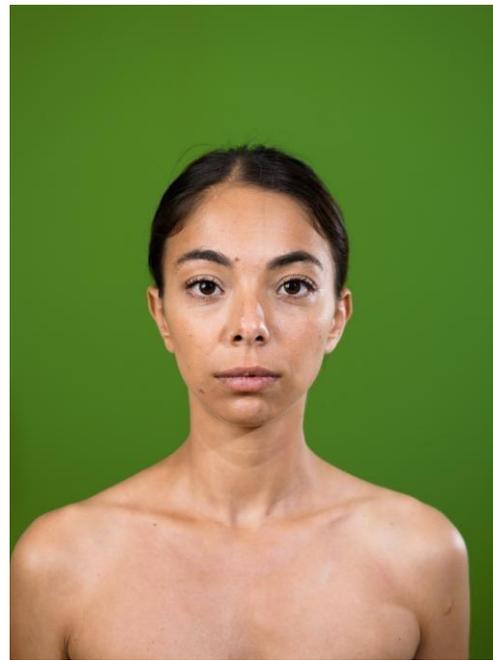
Lingering upset after experiencing a traumatic or fear-inducing event

Physical signals and behaviors: taking a step or two back, eyes widening or bulging, body movements that freeze momentarily, becoming speechless, rapid blinking as one tries to process what one has seen or heard, the mouth falling open, raising the eyebrows, one's head drawing back quickly, covering one's mouth with the palm, a shaky or disbelieving voice, not knowing where to look; a wandering gaze that doesn't settle.

When faced with an intense stressor, you may experience a rush of overwhelming emotions that you are not ready to understand or respond to, which can cause your body to go into a state of shock, Dr. Daramus explains.

Emotional shock is often part of the fight or flight response, a normal but painful way your brain reacts to something it sees as a threat to your well-being,<sup>2</sup> according to Dr. Daramus. When your brain is unable to process the situation, it freezes in an effort to protect your mind and body. Emotional shock may be accompanied by a range of physical and emotional symptoms.

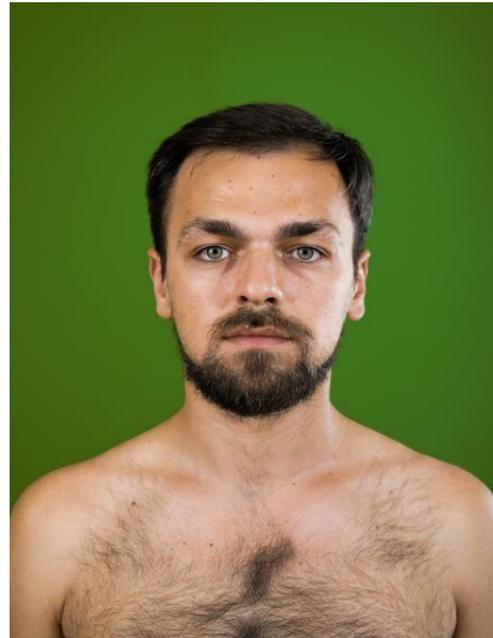
Someone who's shocked is unpleasantly surprised. A shocked audience might gasp and cover their faces as the sword swallower begins to actually swallow a sword.



**NEUTRAL**



**SHOCKED**

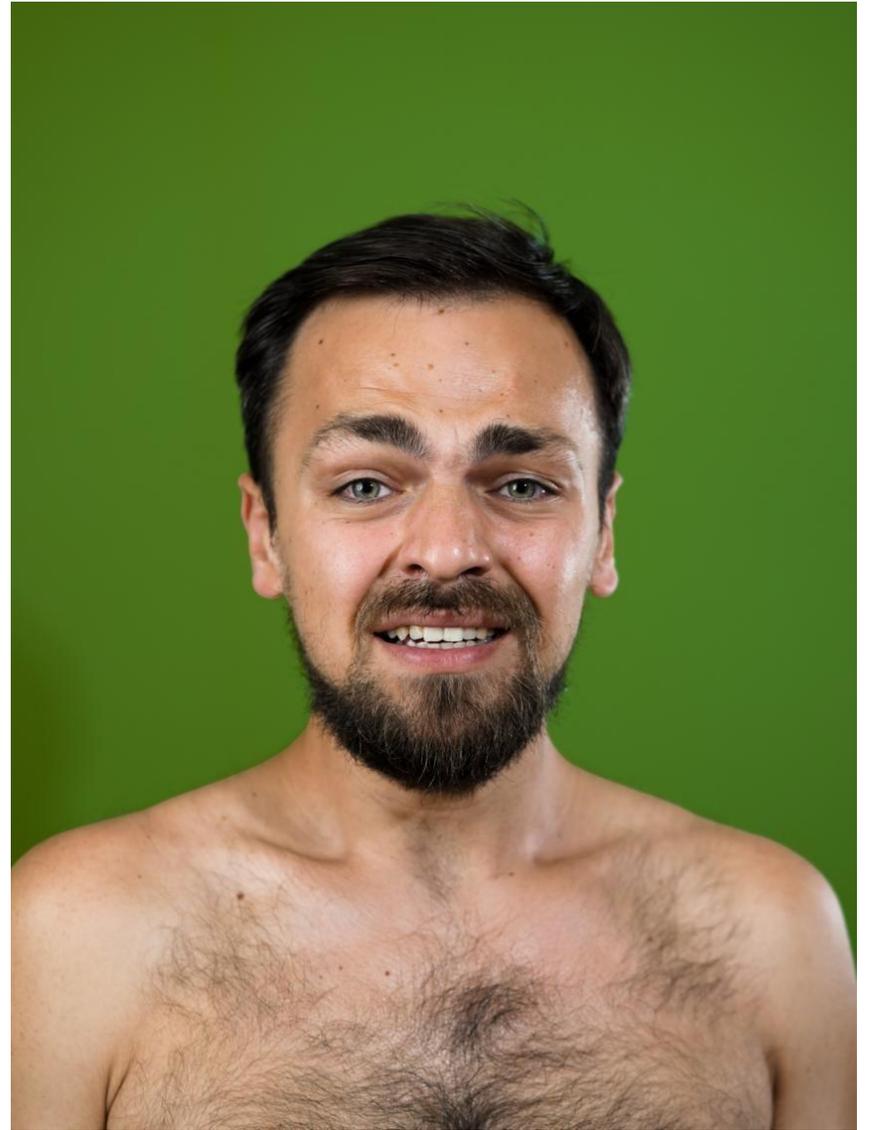
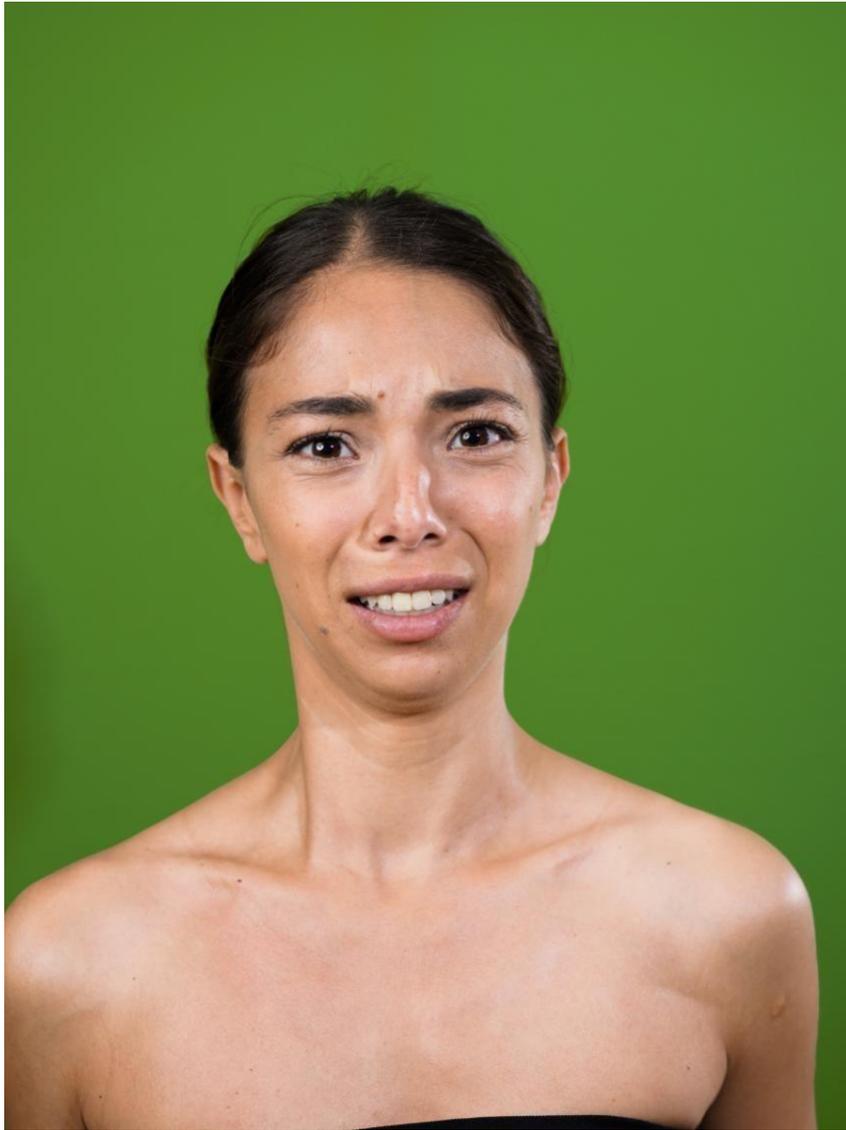


**NEUTRAL**



**SHOCKED**

## 85. FRIGHTENED

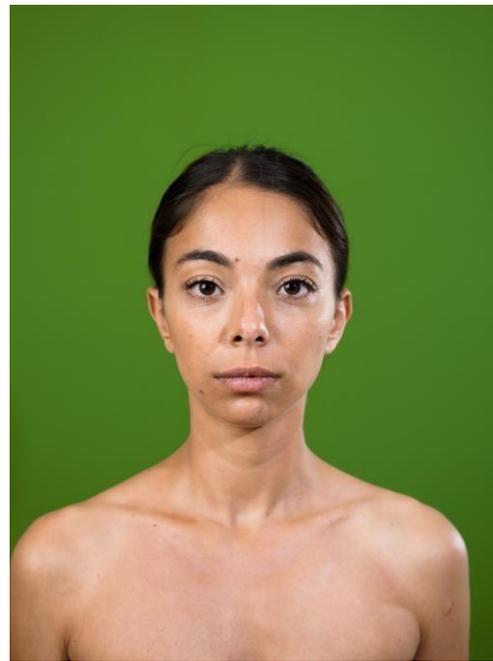


Filled with fear; frightened, afraid; which expresses fear.

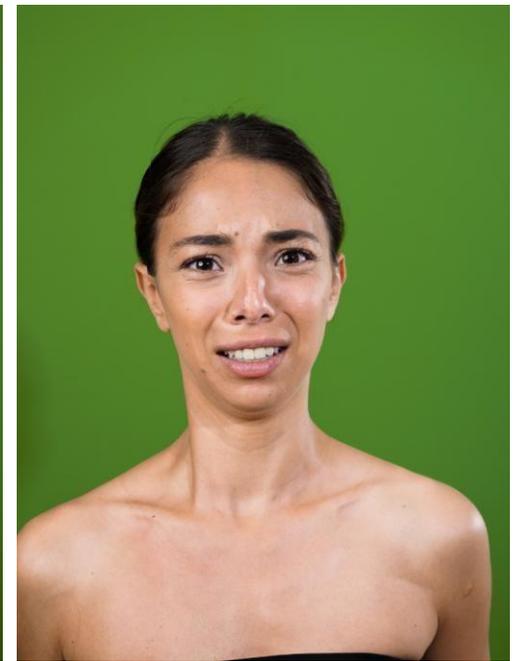
When our facial expression shifts to one of eye-bulging, nostril-flaring fear, our ability to sense attackers or other imminent danger improves dramatically, researchers found, "Fear expressions open up the face and expose the sensory surfaces, whereas disgust does the opposite, it's a protective wincing. Fear is about vigilance and disgust is rejection," said Anderson.

Someone who's frightened is scared or anxious. A frightened camper might tremble with fear as she listens to the scary campfire stories her counselor tells.

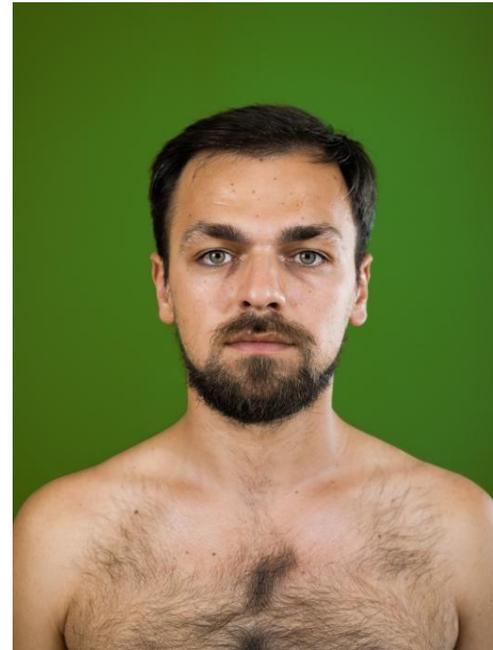
When you're frightened, you feel fearful - you might be frightened of thunderstorms or frightened of strange dogs. A frightened airplane passenger might panic and cause other people to become frightened. The adjective comes from frighten - before the 1660s, the verb was instead fright. All of these words share an Old English root, fyrhtu, "fear, dread, trembling, or horrible sight."



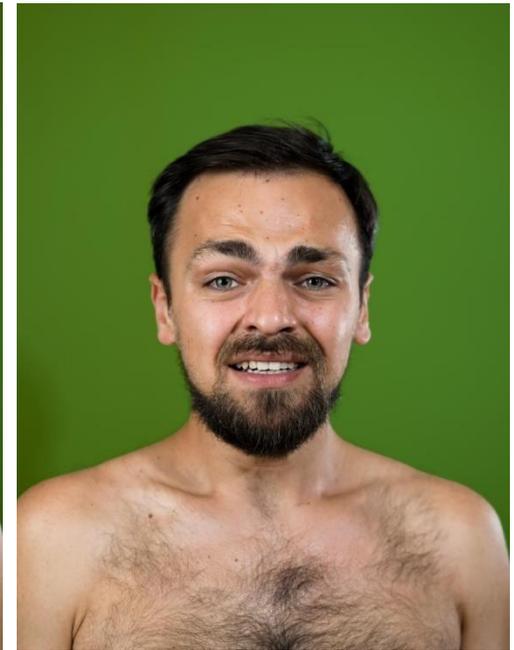
**NEUTRAL**



**FRIGHTENED**

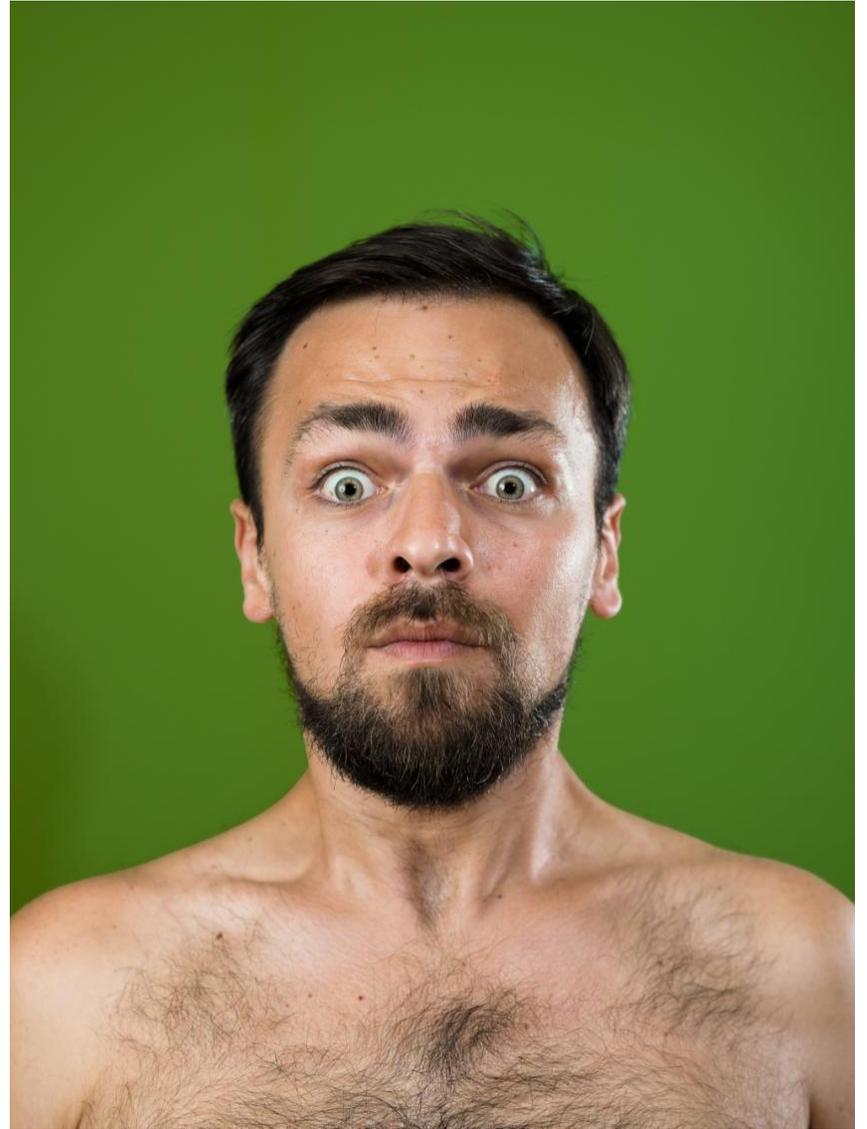


**NEUTRAL**



**FRIGHTENED**

86. PANICKED

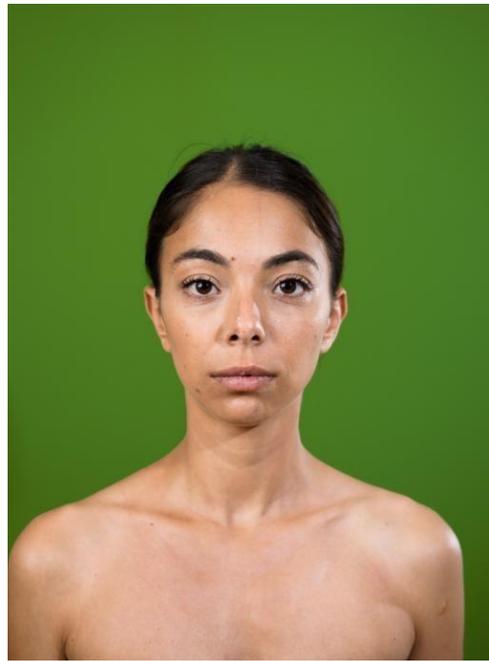


Who is panicked. Sensation of violent fear that suddenly (and often without reason) grips a person or a group.

A sudden and incapacitating fear that produces neurotic or illogical behavior.

Physical signals and behaviors:

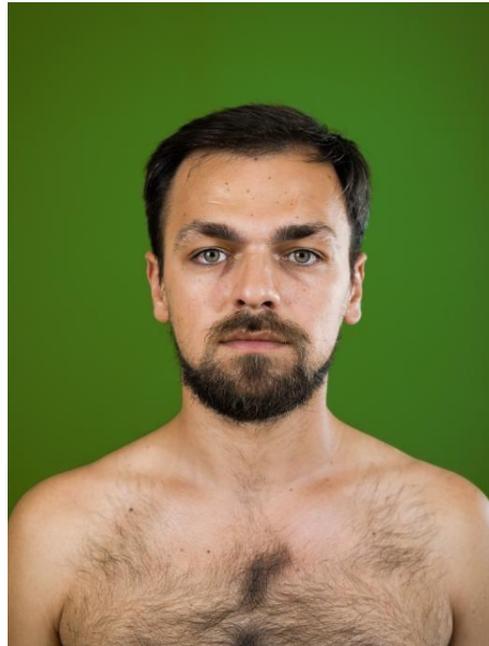
- quick, shallow breathing
- eyes that are wide, with white showing around the whole iris
- hyperventilating
- squeezing the eyes shut
- clenching and unclenching the fists
- folding the body over and making oneself small
- rubbing at one's throat
- veins standing out in one's neck
- loosening a tie or unfastening collar buttons
- involuntary moans or whimpers
- being on edge (jumping at sounds, difficulty concentrating, etc.)



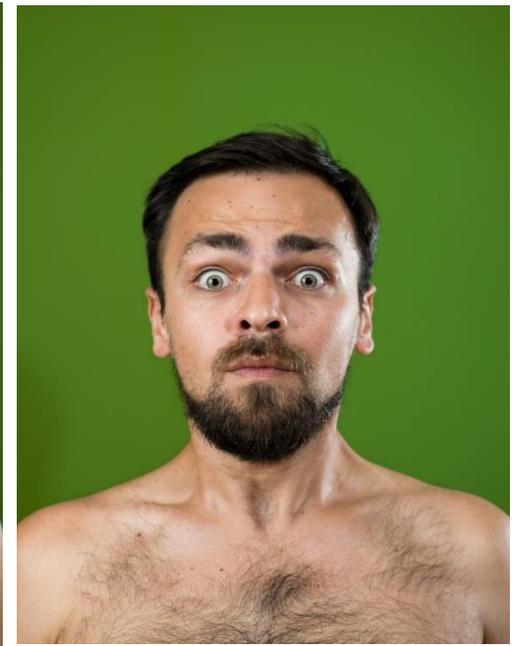
**NEUTRAL**



**PANICKED**

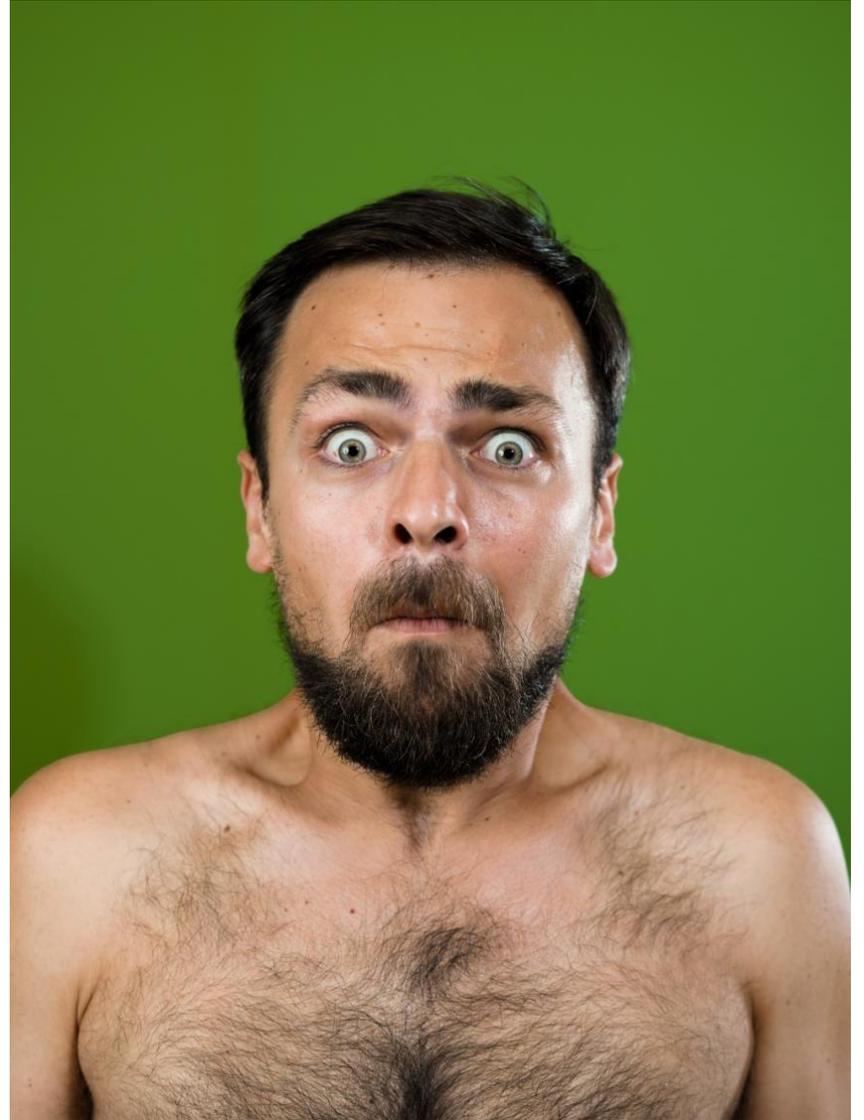


**NEUTRAL**



**PANICKED**

## 87. HORRIFIED

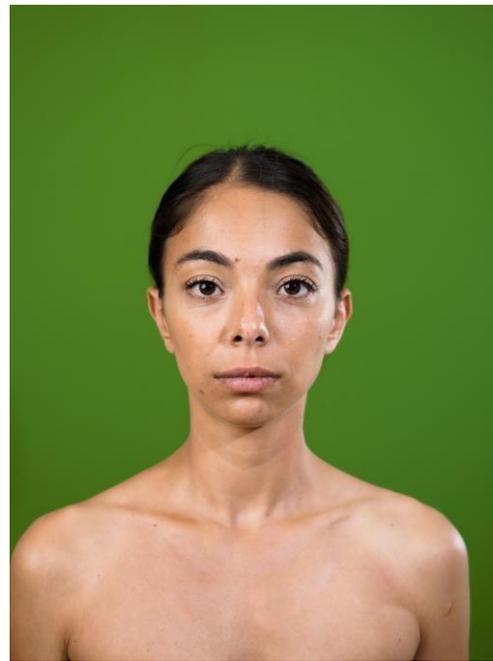


A person gripped by terror. Filled with horror; extremely shocked.

Differs both from fear and from terror, though more nearly allied to the last than to the first. It is superior to both in this, that it is less selfish, less imbued with alarm, and is more sympathetic, having in contemplation the feelings of others, rather than a strict and immediate relation to our own individual suffering.

We are struck with horror even at the spectacle of artificial distress, but it is peculiarly excited by the danger or actual suffering of others. We see a child under a waggon wheel, and in danger of being crushed by the enormous weight, with sensations of extreme horror. Horror is full of energy: the body is in the utmost tension, not unmanned as with fear.

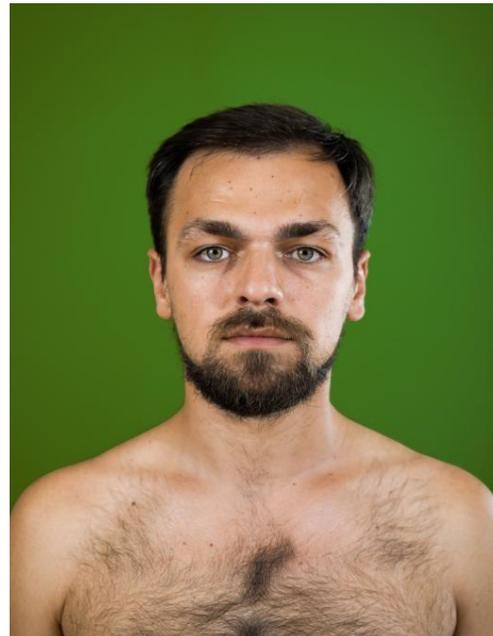
A sensation of cold seems to chill the blood; the term is applicable damp horror;" the flesh creeps, and we feel that peculiar sensation which gives its name to the emotion.



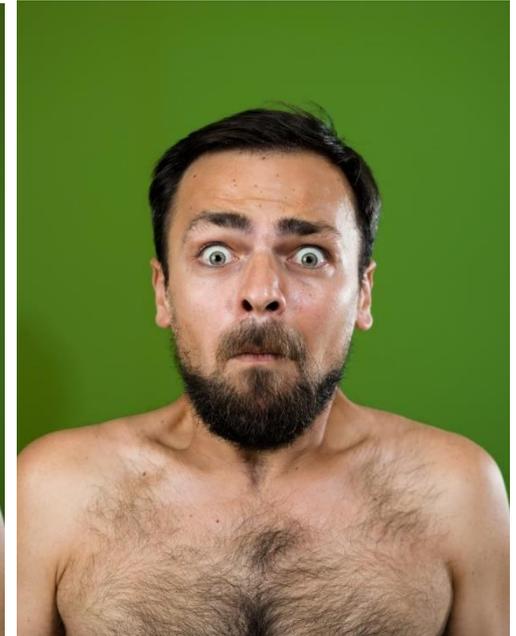
**NEUTRAL**



**HORRIFIED**

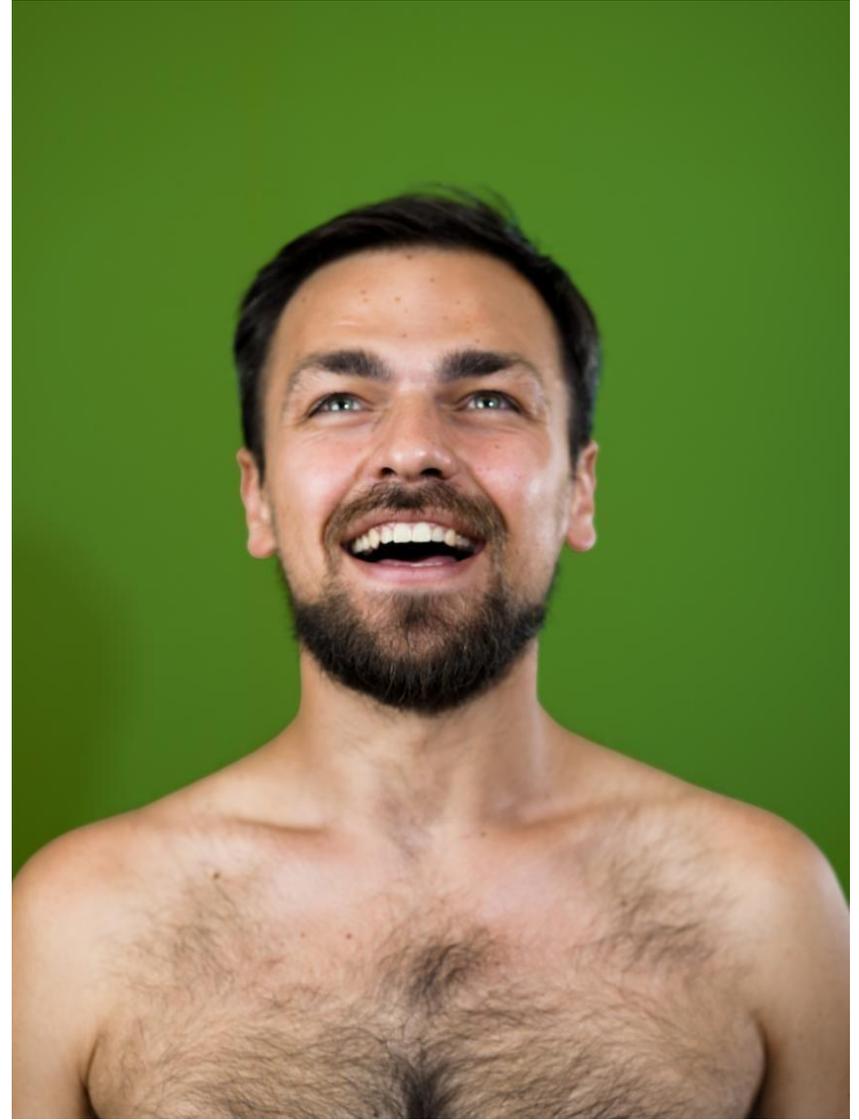


**NEUTRAL**



**HORRIFIED**

## 88. EUPHORIC



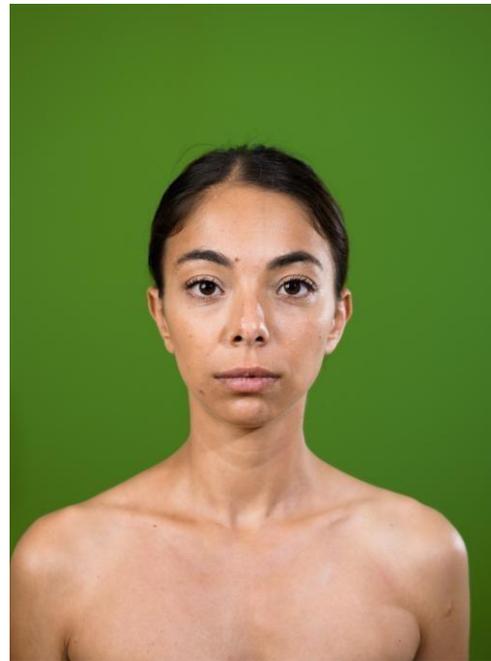
A transcendent state of intense pleasure, happiness, and well-being

Physical signals and behaviors:

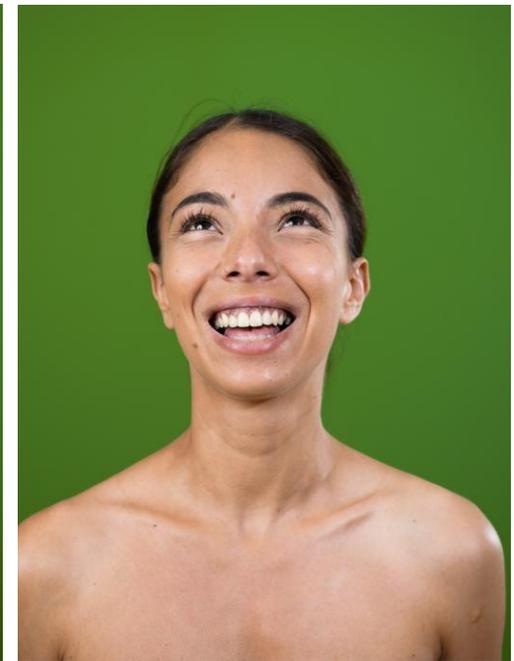
- unrestrained smiling or laughter
- one's head tipping back and the eyes closing
- the mouth opening in wonder
- eyes going as wide as they can
- thrusting the chest out and up
- letting out a gasp
- all tension leaving the body
- repeatedly laying a hand on the chest and lightly pressing down
- pulling in deep breaths and holding them before releasing them
- becoming more affectionate (hugging, touching, etc.)

Euphoria is a joyful, elevated mood, giving the individual a sense of well-being, contentment, often not corresponding to objective circumstances. In people in a state of euphoria, an optimistic assessment of the entire surrounding reality prevails, and the opposite state - affectation is not available to them.

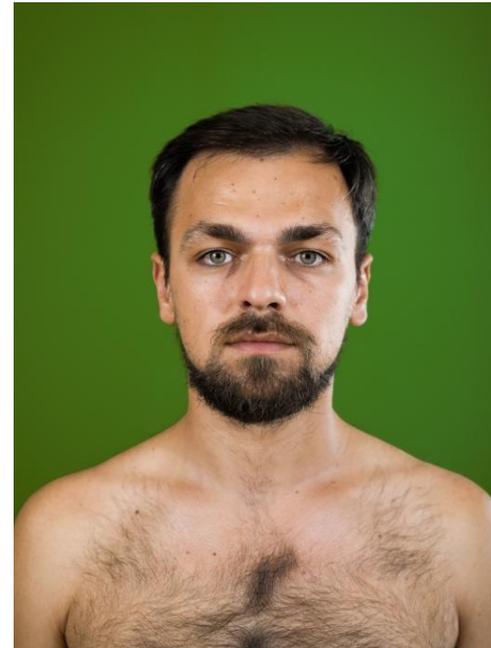
Euphoria is combined with an accelerated flow of thoughts, marked by imaginative fantasies, unproductive but vigorous activity, slowness of mental processes, disinhibition of impulses, lethargy, passivity, lack of motivation.



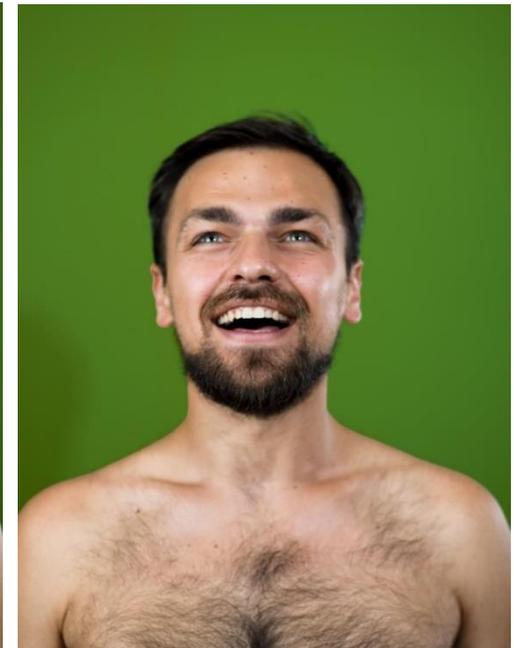
**NEUTRAL**



**EUPHORIC**

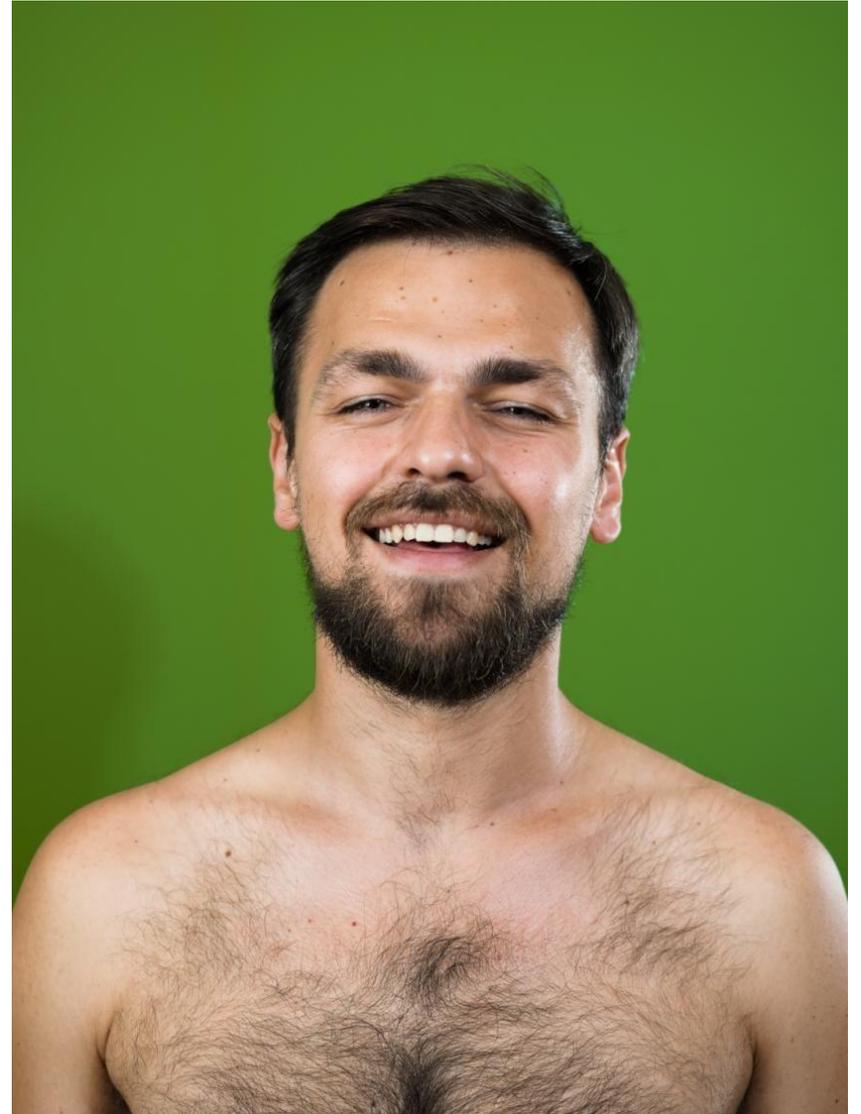


**NEUTRAL**



**EUPHORIC**

## 89. SATISFIED



The state of being content or fulfilled.

Physical signals and behaviors:

- A high chin and exposed neck
- A crisp nod
- Arms crossed
- Smoothing the front of a shirt or tugging down the sleeves
- Offering a “thumbs-up”
- Giving a toast or praise
- Clapping someone on the back
- A wide stance, fists on hips, elbows wide
- Surveying the finished product with a pleased expression
- A raised eyebrow and a See? look
- A sleek walk that draws the eye (catlike, deliberate)

Contentment is an emotional state of contentment that can be seen as a mental state that results from being at ease in one's situation, body, and mind.

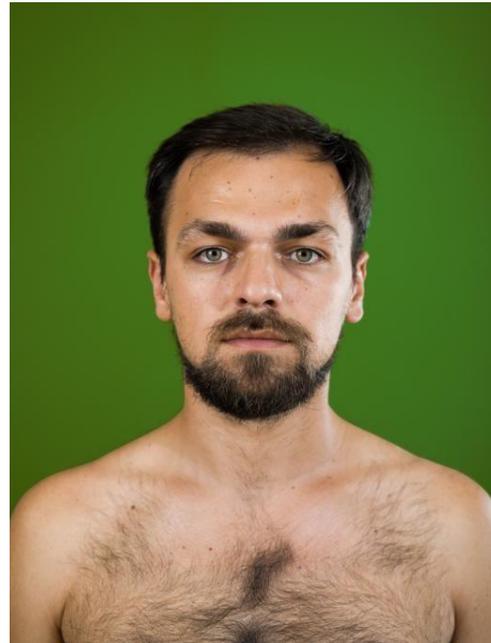
Colloquially speaking, contentment could be a state of acceptance of one's situation and is a milder and more tentative form of happiness.



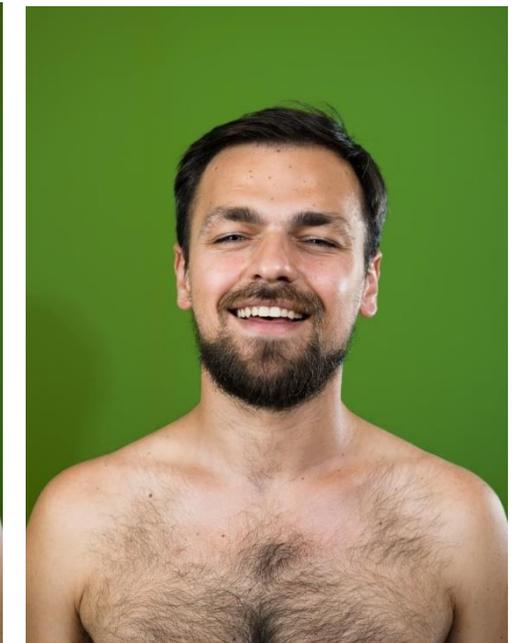
**NEUTRAL**



**SATISFIED**

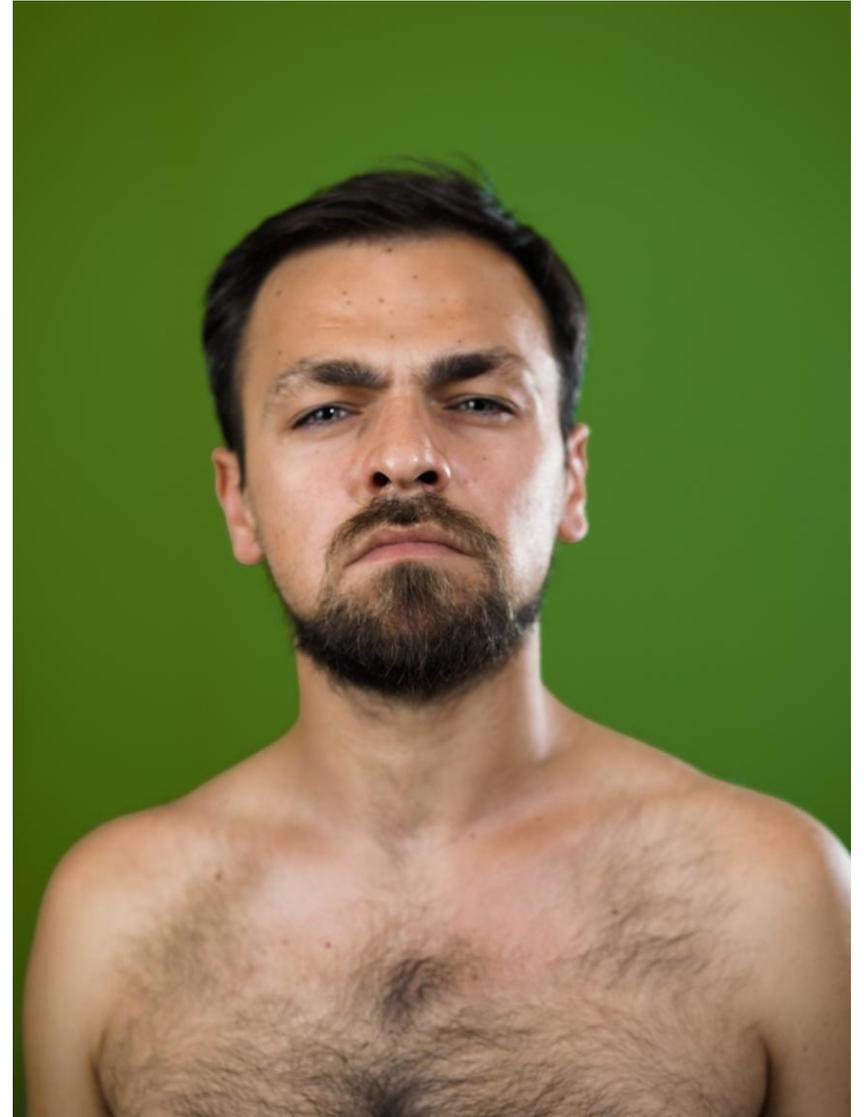


**NEUTRAL**



**SATISFIED**

## 90. ENVIOUS

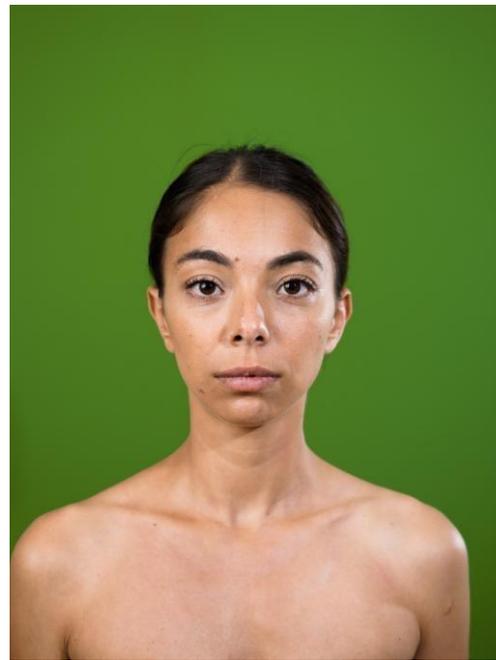


Who feels envy, possessed by envy, who betrays envy.  
Selfish feeling of regret, trouble, spite, caused by another's successes or good fortune.

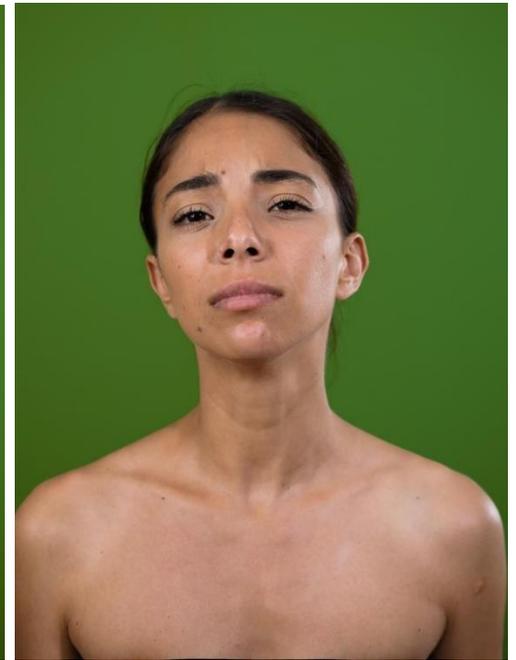
Envious is another way to say jealous or resentful - in other words, you want what someone else has, whether it's charming good looks or the last chocolate frosted donut.

Once upon a time, envious meant "eager to emulate." Now adays this adjective is used to describe covetous feelings or a state of painful desire.

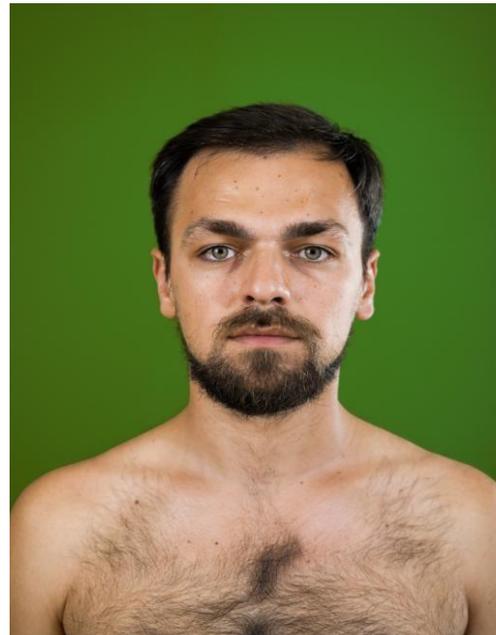
Envious usually isn't a good thing to be; it's better to let it go and be happy with what you've got. Just remember the words of the wise Greek philosopher Antisthenes: "As iron is eaten away by rust, so the envious are consumed by their own passion."



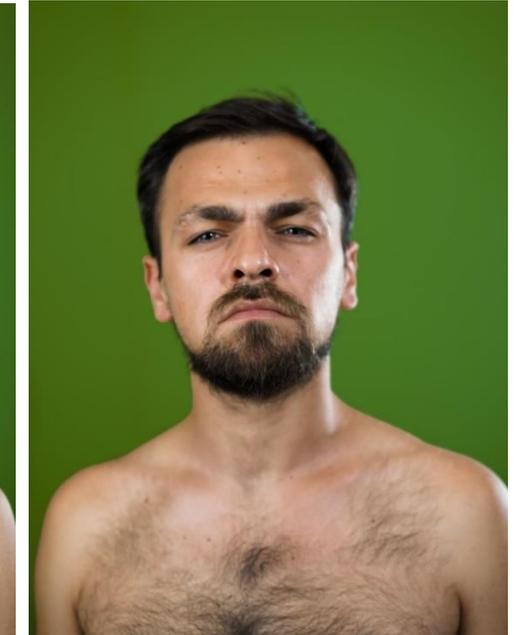
**NEUTRAL**



**ENVIOUS**

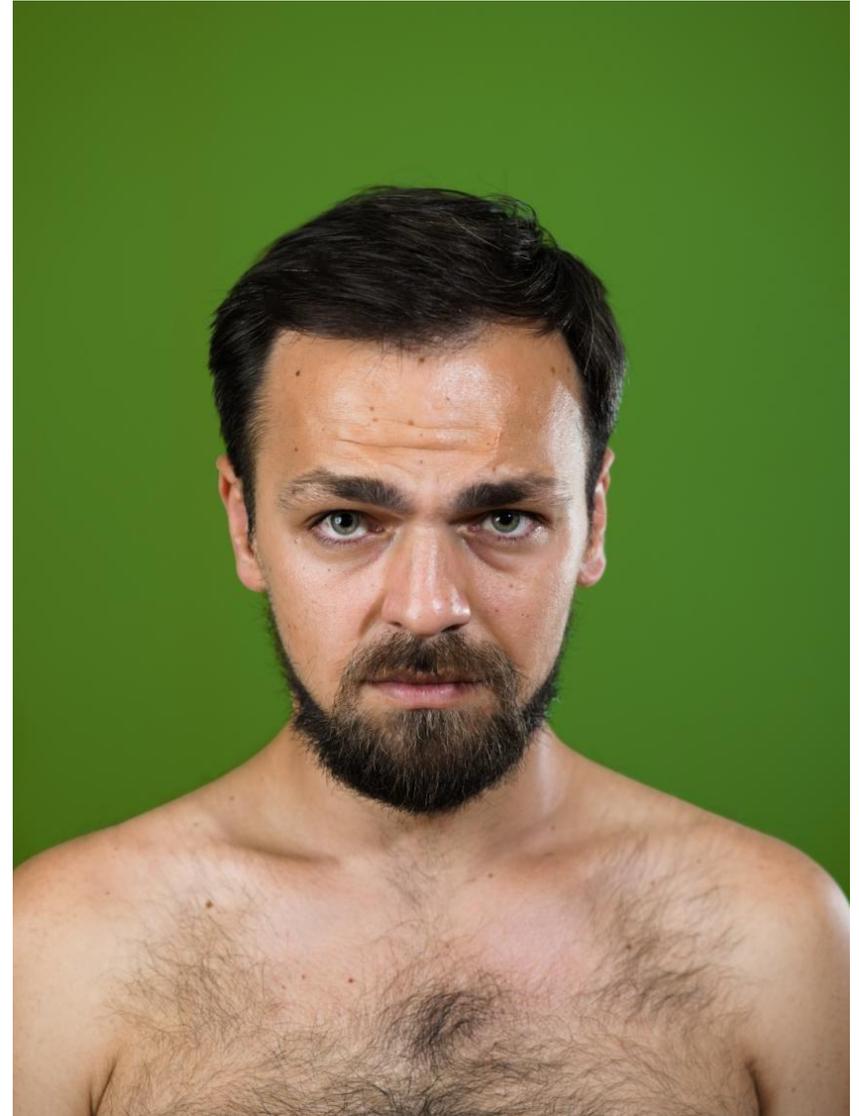


**NEUTRAL**



**ENVIOUS**

## 91. INFERIOR



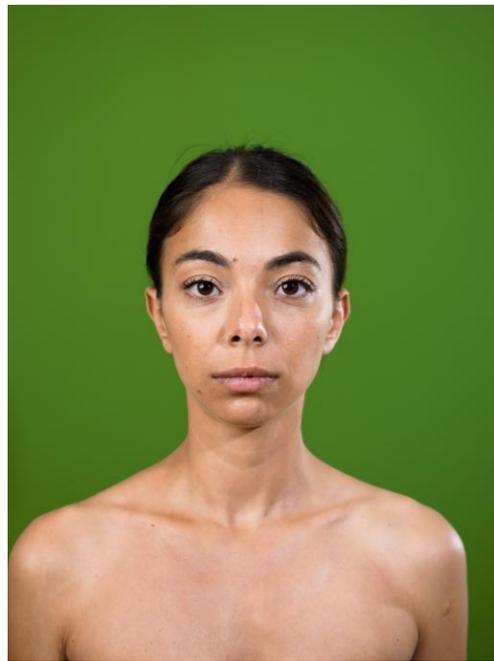
State of being inferior, weakness, diminution, disadvantage (compared to something else or someone else). Having a lower rank, office, or degree than another.

It is due to certain experiences and lack of physical endowments that trigger in the soul of the person in question feelings of inferiority to society. These frustrations are due to sexual impotence, physical deformity, failure in social integration, feelings of guilt, feelings of helplessness (intellectual or moral), etc.

You might call something inferior if its quality isn't as good as another, comparable thing, like that kite that you can't get to fly no matter how fast you run back and forth while your friend's kite soars overhead.

Besides "lower in quality," another meaning of the adjective inferior is "lower in rank or status, "the way a corporal is inferior to a general in the Army."

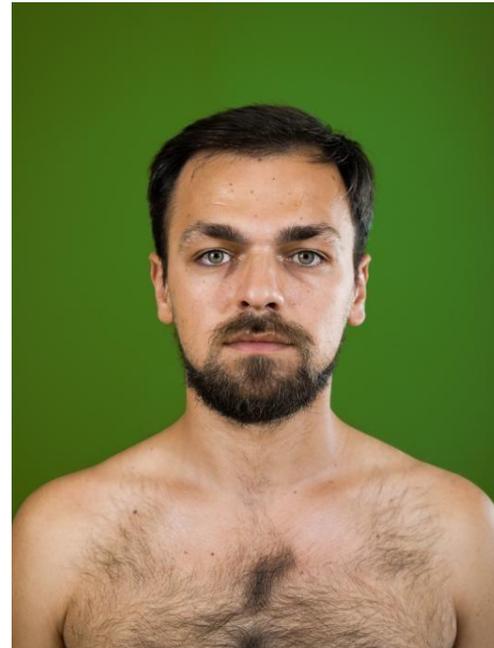
The word inferior can also be used as a noun to mean "a person who is lower in rank or status, "in which case you might say to your younger brother, "You are my inferior, therefore you should take out the trash."



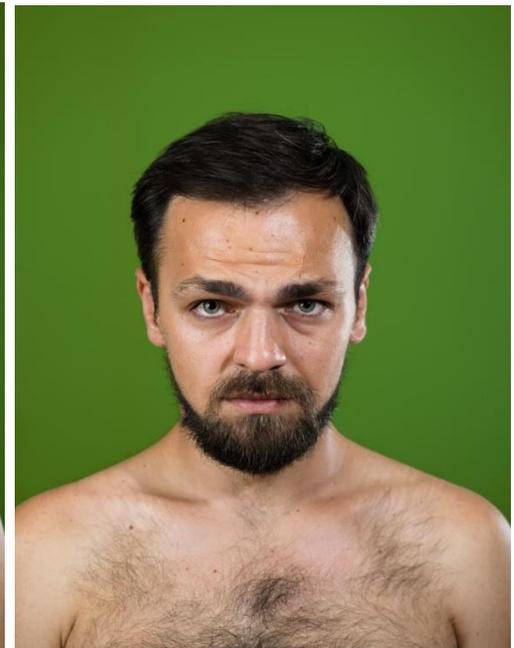
**NEUTRAL**



**INFERIOR**

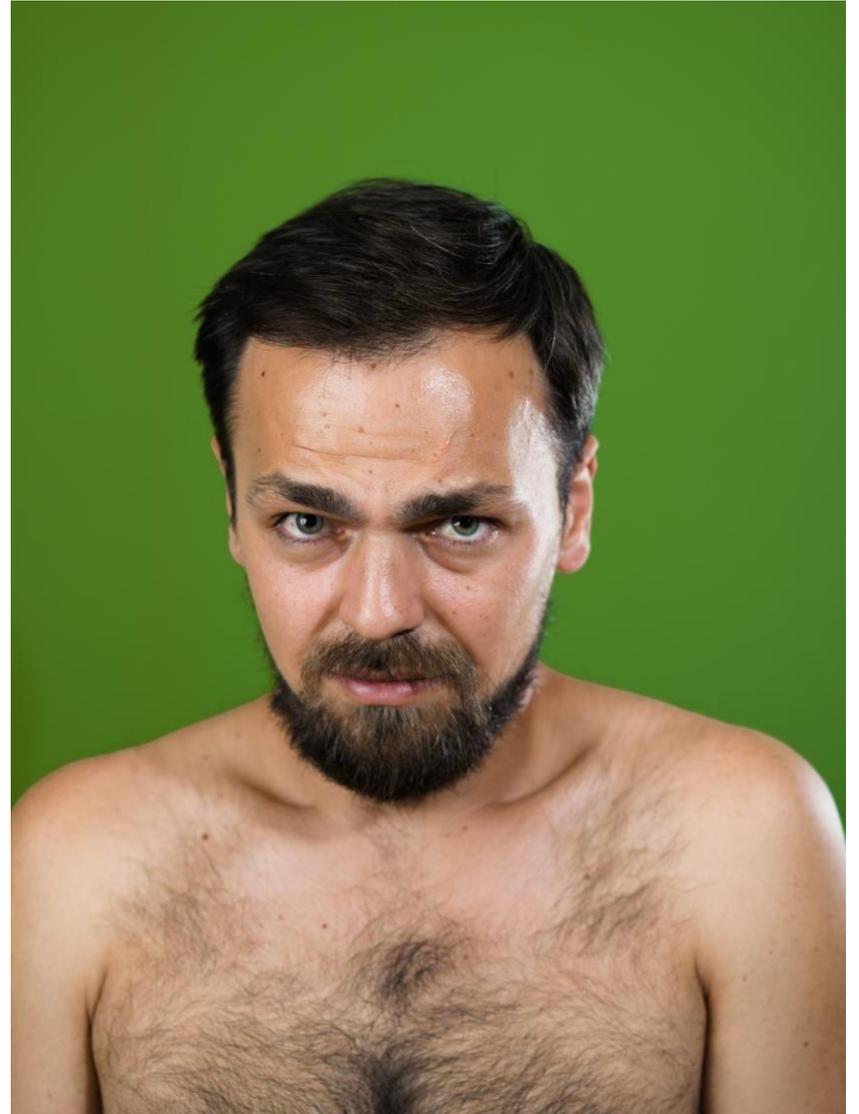


**NEUTRAL**



**INFERIOR**

## 92. HUMILIATED



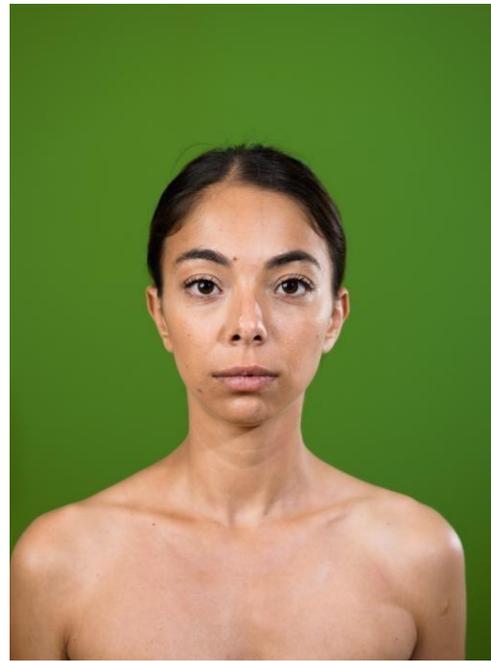
With submissive, humble, departed attitude; which expresses humility. Feeling of inferiority; attitude caused by this feeling.

Humiliation is an emotion you feel when your personality is attacked in the presence of other people. You can be annoyed or upset with yourself if you made a mistake, but if no one noticed, then you have no reason to feel bad. As a rule, humility requires the involvement of another person.

As we all know from our experience, being humble is very painful and unpleasant. This emotional state is extremely harmful. Therefore, it is extremely surprising that humiliation is very little studied in psychology. While other negative emotions such as anger, anger, jealousy and fear have been targeted in thousands of scientific studies.

For example, anger causes imbalance in the activity of various vital organs of the human body, anxiety prevents us from living a full life and doing our job, jealousy destroys love and other relationships, and fear contributes to the development of various phobias.

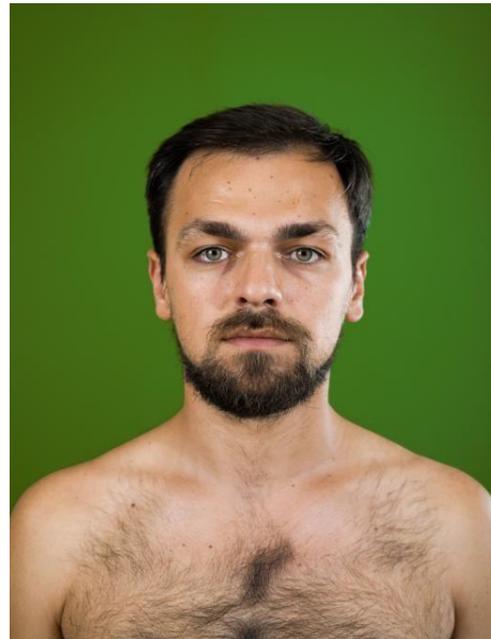
Everyone believes that humility is a neptic emotion that at first glance does not have such serious consequences, but it is not so.



**NEUTRAL**



**HUMILIATED**

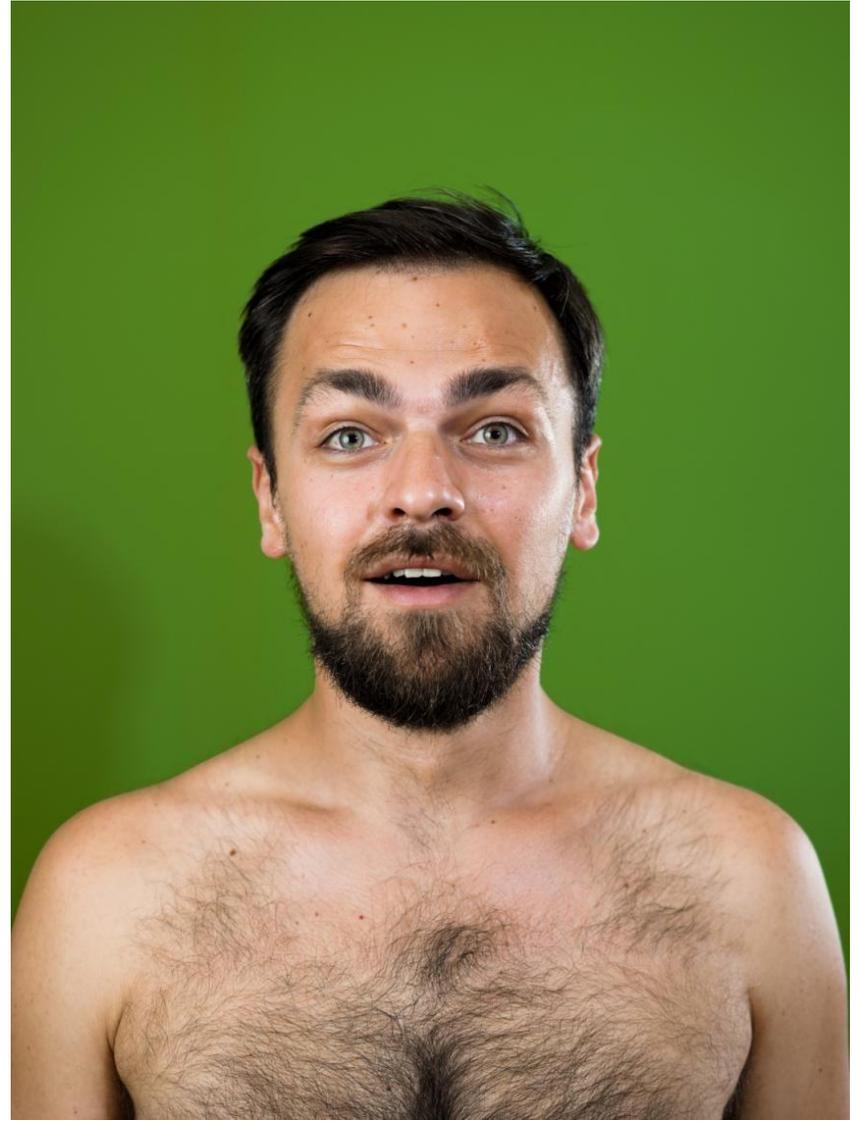


**NEUTRAL**



**HUMILIATED**

93. AWE

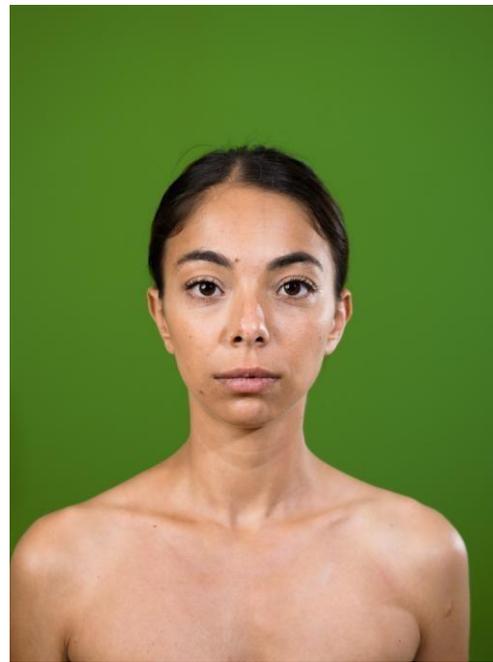


Deep and unexpected emotion. To excite, cause great and unexpected wonder, admiration, excitement; to impress strongly.

Awe has traditionally been considered a religious or spiritual emotion, yet scientists often report that awe motivates them to answer questions about the natural world, and to do so in naturalistic terms. Indeed, awe may be closely related to scientific discovery and theoretical advance.

Awe is typically triggered by something vast (either literally or metaphorically) and initiates processes of accommodation, in which existing mental schemas are revised to make sense of the awe-inspiring stimuli. This process of accommodation is essential for the kind of belief revision that characterizes scientific reasoning and theory change. Across six studies, we find that the tendency to experience awe is positively associated with scientific thinking, and that this association is not shared by other positive emotions.

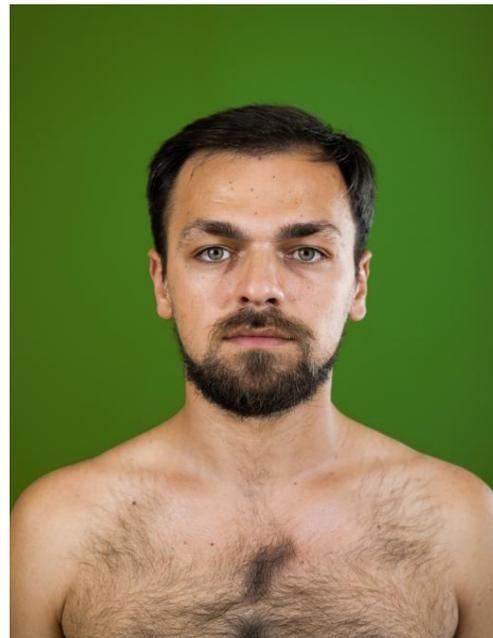
Specifically, we show that the disposition to experience awe predicts a more accurate understanding of how science works, rejection of creationism, and rejection of unwarranted teleological explanations more broadly.



**NEUTRAL**



**AWE**

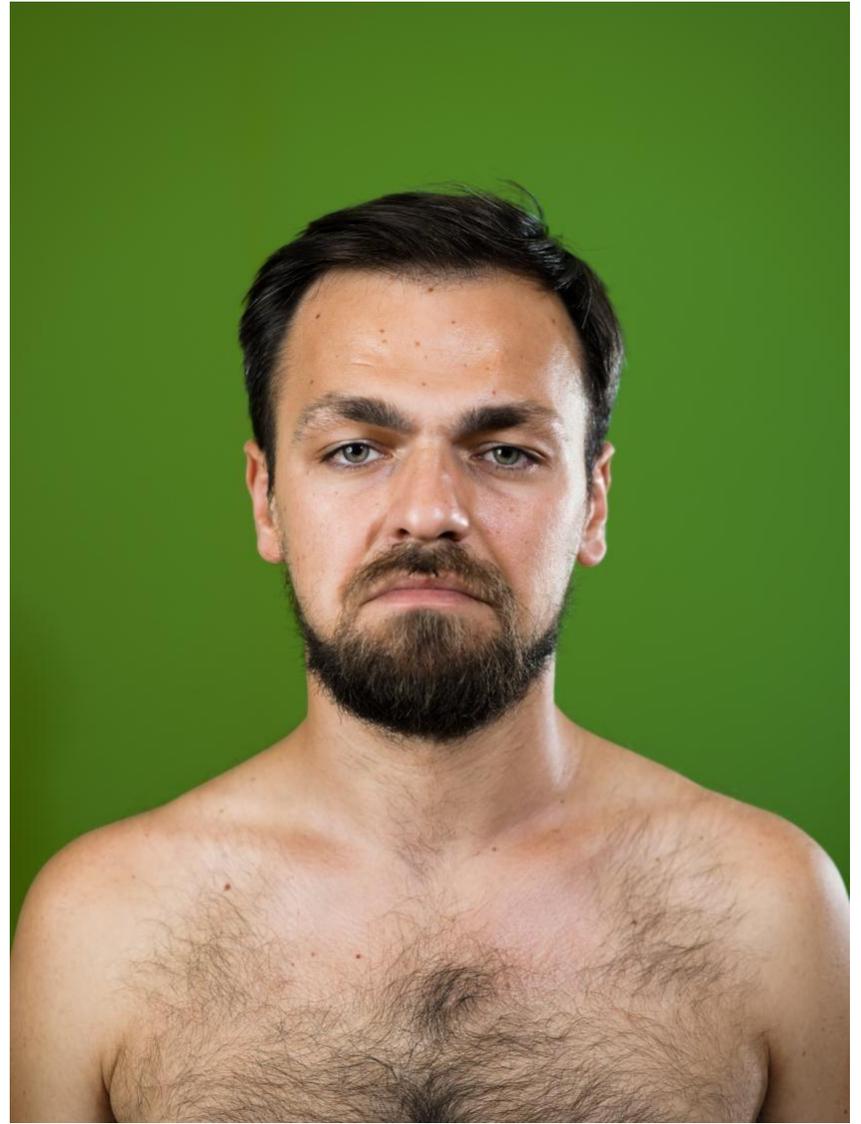
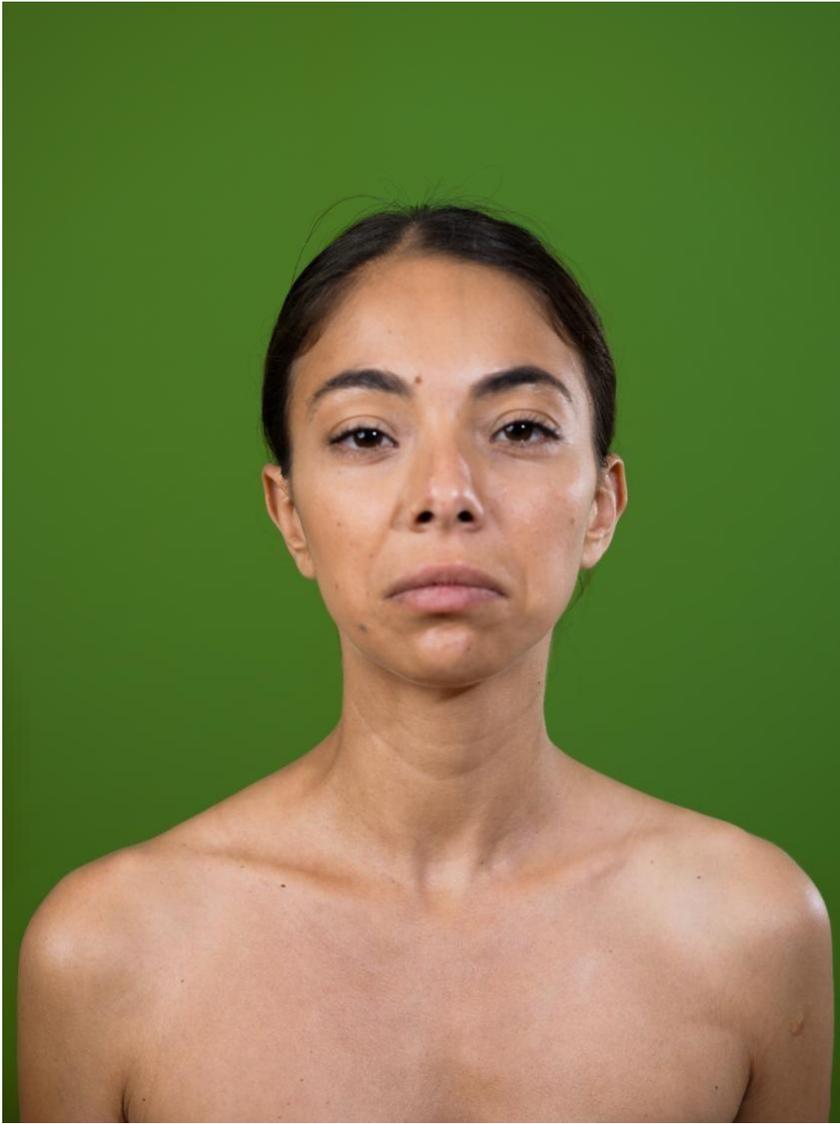


**NEUTRAL**



**AWE**

94. INDIFFERENT

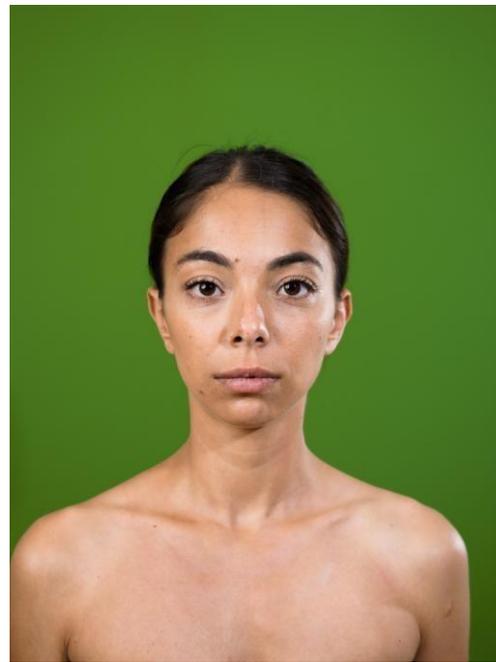


Showing no interest (in someone or something); careless, impassive; of no significance, of no interest.

A state of apathy, casualness, or disinterest.

Physical signals and behaviors:

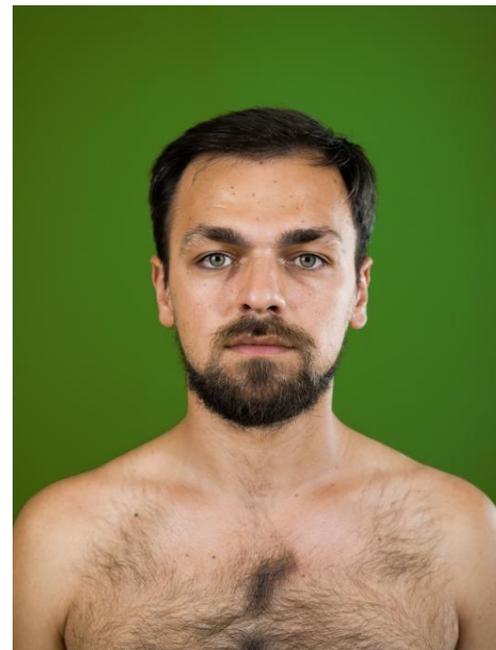
- shoulders are lowered and loose
- a slow, steady gait
- arms hanging limply at the sides
- shrugging half-heartedly
- long pauses before responding
- staring blankly or emotionlessly
- lifting a hand loosely, palm up in a "who cares?" gestures
- placing hands in one's pockets
- leaning back or away
- looking sleepy or glazed
- speaking in a flat voice



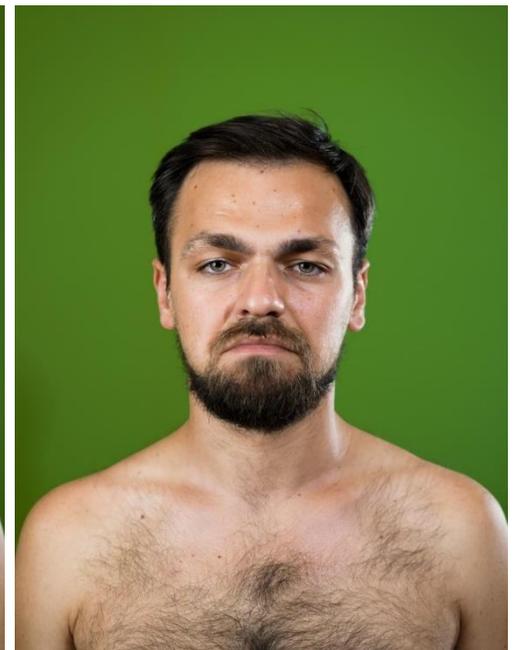
**NEUTRAL**



**INDIFFERENT**

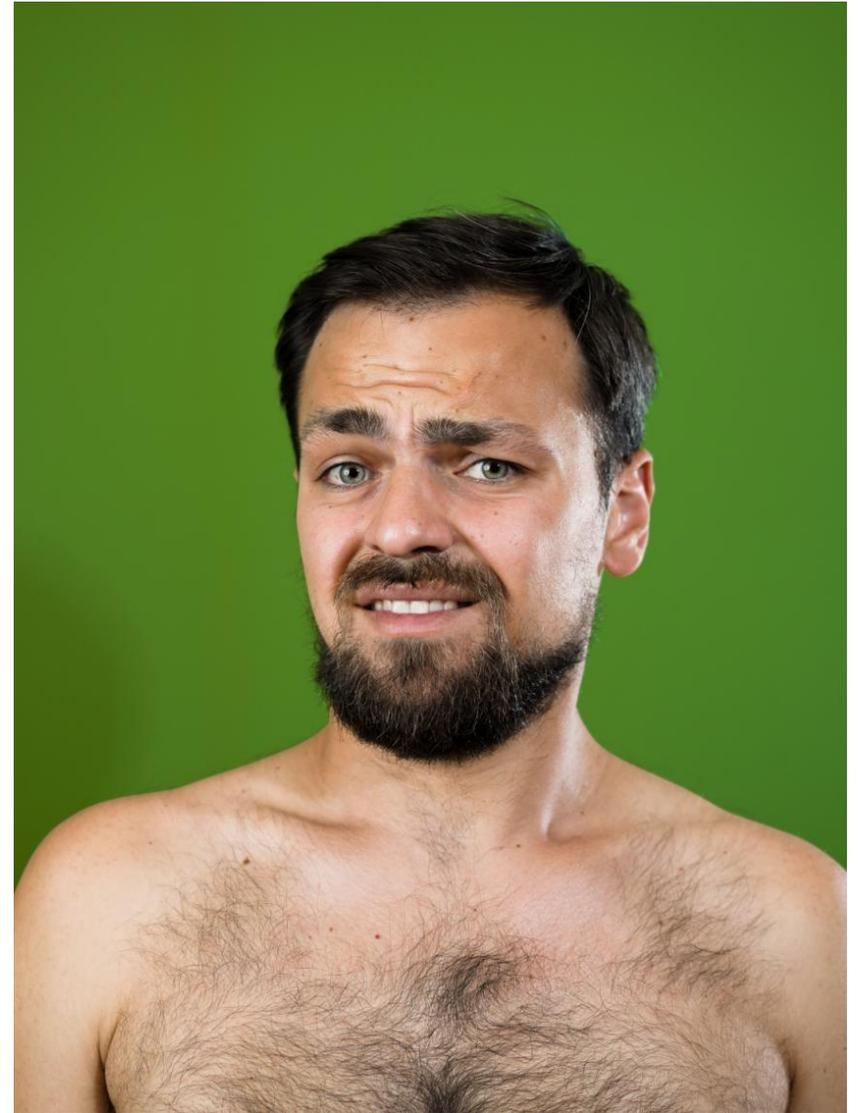
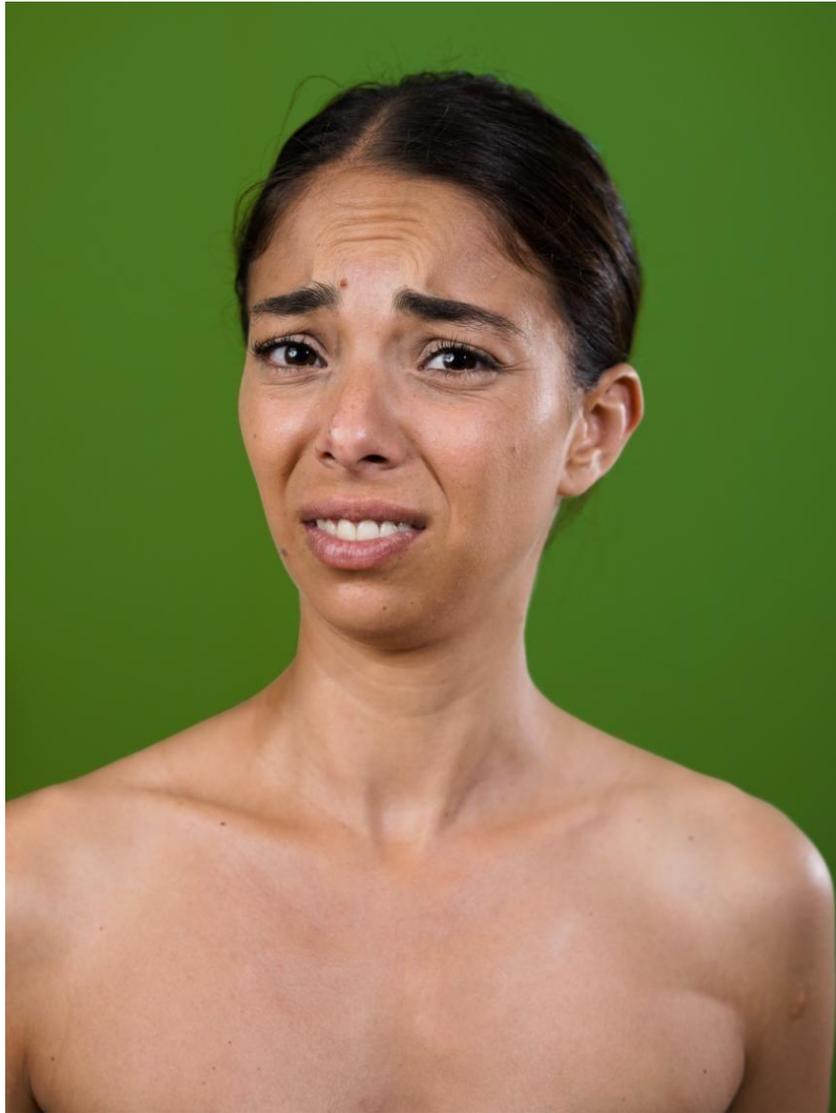


**NEUTRAL**



**INDIFFERENT**

## 95. HESITANT



To hesitate in making a decision; to wake up Emotion resulting from a state of hesitation, lack of firmness, wavering. To pause before doing something, to be unwilling to do something because of doubt or nervousness

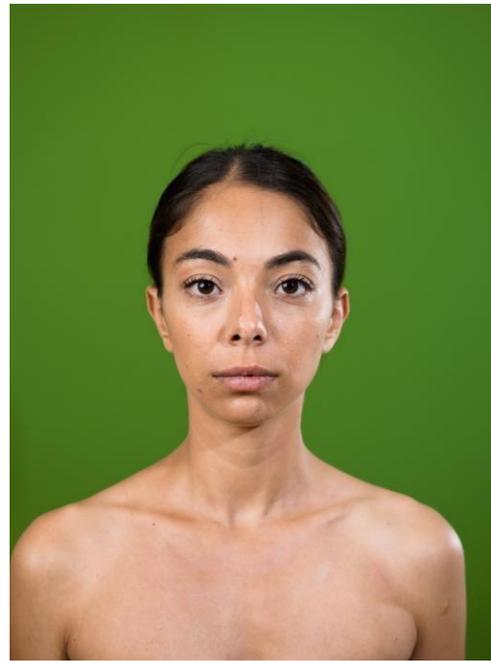
Hesitation occurs when you feel uncertainty or doubt.

Fear of making the wrong decision is one of the reasons why many people hesitate when faced with a choice. You may fear failure or even the consequences of success. You may worry about what others will think of you. Perfectionism might get in your way.

When you're feeling hesitant, you aren't sure what to do, so instead of taking action you wait a little, biding your time until you figure out what option is best.

The Latin word *haesitant* translates as "being undecided" and not being able to decide is exactly what makes you hesitant. Being hesitant will make you hesitate for a bit, waiting to see what happens next.

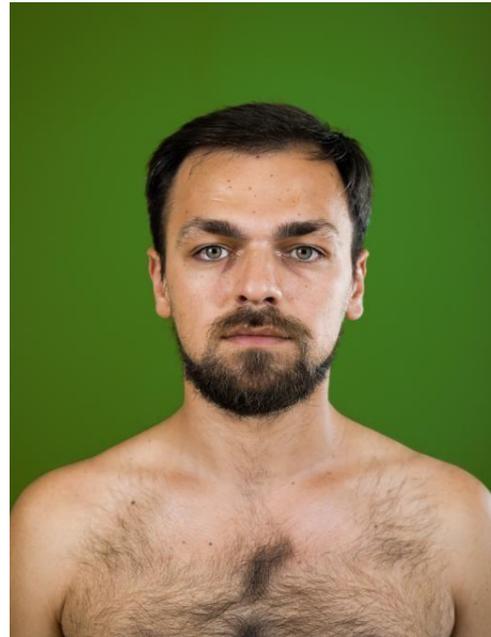
Nervousness or fear will make your actions hesitant, like when trying to walk across a rickety wooden bridge. Should you keep going or turn back? Your hesitant steps show that you're still wrestling with that question. Whatever you decide, don't look down.



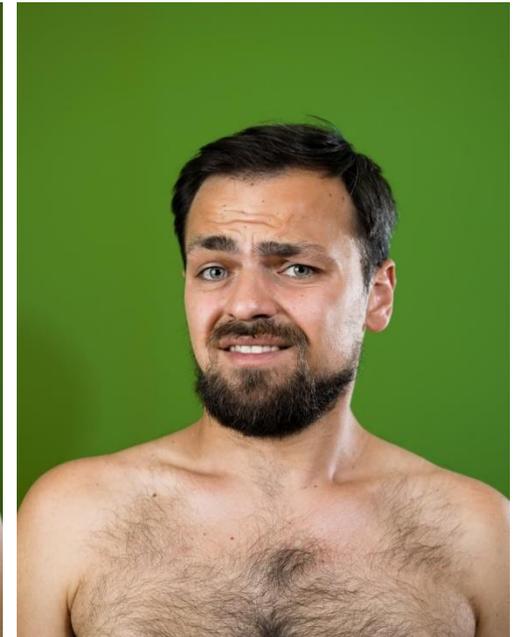
**NEUTRAL**



**HESITANT**

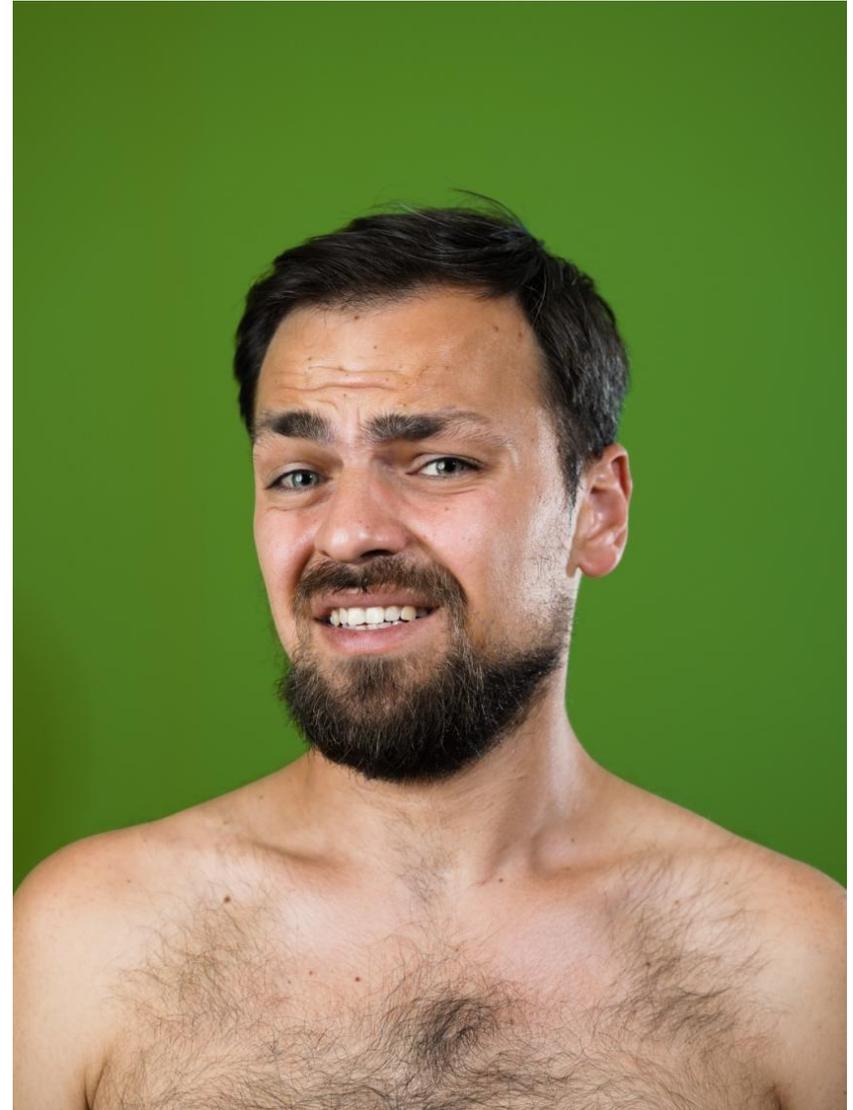
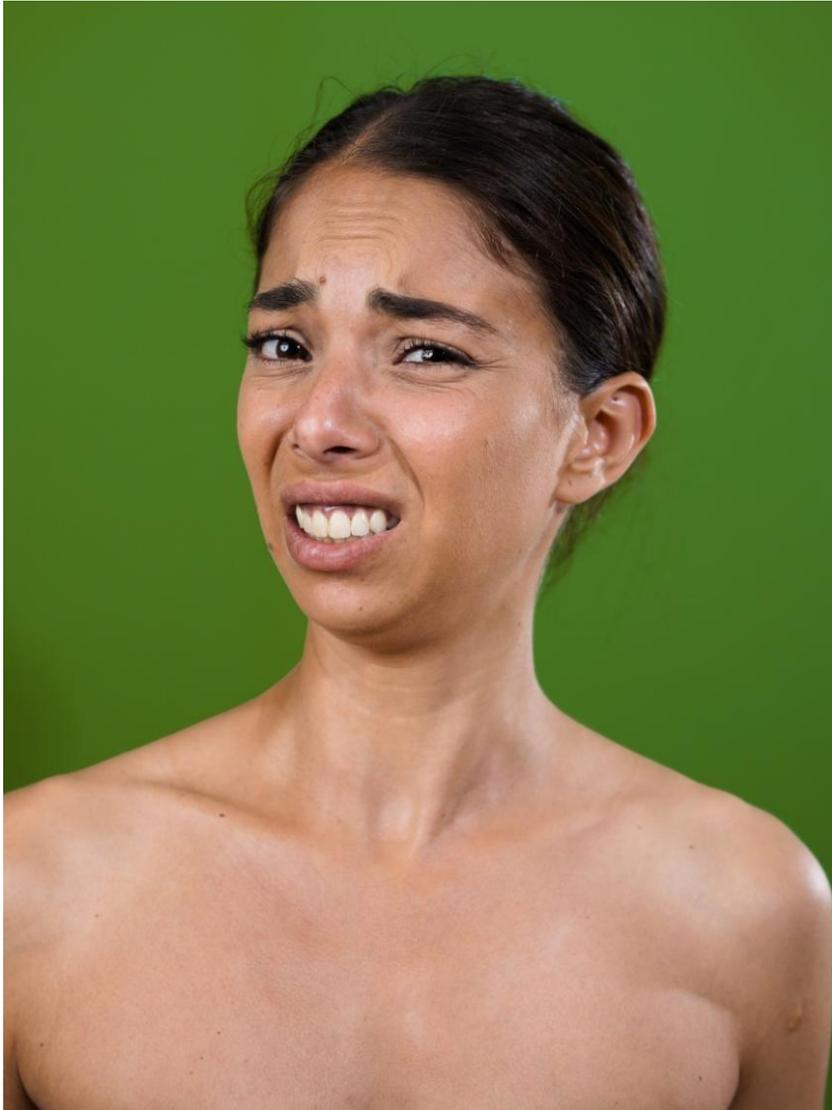


**NEUTRAL**



**HESITANT**

## 96. AVOIDANCE

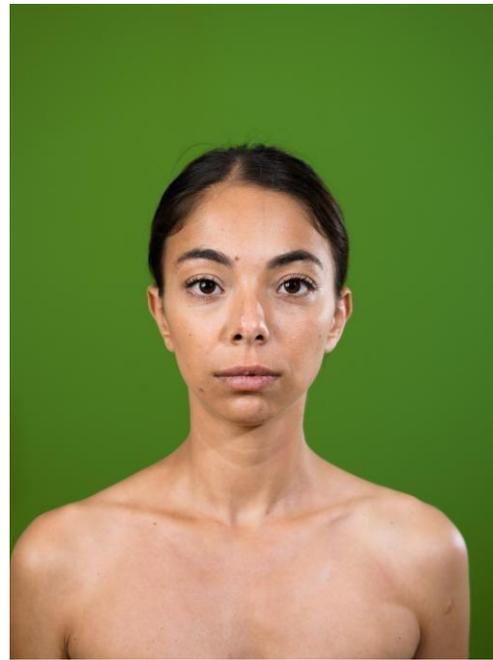


The act of avoiding, seeking to escape, avoiding, avoiding something.

The act of deliberately keeping yourself away from something is avoidance. Your avoidance of the outdoors this summer has left you very pale!

Some types of avoidance make a lot of sense, like the avoidance of horror movies by someone who's easily frightened.

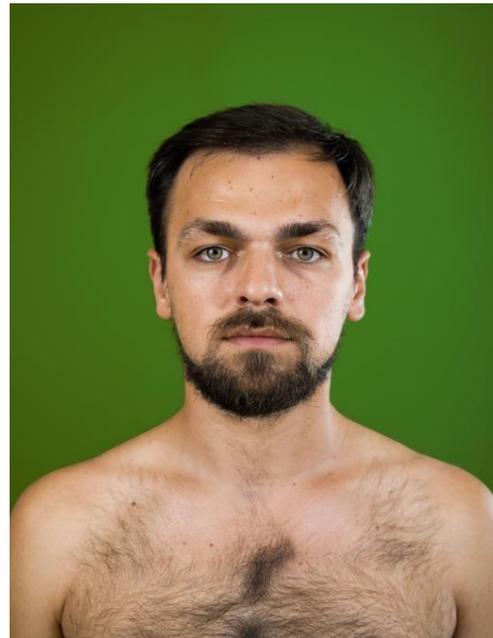
Others are less healthy, like your avoidance of doing homework, which inevitably leads to a panic when you realize it's all due tomorrow. In law, avoidance means "making something nullified or void," the way failing to fulfill certain obligations can result in avoidance of a signed contract.



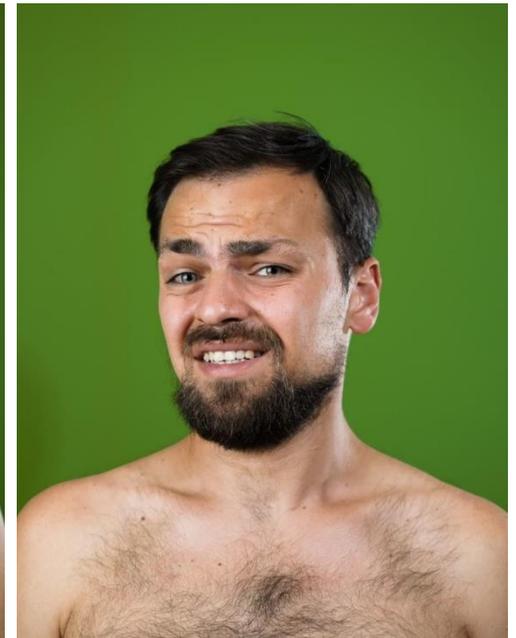
**NEUTRAL**



**AVOIDANCE**

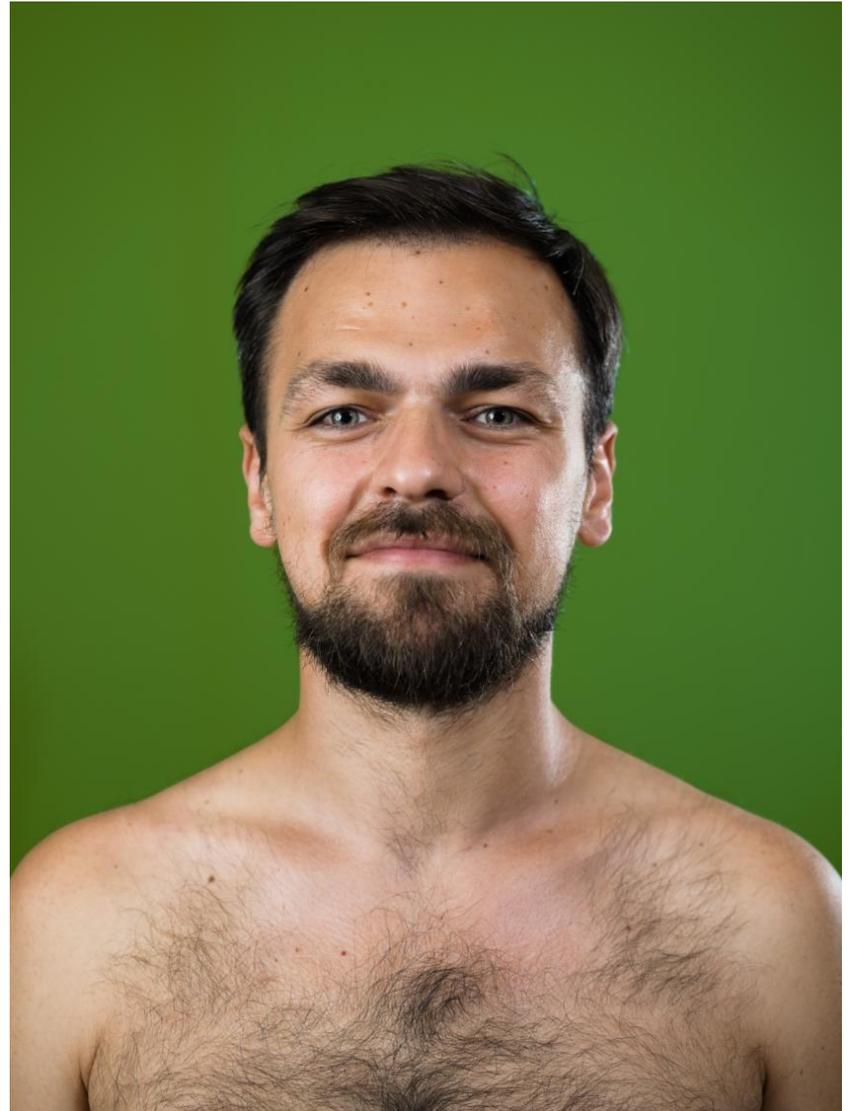


**NEUTRAL**



**AVOIDANCE**

97. COMFORTABLE

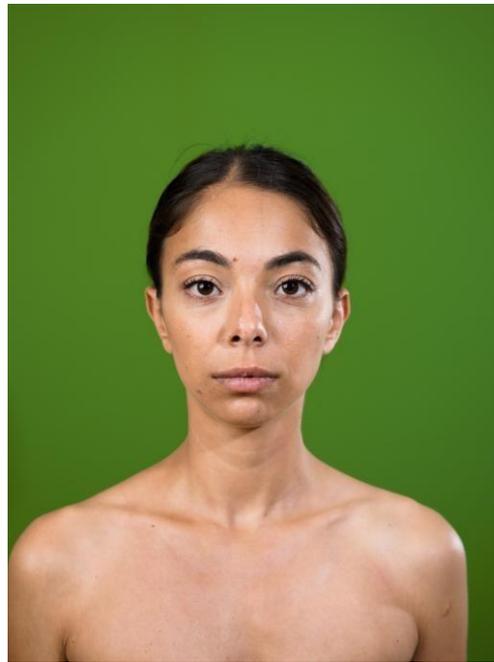


Person who feels comfortable; convenient. Comfort represents the totality of material conditions that ensure a civilized, pleasant, comfortable and hygienic existence.

The adjective comfortable describes something that makes you feel relaxed, like a comfortable couch that makes you want to curl up on it and take a nap.

In addition to describing things that feel good, like shoes that don't hurt your feet, comfortable can mean "feeling free from stress or worry." If you are comfortable around people, you can be yourself.

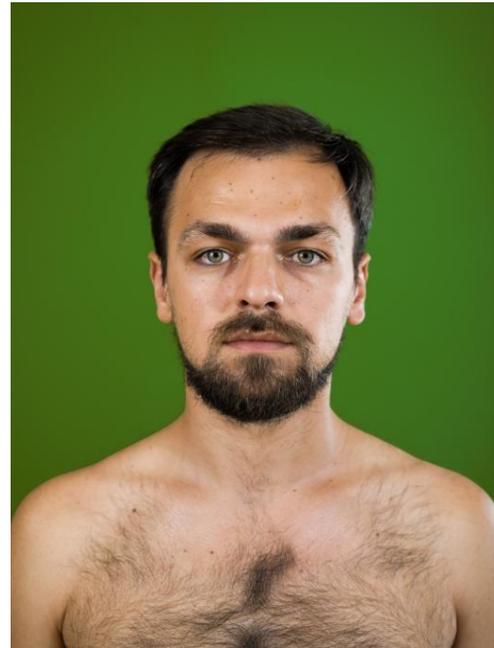
It can also mean "secure" - a family that, though not rich, lives a comfortable lifestyle, meaning they have considerable savings, or you feeling comfortable speaking Spanish in Chile, meaning you trust your ability to communicate.



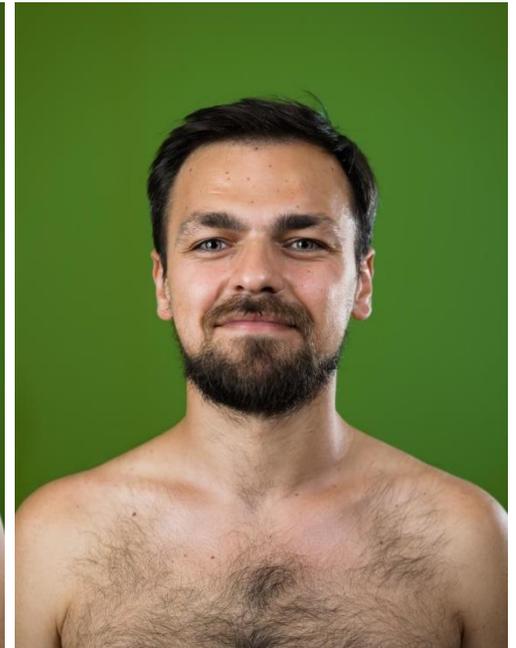
**NEUTRAL**



**COMFORTABLE**

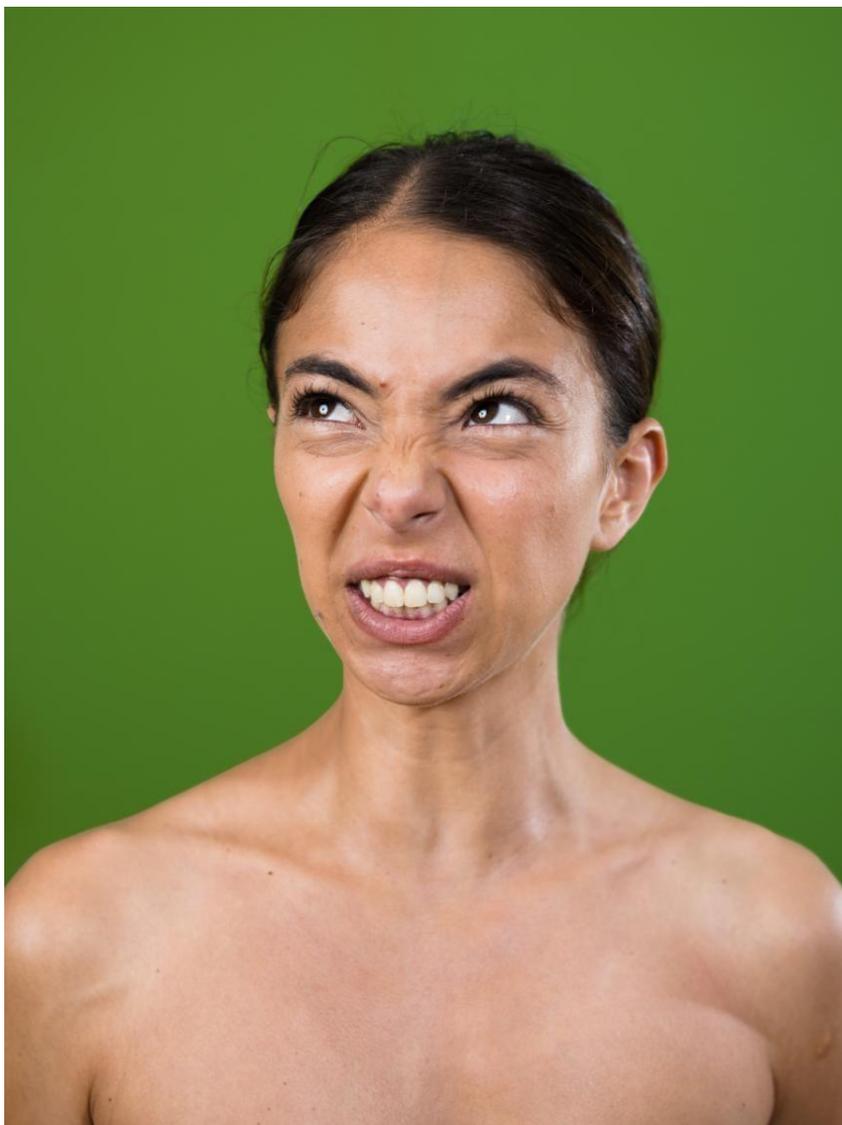


**NEUTRAL**



**COMFORTABLE**

## 98. FRUSTRATED



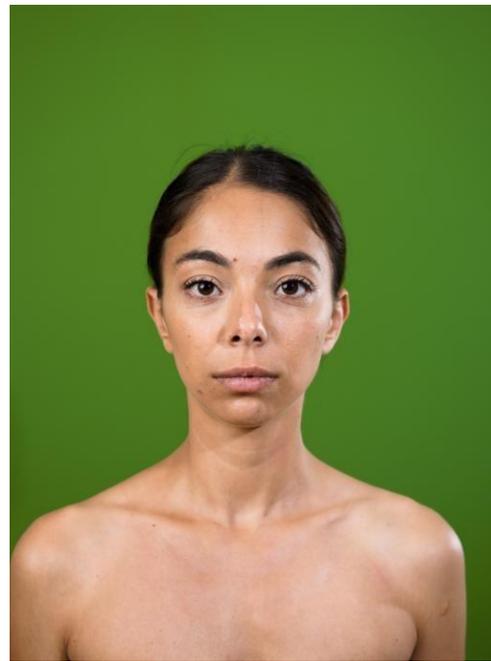
In psychology, frustration is a common emotional response to opposition, related to anger, annoyance and disappointment.

Frustration arises from the perceived resistance to the fulfillment of an individual's will or goal and is likely to increase when a will or goal is denied or blocked.

Physical signals and behaviors:

- pinching the lips together
- holding hands behind the back, gripping one's own wrist
- rushed speech
- tapping one's fingers to release energy
- pointing with an index finger
- scratching or rubbing the back of the neck
- shaking the head
- jerky movements (talking with the hands, changing direction mid-stride)
- pacing in short spans
- stiff posture, rigid muscles, a corded neck
- clenching the jaw
- speaking through the teeth with forced restraint

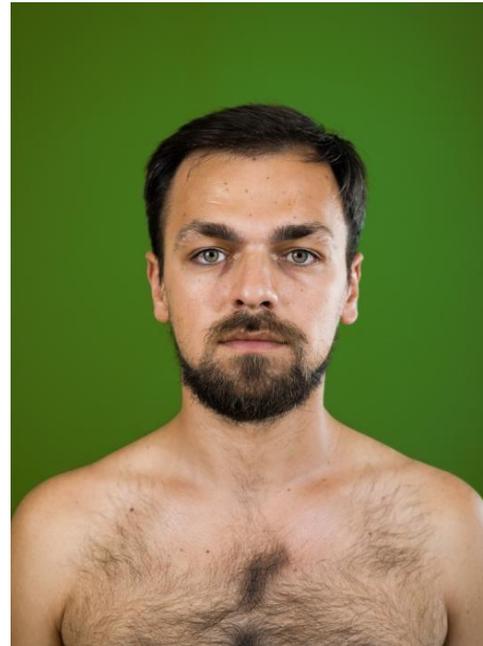
There are two types of frustration: internal and external. Internal frustration may arise from challenges in fulfilling personal goals, desires, instinctual drives and needs, or dealing with perceived deficiencies, such as a lack of confidence or fear of social situations. Conflict, such as when one has competing goals that interfere with one another, can also be an internal source of frustration or annoyance and can create cognitive dissonance. External causes of frustration involve conditions outside an individual's control, such as a physical roadblock, a difficult task, or the perception of wasting time.



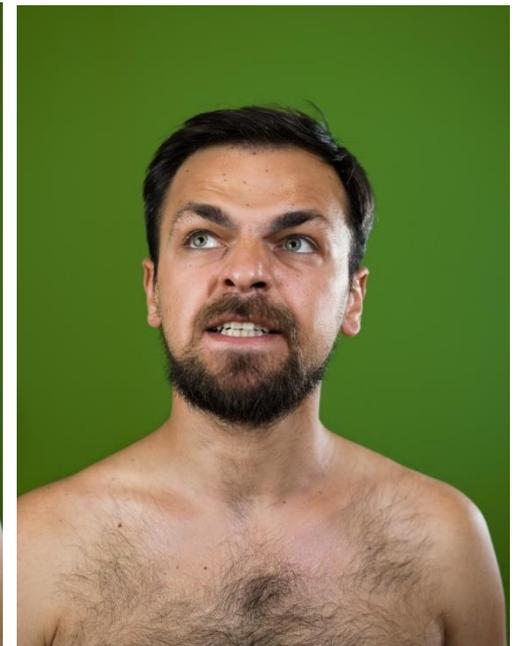
**NEUTRAL**



**FRUSTRATED**

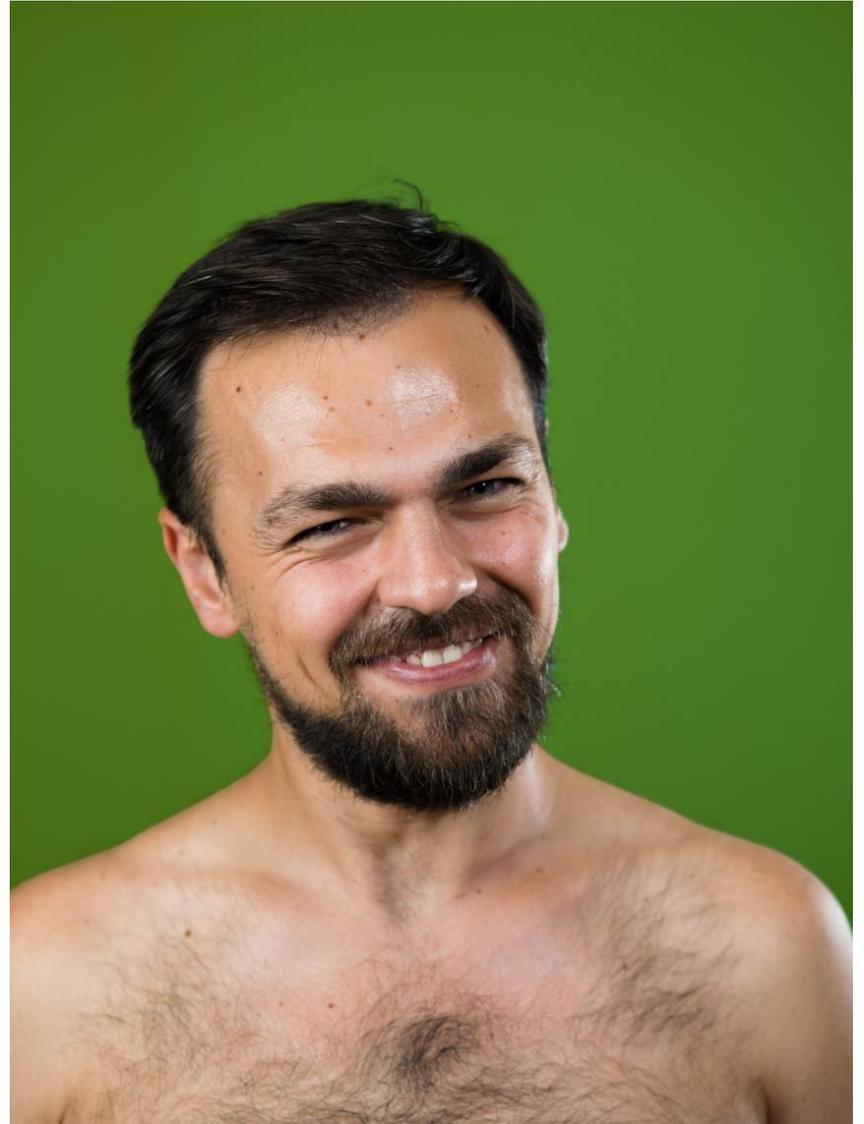


**NEUTRAL**



**FRUSTRATED**

## 99. NAUGHTY



Disrespectful, shameless; shameless, impertinent, insolent, arrogant; (with attenuated meaning) disobedient, intemperate.

Naughty is used slightly humorously to describe an adult who has behaved badly or an adult's bad action: "I'm afraid I borrowed your car without asking." "Yes, that was very naughty of you - I needed it at the weekend!"

Naughty also refers to: disobedient; mischievous (used in speaking to or about children), improper, tasteless, indecorous, or indecent, obsolete, wicked; evil.

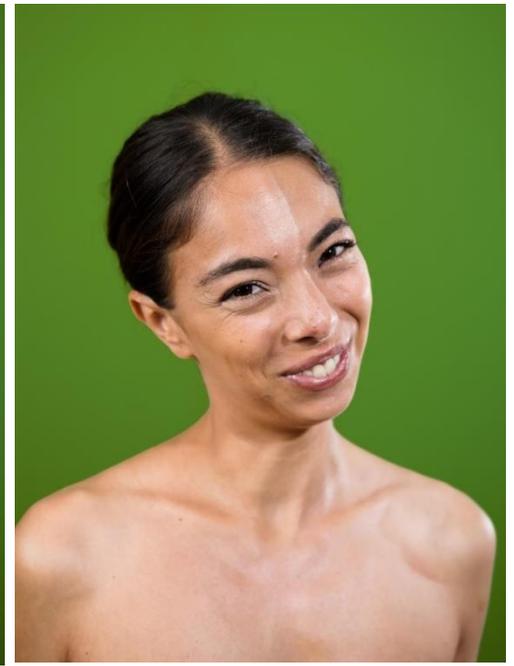
When talking about children it usually means that the child is exhibiting behaviour that adults find frustrating, irritating, confusing, annoying or even bizarre.

The word naughty at one time was an all-purpose word similar to bad. During the 16th century one could use naughty to mean "unhealthy, unpleasant, bad (with respect to weather), vicious (of an animal), inferior, or bad in quality" (one could say "very naughtie figes" or "naughty corrupt water").

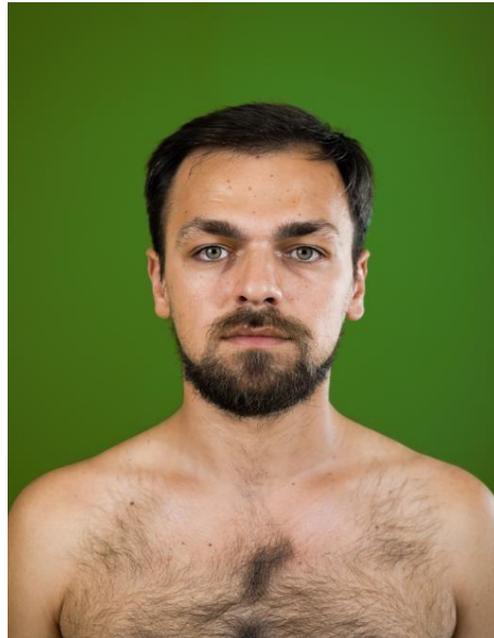
All of these senses have disappeared, however, and naughty is now used mainly in contexts involving mischief or indecency.



**NEUTRAL**



**NAUGHTY**

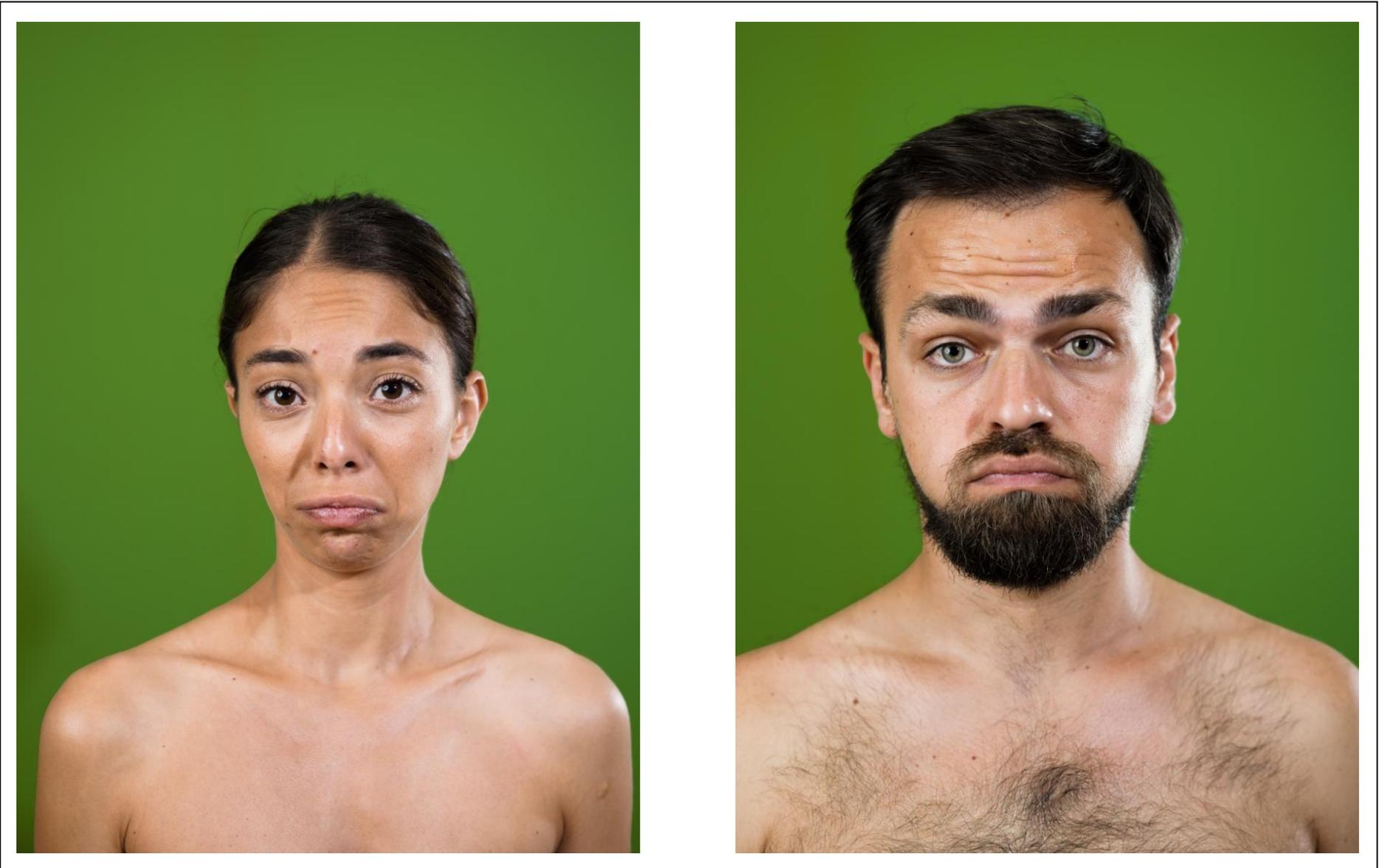


**NEUTRAL**



**NAUGHTY**

100. FOOLISH



Lacking intelligence, without mind, without judgment, unskilful.

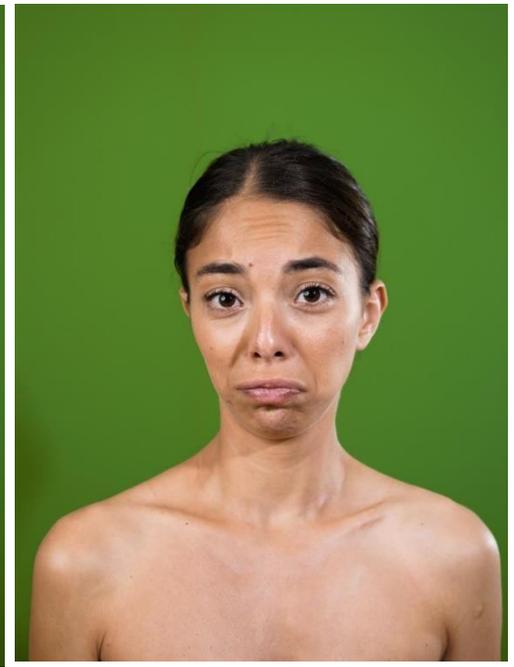
When one trusts and accepts the strange pathways of individual destiny, one often feels foolish in one's own eyes and the eyes of the collective. But then one is open to the numinous, the non-ordinary -that which one can't force to happen, but just seems to run into at the most unexpected moments. The abyss, the rational pitfalls and limitations of consciousness, can be transcended if one has the fool's faith in the pregnant darkness.

We experience this embarrassing aspect of the fool through the emotion of shame. Shame is the emotion of feeling foolish. Just as the fool is exposed, so part of his archetypal role is exposure of our own narrowness, pride, limitation, inferiority. He mocks our sterile rigidities, he makes fun of our pet idols, he shows us the paradoxes in our certainties. In his bare arse we see the red face of our own shame. To experience limitation is to know shame. The fool dwells on the edge of infinite possibility, of the sacred cosmos; but this is overwhelming, is bewildering chaos when seen from the perspective of the finite ego. When we experience our wretched finitude, like Adam and Eve driven from the Garden, we know humiliation and shame.

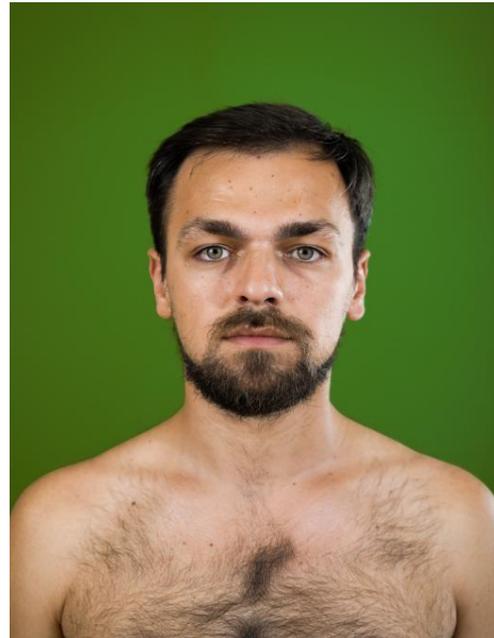
We feel the ego's power and control to be that of a flea compared to a giant. Call this inferior function or what you will, the fool often makes us feel naked, vulnerable and ashamed: we feel foolish. Our bare-assedness shows. It's no mistake that fools sometimes wear asses' ears. As Kierkegaard said, the finite, as seen from the viewpoint of the infinite, appears absurd.



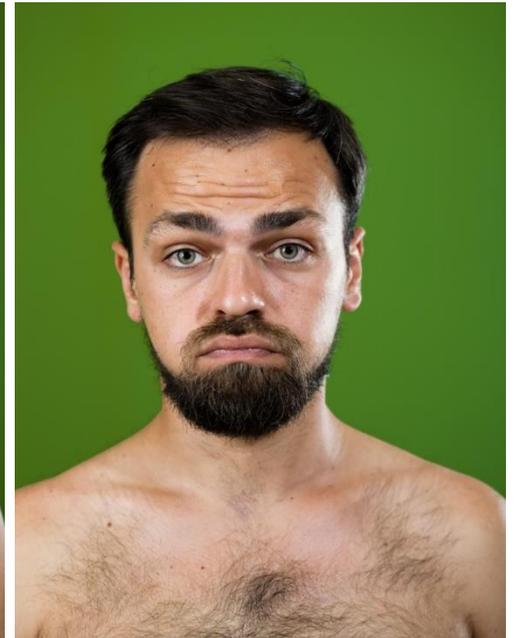
**NEUTRAL**



**FOOLISH**



**NEUTRAL**



**FOOLISH**

## 9. Interpretation of facial expressions

Reading a person's facial language may be a better barometer than the words he or she speaks. As Sigmund Freud said. "He who has eyes to see and ears to hear may convince himself that no mortal can keep a secret. If his lips are silent, he chatters with his fingertips. Betrayal oozes out of him at every pore. "

Just as there is vocal leakage, there is facial leakage. A person may attempt to mask an emotion, but for a millisecond the true expression is revealed. As Freud observed, it is almost impossible to hide true feelings.

Faces have told us much throughout the centuries, from the works of Rembrandt and Velazquez to modern day photojournalists and videographers. Expressions we have seen in classic photographs are etched in our minds forever.

Who can forget the emotion captured in the face of Lee Harvey Oswald when he was shot by Jack Ruby, or the fear and agony in the face of the young naked Vietnamese girl, Kim Phuc, as she ran screaming in agony after being caught in a rain of napalm during a Vietnamese air strike? Or the picture of joy and elation when gymnast Mary Lou Retton won her Olympic gold medal, then jumped into the arms of her elated and beaming coach, Bela Karolyi. Or President Clinton's humbled and saddened expression as he told the nation he had not been forthright and that he did, indeed, have improper relations with "that woman." There is no question that these facial images and many others like them show us what is going on inside people.

### **EMOTIONAL EYES.**

*Eyes of Surprise.* When a person is surprised or taken off guard, it clearly shows in their eyes. Someone who is astonished will open the eyes extremely wide and show the sclera (the white of the eye) above the iris (the colored portion of the eye). The eyebrows are raised and curved upward, while the lower jaw often drops, allowing the lips to part. As you become aware of responses you may be able to catch someone by surprise, especially after confronting the person in a lie. If you see this facial expression, chances are you caught the person in the act.

*Scared Eyes.* A person who is afraid will also have a wide-eyed appearance. The eyes seem locked open as if to catch the slightest action that may indicate impending peril. The lower eyelids are tense and the eyebrows are raised, unlike the person who is surprised, a fearful person's eyebrows are drawn together while the lips are drawn back into a horizontal position.

*Angry Eyes.* A person who is angry will gaze directly at the person with whom he or she is angry. There is tense eye-to-eye contact with both the upper and lower eyelids tense and narrowed,

making the eyes appear “scrunched up.” When someone focuses on you with an unflickering gaze, he or she may be attempting to intimidate, dominate, or threaten you.

*Staring Eyes.* If we stare too intensely at another person, it means one of two things are going on. A stare can either be regarded as a sexual advance - either welcome or unwelcome - or it can be a hostile act. Whether you are a chimpanzee, gorilla, dog, or human, staring is no good. If this fixed glance is held in place without a change in facial expression for any length of time, the person being stared at feels increasingly uncomfortable.

I was recently invited to a boxing match in Las Vegas. It was my first live fight. I was awed by the way the fighters stared at one another in the ring just before the fight in an attempt to intimidate one another.

People who are Machievellian also tend to stare. These people usually have a controlled gaze, rather than one that is soft and natural. They are adept at lying, and they have learned to control their anxiety levels by staring at others in order to manipulate them.

*Doubting Eyes.* If, simultaneously, the eyes narrow, the forehead furrows, and one of the eyebrows lifts, the person probably doubts what you have said. This expression often occurs when someone is unsure about a decision.

*Astonished Eyes.* When someone is utterly surprised, the eyes are raised, staring at the ceiling. An expression of disdainful astonishment may happen when someone doesn't believe you or doesn't believe something is really happening. This expression occurs when someone cannot believe what he or she has just seen or heard.

*Shy Eyes.* When a person is shy or embarrassed, he or she will often give someone a sideways glance instead of maintaining direct eye contact.

This is also considered a flirtatious action, whereby the person looks sideways at the other person while lowering the head and looking downward, much like a child does when feeling embarrassed or self-conscious.

Anthropologist Desmond Morris says this action is a conflicting movement because it signals “bold shyness,” which are contradictory terms. In essence, it is an absence of forthright staring, combined with the humility of demurely looking away. Depending upon the situation, doing this can be either appealing or irritating to others.

*Sad Eyes, Shameful Eyes.* A person who is sad, embarrassed, or ashamed tends to look downward to avoid eye contact. The brow may also be wrinkled. Usually when a person breaks the gaze, he or she is either sad or submissive.

*"I Didn't Do It!" Eyes.* Just as a person who is lying will avoid eye contact, when we tell the truth and are sure of ourselves, especially after we have been falsely accused, we make strong and direct eye contact. The muscles around our eyes will be relaxed and provide a firm and fixed gaze.

*Lying Eyes.* If a person is smiling at you, you know if they are being sincere by their eyes. In a study conducted by Tamara Newman at the National Center for Post-Traumatic Stress Disorders in Boston, sixty women who had previously been identified as being anxious or repressive were videotaped. Although they turned their lips up in an expression of happiness, they repressed their true feelings. These were reflected in their unhappy, unsmiling eyes.

If you look at a photo of someone smiling and cover their lips, their eyes will reveal everything about their feelings. The eyes may look extremely sad, even though the lips may be curved in an uplifted smile.

If their cheeks aren't lifted and the nose hasn't spread, the person may not be very happy. This is because a real smile lights up the whole face—especially the eyes. Where there is no wrinkling at the corners or no movement in the region of the forehead, it is a fake, deceptive smile. People may not be happy even though they say they are.

*Twitching Eyes.* When we do things, we shouldn't, our body often finds a way to tell us something is wrong. I once had a client who was engaged to a man, she had no business being engaged to. He was a heavy drinker and she was always searching for him in bars. Immediately after this woman got engaged, she developed an involuntary eye twitch. It did not go away until six months later, when she broke off her engagement. Another client had a daughter who developed an eye twitch after she went to work in her controlling and bullying father's law firm. As soon as she quit, the twitch went away.

An eye twitch is a muscle contraction, or spasm, usually brought about by tension and stress. So if you happen to develop one, think about what is going on in your life. It may be a warning that you are stressed out: take heed!

*Excessively Blinking Eyes.* Excessive eye blinking may be a form of nervousness or insecurity. I once had a news anchor client who blinked excessively on the air. Even though she was well spoken, deep down she was worried about her contract renewal. Her discomfort about the fact she ultimately might not have a job manifested in her eye blinking.

After long discussions about her business, including setting forth alternatives in the event she wasn't rehired, she began to relax. We decided that news anchoring wasn't her only option. Our sessions worked beautifully. The next time she appeared on air. the excessive blinking stopped

completely. After she relaxed and stopped worrying about her future, her eyes relaxed and she ended up getting a three-year contract renewal.

Excessive eye blinking also occurs when a person doesn't tell the truth or is worried or insecure about not being believed.

*Avoiding Eyes.* There is definitely something wrong when a person doesn't look directly at you. A person may avoid eye contact because he or she doesn't like you. isn't interested in you. is unable to confront you. or is intimidated by you. In most instances, people who lie will do what they can to avoid eye contact. They are plagued with guilt, so they don't want to face you.

But just because someone looks away doesn't necessarily mean he or she is lying. The person may feel uncomfortable or defensive and may have something to hide. People may avoid a direct gaze because they don't want others to know who they really are. They may be suffering from low self-esteem, so they look away, hoping you won't find them out.

## **EYEBROW EXPRESSIONS.**

If you want to know if a person likes you, watch the eyebrows. When someone meets you for the first time and smiles, their eyebrows will automatically "flash," which means they will rise rapidly. and then go back down. This facial action occurs only once and is always accompanied by a smile. We tend to open our eyes wider when we increase our attention toward someone. If the other person does the same thing, rest assured you are on the right track. That person is interested in you. If, on the other hand, there is no flash, it means they probably couldn't be bothered.

*Knitted Brows, Raised Brows, Lowered Brows.* When someone doesn't like you or is anxious, he or she will "knit" the brow: simultaneously raise the eyebrows and draw them toward each other. It is, according to Desmond Morris, a contradictory expression, whereby the muscles try both to raise and to lower the brows. It is an expression that contains elements of grief, pain, anger, and fear, which combine to form anxiety.

Raising of the brows occurs when someone is shocked or in disbelief. Lowering of the brows - with the eyebrows drawn together and vertical lines between them - signifies anger.

## **MOUTH AND CHIN.**

*Read My Lips.* The true intent of what someone is saying is found not necessarily in the words he or she speaks but in the way the mouth plays out the facial code. The lips, throat, and cheeks all give signals about a person's state of mind.

*Genuine Smiles.* A smile is one of the most powerful things we can give another person. In a genuine smile, the corners of the lips are turned up. the lips are parted with the teeth showing, the cheeks are raised, and there is a wrinkling around the corners of the eyes.

To test the power of a smile, give someone a heartfelt smile and watch what happens. If you aren't feeling particularly happy and don't feel like smiling, do it anyway. Just put your face in the genuine smiling position and employ some sense memory. Go back to an experience in your life when you were extremely happy and keep that thought. Now smile. You'll be amazed by the positive reactions.

Smiling is contagious. When you smile, others usually follow suit and any tension you may have felt toward another will be erased. You will discover that others will open up to you. You will meet more people because they will perceive you as being approachable.

*Tight Grin.* A tight grin is a phony grin. Remember when you were a kid and didn't want to be in that photo with your family? You weren't particularly happy being there, so you didn't act happy—you didn't smile. Then the photographer said, "Say cheese," and you repeated the word. When you finally got your photos back, your mouth looked like it was tight and smiling, but your eyes still looked unhappy.

What I have described here is a phony grin, the tight smile people force upon themselves. They really don't like you or they don't like to be in your presence, but they know in order to be civilized and social, they have to smile. And this is what results. Next time you see a person with dull eyes and a pulled-back "cheese" grin, realize that it's not genuine.

Tight-lipped smilers are not exhibiting their true feelings. In fact, anyone who exhibits this facial gesture while saying, "Don't worry about it," or "It's no big deal," is telling you just the opposite. There is indeed a problem and you have to worry - it does bother them.

*Inappropriate Smiles.* "Why are you smiling?" asked Linda. "I just told you I lost my father. What's wrong with you?" That's what Linda said to her best friend when she told her that her father had passed away. Sherol wasn't being cruel or insensitive, but was expressing her intense nervousness and discomfort at a sad situation. Unfortunately, she expressed it with a smile instead of a frown.

People who smile during tension-filled crisis situations often end up causing additional grief. They are not necessarily sadistic; they are showing their discomfort with the situation. But that doesn't help those like Linda, who are shocked and dismayed at the reaction.

This very reaction occurred with former president Jimmy Carter, who many believed lost a second term in office because of inappropriate facial communication skills. Whenever he appeared on

television and spoke of the ongoing Iranian hostage crisis, he would smile nervously, which made people feel extremely uncomfortable. It detracted from his credibility and trustworthiness. "Why is this man smiling when such an awful event is occurring?" thought most Americans. What they didn't realize was that the former president was expressing his nervousness through his inappropriate smile. His serious and sad words did not match his happy and upbeat facial expression. It made him appear weak as a leader.

The next time you see someone smiling after they hear of an unfortunate event, understand that they usually can't help themselves. It is simply an automatic reaction to being nervous and uneasy.

*Yawning.* Usually, we think nothing of someone yawning when we speak, other than the fact they may be bored or tired. But psychologists now believe there is a deeper meaning to yawning. It may be an escape mechanism used for not confronting difficult, painful, or stressful issues.

When people bring up something they don't want to deal with, they often subconsciously yawn in order to avoid the subject.

I had a client whose son was a terror in school. He always cut class and was on his way to becoming a juvenile delinquent. When my client spoke of her son and we discussed her role as a parent, she would inevitably let out a yawn. It was uncanny to watch. She couldn't deal with the fact she was too permissive and an absentee parent.

*Gulping.* "Oh. I'm really happy for you." said Jessica, gulping. "It's so great that you are going to have a baby! It's exciting." she said, gulping again. A monotonous tone, and the hard swallow or "gulp" (where you see the Adam's apple move up and down) is an obvious giveaway about how someone feels about you or a situation.

Rather than being happy that her friend was going to have a baby. Jessica was actually quite jealous. She was in shock, so her autonomic nervous system took over. Her mouth got dry and she had to swallow hard to stop from choking with jealousy. What she really wanted to say was, "I can't stand you. I am terribly jealous of you. You get everything you want in life and now you are going to have a baby. Look at me, sitting babyless and husbandless."

The next time you meet someone new or you tell someone something great that's happened to you. watch the neck. It will reveal how the person really feels about the things you've said. A hard swallow accompanied by a tight grin, dead eyes, and a life less voice, is a dead giveaway that this person is not pleased to see you, no matter what words he or she actually uttered.

*Hand to Mouth.* Often when a child tells a lie. he or she will cover the mouth in an attempt to subconsciously retract the lie that has just come out. As we become older, these become natural

reactions. Covering the mouth may be a sign of deception. Like the child, they are saying, "I shouldn't have said that," as they cover their mouth.

When an adult puts a hand to the mouth while speaking or touches the lips, he or she is probably not telling the truth. If you want to determine whether someone likes what you are saying, see if they bring their forefinger to their lips. They are subconsciously and silently "shushing" you.

A client of mine who was a very controversial public speaker noticed audience members kept bringing their hands to their mouths as he spoke. He told them, "I know many of you find what I have just reported to be incredible and difficult to understand, but if you take the time to listen carefully and digest what I have said, you will find there is a lot of merit in what I have to tell you."

As soon as he made this remark, the people in the audience immediately changed their body and facial positions, assuming a more attentive posture, and most were no longer covering their mouths. They weren't subliminally "shushing" him and were more receptive to hearing what he had to say. He took his cue from watching their facial code.

*Lip Biting.* Biting or gnawing the lips is often a controlled expression of internalized anger or resentment. This is basically a safe way to express hostility. Biting the lower lip while shaking the head is a display of intense anger.

The late Princess Diana used to bite her lip a lot, as evidenced in numerous photographs. She may have done this in an attempt to suppress hostile feelings toward the intrusions of photographers.

*Lip Licking.* People lick their lips for a variety of reasons. It may indicate that an individual is not telling the truth or is expressing nervousness. Often when people are nervous the mouth will get dry, so they will automatically lick their lips as a means to create saliva. People who drink or smoke a lot often have dry lips and tend to lick them a lot.

Lip licking may also be seen as a flirtatious habit. Depending on how seductively it is done, it may be intended to attract the attention of others in a sexual way.

*Cheeky Talk.* A person's cheeks also have a language of their own. Cheek movement can tell you if someone is genuinely happy or is being sarcastic. When a person exhibits a genuine smile, their cheeks will be raised. By contrast, someone who presents a tight-lipped grin or phony smile will have cheeks that are flat and drooped.

When you want to know if someone is being sarcastic or has hostile or doubtful feelings toward you, observe the cheek. For example, when one corner of the mouth is drawn back strongly so it

forms a crease in the cheek (like a distorted smile), it means the person has inner resentment and a sarcastic comment or tone is sure to follow. Rubbing the cheek is an unconscious gesture indicating that a person doubts what you are saying.

Finally, cheeks will reveal if a person is embarrassed or even humiliated. Not only will the cheeks turn red, but they may appear to droop or sag, depending on the degree of humiliation the person is feeling.

## **THE EMOTIONAL CHIN.**

Anthropologist Desmond Morris believes we can tell a great deal about how to read others by observing lower face movement - the movements of the chin and jaw - especially in terms of determining emotional state.

*Chin Anger.* Someone who is angry tends to jut the chin forward, which commonly registers as a threatening or hostile act. You notice chin-jutting in small children who don't want to do what they are told. The first thing they do before they say no is jut their chin forward as a defiant gesture. Most of us carry this gesture into adulthood.

We unconsciously jut our chins forward when we have been wronged or are about to tell someone off. During a conversation, you can tell if someone is getting angry by observing the position of the chin.

*Chin Fear.* When someone's chin is retracted, that person is exhibiting fear. A retracted chin is a protective reaction, much like a turtle does when it retreats into its shell. When we watch horror films, we tend to recoil, appearing to rest the chin on the neck. So when you see someone pull away by retracting the chin, he or she may be afraid of you or threatened by you.

*Chin Boredom.* When the chin is supported by the hand, it means the person is trying to focus attention, perhaps on whomever is speaking. Although the person may look thoughtful, the message is that he or she is bored and is holding up the head in order to concentrate better.

*Chin Concentration.* When someone strokes the chin lightly and gently, much like stroking a beard, it implies the person is concentrating heavily on what the speaker has said.

*Chin Criticism and Snobbery.* When someone is being highly critical or judgmental, they tend to lift the chin, sending the message "I am better than you." or "You don't know what you are talking about."

*Chin Doubt.* When someone distrusts what you are saying, the person often rubs or holds the chin, subconsciously holding back from telling you he or she doesn't believe you.

## THE NOSE AND EARS.

Touching the nose may be a subconscious act that says the person has something to hide, a sign that someone is being deceptive and not telling the truth. It may have to do with the involuntary move to cover the mouth for saying something he or she shouldn't, but instead, the person reaches for the nose.

Ruthie hadn't seen Todd, a college friend, in ages. She had put on a lot of weight through the years, which left her looking much older and less attractive. Throughout their conversation, it was apparent Todd didn't mean any of the compliments he directed toward her. As soon as he said, "You look great." his hand moved toward his nose. When he told her he liked her outfit, that she looked fabulous, or that he was glad to see her. he would unconsciously grab at his nose. Luckily his conversation with Ruthie didn't last too long or he would have rubbed his nose raw.

Sometimes when someone is speaking to you. you'll notice the person has wrinkled the nose, which usually means someone either disapproves or is disgusted by you.

We have all heard the expression about having one's "nose in the air." When the nose is raised and directed upward, with the head tilted back, it is a subconscious sign of snobbery, superiority, an "I am better than you" attitude. The person is being judgmental. reflected by turning up the nose. This gesture—the opposite of the shy person's lowering the head - may also reflect feelings of contempt, defiance, or dominance.

*Ear Talk.* Unconscious touching can also involve the ears. If someone scratches behind the ear with a bent forefinger, it means the person is confused and doubts what he or she is hearing, or may have misunderstood what was said.

When someone tugs at the ears while speaking, the person may be using a delay technique. He or she may have previously heard something and wants to think it over before responding.

Subconscious rubbing of the ears between the thumb and the forefinger says, "I really don't want to hear this." This gesture often appears when a person is not telling the truth and the other person knows it. It is a subconscious attempt to block the ears from hearing what is said. If you see someone doing this while you or someone else is speaking, that person is not interested in hearing what is being said, or simply doesn't believe it.

*Aloof Expressions.* An aloof or deadpan expression is an attempt to hide anger, resentment, or hostility. Everyone's face routinely exhibits some degree of muscle tension and animation, so when the face presents dead eyes and flaccid muscles, it signals that the person has given up and is resigned to the situation at hand.

Prison inmates' resort to this type of facial nongesturing in order to show they are in control of their emotions. By appearing expressionless, they find they are less offensive and invasive toward others. They are less likely to enter someone's space and become a victim.

People who don't want you to know how angry or upset they are (passive-aggression) often show no expression. They don't want to give you power by letting you know you've upset them.

*The Sincere Face.* When someone is sincere and likes you, that person will look directly at you with a face that looks alive and exhibits a great deal of facial animation. The eyes do not wander. The gaze is not hard and steady, but soft and welcoming. The mouth is relaxed and the jaw is slightly dropped in a relaxed "rest position." The back teeth do not touch. There is usually a warm, sincere smile, where the corners of the lips turn up and the eyes are bright and wrinkled at the corners.

This type of facial expression says someone is confident, secure, open, and outwardly directed, as opposed to being uptight and closed in communication.

Now that you've learned the four codes of communication, you're ready to apply what you've learned. In Part Three, we'll move on to the fourteen personality profiles.

### **NONEXPRESSIVE ATTITUDES.**

Can you wrinkle up your nose at the bridge between your eyes? You can attempt this by raising the upper lip and showing your front teeth. Then lower the brows forcibly. Out of context, this contortion says nothing. It is merely grotesque. Probably you felt nothing in doing it except a willingness to oblige and a mild curiosity to find out what this is all about. But these feelings, if you had them, are in no way related to a wrinkled nose.

Nevertheless, the wrinkling of your nose did signify something. Was it willingness to oblige? Or curiosity? Or was it simply that you're highly suggestible? This is the crucial point, and one about which we must be discerning from here on. Facial attitudes of any sort are significant. You "wear" them for a reason, and the reasons are sometimes remote and curious.

Much facial behavior is nonexpressive, yet it still serves a purpose. Every woman must have noticed her facial antics as she applies her make-up; every man will call to mind the comedy of his face while shaving. These are deliberate stretchings and puckerings that make the job easier or more effective. But such examples are obvious. In this chapter, let us consider the facial attitudes that may spring into being without relation to any state of mind.

*Squinting* is probably the most basic of nonexpressive patterns. It serves to protect the most delicate, exposed part of the body - the eyes. Disc-shaped muscles around the eyes narrow the

eye openings, while the mouth area may stay relaxed. In nearsighted people, this facial pattern becomes more or less habitual. You probably have certain acquaintances who just naturally squint most of the time. But ordinarily squinting suggests a moment of temporary adaptation for the sake of proper vision.

Think of your eyelids as shutters at the window of a room. If a flood of sunlight is unpleasantly intense, you close the shutters partway to cut down the light. Or if a storm is blowing up, you might close the shutters tightly to keep out the wind, dust, or rain. Squinting is shuttering. It serves the useful purpose of shielding the eyes from harmful or unpleasant stimuli. Imagine that you have been sitting in a dark room long enough to have become thoroughly "dark-adapted." Suddenly, someone switches on a bright light. The sudden brightness is disagreeable.

How does your face complain? Not only do the pupils of your eyes constrict to the size of a pinhead, but the circular muscle around each eye will also tighten, like the drawstring of a pouch. This eyelid muscle is actually elliptical in shape and might be likened to an old-fashioned oval rug, woven in a spiral. The muscles of both eyes serve to shield the eyes from above and below, by pulling the brows and cheeks toward each other. The effect is to reduce the field of illumination to which your eyes are exposed.

To consider a similar case of squinting, how do you look for the first minute in the morning when you have been suddenly aroused from a deep sleep? Again, the interference is the comparative brightness of light, although the morning may actually be overcast. Your eyes are just "sleep-adapted"! So perhaps in a stupor, you sit on the edge of your bed. Your face is serene with closed eyes; part of you is still slumbering, yet part of you is awake enough to struggle against slumber. You raise your lids just a fraction and discover that ordinary daylight is painfully brilliant. Then the light adaptation takes place, little by little. You open the "shutters" only a crack, then a little more. Before long, they arc moderately wide open. And you can face your image in the mirror with nothing more serious than heavy eyelids.

It was noted that the mouth area may remain relaxed in squinting. There is no need for tension around the mouth. On the contrary, it is passively affected by what goes on around the eyes. You will want to consult your mirror to prove this. Can you discover what the mouth does? You will see, in fact, that it is impossible to squint forcibly without allowing the mouth to ride upward in a smiling curve. Some of the slender strands of muscle running to the corners of the mouth are anchored above in the flesh around the eyelid muscles. So when eyelid muscles squeeze toward the centers of the eyes in drawstring fashion, they are obliged to draw these slender strands (and hence the mouth) upward with them.

*Grinning* is, therefore, a common adjunct of forcible squinting. If the mouth is utterly limp, the lips will separate; the upper lip will ride still higher to expose the tipper teeth. This might be the

sort of grin you wear as you try to open the "shutters" to the morning light- So there is really nothing jubilant about the grin of someone who has just turned off the alarm clock.

During the day, your eyes are exposed more or less steadily to bright light. No longer does the sky blind you and cause you to bring a hand up to shield your eyes. Your entire field of vision, in fact, is often a brilliant flood of light. At times, you are determined to pick out some small object in the far distance - to identify it, perhaps to watch it move. Once again, the shutters go to work. Squinting will decrease the field of vision. By eliminating distracting elements at the fringe of vision, squinting can thus improve the mental focus of attention. You may even catch yourself closing one eye completely while squinting with the other. Who knows? Perhaps you are squinting now at this page of print to blot out everything else around you.

Squinting is a pattern found so often at the race track, ball field, stadium, or theater - anywhere spectators must keep their eyes on a distant focal point of activity. It can become a habitual expression for some sailors whose life at sea surrounds them with only the great expanse of shifting water. There is not just the brilliance of the empty dome of sky but reflection from the water too. The desert or open stretch of sandy beach may offer similar problems of blinding glare. It can be cruel. The ever-popular solution is a pair of sunglasses. Squinting and sunglasses do not usually go together.

Among other things that occasionally interfere with proper vision is the weather itself. Whoever is caught in a teeming rain without hat or umbrella will seem to grin with fiendish glee at his or her own hatless and hapless plight. Or it may be the familiar "shower-bath" grin. The squint simply narrows the eyes against the spatter of the shower. It is common to speak of a "blinding rain" or "blinding snowstorm." A brisk wind will call for squinting too. When one is pacing into the teeth of the gale, eyes must be guarded from whirling dust. And just as surely, the eyes of bride and groom must squint against the bombardment of rice and confetti.

Such are the physical causes of squinting. The facial pattern is established at birth as a reflex for reasons that should now be perfectly apparent: protection of the light-sensitive retina within the eye and protection of the outer surface of the eyeball against irritating substances in the air.

You have noticed that you often squint when attempting to see distinctly an object at some distance. This is to reduce the overall illumination and blot out nearby distractions, so that undivided attention may be given to the object. At close range, however, squinting actually interferes with proper vision. The fringe of upper eyelashes gets in the way. Yet this is precisely what an artist wants when he squints at the object he is painting. The filtering out of extraneous detail leaves only the broad sweep of things. Squinting thus becomes associated with the act of appraisal or analysis. One may, from habit, summon up the squint when sizing up a person, idea, or situation. The employer, interviewing the job applicant, may squint by way of evaluation. The legislator may squint critically as he or she examines the proposed revision of tax laws. The

architect may squint as he or she surveys the site for a new library. Squinting is an effort to sift and diminish—whether it's the amount of light or momentary distractions.

Try this yourself. First, with eyes wide open and looking straight ahead, note how much you can see around you, especially above and below eye level. Then squint forcibly, with head and eyes fixed in the same direction as before. You will readily observe that your field of vision is much reduced, something like fifty percent. It is not difficult to appreciate how this reduced vision is favorable to concentration of the mind.

*Empathy.* Up to this point, we have been talking about a nonexpressive attitude that serves a useful purpose. You may be surprised to find how much of your facial behavior is utterly pointless. There is a strange variety of compulsive attitudes that is mostly sheer nonsense. This unemotional activity of the face comes and goes throughout the day. But it will be more apparent in faces other than your own. If only you can be sufficiently vigilant to catch it on the wing, the procession of things you see will be almost comical. It is a family of attitudes related to effort, attitudes that would seem to be reinforcing an effort, ineffectual though they are.

An interesting point here is that you will attempt to reinforce not only your own efforts but those of others as well. You are inclined to be generous with your face! In this matter of observing the efforts of others and reinforcing them, we may borrow a word from psychologists. It is *empathy*. It sounds like *sympathy* and means almost the same thing. But empathy can be felt in regard to inanimate objects, as well as our fellow human beings. We think of sympathy as a capacity for sharing the feelings of others. Empathy is a sensitivity to physical factors in a situation. You endow inanimate things with feelings and then proceed to share those feelings. The forlorn shell of an old house has careened jauntily from its original plumb. As we gaze up at the collapsing wreck, we too may feel giddy and wobbly.

Flesh is not everywhere bound tightly to the underlying bone. Some parts glide about more freely than others. On the head, the most mobile region is the mouth. You can trace the line of its attachment to the skull. From right to left, stroke the gum above the arch of your upper teeth; then slide into the deep pocket of your left cheek. Return from left to right along the gum below the lower teeth. Complete the circuit in the pocket of your right cheek. While massaging the gums in this circle, notice how perfectly free from the bone is the lower part of your face. It is a sort of apron extending from nose to chin, and almost from ear to ear. No wonder it's your most versatile area! Brows and eyes are less mobile.

Place your finger tips on your brows; then alternately push them up and pull them down. Can you feel the bony ridge over which they glide? If we disregard the rolling of the eyeball itself, there is only limited movement of the flesh around it. Once you have closed your eyelids and squeezed them shut, you have exhausted all the possibilities. As for the freedom of the nose, only slight activity is possible. You have already tried to wrinkle your nose at the bridge. All that

is left is the faint dilation and contraction of nostrils. (In case you hadn't noticed, nostril activity is perfectly visible and under partial voluntary control)

At the side of the head, many of us find we can tighten the flesh around our ears. This will make the ear lobe stand out from the head and will draw the rest of the ear backward against the head. Can you wiggle your ears? Such a movement no longer serves a purpose. Its very lack of purpose (at least in this age) makes it a bid for laughter. Thus is the picture of comparative mobility. Already you can make your forecast that most instances of empathy will engage the mouth.

You are now at a disadvantage in case you wish to demonstrate your own acts of empathy. Forewarned is forearmed. And you may half-consciously try to prove you don't indulge in such tomfoolery. But the next time you thread a needle, take special note of what you do with your mouth. Most people will pucker the mouth, as if to help steer the point of thread into the needle's eye. And the next time you are wringing out a heavy wet towel, step before a mirror and watch the process. The squeezing will be done not with your hands alone, but with your mouth as well. Actually, you will get a better performance watching other people.

They will not be forewarned and will give you a spontaneous, bona fide exhibition. Consider the face of someone who is tying up a large, unwieldy bundle. As he strains to draw the cord very tightly, you can expect to see his mouth also drawn very tightly - the lips meeting on a line as taut as a piano wire!

At the arena, in the heat of championship bouts, feverish support is there at every turn. As contestants slug away, a synchronized mock battle is being fought from start to finish by the mouth muscles of frantic fans. There are, of course, the obvious attitudes that stem directly from excitement - from the savage bellows of anger to the shrieks of triumph. But the mock battle of mouths almost escapes detection, being slight and silent. Another type of performance is common at the circus. In part, the performance is high above us, where the aerialists defy death, gravity, and our own reeling heads. Yet, down below, another show is in progress: the sea of upward-protruding lips and chin, and even up-turned eyeballs and high-rising brows. What an army of helpers! All, presumably, to keep the performers from taking the dizzying plunge to a net or, far worse, the ground itself.

Now and then, one takes advantage of what is in the mouth. Try cutting some heavy cardboard with shears. You will do it, too, with clenching teeth, a silent crunch of molars with every crunch of shears. It is jaw muscles, spread out in the region of your temples, that bring molars together. Human jaws are like the jaws of any vise. When you or someone you are watching is crushing something you just cannot resist lending a jaw.

Of the other facial features that aim to reinforce an effort, only the eyebrows warrant a mention here. When they rise toward the hairline, they are being drawn by a thin sheet of muscle under

the skin of the forehead. It should not surprise us, therefore, that any facial effort to make ourselves taller must be delegated to that forehead muscle. When it pulls tightly, it draws up the brows—and we feel taller. Stand two growing children back-to-back to compare their heights, and the contest is on. It is a contest to see who can lift his or her eyebrows higher! But consider this phenomenon from another angle. You yourself reach up to a high shelf, perhaps having to stand on tiptoe. And if this heavenward stretch is taxing your reserves, your eyebrows will come to your assistance and rise a little higher on the forehead.

They are ineffectual in making you taller, but they have tried! Spectators at many athletic events are cooperative in this way. What a welcome lift they must give the pole vaulter and the high jumper! And it's all done with raised eyebrows. Accordingly, what a great demand on the eyebrow-raising muscles to witness the launching of a colossal rocket into space! In Chapter Eight we will have a closer look at brow raising.

At this point, it must be abundantly clear that our grimaces are not entirely the products of emotional feelings inside us. It might well be argued that facial attitudes are more often related to this business of reinforcing an effort than to the expression of feelings. Be that as it may, you have at least recognized the existence of nonexpressive attitudes. You are not really through with them. In the chapters to come, you will perhaps spy them in the crowd. But by that time, they will be old friends.

## **10. Perception and rationalization of emotions**

The emotional/rational dichotomy approximates the popular distinction between "heart" and "mind"; when you know "in your heart" that a thing is good you have a different conviction - somehow a deeper kind of conviction - than when you know a thing is good from the point of view of the rational mind. There is a steady variation in the ratio of reason to emotion in mind control; the more intense a feeling, the more dominantly emotional the mind becomes - and therefore less rationally effective. This is an order of things that seems to last from the distant ages of evolution - to have emotions, that is, intuitions that guide the instant reaction in situations where our lives are in danger and were stopping to think about what to do it may cost life, it is an advantage.

These two minds, the emotional and the rational, often act in close harmony, intertwining their very different paths to guide us through the world. Usually there is a balance between the emotional and the rational mind, where the emotions fuel and inform the operations of the rational mind and the rational mind refines and sometimes opposes the emotions. And yet our minds, the emotional and the rational, are semi-independent faculties, as we shall see, each reflecting a distinct but connected operation of brain circuitry.

At many or most times these two distinct minds are most exquisitely coordinated; feelings are essential to thought, and thought to feelings. But when passion intervenes, an imbalance is created: the emotional mind takes over, drowning out the rational mind.

The Oxford dictionary defines emotion as "any mental, sentimental, or passionate agitation or disturbance; any acute or tense state of mind." Emotion refers to a feeling and the thoughts it evokes, psychological and biological states, and the extent to which we are inclined to act. There are hundreds of emotions of all kinds, in various variations, changes and shades. Indeed, there are also emotions much more subtle than words could define them.

Researchers continue to debate which emotions can be considered primary - which in the field of primary colors correspond to the colors red, yellow and blue, from which all possible combinations are generated - or whether such primary emotions even exist. Some theorists propose fundamental entanglements, but not everyone else agrees with them. which would be the main candidates (and some of the members of these families) of these relationships:

*Anger:* anger, resentment, exasperation, indignation, vexation, animosity, irascibility, hostility, and perhaps to some extent hatred and violence, which are pathological;

*Sadness:* anger, sorrow, lack of mood, sulking, melancholy, crying for pity, loneliness, despair and severe depression, when pathological.

*Fear:* anxiety, nervousness, preoccupation, consternation, misunderstanding, worry, fear, fright, horror, and of a psychopathological order, phobia and panic.

*Joy:* happiness, relief, contentment, blessing, delight, amusement, pride, sensual pleasure, reward, satisfaction, euphoria, ecstasy, and at the limit, mania.

*Love:* acceptance, friendship, trust, kindness, affinity, devotion, adoration, love, respect.

*Surprise:* shock, wonder.

*Disgust:* contempt, aversion, loathing, repulsion.

*Shame:* guilt, embarrassment, anger, remorse, humiliation, regret.

Of course, this list does not solve all questions about the categorization of emotions. For example, what about a combination like jealousy, a variant of anger that includes sadness and fear? But with virtues like hope and faith, courage and forgiveness, certainty and self-control? Or with some of the classic lives, feelings like doubt or boredom? There are no clear answers, and the scientific debate over how emotions should be classified continues.

The idea that they are based on a few primary emotions stems in part from a discovery by Paul Ekman of the University of California, San Francisco, who claims that four of the facial expressions (fear, anger, sadness, joy) are recognized by all cultures in the whole world, including completely illiterate individuals who have not been in contact with cinema or television, thus suggesting their universality.

Ekman showed photographs of various facial expressions of representatives of distant cultures, such as those of New Guinea, where there are isolated tribes living as in the Stone Age, somewhere in the mountains, and absolutely all of them recognized these fundamental emotions. The first to notice the universality of emotional expressions was Darwin, who also used it as an argument in his evolutionary theory, these signals being imprinted in our nervous system.

In searching for the underlying principles, I watched as Ekman and others thought of emotions in terms of families or dimensions, and saw the main families—anger, sadness, fear, joy, love, shame—as starting the endless nuances of our emotional lives. Each of these families of emotions has a basic core, from which endless mutations are formed.

This is where moods are born, which, theoretically speaking, are less obvious and last longer than emotions (while, for example, it's hard to be very angry all day, you can still be sulky or irritable, these being less acute anger and which are easy to trigger). Beyond moods there are temperaments, the tendency to remember certain emotions or moods you've been through before, which makes people melancholy, shy, or cheerful. But beyond these emotional moods, there are problems of an emotional nature, such as clinical depressions or chronic anxieties, from which some cannot escape, feeling trapped as if in a toxic effect.

Only in recent years has a scientific model for studying the emotional mind emerged, which explains how much of what we do can be dictated by emotions - how we can become reasonable one moment and so irrational the next—and measure that emotions have their own reasoning and their own logic. Perhaps the best assessments of the emotional mind are those offered, first, by Paul Ekman, head of the human interaction laboratory at the University of California, San Francisco, and second, by Seymour Epstein, a clinical psychologist at the University of Massachusetts. Even though Ekman and Epstein evaluated various scientific evidence differently, they still offered a fundamental list of qualities that distinguish emotions from other mental experiences (Goleman, 2001).

The emotional mind operates much faster than the rational mind, jumping into action without stopping for even a moment to consider what it is doing. Its quickness does not allow for the deliberate, analytical reflection that is the mark of a thinking mind. Throughout evolution, this speed has been associated with making fundamental decisions, with things that need to be paid attention to, and with facts that require vigilance, for example, when facing an animal and making

a decision in a fraction of a second: "I eat it or it eats me". Organisms that had to pause too long to think about answers did not have many offspring to pass on these genes of slowness.

Actions that spring from the emotional mind carry with them a strong and special sense of certainty, are well-directed products, and represent a simplified way of approaching things that can be absolutely bewildering to the rational mind. When some agitation or even a minimal reaction sets in, we find ourselves thinking, "Why did I do that?" - a sign that the rational mind is awake at the time, but was not as prompt as the emotional mind.

Since the interval between what triggers the emotion and its actual appearance can be practically zero, the mechanism that evaluates the perception must be able to have a high speed of operation even in terms of time at the level of the brain, while it seems to be measured in thousandths of a second. This capitalization of the need to act must be automatic and so fast that an obvious awareness is not reached. A lot of emotional reactions occur practically before we even know what's going on.

Quick Perception sacrifices accuracy in favor of speed, relying on first impressions, reacting to the big picture or the most striking aspects. All things are judged at once, as a whole, without respite for deep analysis. Intensely experienced elements can determine this impression without careful weighing of details. The big advantage is that the emotional mind can read an emotional reality (he's angry at me; she's lying; this makes him sad) in an instant, building quick, intuitive judgments that tell us who to fear, who to trust, who is disturbed.

The emotional mind is our danger-detecting radar; if we (or our ancestors, in evolutionary history) had waited for the rational mind to make some of these judgments, not only would we have made a mistake - but it would have been fatal. The problem is that these intuitive impressions or judgments, being made in the blink of an eye, can be wrong.

Paul Ekman believes that this speed with which emotions can involve us in an action before we are aware that they have arisen is absolutely essential to our great adaptability: they mobilize us to react without wasting time to analyze how to react or whether to react in case of serious situations. Using this system he created to detect emotions from subtle changes and facial expressions, Ekman was able to sense the micro-emotions appearing on the face in less than half a second.

Ekman and his collaborators discovered that emotional expressions begin to be deciphered in changes in facial muscles within a few thousandths of a second after being triggered by an event, and that the physiological changes typical of a particular emotion - such as facial flushing or increased heart rate - they also occur in just a few fractions of a second. This speed is especially true for intense emotions, such as fear of an immediate threat.

Ekman argues that, technically speaking, peak emotion is very brief, lasting only a few seconds and not minutes, hours or days. His reasoning is that an emotion that grips the brain and body for a longer period, independent of changing circumstances, would have proved a maladaptation.

If the emotions produced by a particular event would invariably continue to dominate us after it has passed, regardless of what else is happening around us, then feelings would become ineffective guides to action. In order for emotions to last longer, their triggering must be supported by constantly evoking that emotion, as when we lose someone we love, we continue to mourn him for a long time. When feelings persist for hours, they actually become moods, a dampened form. Moods set an affective tone, but they are not as powerful shapers of how we perceive and act as strong emotions.

Because the rational mind takes a little longer than the emotional mind to register and react, the first impulse in an emotional situation is that of the soul and not of reason. There is also a second type of emotional reaction, slower than the immediate reaction, which is born and amplified in our thought before the feeling is reached. This second way of triggering emotions is a deliberate one, and we are generally aware of it. of the thoughts that precede them.

In this type of emotional reaction there is a more extensive valorization; our thoughts - the cognitive part - play the key role in determining the emotions that will be triggered. As soon as we make an assessment - "This taxi driver is cheating me" or "This child is adorable", an emotional reaction follows that is adapted to the situation. In this sequence, the better articulated thought gradually precedes the feeling. More complicated emotions, such as embarrassment or fear of an exam, follow this path more slowly, taking seconds or minutes to unfold, as they are emotions that come from thoughts: meta-states.

By contrast, in the rapid reaction sequence feelings seem to precede or be simultaneous with thoughts. This rapid-fire emotional reaction takes over in urgent, survival situations. This is the power of such quick decisions: to mobilize us in an instant in the face of an emergency.

Our most intense feelings are involuntary reactions; we cannot decide when they will break out. Stendhal wrote: "Love is like a fever that comes and goes independently of our will." Not only love, but also anger or fear engulf us, giving the impression that it happens by itself and that we did not decide it to be so. That's why they can also provide an alibi: "The fact that we can't choose the emotions we have," Ekman observes, allows people to explain their actions by saying they were overcome by emotion.

Just as there are fast or slow routes to emotion, some through immediate perception and others through thought that involves reflection, so there are emotions that can be produced. An example is the kind of intentionally manipulated feeling used by actors on stage, such as tears, which occur when certain sad memories are recalled for this purpose.

But actors are nothing more than people more adept than we are at making intentional use of the second route to emotion, feeling through thought. Although we cannot easily change the specific emotions that can be triggered by a certain thought, very often we can choose what to think about. Exactly how. sexual fantasies can lead to sexual feelings, just as happy memories lift our spirits and melancholy thoughts make us sad.

But it is not usually the rational mind that decides what emotion we "should" have. Instead, our feelings usually come naturally. What the rational mind can most often control is the course of our reactions. With a few exceptions, we don't decide when to be angry or happy.

The logic of the emotional mind is associative; it associates elements that symbolize reality or triggers a memory that corresponds to this reality. That is why smiles, metaphors and images address the emotional mind directly, as do visual arts, novels, film, poetry, music, theater, opera. Great spiritual masters such as Buddha and Jesus reached the soul of their disciples by addressing them in an emotional language, telling stories in parables, fables and stories. Indeed, religious symbols and rituals matter less rationally; they find their place in the expressions of the soul.

This logic of the soul - of the emotional mind - is very well described by Freud in the concept of the "primary process" of thought; this is the logic of religion and poetry, of psychoses and childhoods, of dreams and myths (or as Joseph Campbell says: "Dreams are private myths; myths are shared dreams").

The process of initiation is the key to the meaning of James Joyce's words in *Ulysses*: in the process of initial thought, certain associations of vague ideas determine the narrative flow; one object symbolizes another; one feeling turns into another, which he supports. The whole is condensed into parts. There is no more time, no laws of cause and effect. Indeed, there is no longer any such thing as "No" in the initial process; anything is possible. Psychoanalytic methods are part of the art of deciphering and bringing to light these meaningful substitutions.

The emotional mind follows this logic and its rules, according to which each element supports the other, and things are not necessarily defined by their objective identity: what matters is how they are perceived; things are as they seem. Something that reminds us of something else can be far more important than what it "is" itself. Indeed, in emotional life, identities can be like a hologram, in that a single part evokes the whole. As Seymour Epstein points out, while the rational mind makes logical connections between causes and effects, the emotional mind does not discriminate, finding connections between things that have vague commonalities.

There are many ways in which the emotional mind is like that of a child. And the more it is like this, the stronger the emotions become. One way would be trenchant thinking, where everything is black or white, with no shades of gray; a person terrified of making a blunder will immediately

think: "I always say the wrong thing." Another sign of this childish mode is personalized thinking in which events are perceived through the lens of a tendency to be self-centered, such as the driver who, after an accident, explains that: "The telephone pole just went into me."

This childish way is self-confirming, suppressing or ignoring memories or facts that might undermine certain beliefs and only focusing on those that reinforce them. The convictions of the rational mind are mere trials; any new evidence can no longer confirm a certain belief and replace it with a new one - this seems to be objective evidence. The emotional mind, however, makes the beliefs very true, shrugging off any evidence to the contrary.

That's why it's so hard to get along with a person who's emotionally upset: no matter how logically sounds the arguments are, they carry no weight if they don't match the emotional beliefs of the moment. Feelings are self-justifying, having a series of perceptions and "proofs" of their own.

When a feature of an event resembles an emotionally charged memory from somewhere in the past, the emotional mind reacts by triggering the feelings you had at the time you remembered. The emotional mind reacts to the present as if it were in the past.

The problem is that, especially when the reaction is fast and automatic, we may not realize that the situation that once represented a crisis is not repeated today. A person who has learned from painful childhood experiences to react without angry glares, without intense fear and without hatred, will repeat this reaction in the same size and in adulthood, when the reaction itself is no longer a great threat.

If the feelings are strong, then the reaction triggered is also clear. But if the feelings are vague and subtle, we may not be aware of the emotional reaction we are having, even if it subtly colors the way we react in the moment. Thoughts and reactions at any given moment will be consistent with the color of past thoughts and reactions, even though it may appear that the reaction is solely due to the current situation.

Our emotional mind will urge the rational mind towards its goals and thus explanations for our feelings and reactions appear - rationalizations - justifying them according to the present moment, without understanding the influence that emotional memory has. Thus, we may not realize what is actually happening, even though we may have the conviction and certainty that we know exactly what is happening to us. In such moments, the emotional mind has already subjugated the rational one, putting it to work for its benefit.

The functioning of the emotional mind is very much a specific state, dictated by a certain feeling, that occurs at a given time. The way we think and act when we are in a romantic mood is totally different from the way we behave when we are angry or demoralized; in this mechanics of

emotions, each feeling has its own distinct repertoire of thinking, reacting, and even remembering. These state-specific repertoires become predominant in moments of intense emotion.

A sign that this repertoire is active is his selective memory. Part of the mental response to an emotional situation is to review memories and options for action, so that the most relevant ones are placed at the top of the hierarchy and therefore become easier to put into practice. Each major emotion has its own biological signature, a particular pattern of changes that sustain the body when the emotion rises, and a unique set of cues that the body automatically gives when it is prey to the emotion.

## 11. Integrating elements

### FRONTALIS.

Frontalis is the anterior muscle belly of the extensive epicranium muscle. The epicranium muscle consists of a broad layer of tendon (the galea aponeurotica) and thin muscle bellies; it covers the top and sides of the skull, from the brows in front to the base of the skull in back and over to the tops of the ears. The front edge of the galea aponeurotica, just posterior to the top of the forehead. The skin at the eyebrow and root of the nose, blending with the fibers of the procerus, orbicularis oculi and corrugator supercilii.

Medial and lateral portions together: Raise the entire eyebrow, increasing its overall curvature (the central portion is pulled higher). They also pull the scalp (hairline) slightly forward as they pull on the galea aponeurotica. Medial portion only: Pulls up the medial end of the eyebrow. Lateral portion only: Pulls the middle and lateral end of the eyebrow upward, giving the eyebrow a strong curvature. The medial portions of both sides of the face always contract together and are almost always accompanied by contraction of the corrugator supercilii (as in sadness). The lateral portion only occasionally contracts by itself, and usually in one eyebrow only.

The frontalis is divisible functionally into medial and lateral parts. The two frontalis bellies of the head are in contact with each other at their lower portion, on the midline of the forehead. Contraction of the frontalis bellies produces horizontal wrinkles across the forehead.

#### *Expressions.*

- (1) Medial and lateral portions of both sides of the face: surprise, astonishment; fear, fright, horror; interest, attention; questioning, doubt.
- (2) Medial portions of both sides of the face (with corrugator): sadness, grief, suffering; sometimes fear.
- (3) Medial and lateral portions of one side of the face: inquisitiveness, skepticism.
- (4) Lateral portion of one side of the face: sly, devious look.

(5) Contraction of the entire frontalis is often used as a greeting signal or for conversational emphasis. This use is not an expression of emotion.

### **CORRUGATOR SUPERCILII.**

The bone at the medial end of the superciliary arch, near the upper inner corner of the orbit. The skin of the middle portion of the eyebrow, and the skin of the forehead immediately above it. The fibers interlace with fibers of the frontalis and orbicularis oculi.

Pulls the middle section of the eyebrow downward and medially in an oblique direction, thereby pulling the eyebrows together. It usually works simultaneously with the procerus and depressor supercilii to lower the eyebrows and pull them together. It can work without these muscles, pulling the eyebrows together, when the eyebrows are raised by the frontalis.

Both sides usually work together, except when one eyebrow is pulled downward and the other upward. The corrugator supercilii is a narrow, elongated muscle. Most of the muscle is deep to the orbicularis oculi, but the lateral tips of its fibers pierce the orbicularis to pass superficially and insert into the skin.

The corrugator supercilii typically creates strong vertical or slightly oblique wrinkles and vertical bulges on the glabella between the medial ends of the eyebrows. It also swells the skin at the medial end of the eyebrow into a wide, thick, crescent-shaped bulge. This action pulls the brows shelflike over the eyes, shading them from strong light.

A depression forms in the skin above the middle of the eyebrow (actually closer to the medial end) as the corrugator contracts. It often gives the eyebrow an S-shaped curve—the eye brow develops a central downward dip (usually close to the medial end) as the muscle pulls the middle portion of the eyebrow downward and inward.

This is especially noticeable if the medial portion of the frontalis is also lifting the medial end of the eyebrow. The corrugator may also create a long, oblique, shallow furrow on the lateral side of the front of the forehead. This furrow is directed upward and outward from the medial end of the eyebrow or from the skin depression located above the middle of the eyebrow. The lowering of the brow by the corrugator narrows the eye opening by pushing the skin below the eyebrow and upper eyelid downward.

#### *Expressions.*

(1) Anger; sadness, suffering, grief, pain; frowning; interest, thoughtful reflection, concentration (focused thought), curiosity, confusion. The corrugator can be considered a muscle of negative feelings, being typically used in sadness, fear, and anger.

(2) Concentration and determination, which also make strong use of the corrugator, may be regarded as unresolved stressful (negative) states.

## **LEVATOR PALPEBRAE SUPERIORIS.**

Origin of this muscle is deep in the back of the eye socket, from the roof of the orbit. The entire lower edge of the upper eyelid. The levator palpebrae superioris is a long muscle which passes over the eyeball, deep in the eye socket, along the roof of the orbit. Narrow behind, it widens as it advances anteriorly, becoming aponeurotic before inserting into the margin of the upper eyelid

Raises the upper eyelid. It holds the eye open in the normal neutral position. Expression develops only after the eyelid has been raised above this position. Exposes the upper portion of the iris and the white of the eye (sclera) above the iris. By continued action it pulls the upper eyelid back so it disappears from view under the eye cover fold.

### *Expressions.*

- (1) Slight raising of the upper eyelid beyond the normal open eye produces a staring, fixed gaze or the expression of surprise.
- (2) Full contraction produces intense expressions ranging from fear, terror, shock, astonishment, and intense joy to a blank, hypnotic look.
- (3) Slight relaxation of the muscle (causing the upper eyelid to droop) with the eye still remaining partially open suggests drowsiness or intoxication, especially if the frontalis is also contracted in an attempt to hold the eyes open by raising the eyebrows. This expression exposes more of the upper eyelid, which has descended onto the upper portion of the iris. Upper eyelid droop and gentle eye closure (when the lower eyelid does not rise) are caused by relaxation of the levator palpebrae superioris, not by contraction of the orbicularis oculi.

## **PROCERUS.**

The fascia covering the lower part of the nasal bones and the upper part of the lateral nasal cartilages. The skin between the eyebrows and on the lower portion of the center of the forehead. Its fibers blend with fibers of the frontalis in the same region.

Pulls down the skin of the middle of the forehead and the medial ends of the eyebrows. This muscle works in conjunction with the corrugator supercilii and depressor supercilii to lower the medial ends of the eyebrows. The procerus automatically contracts when the levator labii superioris alaeque nasi is tensed. It can be seen working by itself if the eyebrows are first raised by the frontalis and then the levator labii superioris alaeque nasi is contracted.

The procerus muscles of both sides form a single triangular sheet of muscle between the eyebrows. The procerus may occasionally produce a horizontal wrinkle across the bridge of the nose.

### *Expressions.*

- (1) Anger, aggression, pain; frown, concentration; contributes to disgust.

## **DILATOR NARIS.**

Edge of the nasal notch of the maxilla (bony origin) and the lesser alar cartilages and lower edge of the lateral crus of the greater alar cartilage (cartilaginous origins). The skin at the inferior margin of the wing of the nose. The dilator naris is a very thin rectangular muscle that lies on the outer surface of the wing of the nose.

Dilates (flares) the wing of the nose. Both sides work simultaneously. Enlarges the opening of the nostril. The upper edges of the wings of the nose become depressed (pulled medially), and the furrow at the upper edge of the wing becomes more pronounced. In side view, the middle of the lower edge of the wing is raised, exposing more of the nostril.

*Expressions.*

(1) Passion, anger, rage, labored breathing, exertion.

## **ZYGOMATICUS MINOR.**

The front surface of the zygomatic bone, below the lateral edge of the orbit (below the outer corner of the eye). The skin of the middle section of the nasolabial furrow and into the cheek fat. Other fibers continue further downward to the red lip, passing over as well as through the mass of the orbicularis oris (see insertion of levator labii superioris). From its origin, this small muscle passes medially and then curves downward. It lies deep to the orbicularis oculi at its origin.

Pulls the middle section of the nasolabial furrow and the middle portion of one side of the upper lip outward and slightly upward. This is a subtle, oblique pull, whereas the pull of the levator labii superioris is straight up. The zygomaticus minor does not pull the angle of the mouth. The zygomaticus minor deepens the portion of the middle section of the nasolabial furrow located midway between the level of the bottom of the nose and the top of the upper lip.

*Expressions.*

(1) Sadness. It pulls the upper lip into the crying position. The zygomaticus minor does not express disgust or happiness, although its action may look similar to disgust.

## **LEVATOR ANGULI ORIS.**

The canine fossa of the maxilla, below the middle of the lower edge of the orbit. The muscular node at the angle of the mouth. This somewhat fan-shaped muscle converges inferiorly into the node. It lies deep to other facial muscles.

Pulls the node, and therefore the angle of the mouth (not the upper lip), straight up. This is a difficult action to do voluntarily. Pulling the angles of the mouth straight up, the levator anguli oris curves the mouth line upward at its ends. This is a rounder, tighter curvature than that caused by the zygomaticus major during a normal, true smile. The levator anguli oris also

stretches the lips. The front of the cheek is lifted and puffed out. The nasolabial furrow rises and moves laterally.

*Expressions.*

(1) Uncomfortable, uncertain, or "stupid" smile. This muscle is probably not used in expressing the basic emotions; it may be used primarily to stabilize the node.

**RISORIIUS.**

The fascia of the cheek overlying the masseter muscle (a nonbony origin). The muscular node at the angle of the mouth and sometimes into the posterior edge of the upper end of the depressor anguli oris. The risorius is one of the most variable of the facial muscles. A good percentage of people has no risorius at all, while others have an expansive one. In some individuals, the muscle is present on one side of the face only. The nodular platysma, however, is present in all people. Structurally, the risorius ranges from a triangular muscular sheet that converges into the node to a narrow band that may contain only a few strands of muscular fiber.

Pulls the node, and therefore the angle of the mouth, backward and outward-horizontally-toward the ear lobe. This very weak action is probably used for creating subtle movements of the mouth during speech. Strong retraction of the angle of the mouth is produced by the nodular portion of the platysma, which also pulls it slightly downward.

The risorius widens the mouth, stretching and flattening the lips. It pulls the lower end of the nasolabial furrow outward and backward.

*Expressions.*

(1) When present, the risorius may contribute to facial expressions that involve retraction of the angle of the mouth, especially smiling (happiness), along with the more powerful zygomaticus major.

**BUCCINATOR.**

The outer surfaces of the upper and lower jaws, just above and below the three back molars respectively, and from a tendinous band that spans across the posterior end of these bony origins. Into the muscular node at the angle of the mouth. This relatively deep, quadrilateral muscle forms the lateral wall of the cheek, lying on the outside of the teeth. The thick buccal (cheek) fat pad lies on the muscle's outer surface. The angle of the mouth is pulled inward or puckered inward and is usually also pulled slightly upward, curving the mouth line slightly upward at its ends. Lines may radiate from the angle of the mouth, especially one that passes outward and downward. The lips are widened and elongated as they are pulled around the cylinder of the muzzle and the fleshy prominence of the chin is widened and flattened slightly. The lower end of the nasolabial furrow may deepen, while the cheek tissue just lateral to the dimpled angle of the mouth develops several bulged forms.

The buccinator pulls the medial edge of the node and the angle of the mouth (the extreme lateral end of the mouth line) straight back (posteriorly, not laterally), and usually slightly upward. It compresses the cheeks to force out air after they have been distended (or prevents them from being distended) and keeps food between the teeth while chewing.

*Expressions.*

(1) Sarcastic smirk, annoyance, contempt, disapproval. These emotions are expressed by either unilateral or bilateral contraction of the buccinator.

**DEPRESSOR ANGULI ORIS.**

Deep head (long head): A line on the outside of the body of the mandible, extending forward to the mental tubercle. This line is variable in length—often the long head arises only from the mental tubercle at the corner of the chin. Superficial head (caput latum): The fascia covering the platysma and depressor labii inferioris. The muscular node at the angle of the mouth.

Pulls the node (and angle of the mouth) only slightly downward and laterally from its normal resting position. This muscle is the antagonist of the zygomaticus major, and the long head may be seen on the surface as a raised ridge during strong smiling action as the zygomaticus pulls the node upward and outward. The depressor anguli oris is made up of two layers: a superficial head arising from fascia, and a deep head arising from bone. The deep head is often narrow and straplike, arising from the small bony area of the mental tubercle. Together, both heads create a fan-shaped muscle that converges into the node.

The depressor anguli oris curves the mouth downward at its outer corners, which also lengthens the nasolabial furrow while deepening its lower end (producing the "long face" of sadness). It widens the mouth slightly and stretches the lips, flattening them. Strong contraction will produce several bulging forms below and lateral to the angle of the mouth. The furrow descending obliquely from the angle of the mouth is deepened and prolonged.

*Expressions.*

(1) Sadness, grief, sorrow, depression; disgust.

**DEPRESSOR LABII INFERIORIS.**

An oblique line on the outside of the body of the mandible, just superior to the origin of the depressor anguli oris. The skin of the medial portion of each half of the lower lip, almost up to the red part, and into the substance of the orbicularis oris. The fibers of these muscles of each side of the face blend at the midline just below the lower lip. The depressor labii inferioris is a quadrilateral muscle. Its lower lateral portion lies deep to fibers of the depressor anguli oris and the labial platysma.

The muscles of both sides contract together to pull the middle third of the entire lower lip straight downward. This parts the lips, exposing the teeth and lower gum (also see action of labial

platysma). The depressor labii inferioris assists in eversion of the lower lip, exposing the inside wet mucous membrane. Its medial fibers push the chin prominence downward. The lower lip curves downward at its center. A horizontal skin fold (the mentolabial sulcus) below the lower lip may develop or deepen. The fleshy prominence of the chin is pushed downward. The mouth does not widen.

#### *Expressions.*

(1) Primarily used in speaking.

(2) When the levator labii superioris alaeque nasi contracts unilaterally, skin wrinkles form on that side of the nose only. The corners of the mouth are pulled straight back (posteriorly, not laterally) and dimpled, on both sides or on one side only (buccinator).

(3) Disgust and contempt are closely related yet distinct, and are grouped together.

**Disgust** often blends with anger and surprise. It is brought about by the actual experiencing of unpleasant sights, tastes, smells, or tactile experiences, or just by the thought of them. Sticking the tongue out, as in an attempt to remove undesired matter from the mouth, is an extreme form of disgust. Vomiting is the ultimate disgust reaction.

**Contempt** is the expression of condescension toward people, with a feeling of superiority felt, or hoped for, by the expresser. The head may be tipped back so the eyes look down at the other person. In this position, the nose is raised and the upper eyelids are lowered.

**Interest/Excitement.** Variations of the basic emotion (type/intensity): alertness, brightness, attentiveness, expectancy and anticipation. Interest/excitement is also characterized by a focused gaze with continuous eye tracking of the person or object of interest. Slight turning of the head so as to direct the ear toward the sound stimulus may also be present. Interest/excitement is the opposite of boredom, and often accompanies other emotions (happiness, fear). It is similar to surprise, but surprise is a very brief emotion. If the appearance of surprise lasts for an extended period of time, it is probably interest/excitement.

**Pain/Distress.** Variations of the basic sensation (type/intensity): Discomfort, ache, hurt, unbearable pain. Pain/distress is usually characterized by intense muscular contraction. It is often accompanied by sadness, crying, or screaming.

## **12. Facial graphics**

Sex differences in facial appearance are the result of hormonal and cultural influences. In general, men tend to have stronger, more angular facial features. Women tend to have rounder, more curved lines defining the face. The gonial angle of the mandible is more defined and prominent in men. The chin is more prominent. Consequently, a receding chin in a man may cause him to be perceived as weak and ineffective. The forehead and zygomatic bones are more apparent in men. The eyebrows are thicker, straighter, and positioned at the supraorbital rim in men.

Women's brows are usually thinner, more arched, and positioned above the level of the supraorbital rim. Facial skin is usually thicker and more textured in men. Numerous differences are noticeable regarding the ideal noses of men and women. Men usually have larger, broader noses with a dorsum that is straight to slightly convex. Women tend toward smaller noses with a slightly concave dorsum. Their nasolabial angle is preferably obtuse, whereas most men prefer a nasolabial angle of no more than 90 degrees. Overall nasal contour is strongly associated with sex identity. Individuals may wish to masculinize or feminize their facial features to better harmonize with their self-image.

*Body Habitus.* Just as the parts of the face cannot be evaluated independently, the face cannot be analyzed without regard for the body on which it rests. Different faces are right for different body types. In general, the overall body type is reflected in the face. Tall, slender individuals will usually have longer, thinner faces, whereas short, stout people tend to have rounder faces with less height and more width. Obviously, this type of body and face will tolerate a shorter, broader nose. However, a long, narrow nose would appear out of place on a short, stocky build. Overall, the individual aesthetic units of the face must be in proportion with the rest of the face and, likewise, the face with the rest of the body.

*Facial Proportions.* For facial harmony to exist there must be some degree of relative proportion of the various parts through which an overall balance is achieved. No individual component of the face exists or functions in isolation from the other integral parts. Any change in one part of the face will have a real or perceived effect on the other facial parts and on the whole.

The most basic facial proportions are those that are learned by beginning art students drawing the face. The ancient Greeks taught that the ideal human stature must equal eight times the height of the head. The length of the neck is approximately one-half the length of the head. This distance is measured from the suprasternal notch to the chin and from the chin to the vertex of the skull.

Relative proportions of the hand to the face play an important role for the portrait artist in establishing facial proportions. The length of the hand is three fourths the length of the head or the length of the face as measured from the chin to the hairline. The width of the hand is one half the width of the face. Placed transversely, the hand will cover one fourth the length of the head or one third the length of the face. Leonardo da Vinci described the relationship of the forehead, nose, and chin on the lateral view as lying along an arc produced by a radius based at the external auditory canal.

*Symmetry.* Facial symmetry is assessed by bisecting the face through the midsagittal plane and comparing the halves. Although minor asymmetries will be noted in almost everyone, the midline points of the forehead, nose, lips, and chin should lie on this axis. Facial width is then divided into

fifths and evaluated for balance among the parts. The width of one eye should equal one fifth of the facial width or the intercanthal distance. Lines dropped from the outer canthi should approximate the width of the neck. The lateral most fifths of the face on frontal view extend from the lateral canthus to lateralmost point of the helical rim.

*Reference Points.* The Frankfort horizontal is the standard reference for patient positioning in photographs and cephalometric radiographs. A line drawn from the superior aspect of the external auditory canal to the inferior aspect of the infraorbital rim is placed parallel to the plane of the floor to achieve this standardized position. Obviously, these points are more easily determined on lateral skull radiographs than photographs. When determining this position for patient photographs the hair must be pulled back sufficiently to reveal the tragus.

The superior edge of the tragus approximates the superior aspect of the external auditory canal. The point of transition between the skin of the lower eyelid and the skin of the cheek is usually discernible and approximates the level of the infraorbital rim.

For measurements of the face to provide meaningful information for communication with colleagues or for accurate records, standard reference points must be used. These have been standardized for use in facial surgery by Powell and Humphreys.

*Aesthetic Assessment.* The initial assessment of the face is to determine facial height. This is measured in the midline from the hairline (trichion, Tr) to the lowest contour point of the chin (menton, Me). In those with a receding hairline, the trichion (Tr) may be determined by the uppermost point of action of the frontalis muscle. The face can then be divided into thirds at the most prominent point of the forehead (glabella, G) and the point at which the nasal columella merges with the upper cutaneous lip (subnasale, Sn). The upper, middle, and lower portions of the face should be equal using this method.

A second method for assessing facial height takes into account only the middle and lower portions of the face. The initial measurement is taken from the deepest depression at the root of the nose (nasion, N) to the menton (Me). Midfacial height (N–Sn) should be 43% of the total, and lower facial height (Sn–Me) should be 57% of the total length. The following are advantages of this method over the first:

(1) the nasion (N) is a more reproducible landmark than the glabella (G) and

(2) imbalance of the upper third of the face (forehead) is not easily amenable to surgical intervention.

The face is then subdivided into the following five major aesthetic units for further analysis: forehead, eyes, nose, lips, and chin. In addition, the ears and neck should be considered separately and as they relate to the face as a whole.

### **FOREHEAD.**

The forehead comprises the entire upper one third of the face. It forms a stable mass that is not readily modified. The aesthetically pleasing forehead produces a gentle convexity on profile with its most anterior point just above the nasion (N) at the level of the supraorbital ridge. Other possible forehead shapes include protruding, flat, and sloping. The nasofrontal angle (NFr) is formed at the transition between the nose and forehead, where the nasal dorsum merges with the glabella (G). The angle is determined by a tangent passing through the glabella (G) and the nasion (N), and another tangent along the nasal dorsum. This angle should ideally be 115 to 135 degrees.

The eyebrows separate the upper and middle portions of the face and frame the eyes. The medial edge of the eyebrow lies on a perpendicular that passes through the lateralmost portion of the ala nasi and 1.0 cm above the medial canthus of the eye. The brow should begin medially with a slight clublike configuration and gradually taper toward its lateral end. In women the brow should rest just above the level of the supraorbital rim. An arch is desirable in women, with its highest point at the level of the lateral limbus. The brow should end laterally at an oblique line that begins at the ala nasi and passes tangentially along the lateral aspect of the lower lid. The medial and lateral ends of the brow should lie on the same horizontal plane. In men the brow may form less of an arch and lie slightly lower at the level of the supraorbital rim.

### **EYES.**

The eyes are perhaps the most expressive part of the face and have been referred to as the window of the soul. Nowhere else in the body are asymmetries more noticeable than in the eyes. The effects of aging become apparent in the eyes sooner than in the other parts of the face. With increasing laxity of the skin of the eyelids, the eyes may project a tired, humorless expression that may be quite out of line with actual physical and mental state of the patient.

The width of the eye from canthus to canthus is equal to one fifth the width of a well-proportioned face. This same measurement should approximate the distance between the medial canthi. The distance between the midpoints of the pupils should equal the distance from the nasion (N) to the vermilion border of the upper lip (labrale superius, LS). The supraorbital rim lies slightly anterior to the infraorbital rim when the head is in the neutral position.

The lateral canthus is attached posterior to the level of attachment of the medial canthus. The lateral canthi may lie on the same horizontal plane with the medial canthi or slightly above. The

superiormost point along the arch formed by the free margin of the upper lid is at the level of a vertical passing through the medial limbus. The lateral portion of the free margin of the upper eyelid should parallel a tangent passing along the lateral vermilion border of the upper lip.

The inferiormost point of the curve of the lower lid margin is along a vertical passing through the lateral limbus. If the lateral one third of the lower lid does not form a line rising steadily toward the lateral canthus, a subtle defect referred to as lateral scleral show may be present). This may result from excessive excision of lower-eyelid skin during blepharoplasty. The distance from the lash line to the lid crease in the upper lid varies from 7 to 15 mm and is related to body weight, skin thickness, and ethnicity. The upper eyelid normally covers a small portion of the iris but does not touch the pupil. The lower lid is within 1 to 2 mm of the iris on neutral gaze.

## **NOSE.**

The nose is the central focus of facial appearance by virtue of its position in the midline of the central third of the face. The tremendous significance of its form and function is reflected in the earliest writings of the Judeo-Christian tradition: "God formed man and breathed into his nostrils the breath of life." Slight changes in the structure of the nose can sometimes produce dramatic improvements in facial harmony and the perception of the surrounding aesthetic units. The ideal nose should appear natural and in harmony with its surrounding features and not draw attention to itself.

The nose is the central aesthetic unit of the face. It can be further subdivided into aesthetic or topographic subunits. These include the dorsum, sides, tip, alae, and soft triangles. The borders of these subunits allow for camouflage of scars resulting from reconstruction of nasal surface defects.

When incisions lie along the margins of these natural anatomical subunits, the eye is less apt to recognize the scar. Excising additional nasal skin to make the defect fit an aesthetic subunit before reconstruction will ultimately produce a less noticeable incision.

The issue of nasal measurement is made quite complex by the plethora of methods available in the literature and the lack of standardization. The various methods have been reviewed by Powell and Humphreys and are summarized here.

*Angle Measurements.* The nasofrontal angle (NFr) has been described previously, but a second angle measurement is necessary to define the proportions of the aesthetic nose. The nasofacial angle (NFa) is the incline of the dorsum of the nose in relation to the plane of the face. On the lateral profile a line is drawn from the glabella (G) to the most anterior point of the chin (pogonion, Pg). The nasofacial angle (NFa) is defined when this line is intersected by the line of

the dorsum of the nose. The dorsal line should intersect the nasion (N) and the tip (T) and should be drawn through any dorsal hump that exists.

The third angle measurement in the evaluation of the nose is the nasolabial angle (NL). Lines are constructed between the upper mucocutaneous border of the lip (LS) and the subnasale (Sn), and between the subnasale (Sn) and the most anterior point on the columella of the nose (Cm). This angle defines the relationship between the nose and the upper lip. It is susceptible to abnormalities of the facial skeleton and dentition. This angle should measure 90 to 95 degrees in men and 95 to 105 degrees in women. Shorter individuals tolerate a more obtuse angle, whereas taller people require a nasolabial angle at the low end of the range for their gender.

### **LIPS.**

The lips are a dynamic and expressive aesthetic unit of the face. Fullness of the lips and strong definition of the philtrum are associated with youth. A thin vermilion, loss of lip highlights, and flatness are associated with aging. The posture of the lips, designated as procumbent or recumbent, greatly depends on the underlying dental support.

On frontal view the oral commissures are on a line vertical with the medial limbus. The lips are contained within the boundaries of the lower one third of facial height. The upper lip is measured from the subnasale (Sn) to the lowermost point on the vermilion of the upper lip.

The lower lip is measured from the uppermost point on its vermilion to the menton (Me). The length of the lower lip should be about twice the length of the upper lip, using these points for measurement. Horizontal lip position can be determined by constructing a line between the subnasale (Sn) and the soft tissue pogonion (Pg). The distance along a perpendicular from this line to the most anterior point of each lip defines its horizontal position. The upper lip should rest 3.5 mm anterior to this line and the lower lip 2.2 mm.

A second method of assessing horizontal lip position is to construct a line between the nasal tip (T) and the pogonion (Pg) termed the nasomental line. The lips should lie posterior to this line. The lower lip ideally falls 2 mm posterior to this line and upper lip 4 mm behind it. This concept was described by Ricketts as the E-line and has been incorporated into the aesthetic triangle by Powell and Humphreys.

### **CHIN.**

The chin is the aesthetic unit that confers strength to the face. The anterior limit is at a vertical dropped from the brow. For the chin to have pleasing form it must be well defined from both frontal and lateral views without appearing knoblike. There should be a definite, but gentle, mentolabial sulcus separating the cutaneous lower lip from the chin.

The chin is included in measurement of the lower portion of the face (Sn to Me), as well as being part of the length of the lower lip (to Me). The lower lip and chin compose two thirds of the lower portion of the face.

When measured from a line drawn between the vermilion border of the lower lip (labrale inferius, LI) to the pogonion (Pg), the deepest point of the mentolabial sulcus (Si) should lie 4 mm behind this line.

## **EARS.**

An additional facial feature to be considered is the ear. This flaplike, cartilaginous appendage has multiple convolutions and is attached to the scalp approximately one ear length posterior to the lateral brow. The superior aspect of the ear is at the level of the brow, and its inferior aspect is at the level of the ala nasi. The width of the ear is 55 to 60% of its length.

The line of the posterior aspect of the auricle roughly parallels the dorsal plane of the nose.<sup>28</sup> The long axis of the ear is posteriorly rotated ~15 degrees from the vertical plane. The auricle produces an angle of ~20 degrees with the mastoid posteriorly. The superior portion of the helix should rest at ~15 to 20 mm from the squamous portion of the temporal bone.

## **NECK.**

Although the neck is not usually considered one of the major aesthetic units of the face, its shape, especially in the upper portion, can have a marked impact on the appearance of the chin and lower portion of the face. A low-lying hyoid bone, excessive submental fat, or laxity of the platysma can cause the neck–chin contour to be obtuse and create the perception of a chin deformity that does not exist.

Powell and Humphreys have defined the mentocervical angle (MC), which relates the line of the neck to that of the entire face. The angle is produced by constructing the facial plane from the glabella (G) to the pogonion (Pg), and intersecting a line drawn from the menton (Me) to the innermost point between the submental area and the neck (the cervical point, C). This angle should ideally be between 80 degrees and 95 degrees.

*Movement patterns.* This section analyzes the patterns of facial movement yielded by the expression of six emotions. The analysis is accomplished with the help of photographs depicting the paths of the white spots over the course of the expressions. In addition, a descriptive analysis of major confusions is undertaken. For this purpose, an arbitrary cutoff point of 20% was used to isolate emotions that were often confused with a target emotion.

## **HAPPINESS.**

The movement pattern yielded by the expression of happiness consists of an upward displacement of each side of the mouth and of the cheeks. This movement results from a smile. Following the 20% criterion, happiness was confused substantially only with sadness in spots-only/upper face displays (23.3%).

## **SADNESS.**

The movement pattern yielded by sadness is more subtle. It consists of a slight upward displacement in the area of the chin, whereas the forehead area reflects an inward and upward movement of the eyebrows. Both normally illuminated and spots-only displays of the bottom of the face yielded confusions with disgust (23.3% and 30.0%, respectively). However, when the full face or top face was shown in spots-only displays, confusions occurred mainly with fear (22.5% and 25.8%, respectively).

## **FEAR.**

Fear involves a downward and outward movement in the mouth area. The forehead movement is similar to that of sadness (inward and upward), although the movement is more pronounced because the brows are raised higher. The similarity of movement in the forehead area in sadness and fear is reflected by the fact that in spots-only/upper face conditions fear was often confused with sadness (24.2%). In addition, fear in these displays was confused with surprise (25.8%). This latter confusion was probably caused by the strong upward movement of the brows characterizing the expression of surprise. Another common error yielded by the expression of fear involved happiness and occurred in spotonly/lower face displays (35.8%).

## **SURPRISE.**

Surprise was one of the easiest emotions to recognize, and was particularly so in spotonly displays. The expression involves a strong upward displacement of the brows and an equally strong downward displacement of the jaw. The rapidity of the movement (akin to a startle) is also specific to this emotion. Major confusions only occurred with fear in normally illuminated/upper face displays (28.3%).

## **ANGER.**

The expression of anger involves a downward movement in the forehead area caused by a frown, along with a compression in the mouth area, caused by the pinching of the lips. Anger was confused with disgust in lower face displays (both normally illuminated and spots-only conditions, 20.8% and 25.0% respectively). The normally illuminated/upper face displays yielded

confusions with fear (20.0%). Finally, all spots-only displays yielded confusions with sadness (full face = 32.5%, lower face = 20.0%, upper face = 23.3%).

## **DISGUST.**

The expression of disgust involves the wrinkling of the nose, which causes an upward movement on its sides as well as on the cheeks. Moreover, the expression can involve an upward movement in the area of the chin. Though the wrinkling of the nose is specific to disgust, this emotion leads to low recognition rates. Confusions, however, seemed to concentrate on anger. In all conditions except spots-only/bottom face displays (15.8%), anger was taken for disgust on more than 28% of the trials. This confusion was particularly pronounced in upper face displays (normal illumination = 51.7%, spots-only = 46.7%). The spots-only/bottom face displays lead to confusion with fear (20.0%).

One possible cause of confusions among emotions is that their expressions are so similar that they are difficult to discriminate. If this is the case, confusions should be reciprocal. This was seldom the case in the confusions just described. Reciprocity was only evident in two cases: fear and sadness in spots-only/upper face displays and disgust and anger in normal illumination/bottom face displays. Another possibility is that the actors failed to represent emotions adequately. This possibility, with one exception, is not very likely, since recognition rates in normally illuminated/full face displays were very high (above 87%). The exception involves expressions of disgust (70%), which were often judged as anger.

The third possibility accounting for nonreciprocal confusions is that specific expressions may have been nondistinctive or ambiguous. In resolving the ambiguity, subjects may have responded with an emotion sharing some components with the target emotion. The expression of that alternate choice may have also been ambiguous and shared components with yet other expressions. In short, two ambiguous expressions need not be resolved in a reciprocal manner.

## **13. Microexpressions**

Facial expressions are important for interpersonal communication, in no small part because they are key in understanding people's mental state and emotions. Different from 'conventional' facial expressions, which can be consciously controlled, microexpressions are affected by short-lasting, unconscious contraction of facial muscles under psychological inhibition. As such they can be used as a means of inferring a person's emotions even if there is an attempt to conceal them.

The concept of a microexpression was first introduced by Haggard in 1966. Following on this work, Ekman reported a case study on the topic, thus providing the first evidence in support of the idea. If the occurrence of microexpressions is detected, and the corresponding emotional

associations understood, the true sentiments of individuals could be accurately identified even when there is an attempt at concealment, thus improving lie detection rates.

For example, during psychological diagnostic testing, when a patient presents a microexpression of joy, depending on the context, it may mean that they are successful in passing the test. A patient's microexpression of fear may indicate a fear of betraying something they wish to keep secret. When the patient exhibits a microexpression of surprise, it may indicate that they have not considered the relevant question or do not understand something.

Therefore, microexpressions can help us understand the true emotions of individuals and provide important clues for lie detection. In addition, microexpressions have high reliability and potential value in emotion-related tasks, such as communication negotiation and teaching evaluation. In recent years, research on microexpressions has been attracting an increasing amount of attention in the scholastic community. Following the publication of two open-source microexpression databases in 2013, the number of published articles pertaining to microexpressions has increased every year.

Since 2018, the Micro-Expression Grand Challenge (MEGC) workshop has been organized as part of the IEEE International Conference on Automatic Face and Gesture Recognition, contributing to the popularization of the topic in the computer vision and machine learning community.

Within the realm of microexpression research, there are several related but nonetheless distinct research directions which have emerged over the years. These include the differentiation of macro- and microexpressions, the identification of specific microexpressions over a period of observed facial movement (referred to as microexpression detection or spotting), and the inference of emotions revealed by microexpressions.

The last of these is the most commonly addressed challenge and is often referred to as Micro-Expression Recognition (MER). The task is to recognize emotions expressed in a sequence of faces known to be microexpressions. In recent years, many researchers have begun to use computer vision technology for automatic MER, which significantly improves the feasibility of microexpression applications. The use of computer technology for MER has unique advantages.

Even the very fastest facial movements can be captured by high-speed cameras and processed by computers. In addition, when an efficient and stable model can be trained, computers are able to process large scale MER tasks with low cost, greatly exceeding the efficiency of manual recognition of microexpressions by professionals.

In recent years, research on MER has increased considerably, leading to the development of a variety of different, specialized features. Popular examples of such features include 3D Histograms of Oriented Gradients (3DHOG) as the simplest extension of the 'traditional' HOG

features, subsequently succeeded by more nuanced extensions such as Local Binary Pattern-Three Orthogonal Planes (LBP-TOP), Histograms of Oriented Optical Flow (HOOF), and their variations.

Since 2016, the application of deep learning in MER has been increasing and it can be expected to continue to proliferate, thus becoming the main methodology in MER research in the future.

Polikovskiy proposed the use of a 3D gradient feature to describe local spatiotemporal dynamics of the face. Following the segmentation of a face into 12 regions according to the Facial Action Coding System (FACS), each region corresponding to an independent facial muscle complex, and the appearance normalization of individual regions, Polikovskiy et al. obtain 12 separate spatiotemporal blocks.

The magnitudes of gradient projections along each of the three canonical directions are then used to construct histograms across different regions, which are used as features. The authors assume that each frame of the microexpression image sequence involves only one action unit (AU), which represents one specific activated facial muscle complex in FACS, and this unit can be used as an annotation of the image. The k-means algorithm is used for clustering in the gradient histogram feature space in all frames of microexpression image sequences, and the number of clusters is set to the number of action units that have appeared in all ME samples.

The action unit corresponding to the greatest number of features is regarded as the real label of each cluster. The feature extraction method of this work is relatively simple and is an extension of the plane gradient histogram. The model construction adopts a more complicated process, which can be regarded as a k-nearest neighbour model constructed by the k-means algorithm. It is robust to the correctness of the labels and insensitive to a small number of false annotations. The main limitation of this work lies in the aforementioned assumption that only a single action unit is active in each frame, which is overly restrictive in practice.

Pfister made one of the earliest attempts to recognize microexpressions automatically. Their method has been highly influential in the field and much follow-up work drew inspiration from it. Pfister et al. first use a 68-point Active Shape Model (ASM) to locate the key points of the face. Based on the key points obtained, the deformation relationship between the first facial frame of each sequence and the model facial frame is calculated using the Local Weighted Mean (LWM) method.

A geometric transformation is then applied to each frame of the sequence so as to normalize for small pose variation and coarse expression changes. In order to account for differences in the number of frames between different input sequences, Temporal Interpolation Model (TIM) is used to temporally interpolate between frames, thus normalizing sequence length to a specific

count. Finally, Support Vector Machine (SVM), Random Forest (RF), and Multiple Kernel Learning (MKL) methods are used for classification.

Wang et al. expressed the microexpression sequence and its Local Binary Pattern (LBP) features by tensor and performed a sparse tensor canonical correlation analysis on the tensor to learn the relationship between the microexpression sequence itself and its LBP features. The simple nearest neighbor algorithm is used for classification. In experiments, the authors demonstrate the superiority of their approach over the original LBP method of Pfister et al.

In addition to standard texture features, some researchers have also considered the use of color on micromovement extraction (color has indeed been shown to be important in face analysis more generally. If the usual RGB space that the original face image data is represented in, is adopted for the extraction of the aforementioned local appearance features (such as the commonly used LBP), the three channels result in redundant information, failing to effect improvement over greyscale.

Hence, Wang et al. considered this problem and instead proposed the use of Tensor Independent Colour Space (TICS). In another work, the researchers tried to use color spaces, which have already demonstrated success in applications needing human skin detection. Their experiments showed that the transformation of colour space can affect an improvement in recognition.

Although deep learning techniques and deep neural networks are widely used in other face related recognition tasks, they are still novel in the field of MER research. Deep learning in the realm of microexpression analysis started around 2016. However, the annual number of publications shows an exponential increase in the following years.

Kim et al. use deep learning and introduce a feature representation based on expression states—Convolutional Neural Networks (CNN) are employed for encoding different expression states (start, start to apex, apex, apex to end, and end). Several objective functions are optimised during spatial learning to improve expression class separability. The encoded features are then processed by a Long Short-Term Memory (LSTM) network to learn features related to time scales. Interestingly, their approach failed to demonstrate an improvement over more old-fashioned, hand-crafted feature-based methods, merely performing on par with them.

*Microexpression Databases.* A consideration of data used to assess different solutions put forward in the literature is of major importance in every subfield of modern computer vision. Arguably, considering the relative youth of the field, this consideration is particularly important in the realm of microexpression recognition. Standardization of data is crucial in facilitating fair comparison of methods, and its breadth and quality key to understanding how well different methods work, what limitations they have, and what direction new research should follow.

Some of the most widely used microexpression related databases include USF-HD, Polikovsky Data-set, York Deception Detection Test (YorkDDT), Chinese Academy of Sciences Micro-Expressions (CASME), Spontaneous Micro-Expression Corpus (SMIC), Chinese Academy of Sciences Micro-Expression II (CASME II), Spontaneous Actions and Micro-Movements (SAMM), and Chinese Academy of Sciences Spontaneous Macro-Expressions and Micro-Expressions (CAS(ME)2 ).

The nature and purpose of these data sets varies substantially, in some cases subtly, in others less so. In particular, the first three databases are older and proprietary and contain video sequences with nonspontaneous microexpression exhibition. The USF-HD is used to evaluate methods which aim to distinguish between macroexpressions and microexpressions. Different yet, the Polikovsky data set was collected for assessing keyframe detection in the context of microexpressions, whereas the York DDT is specifically aimed at lie detection.

For the acquisition of data for nonspontaneous databases, participants are required to watch the video or image data of the microexpressions and try to imitate them. Therefore, this data should be used with due caution and not assumed to represent the strict ground truth. Therefore, only open-source spontaneous microexpression databases will be discussed here. These exhibit significant differences between them, and their particularities are important to appreciate so that the findings in the current literature can be interpreted properly and future experiments can be designed appropriately.

Microexpression Databases Recall that the duration of a microexpression is usually only 1/25 to 1/5 of a second. In contrast, the frame rate of a regular camera is 25 frames per second. Therefore, if conventional imaging equipment is used, only a small number of frames capturing a microexpression is obtained, which makes any subsequent analysis difficult.

Nevertheless, considering the ubiquity of such standardized imaging equipment, some data sets such as SMIC-VIS and SMIC-NIR, do contain sequences with precisely this frame rate. On the other hand, in order to facilitate more accurate and nuanced microexpression analysis, most microexpression data sets in widespread use in the existing academic literature use high-speed cameras for image acquisition. For example, SMIC uses a 100 fps camera and CASME uses a 60 fps one, in order to gather more temporally fine grained information. The highest frame rate in the existing literature is the SAMM and CASME II, which both use a high-speed camera at the rate of 200 frames per second.

*The Chinese Academy of Sciences Micro-Expressions (CASME)* data set contains 195 sequences of spontaneously exhibited microexpressions. The database is divided into two parts, referred to as Part A and Part B. The resolution of images in Part A is 640 × 480 pixels, and they were acquired indoors, with two obliquely positioned LED lights used to illuminate faces. Part B images have the resolution of 1280 × 720 pixels and were acquired under natural light. Microexpressions in

CASME are categorized as expressing one of the following: amusement, sadness, disgust, surprise, contempt, fear, repression, or tension. Considering that some emotions are more difficult to excite than others in a laboratory setting, the number of examples across the aforementioned classes is unevenly distributed.

*The Spontaneous Micro-Expression Corpus (SMIC)* contains videos of 20 participants, exhibiting 164 spontaneously produced microexpressions. What most prominently distinguishes SMIC from other microexpression data sets is the inclusion of multiple imaging modalities. The first part of the data set contains videos acquired in the visible spectrum using a 100-fps high-speed (HS) camera. The second part also contains videos acquired in the visible spectrum but at the lower frame rate of 25 fps. Lastly, videos in the near-infrared (NIR) spectrum are included (only of 10 out of 16 individuals in the database).

*The Chinese Academy of Sciences Micro-Expression II (CASME II)* data set is a large collection of spontaneously produced microexpressions, containing 247 video sequences of 26 Asian participants with the average age of approximately 22 years. The data was captured under uniform illumination, without a strobe. In contrast to CASME, the emotional category labels in CASME II are much broader—namely, happiness, sadness, disgust, surprise, and ‘others’—thus making the trade-off between class representation and balance, and emotional nuance, in the opposite direction.

*The Spontaneous Actions and Micro-Movement (SAMM)* data set is the newest addition to the choice of microexpression related databases freely available to researchers. It contains 159 microexpressions, spontaneously produced in response to visual stimulus, of 32 gender balanced participants with the average age of approximately 33 years. Being the most recently acquired data set, in addition to the standard categorized imagery, SAMM contains a series of annotations which have emerged as being of potential use from previous research. In particular, associated with each video sequence are the indexes of the frame when the relevant microexpression starts and ends and the index of the so-called vertex frame (frame when the greatest temporal change in appearance is observed). In addition to being categorized as expressing contempt, disgust, fear, anger, sadness, happiness, or surprise, each video sequence in the data set also contains a list of FACS action units (AU) engaged during the expression.

*The Chinese Academy of Sciences Spontaneous Macro-Expressions and Micro-Expressions (CAS(ME)2)* data set is also heterogeneous in nature. The first part of this corpus, referred to as Part A, contains 87 long videos, which contain both macroexpressions and microexpressions. The second part of CAS(ME)2, Part B, contains 303 separate short videos, each lasting only for the duration that an expression (be it a macroexpression or a microexpression) is exhibited. The numbers of macroexpression and microexpression samples are 250 and 53 respectively. In all cases, in comparison with most other data sets, the expressions are rather coarsely classified as positive, negative, surprised or other.

## **DATA COLLECTION AND METHODS FOR SYSTEMATIC MICROEXPRESSION EVOCATION.**

One difficulty in the process of collecting microexpression video sequence corpora lies in the difficulty of inciting microexpressions in a reliable and uniform manner. A common approach adopted in the published literature consists of presenting participants with emotional content (usually short clips or movies) which is expected to rouse their emotions, while at the same time asking them to disguise their emotions and maintain a neutral facial expression.

When the aforementioned data collection protocol is considered with some care, it is straightforward to see that a number of practical problems present themselves. Firstly, in some instances, the assumption that the content presented to the participants will elicit sufficient emotion may be invalidated. Thus, no meaningful microexpression may be present in a video sequence of a person's face (in SMIC out of 20 individuals who participated in the recording sessions, only 16 exhibited sufficiently well expressed microexpressions).

This problem can be partially ameliorated by ensuring that the stimuli are strong enough, though this must be done with due consideration of possible ethical issues. On the complementary side, so to speak, considering that microexpressions are involuntarily expressed, it is important to suppress as much as possible any conscious confound. In other words, there must exist sufficient incentive to encourage participants to conceal their true feelings.



# III) TRANSFORMATIONAL COMMUNICATION

## NLP

### 1. Neuro-Linguistic Programming

There are four stages of learning a new skill with the help of techniques used in NLP - Neuro-linguistic programming:

(1) *Unconscious Incompetence*. Learning a new skill for the first time, not knowing what you don't know.

(2) *Conscious Incompetence*. Realizing what you don't know and what you still need to learn.

(3) *Conscious Competence*. Building the new skill and capabilities, and feeling more familiar with them.

(4) *Unconscious Competence*. Expertly using the tools as if they were second nature, like driving a car.

The fourth stage is also called *automatic behavior*, from the greek *automatos* or self-acting. An automatism is the spontaneous production of verbal or motor behavior without conscious intervention. This condition can be observed in a variety of actions, on an unconscious or subconscious levels.

Automatic behavior manifests while performing well-learned actions. In this case, the behavior becomes automatic in the sense that it does not require conscious monitoring. The seemingly purposeful task is performed with no clear memory of it happening.

Automatic behavior can also be exhibited whilst in the REM state where there is a higher amount of brain stimulus during this stage, which increases dreaming patterns - subjects can hold conversations, sit up, and even open their eyes. These acts are considered subconscious as most of the time the events cannot be recalled by the subject.

An automatic behavior will determine a conditional reflex. The best-known and most thorough early work on classical conditioning was done by Pavlov, although Twitmyer published some related findings a year earlier.

During his research on the physiology of digestion in dogs, Pavlov developed a procedure that enabled him to study the digestive processes of animals over long periods of time. He redirected

the animal's digestive fluids outside the body, where they could be measured. Pavlov noticed that his dogs began to salivate in the presence of the technician who normally fed them, rather than simply salivating in the presence of food.

Pavlov called the dogs' anticipatory salivation "psychic secretion". Putting these informal observations to an experimental test, Pavlov presented a stimulus (the sound of a metronome) and then gave the dog food; after a few repetitions, the dogs started to salivate in response to the stimulus. Pavlov concluded that if a particular stimulus in the dog's surroundings was present when the dog was given food then that stimulus could become associated with food and cause salivation on its own.

In Pavlov's experiments (*Conditioned Reflexes*, 1927) the unconditioned stimulus (US) was the food because its effects did not depend on previous experience. The metronome's sound is originally a neutral stimulus (NS) because it does not elicit salivation in the dogs. After conditioning, the metronome's sound becomes the conditioned stimulus (CS) or conditional stimulus; because its effects depend on its association with food.

Likewise, the responses of the dog follow the same conditioned-versus-unconditioned arrangement. The conditioned response (CR) is the response to the conditioned stimulus, whereas the unconditioned response (UR) corresponds to the unconditioned stimulus.

Pavlov reported many basic facts about conditioning; for example, he found that learning occurred most rapidly when the interval between the CS and the appearance of the US was relatively short.

As noted earlier, it is often thought that the conditioned response is a replica of the unconditioned response, but Pavlov noted that saliva produced by the CS differs in composition from that produced by the US. In fact, the CR may be any new response to the previously neutral CS that can be clearly linked to experience with the conditional relationship of CS and US. It was also thought that repeated pairings are necessary for conditioning to emerge, but many CRs can be learned with a single trial, especially in fear conditioning and taste aversion learning.

In the end it's all about effectiveness; how to learn new skills in the shortest time and well. It's about how to think effectively and act accordingly. To make this possible we must follow several NLP guidelines.

*The map that we create in our mind's eye is not reality.* We are all acting and responding to our own internal maps of the world. These are the result of our experiences and the emotions associated with those experiences. Our maps are full of values, beliefs and memories. Some of these are helpful and some of them are not. The first step in the process of learning to have the

flexibility and skills to communicate effectively and achieve your goals is to become aware of what is in your map and to recognize that it is just that, a map.

*The person who sets the frame controls the communication and the actions that happen.* When children don't have a really clear understanding of what they have to do, what happens? We have all had the experience of setting up a classroom activity and then finding that it hasn't worked out. Often this is because we missed out an important part of the explanation or weren't clear about 'how' it was to be done. The same thing applies to all communication. The language we use powerfully affects the meaning that we communicate, whether we are aware of it or not.

Taking time to be more aware of the hidden meaning in the language we use makes us much more effective. Fundamentally, whoever establishes the boundaries first will have set the markers for what follows.

*Everyone has all the internal resources that they need.* NLP is essentially a positive set of ideas, beliefs, techniques and philosophies. At the heart of these ideas is the notion that if one person can do something so can anyone else. In other words, it's just a question of working out what that person does and applying it to ourselves. Often the things that make a difference are quite subtle or hidden and can be the result of internal imagery or just the language that we use with ourselves or others. At the end of the day we all have control over what we think and how we act.

*Taking positive action.* We can all learn fast and from one-trial experiences. Think back for a moment to when you were training to be a teacher. How much easier is it to teach something, or deal with a classroom problem, for the second time or subsequent times? Our minds respond quickly to the memories that we have of things that we have done in the past, particularly when there are powerful memories associated with them, either positive successes or failures. Equally our minds respond just as quickly to the images that we create of future events.

Creating positive mental representations of what we want enables us to effortlessly marshal our internal resources. So how quickly can you learn? Fold your arms for a moment. Now fold them the other way. How easy was that? It seems hard the first time doesn't it? Now practise folding your arms the unusual way seven or eight times. What happens when you repeat the experiment you first did swapping one way for another? With many things our mind doesn't need a lot of repetition to learn. NLP techniques definitely exist in this category of life and once experienced stay with you.

*Feedback is information; there is no such thing as failure.* Knowing what we want and aligning our internal representations and imagery to the desired outcome is the beginning of the journey. Remembering that our map is not the reality, we also need to be alert to whether we are getting what we want. Feedback is not just about receiving verbal observations from others. By attuning our senses to the subtle details of what is happening around us we can know when we are getting what we want and when things are not going well. Noticing subtle signs and signals in the

classroom can allow us to act quickly to realign what we are doing and to recognise when we need to do this.

*The person with the most flexibility has the most influence.* How many teaching philosophies and ideas have teachers had to take on board in the last 20 years? And how many of them actually work all the time? Practitioners of NLP recognize that there is not a one-size-fits-all and that not everything will work all the time. At the end of the day, classrooms and schools are complex environments, and flexibility of behavior and thinking gives us more choices and many more options.

What NLP offers teachers is a wide range of possible behaviors and ways of thinking that they can use in their professional judgment, applying them when and where they make sense. The more tools in your tool kit the more jobs you can do. This has been illustrated time and again from the teachers that we have worked with.

In *The Structure of Magic*, Richard Bandler and John Grinder outline in detail their modelling of Virginia Satir and her approach to family therapy. Virginia Satir (1916–1988) was renowned in her lifetime as one of the world’s leading family therapists. In particular, she is famous for having developed conjoint family therapy. When Satir first applied this approach, it was quite revolutionary for a therapist to meet several, or all members of the family group at the same time (hence the use of the term conjoint).

This approach had the advantage that it made explicit the differences in the ways in which members of the family perceived each other’s relationships. Patterns which emerged in the group therapy usually mirrored typical interactions within the home, despite the presence of the therapist. Conjoint family therapy took our understanding of group interrelations beyond the areas of the unconscious mind and early childhood experience which would have been the focus of Freudian-derived therapy. Satir’s best-known books are *Conjoint Family Therapy* (1967), *Peoplemaking* (1972), and *The New Peoplemaking* (1988).

From working with and modelling Virginia Satir and others, two key areas of the NLP model emerged:

- (1) the meta model and
- (2) Satir categories.

The meta model is a framework for understanding how language works and helps us to get behind the words that people use to explore the experience behind those words. From studying Satir’s sessions, it was noted how Satir was both aware of and made use of a number of broader communication categories, the Satir categories. These categories not only have an effect on the language we use, but also on the person we are communicating with, our external behaviour and our own internal emotional state.

## USING YOUR FACIAL EXPRESSIONS TO BUILD RAPPORT.

There is a common misconception about facial expressions - you can interpret what it means. If you base your approach to people on your interpretation of their body language, you will get it wrong much of the time. Interpretation will not get you very far. It is more useful to use what you notice about a person's facial expressions or body language in the matching and mirroring process.

So, crossed arms doesn't necessarily mean that somebody is closed - they could just be feeling comfortable that way. If you also fold your arms, you will be joining them in their 'dance' and they will feel comfortable with you. Knowing that people have a tendency to interpret body language and often get it wrong, however, means you need to be aware of your own as others are likely to be making judgements about you from your posture, gestures and tone of voice, too.

Matching and mirroring facial expressions is a highly effective method of creating rapport. At first it may seem a little wooden, but, as you practise it and learn to do it naturally, no one notices. It becomes an unconscious process. To be proficient at it requires you to overcome any apprehensions you may have. It's like learning anything - practising it makes it easier to do. Things that you can usefully match also include:

- (1) physiology - body posture, position, movement, gestures (when you are talking), breathing.
- (2) voice - tone, speed, volume, pitch, timbre, rhythm.
- (3) language - key words.
- (4) values - (personal and intrinsic) what people hold as being true and important.
- (5) experience - common interests.

Matching and mirroring take place at the behavioural level. Think back to a time when you felt awkward building rapport and it just wasn't working, no matter what you tried. What was going on for you? Was it anything to do with the mirroring and matching or was it more to do with what was going on inside your head? Using the above list to match and mirror, how would you create rapport with a two-year-old child? How about a teenager? A pensioner? A particular person you want to influence at work?

*How to match and mirror to create rapport.* Think of someone you have not seen eye-to-eye with, where a better relationship would be good for you both. Imagine meeting that person. Notice his or her posture and facial expressions, then match or mirror it. You don't need total precision when matching. Are the arms folded? Is the breathing fast, slow, shallow or deep? Are the legs crossed? Notice the gestures used and use the same gestures when you are speaking. Raise or lower your voice tone and pace to match. Above all, be curious about what he or she has to say and acknowledge that you are listening. When you speak, use the same words as he or she does

wherever possible rather than substituting your own preferred words - don't use 'shop' for their 'store'. This may seem unnatural, but it works. It is giving the other person a very strong message that you are a lot like him or her.

Time taken creating and building rapport will pay dividends in the influencing process. Be open and willing to be influenced by the other person's perspectives. If you attempt to gain rapport and yet show no interest in understanding the other person, you are unlikely to succeed. Lasting rapport requires sincerity and receptivity - you need to really understand the other person's unique perspectives on how things are and not push yours on to them.

*Pacing and leading.* Having created rapport, you now have a foundation for influencing. Generally speaking, a person is unlikely to accept your views, opinions and goals unless they can form some attachment to them. Just telling a person what you want is not a smart option. First, make sure that you have strong rapport, then gently lead the person towards your thinking and create as much attachment for them as you can. Pacing is the ongoing process of matching the other person's unique perception, thus strengthening rapport. The same applies in group meetings and presentations where you might begin by pacing common views or experiences.

Once you have gained a good level of rapport by pacing, begin to lead and influence the other person or group. Check if the other person is willing to follow you by changing your physiology and noticing what happens. If you have rapport, he or she will follow you. If rapport is lost during leading, revert to pacing and regain rapport before continuing to lead to a desired outcome. The general view in NLP is that you need twice as much pacing as leading.

*Taking the lead with your ideas.* When you introduce a new topic to a conversation, unless the topic is popular you risk breaking rapport. Why should anyone want to listen to what you have to say? Most people attempt to introduce their ideas into a conversation and justify them as we all like to defend and protect what we consider to be important. A smarter way to have your ideas accepted is to connect them with the ideas already held by the other person. You are then able to make a smooth transition to your topic. Minds like to be led to new ideas.

Some politicians are highly skilled at pacing and leading. Watch any interview conducted by a skilled television interviewer and notice just how such a politician manages to stay on track with what he or she has previously decided to talk about. Politicians without this skill tend to get bogged down in the details and cornered by the interviewer, causing them to become defensive and irritated. That is damaging to their public image. Airtime is precious to any politician and the most effective ones know how to take control of it to get their message across, even when the topic in question is different from their message.

First, they validate the concerns of the interviewer, then they skillfully use the technique of chunking to move back to their chosen topic despite the valiant efforts of the interviewer to draw them away. You can use this technique wherever you want to elegantly and subtly remain in control of the topic, such as when making a presentation, during a meeting where there are mixed opinions, in a debate or in any public speaking scenario.

*Fine-tune your senses for feedback.* The communication process is greatly enhanced if you can learn to recognize the state changes discussed in the previous chapter in other people as well as yourself. This means sharpening up your senses so that you can spot changes in yourself and others that usually go unnoticed.

In NLP this is called *sensory acuity*. Without good sensory acuity, the effectiveness of any techniques you learn will be very limited indeed. How can you have any influence if you are unable to read the way people are communicating and feeling? You may passionately explain to people how your master plan is brilliant, but, if they think otherwise and you miss their signals of disbelief, then you have only convinced yourself.

To influence others, you need your senses to be tuned in to certain facial expressions that indicate whether they are with you or not. If you miss the unconscious signals people transmit via their body language and tone of voice, then you are ignorant of most of the message they are conveying. What you want to do is realize when a person's state has changed and whether or not the state he or she is in is useful for the outcome you have in mind. If you are selling, you want your customer to be in a *buying* state.

If you are giving a presentation, you want your audience to be in a *receptive* state. For example, when we run workshops, we make sure that we pace and lead our participants from whatever state they are in when they arrive to a 'curious to learn' state before getting into the first session. We can only do this if we have the sensory acuity to identify their initial states. It makes sense to prepare yourself, and others, before engaging in a matter involving communication or even when just relaxing.

Surprisingly few people intentionally prepare their state for what they want to achieve. It is easy to end up in an inappropriate state for all kinds of activities - for example, going to seminars in a 'you can't teach me anything' state or 'another boring seminar' state; going to work in a 'I hate Mondays' state or 'I'm not looking forward to the meeting' state; arriving home after a long day's work in a 'please don't ask me for anything' state or a 'the kids are making too much noise' state.

Here are some of the outward signs of a state to look and listen for: voice characteristics (tone, speed, timbre, volume, flow), body posture, tension in certain parts of the body, breathing pattern, lip size, pupil size, lines on the face, skin color.

Assessing these external indicators of internal states is called *calibrating* a state. Think of it as taking a reading of a person's state. Noticing and *recording* states for future reference. When you meet a person who tells you that he or she is feeling frustrated, that is the time to calibrate the state he or she is in by assessing all the aspects of the person's physiology listed above. As the person is in a 'frustrated' state, you are unlikely to get him or her to connect with your topic while this state exists. If you ever have to deal with that person again, you will know what signs to look for that show he or she is frustrated. If, say, the signals are screwing up the face, squeezing the fists and grinding the teeth, if you notice these, you can begin to pace and lead the person into a

more receptive state, rather than dive straight in with your idea and have it rejected simply because the person is in the wrong state to consider it properly.

Some people are not easy to calibrate - typically, those who like to keep their emotions to themselves. They will test your skills of sensory acuity and calibration to the full. Look carefully for changes in their physiology - maybe a very slight change in posture or lip size, for example. The signs will be there as the body always shows a change of state. To develop your sensory acuity, you will need to practice calibrating the physiology of people as they change between states. Avoid trying to interpret what any state means.

If you say 'Jack looks depressed' you may be correct, but then again you really don't know unless Jack previously told you that he was depressed and his physiology at the time was the same as it is now. You can only truly interpret what a state means when the person has given you evidence that describes it.

*Give people time to think.* In any form of communication, people need time to think about what they are listening to and observing. They want to process information as it is received. While doing so, they have to stop listening - in NLP the term used for this is 'downtime'. Having the sensory acuity to notice when a person is processing in downtime is fundamental to building rapport, pacing and leading and, ultimately, effective communication. For example, during a conversation, if a person has his or her eyes open and directed your way, does it mean that the person is looking at you and listening? Could be, but, then again, if the eyes are glazed over or focused on a point somewhere in the distance, he or she is likely to be in downtime, thinking of something else.

The senses of sight and hearing can be directed either inwards or outwards. When you are 'in your head', running images, conversations and other sounds that make up your thoughts, you will not be taking in any information from around you, regardless of where your eyes are looking. In order to be fully alert to your surroundings, your senses must be focused outwards. When you are in conversation with another person, you know if he or she is listening to you from the eye movements - roving eyes or a distant focus tell you that other thoughts are uppermost inside the person's head.

*Reading eye patterns for useful information.* There are many aspects of physiology that give clues to how a person is thinking or feeling. One of the biggest giveaways is the movement of the eyes. Once you know what certain movements mean, you can determine how a person is accessing information and use this knowledge to influence them. The eyes are considered to be windows to the soul. They also indicate the way a person is thinking. Because the eyes are hardwired to both sides of the brain, they move in accord with the thinking process. Unless you are a gifted mind reader, you still will not be able to tell what a person is thinking, but, with a little practice, you will be able to tell how a person is thinking.

A thought can consist of visual, auditory and kinesthetic information, which is revealed by the position of the eyes. Just think for a moment how you can use this information with people you

want to influence. If you can tell whether people are thinking in pictures, sounds or feelings, you can imagine how much more effectively you could communicate with them. Otherwise, the danger is that you miss the signals and totally mismatch modes of communication - for example, you use a *feeling* mode with someone who is processing in a *visual* mode.

This is a common and frequent cause of miscommunication between people and, at worst, can create conflict. Depending which direction, the eyes are looking, you can pick up the mode the person is thinking in, as shown in the diagrams that follow, and avoid this problem.

The following descriptions are valid for a right-handed person. Note that some left-handed people may be configured the opposite way around. While you read the descriptions below, keep in mind that we use all the modes of communication, but some people may rely on one dominant mode and use the other modes with far less frequency and clarity. Whichever mode is used most often, this will be the mode in which you are able to communicate most effectively.

Upwards at any angle above the horizon is where the eyes go when you are accessing images. Up to the left indicates the recall of a visual memory and up to the right indicates a constructed image. Flicking from up-left to up-right and back again indicates that both recall and construction are taking place.

People who use the visual mode frequently in their communication often speak quickly and in a high pitch as they synchronize their voice with the images flashing through their minds. This process affects their breathing because, when you speak quickly, there isn't time to take in air all the way down to the lower abdomen, so you will notice the upper chest rising and falling.

In conversation, the visual communicator will have a tendency to choose visual words, such as: 'Can you see what I mean?', 'I'll paint you a picture.', 'It's bright and clear.' or 'Let's zoom in on this.'

A lateral left movement of the eyes indicates a remembered sound, such as a conversation or piece of music. A lateral right movement indicates a constructed sound or conversation. People who use the auditory mode frequently in their communication tend to speak with a varying tone. They are likely to breathe from the mid-chest area.

In conversation, the auditory communicator will have a tendency to choose auditory words, such as: 'I hear what you say.', 'That rings a bell.', 'It sounds OK to me.' or 'It's music to my ears.'

When the eyes are down to the left, it indicates that an inner conversation is going on. We all have an internal voice that we use to talk with ourselves as we are thinking or run habitual loops of dialogue. There is no characteristic breathing pattern accompanying this mode, but it is common for people who are in deep conversation with themselves to put a hand on the side of their face or stroke their chin. This is the classic pose of 'the thinker'. You may even see the jaw moving, as if words are being mimed.

Eyes down to the right indicate that someone is immersed in a feeling. A person in this mode is likely to be breathing from the lower abdomen area and speaking slowly, with gaps between the words. Sometimes the gaps will be long. The gaps are needed to allow time for feelings to form before committing a word or phrase to speech – it must feel right before it is said.

The voice will be low-pitched. In conversation, the kinaesthetic communicator will have a tendency to choose feeling words, such as: 'This just feels right.', 'Let's run with that idea for a while.', 'You had better get your skates on.', 'We're in for a bumpy ride over the next week or so.', 'Let's keep in touch.' or 'I get the hang of this now.'

*Using this knowledge to improve communication.* Knowing the mode, a person uses to communicate is very useful if you want to get on the same wavelength and make your communication as effortless and effective as possible. Underlying this technique is the responsibility that you have for the communication process. Do not expect others to fit in with your style. Be flexible and adapt and you will have greater powers of influence.

So, if you are asking someone a question using the visual mode, such as 'How do you see this panning out?' and the reply 'I don't see anything' comes back, it could be that you have chosen the wrong communication mode for that person. If, using your sensory acuity, you notice that the other person is using the kinesthetic mode, you could then modify your question to fit with this, saying 'How does this feel to you as it begins to unfold?', for example.

By modifying just a small aspect of your communication in this way, you can have a significant influence on people. It's not so much the content of what you are saying that ensures you make the connection but the way you say it. Applying what you have learned about the visual, auditory, internal dialogue and kinesthetic modes of communication can have a big impact on how others respond to you.

Credits for the creation of this NLP pattern belong to various contributors. Practice recognizing non-verbal cues and getting to know you're your own face expresses emotions that you experience, even when you are not trying to show them. This skill will help you function almost like you can read minds. People can observe an extraordinary number of non-verbal cues. It is estimated there are over 1500 cues for interpreting the state of mind that a person is in.

You will improve your skill in reading others by trying it out on yourself, making subtle observations of the interplay of the over 90 muscles of your face. Practice this exercise a good number of times over several days, until you are very good at running yourself through the prescribed emotions.

*Step 1.* Make initial observations in a mirror.

Step in front of a mirror, or get one for this purpose, and take a good look at your face. Look carefully, examining your face for even the most subtle and delicate features. Consider these surfaces:

- (1) Facial skin, in general - it's color, thickness and stretch.
- (2) Ears - not how big, but in what shape.
- (3) Earlobes.
- (4) Forehead.
- (5) Eyebrows.
- (6) Eyes
- (7) Eyelids.
- (8) Eyelashes.
- (9) Nose.
- (10) Nostrils.
- (11) Cheeks.
- (12) Cheekbones.
- (13) Lips.
- (14) Jowls.
- (15) Hair.
- (16) Wrinkles.
- (17) Moles.

*Step 2.* Create a very subtle smile.

As you watch your face, create the most subtle smile you possible can; one that will be almost impossible to see. Increase the smile until you can see it.

*Step 3.* Take yourself through emotions.

Without trying to express them in any way in your face, take yourself through the emotions listed below. Take yourself into memories that will evoke each memory, one at a time. Spend about five seconds entering the state, observe your expression for two or three seconds, and take about one second to break state, then move to the next emotion and do the same thing.

This fast tempo is a key to success for this exercise. When you break the state, it can help to take a power breath through your nose and look up at the same time, then release the air, and move on to the next emotion. Except for the last memory (surprise), don't use the auditory modality for these memories, since it takes time to listen to, and it can flood us with other memories. If you are highly emotionally sensitive, you may want to have a friend with you for this exercise.

Here are the emotions: Fear - Joy - Anger - Acceptance - Sorrow - Anticipation - Disgust – Surprise.

*Step 4.* Repeat until you are good at it.

The next steps require you to be good at the preceding steps, so repeat steps one through three a good number of times over several days before you move on to the remaining steps.

*Step 5.* Exercise the expression of polarities.

This time through, you will be using a different set of emotions that are on polarities developed by Aristotle. Have a drink of water to prepare. We will be going at a slower pace this time. Give the first emotion eight to ten seconds, and then five to seven seconds for transition, and then eight to ten seconds for the paired emotion, then five seconds to cool down, breaking the state. Continue with the next pair in the same way until you are done with all pairs.

You will be going for a more intense emotional experience this time, so use all sensory modalities, including auditory. Going for more intense emotions will teach you a great deal about yourself. Practice this part of the exercise over a few weeks. This will definitely take you out of the phantom reality of what you think your facial expressions convey, and into accurate understanding. Here are the pairs:

- (1) Anger vs. Calmness
- (2) Friendship vs. Enmity
- (3) Fear vs. Confidence
- (4) Shame vs. Shamelessness
- (5) Kindness vs. Rudeness
- (6) Pity vs. Adoration
- (7) Indignation vs. Acceptance
- (8) Envy vs. Gratitude

*Step 6. Test.*

Over the days and weeks after you have fully completed this process, notice how your awareness of your public identity, and your ability to perceive subtleties in others' expressions has expanded.

### **ASSERTIVENESS INSTALLATION.**

The basic difference between being assertive and being aggressive is how our words and behavior affect the rights and well-being of others (Sharon Anthony Bower). Assertiveness is a very important trait, yet people often fall into habits of being too passive or aggressive. These habits can be subconscious, and people often fail to realize how much they are losing and how many bad experiences come from poor assertiveness.

*Step 1. Analyze the non-assertive behavior.*

Determine what the person does instead of asserting himself/herself in a specific situation. In addition to the behavior, uncover the chain of thoughts and other internal representations that take place prior to and during the non-assertive behavior. For verbal thoughts (self-talk), get a good sense of their position. For example, how much are "their thoughts acting as a broadcast for someone else's thoughts". And how much are they trying to preempt what other people might think.

Dynamics such as these show problems with perceptual position misalignment. And this is a clue for you, by the way, to notice issues that you might want to handle with other patterns before continuing a process. As for the stronger sensory elements, look at submodalities as well. You are looking at what drives the person toward the non-assertive behavior. Do not just assume that the submodalities have to be from the known driver submodalities (size, location, etc.). It could be any type in any modality. Be thorough in your investigation of submodalities in this step, because that might determine the success of the whole procedure. does instead of asserting himself! herself in a specific situation.

*Step 2.* Assess what stops the assertive behavior.

Notice any ways that an impulse to be assertive is stopped. One way to derive this is to simply mention two or three assertive behaviors that might apply to the situation. Then ask, "When you think of doing this, what happens? The person is likely to describe a dominant rep system, such as the kinesthetic sense of feeling fear in their stomach, along with some thoughts. Help the person express these thoughts and develop them into specific beliefs such as, "If I asked for that, it would mean that I was a needy person. People like that are disgusting." (Notice the nominalization regarding disgust. Who is disgusted, and why?) Clarify the ways that stopping assertiveness can be useful.

*Step 3.* List ways the assertive behaviors can be useful.

Develop with the person a list of ways that one or more of the assertive behaviors can be useful. Make sure that this list appeals to the broadest possible spectrum of values that the person holds dear. Make sure that this includes as many selfish motives as possible, as well as any ways that the results of their assertive behavior would benefit any people or groups that the person feels are deserving. For example, if self-care makes them more productive, they will be able to contribute more to the world in the long run. Also, their medical bills will be lower, so they can contribute more to their favorite cause.

Be sure to include the pleasure of experiencing an assertive state that is free of guilt or other causes of shyness. As you are doing this step, be sure that you are using each element to foster a state of easy, confident assertiveness in the person. Another issue to consider is morality and ethics. Your client might have other parts that object such a stream of thoughts, making oneself more important in one's eyes. Allow these parts to speak up and use the Parts Negotiation pattern is needed to make sure they do not interrupt in the rest of this procedure

*Step 4.* Expand the assertiveness state.

Bring the person's attention to the ways they are beginning to experience an assertiveness state. This includes any rep system elements, including thoughts. Ask elicitation questions, such as - what do you see, hear, feel? Elicit submodalities as well, and maintain a high level of sensory acuity. Note which rep systems are most compelling, and of the thoughts, which values expressed by the thoughts are most compelling.

Begin future pacing by, for example, having the person imagine carrying out assertive behavior buoyed by this state and fully expressing this state. What kind of posture, gestures and facial expressions would be expressed? Again, if you maintain a high level of sensory acuity, you would notice their posture, gestures and facial expressions and give them verbally as feedback to the client in order to prove that the process is already working. Include a fantasy of people reacting very normally and favorably to this behavior in order to reduce the fear and create positive expectations on the subconscious level. Since voice is so important in assertiveness, have the person imagine vocal tone, volume, and pacing that are likely to gain cooperation and make the assertive requests. Again, bring up the positive feelings that go with the assertive state and behavior. Be very supportive of these feelings, and help the person amplify them. Use the submodalities that were most influential on this specific client.

*Step 5.* Go through the timeline, generating examples of assertive behavior.

Have the person go through their timeline, thinking of many examples of assertive behavior. This includes any times that the person expressed an aspect of the assertive behavior. For example, they may feel badly about having said something meekly, but if they used the right words, have them focus on this very intently. The purpose of this is to modify the person's self-concept into that of an assertive person. This way they will have a greater expectation of being assertive, more permission to be assertive, and better competence at being assertive. They will also express assertive cues such as body language that set expectations in others. This will cause people to respond in ways that elicit more assertiveness in the person.

*Step 6.* Diminish the images of non-assertive behavior.

Bring the person's awareness to their images of not being assertive. These images may include memories and fears. Ask them to send those images behind the assertive images. Have them imbue the nonassertive images with the qualities of the assertive images. For example, if the assertive images have a more lively, colorful quality, have the person modify the nonassertive images to have that quality. Have them do the same with other modalities and submodalities, such as vocal tone and accompanying thoughts. Move unassertive feelings to the same location as the assertive feelings, and modify the unassertive feelings to match key aspects of the assertive feelings. Continue making these adjustments until the person feels very congruent with assertiveness, even though these unassertive elements were being processed.

*Step 7.* Future pace.

Go back to future pacing, having the person imagine carrying out assertive behavior in various situations. Be sure that they bring the assertive state into the situation, and that their future images have the qualities of the assertive images that have been developed.

*Step 8.* Test.

Have the person give you feedback over the coming days or weeks about any changes in their behavior that have to do with assertiveness or anything else that they think is important.

## 2. Emotional intelligence

When we talk about a healthy lifestyle, personal development is as important as sports and nutrition. Especially when we want to turn a healthy habit into a routine. And motivation is one of the emotional intelligence skills that helps us turn to passion over external rewards.

For example, an enthusiast does sports for the feeling of freedom it gives him and for the well-being that physical activity brings him. On the opposite pole, a reward-focused person will be motivated to visit the gym for a possible social reward that a check-in would bring him in that place, to have his progress validated or to show off his new equipment.

What is emotional intelligence and how is it measured? Emotional intelligence (EQ) is defined by the ability to perceive, evaluate and control one's own emotions. While this self-awareness is important, so are the skills to understand, interpret and respond to the emotional needs of those around you.

There are specialists who claim that emotional intelligence can only be native, but also experts who consider it a quality that can be educated, nurtured, improved. Of one thing, however, we can be sure: there are situations when emotional intelligence is more important than IQ.

And if for the measurement of the IQ we have concrete benchmarks - the average falling around the value of 100, with a minimum of 85 and a maximum of 115 - in terms of emotional intelligence, how could we measure it, what are the correct indicators, what testing methods are there?

As with IQ testing, the most popular emotional intelligence tests are form tests that you can complete and calculate yourself. Respondents evaluate their own behaviors to answer questions or to rate the value of agreement or disagreement for statements such as: "I often feel that I have the ability to understand how others feel." Also very popular are ability tests, which involve answers for certain situations and the evaluation of abilities according to these answers; the actual assessment is done later by a third party.

If, instead, you choose the option of professional testing, in which a psychologist or mental health expert evaluates your emotional intelligence quotient, you have two options:

(1) The MSCEIT (Mayer-Salovey-Caruso Emotional Intelligence Test), which is based on skills such as perceiving, identifying, understanding and managing emotions;

(2) The ESCI (Emotional and Social Competence Inventory) test, based on a self-assessment questionnaire and the assessment provided by people who know you very well and can appreciate your social and emotional skills.

Of course, you always have the informal versions, often free, available on websites from various niches, if you want to learn more about your own emotional intelligence.

Daniel Goleman, in the book *Emotional Intelligence* (1995), divides this attribute into five components:

(1) Self-knowledge. This component refers to the ability to identify one's own emotions, values and aspirations. According to the author, self-knowledge comes with greater confidence in one's own strengths, but also with an ability to evaluate both the impact that your behavior can have on others and that of others' behavior on you.

(2) Self-control. Goleman associates self-control with the possibility of control over negative emotions, but also with responsibility for one's own mistakes and the ability to recognize them. Flexibility is the key to this component. Once you are in control of your own emotions, the benefits will be reflected in your optimistic attitude, but also in your ability to adapt to new situations.

(3) Intrinsic motivation. This skill of emotional intelligence is very important. People with a high EQ are motivated by things that go beyond the barriers of external rewards such as fame, wealth, recognition, or the applause of others. Instead, intrinsic motivation is based on the passion to fulfill one's own goals and needs.

(4) Empathy. Empathy refers to the ability to recognize the emotions of others and is an essential component of emotional intelligence. However, empathy is not limited to this identification, but includes the response or reaction to them. This dynamic causes us to be gentler with the sad ones, to rejoice for the success of those around us, to look for solutions for their problems.

(5) Social skills. Although in some contexts they may overlap with empathy, social skills rather include the ability to interact and communicate coherently and productively with others. It is a quality that is valued all the more in the professional environment, where the ability to listen actively, to communicate, to express yourself non-verbally, but also leadership skills or persuasion - all included in the category of social skills - can say the word about the professional path and career achievements.

What is the behavior that denotes emotional intelligence? Emotional intelligence is the ability to understand, use and manage one's emotions in a positive way so that you can relieve stress, communicate effectively, empathize with others, overcome challenges and defuse conflicts.

While brain functions can also improve thanks to dietary supplements that support brain health and combat the effects of stress and fatigue, emotional intelligence can be cultivated through various personal development techniques.

People with high emotional intelligence stand out through a series of behaviors:

(1) They use a rich vocabulary when expressing their emotions.

Instead of saying they feel bad, people with above-average emotional intelligence will place the emotion on a more niche spectrum: sadness, frustration, irritation, etc. The more specifically the emotion is expressed, the better it will be assimilated, and its causes will be identified, in search of solutions.

(2) They are socially curious.

Regardless of whether they are introverts or extroverts, those with high EQ will want to know more about those around them, to understand their motivation, passions, moods.

(3) It adapts.

Such people do not freeze in the face of the possibility of change, but embrace it and think of a plan of action to help them cope from any perspective.

(4) They know their strengths and weaknesses.

Correct assessment of one's own qualities helps the emotionally intelligent to identify the things they are very good at and the things they will never excel at. Thus, depending on the skills they have, they orient themselves towards areas where they can put themselves to good use, without letting themselves be defeated by insecurities.

(5) I know when to refuse and when to stop.

Delaying rewards and self-control lead to an increased ability to avoid impulsive behaviors. This means that people with high EQ know both when to stop and say no to their own starts and how to turn others down.

(6) They make use of their own mistakes.

I keep them in mind so I don't repeat them, but I don't allow them to stop me from persevering. In other words, they know how to forgive themselves for their own mistakes, but they do not evaluate themselves only through their prism and tend to evolve without being inhibited by such a mistake.

(7) They have solid relationships.

Because, in their interaction with other people, they do not create expectations and disappointments. Instead, they think about those around them, and this helps them build strong and lasting relationships.

(8) Neutralizes toxicity.

Precisely because they are very aware of their own emotions and feelings, they very easily identify the states caused by other attitudes, recognize their cause and thus neutralize their own response to toxic people and relationships.

(9) They do not seek perfection and appreciate what they have.

They allow themselves to make mistakes and do not put overwhelming pressure on themselves or others. I know that we are all subject to error and easily overcome obstacles, precisely because they project the future without clinging to the webs of past errors. At the same time, they take the time to assimilate and appreciate, even vocally at times, what they have, whether it is special relationships with other people or professional achievements.

## **WHAT DOES EMOTIONAL INTELLIGENCE HELP US TO DO?**

Self-knowledge brings with it a number of benefits, such as self-confidence or awareness of one's emotions. Self-knowledge helps us recognize the impact our own actions can have on others and makes us, in a way, more responsible. At the same time, it helps us to notice the ways in which the behavior of those around us influences our emotional state.

The benefits of self-control include the ability to recognize our own mistakes, but also to ensure that the information we convey is understood correctly. Self-mastery makes us more flexible and helps us adapt more easily, but it is also a fuel for initiative and motivation. Last but not least, it helps us to master our negative emotions and manage them in such a way that we do not allow them to affect ourselves or those around us.

The main advantage of intrinsic motivation is the establishment of goals and systems for measuring one's success. The satisfaction of one's own achievements comes with a state of serenity, calmness, self-appreciation, but also with ambition and perseverance.

Empathy primarily helps us build healthy, effective and mutually beneficial relationships with those around us. In a study published by the University of California at Berkeley on the Greater Good platform, it is confirmed that empathy reduces discriminatory actions based on race.

At the same time, specialists are of the opinion that empathy can be educated, so many schools run programs to "learn" empathy, with the aim of reducing the rates of the bullying phenomenon.

In Goleman's book, this quality is also referred to as "relationship management". The benefits of this skill include understanding others - from emotions and motivation, to action - and correctly interpreting social constructs. At the same time, this ability helps us to influence the reactions of our interlocutors and to prevent conflicts.

## **EMOTIONAL INTELLIGENCE IN THE PROFESSIONAL ENVIRONMENT.**

Every day, we make decisions based on our own emotions. We sense if one plan could succeed over another. Sometimes we make intuitive choices that have nothing behind them but our own feelings. Once we come to understand the origins of these emotions, especially when the workplace involves team interaction and collaboration, we come to "tune" our tones more easily and maintain the rhythm.

Emotional intelligence becomes more and more important in the context of globalization, but also of remote work, dictated by the coronavirus pandemic. More and more different cultures are pieces of the same team puzzle, and this means that interactions, emotions and the way they are expressed are becoming more complex by the day. Essentially, emotional intelligence in the workplace translates into understanding, expressing, managing and self-control, good relationships and the ability to deal with problems and find solutions even under pressure.

Interpersonal skills are critical to professional success, and EQ is one of the most important. Emotional intelligence affects how you work with other people, and traits like empathy and self-awareness can greatly improve your ability to collaborate, resolve conflict, or cope with stress.

When it comes to job interviews, there is no standard, objective test that can assure an employer that you have the emotional intelligence to handle the job you want or that you are a good addition to the team. This means that you have to demonstrate your skills during the interview, through the answers you give and the interaction you have with the interviewer. Here are some ways you can do that:

### **(1) Listen actively.**

Active listening is the first step to a better understanding of the requirements of the job you want. It is not strictly limited to the patience of letting the interlocutor finish his sentence before you interject with a prepared answer. On the contrary, it means not planning your answers, not jumping to conclusions about what the interviewer would like to hear. So let him finish his idea and determine what he's hoping to get out of your answer before you give it to him on the tray, memorized from an online guide.

### **(2) Don't mask your emotions.**

It's important to show that you care about what you do and that you have the emotional availability needed to take on the responsibilities of the job. Express clearly and transparently what your motivation is for practicing in the field, but also your feelings vis-à-vis the opportunity of the job you are applying for.

(3) Talk about your evolution.

No one likes to talk about failures, even more so in contexts where it is important to highlight their qualities in front of strangers. However, your ability to recognize your mistakes or weaknesses and realize how they got you to where you are indicates emotional intelligence. In addition, this way you have the opportunity to talk about the lessons learned and your evolution in relation to the failures you experienced.

(4) Be interested in the company culture.

Questions about organizational culture can tell a lot about who you are and can be used to your advantage. By showing interest in the company's culture and values, you will demonstrate that you are actively interested in the motivation and "personality" of the company you want to join.

In conclusion, as the value of emotional intelligence in the workplace grows, so does your ability to demonstrate these skills in the job interview become more important. Start by taking time to reconsider your entire career path and communicate honestly during the interview. After all, your goal is to show that you are both qualified to perform the assigned work and to excel among the people around you.

## **EMOTIONAL INTELLIGENCE IN LEADERSHIP.**

One of the most important researchers in leadership dynamics, Gary Yukl says that "When you have self-awareness, it is much easier for you to understand the needs and reactions of others in certain contexts, so you become a facilitator of the evaluation of alternative solutions".

For emotional intelligence to be effective in this way, it must be rooted within. Let them start from their own experiences. You cannot stimulate or enhance the well-being of others, the evolution and sense of self among others without understanding yourself on an emotional level. What sets leaders apart is usually their emotional intelligence, and it includes those skills that help them create and develop a more efficient, productive, results-oriented work environment.

Emotional intelligence is reflected in the ability to express emotions coherently, in the ability to interpret the emotional state of those around, but also in the ability to understand the root of certain emotions. Early childhood is a favorable time for personal development and for the stimulation of these skills.

## THE ROLE OF EMOTIONAL INTELLIGENCE IN CHILDREN'S DEVELOPMENT.

Studies over the past few decades show that emotional intelligence provides children with a variety of benefits that will serve them throughout their lives. Emotionally intelligent children do better on standardized tests and get better grades or grades. In other words, EQ is closely related to IQ. Emotional skills help children build better relationships, manage conflict, and form lasting and deep friendships.

High EQ recorded since childhood is related to the knowledge of success in adult life. A 19-year study published in the American Journal of Public Health shows that social and emotional skills in preschool can predict success in adulthood. Children who are able to share, cooperate and follow instructions at age 5 are more "likely" to earn a university degree and start working life by age 25.

Children with a high level of emotional intelligence are less likely to develop mental disorders such as depression. These advantages are easy to understand and intuitive. A child who can keep calm when irritated can cope better in difficult circumstances, just as a child who can express his emotions in a healthy way is more likely to engage in healthy relationships.

Children have the ability to acquire emotional intelligence skills with the support of the adults around them. Here are some ways they can be learned or improved:

### (1) Development of emotional vocabulary.

Children need help to correctly identify their emotions. Vocabulary development in this sense, derived from the labeling of emotions such as "happy", "sad", "angry", "nervous", "disappointed", etc. it will be reflected in their ability to express them as specifically as possible.

### (2) Evidence of empathy.

As tempting as it may be to downplay a child's feelings and tell them it's "no big deal," this tactic could invalidate their emotions. That's why it's important to let him know that you understand what he's going through, that it's normal for certain events to cause him certain states, that you confirm that nothing he's feeling is wrong.

### (3) Assuming the role of model.

To help your child develop this side, it is important to be an example for him and explain to him why certain behaviors are undesirable and can be successfully replaced with other tactics of expression. For example, you can suggest - and lead by example - that when he is angry, he draws his emotions instead of expressing them very vocally. Thus, you do not inhibit him from expressing himself, but only give him an alternative.

### (4) Handing out the necessary tool kit.

Pass on to your children the tools that help you overcome stressful times, manage your anger or relax. From coloring books to aromatherapy and scented baths, and from breathing techniques to keeping a daily journal, there are a number of techniques that can help. Identify those who support you, introduce them and challenge them to find new ways to face challenges well.

(5) Problem Solving.

When they hit an obstacle, it is important that they know how to channel their energy towards solutions. Stimulate them to look for solutions to the problems they have, evaluate them with pros and cons and thus enable them to make the best decisions in relation to their goals.

### **HOW WE CAN IMPROVE OUR EMOTIONAL INTELLIGENCE.**

Soft skills in the spectrum of emotional intelligence can be improved even in adulthood. There are strategies that have proven their effectiveness in the development of EQ and are aimed at improving interpersonal relationships, self-control and management of emotions, assuming responsibility, awareness of the effects of one's emotions on the decision-making process, improving social skills.

Here are some of these strategies: Observe your reactions. Are you quick to judge people before you have all the information about them? Do you tend to stereotype them? Look at your reactions honestly and practice role playing - put yourself in the shoes of those you are judging. This way you will become more open and you will be able to accept the perspectives and needs of everyone around you.

Analyze the environment in which you work. Looking to get attention or validation for your accomplishments? Modesty can be a quality, but it does not exclude self-confidence. Exercise: Let others shine too, give them a spot in the spotlight and worry less about your own validation, but don't stop believing in yourself.

Self-evaluate yourself. Identify your weaknesses and superpowers, recognize your limits and find those chapters you can improve. Dare to look at yourself honestly and use the tools you have at hand - a psychological test, an hour of therapy, keeping a journal, etc.

Figure out how you react in stressful situations.

Are you upset by a missed deadline or an unforeseen obstacle? Are you in the habit of apportioning blame to others in order to direct your frustrations in the same direction? The ability to keep calm and proven self-control in difficult situations are valuable qualities in the professional environment and beyond.

Practice improvement at every opportunity, from time spent in traffic to evaluating paid services such as accommodation or travel. While some of these, such as stress, can be addressed externally, such as taking magnesium-based dietary supplements enriched with B-complex vitamins, others can be improved strictly through exercise and personal development.

Take responsibility for your own actions. Apologize to those you directly hurt, instead of avoiding or shrugging off the unpleasant episode you caused. People are more willing to forgive and forget if you step up to them to make things right.

Consider how your actions may affect others before you do them. If a decision of yours will impact other lives, put yourself in their shoes. How would you feel? Would you like to have that experience? If the decision is inevitable, how could you reduce its adverse impact?

In conclusion, although academic intelligence is a decisive factor for success, it is emotional intelligence that will help you have good relationships with those around you and achieve your goals. Being aware of your own actions and feelings and the impact that their expression could have on other people will help you see people with different eyes, value them more, listen to them, understand their wants and needs, but also empathize, identify and connect with him on much deeper and more meaningful and fulfilling levels.

### **RULES REGARDING KNOWLEDGE OF THE INTERLOCUTOR'S INTERLOCUTOR WORLD**

The speed of the process of getting to know the interlocutor and the quality - it differs from person to person. They can be improved by assimilating the appropriate knowledge and experience. Based on the research carried out, the scientists came to the following idea: the knowledge of the internal world of the interlocutor falls under the positive/negative action of the following factors: the superiority factor, the attractiveness factor and the attitude factor.

The action of the superiority factor manifests itself in situations of inequality between communication partners (social, intellectual, group). The essence of this factor lies in the fact that communication partners are prone to systematically overestimate the qualities of those people, who are superior in relation to some parameter (financial situation, social position, etc.). However, if they communicate with opposite partners whom they believe to be superior, then the former underestimate the latter.

The attractiveness factor ensures the realization of the following scheme: the more we like a person's appearance, the better he is for us in all respects. If the person seems unattractive to us, then we tend to underestimate his other qualities as well. The experiments carried out by the American psychologist Miller explain the action of the attractiveness factor: three categories of photos ("beautiful" people, "unattractive" people, "ordinary" people) were presented to a group of subjects (50% men, 50% women).

They were asked to express their opinion regarding the inner world of the people presented in the pictures. Those from the category of the beautiful were also appreciated as more confident, happier, sincere, balanced, energetic, kind, spiritually richer in relation to the people from the category of "unattractive" and "ordinary". In other words, many things depend on whether we like the outside of the communication partner or not.

The attitude factor towards the interlocutor induces the connection of perception according to the following scheme: the positive attitude expressed by the interlocutor in new facades

predisposes us to the positive perception of his qualities and ignoring the negative ones (for example: the positive attitude of the trafficker expressed towards the victim at the stage of initial knowledge predisposes a this one to be more gullible than the first). And vice versa, the hostile attitude of the interlocutor towards the communication partner induces a similar reaction of rejection, denial, destruction. (For example, the mutual negative attitude of the conflicting parties).

From the mentioned, we conclude that the process of human perception by humans is complex, but most often inadequate, simplistic and idealized. It is constantly sprinkled with unpredictable influences (positive or negative) of a psychic and social nature. Thus, psychologists highlight several psychological influences on the process of getting to know the communication partner.

The halo effect consists in the fact that any information we receive about a certain person is superimposed on the image we already have of that person. This image we already have of the interlocutor, which has the function of a halo, prevents us from knowing the reality of the interlocutor's personality. Thus, the positive image of the interlocutor predisposes us to continue to perceive him only in a beneficial aspect and not to notice his negative aspects. With an even greater power, the negative halo acts on perception, the unfavorable image of the communication partner remains unshaken at the most daring attempts of the person to whom it refers.

The halo effect can bring many benefits if applied skillfully. By creating positive images of people who are closely related to each other (co-workers, friends) we actually contribute to the formation of a positive psychological climate expressed later through effective interpersonal relationships, positive mutual attitudes, etc. If we consider the activity of two employees performing similar functions in an organization, then the effect of the positive halo can be implemented in the following way: the first listens carefully to the customer, tries to understand his request, after which he says that this problem can be effectively solved only by the second specialist, more competent in the requested field. The second employee is invited, for whom a favorable image has already been created and the interaction with the client has a high chance of being much more effective. At the next customer, the employees switch roles.

Similar to the action of the halo effect is the action of the projection effect, which appears when in communication with a pleasant interlocutor we tend to attribute to him our qualities worthy of appreciation and respect, and to the unpleasant interlocutor - our shortcomings. The projection effect also appears as a defense mechanism when the gaps we have in ourselves are more easily seen in others - the mirror effect.

It is not by chance that illiterate people pay attention to the mistakes of others, the coward enjoys the failure of the bold and strong, and the one who cannot get his head out of problems thinks that those around him have the same problems. As an example, here can be the conceptions of the governments of the USA and the Soviet Union regarding the incursions of the Americans in Vietnam and of the Soviets in Afghanistan.

The backfire effect is when too active intense, too persuasive communication leads to the opposite of the expected result. The action of this effect in politics is particularly obvious. The leaders of the political parties try in every way to convince their people that their program is the best, but the voters vote for their opponents. This situation is due to the fact that people resist strong external pressures because they are perceived as an attempt at freedom of choice.

The effect of the middle error manifests itself in the following way: in assessing the communication partner, we tend to reduce his extreme qualities towards some average, middle ones. Possibly for this reason we tend to believe that a vile man (with hidden and dark thoughts) has something good in him and is capable of change.

The effect of novelty consists in the fact that in getting to know communication partners, people give priority to new elements, sometimes even original ones. This is why when a new person appears in an established group, the attention of the group's constituent members is directed exclusively towards him. E. Berne, the author of the transactional theory of communication, states that in getting to know the new communication partner it is good to pay more attention to the first 10 seconds of communication, because the person does not yet know what role to "play" with us and it is natural, the what is in reality.

Concluding what was previously stated, we can mention that a positive initial perception, knowledge towards the interlocutor can predispose us to overestimate him and conversely, a negative first impression about the interlocutor can underestimate his previously known qualities. In order to reduce the "negative" action of the factors that influence interpersonal knowledge, psychologists recommend the following:

(1) In communication, let's try to observe both the verbal and non-verbal language of the interlocutor.

(2) To avoid the stereotyped interpretation of the external qualities expressed by the interlocutor, of his non-verbal language, for example, the positive attitude expressed can also mean the desire for manipulation; scratching the back of the neck can mean mistrust, cowardice, or an abundance of dandruff.

(3) In the interpretation of non-verbal language, let's try to analyze several gestures (by interpreting only one gesture we can fail).

(4) It is good to take into account the situation in which the communication takes place (time, space, temperature). The person's lack of desire to communicate, for example, can be determined by the low temperature in the room.

(5) Consider congruence - the extent to which the verbal message is reinforced by nonverbal language. If the information transmitted through verbal language does not coincide with what is transmitted through nonverbal language, then it is recommended to rely on nonverbal information.

(6) Let's take into account some regularities: the more adult the interlocutor is, the higher his social-economic status, the less he expresses his non-verbal language, gestures and mimicry are more "hidden", masked, controlled. People who come from southern regions have a more developed and expressed non-verbal language.

## **METHODS OF DISTRACTION.**

At times, you may feel so bad that all you want to do is escape. And, at times, escape can be a helpful strategy. Getting away from a bad situation, as long as you're not shirking responsibilities, can help you rest and refocus, especially in stressful situations. The simplest method, of course, is to simply remove yourself from the situation. Depending on the size of the bad situation, you could do something as easy as silently counting to ten or leaving the room, or as complicated as taking a vacation.

Taking yourself out of the situation can give you some time to coolly and thoughtfully reflect on what's happening. It also may prevent you from escalating your bad feelings and perhaps saying something you might regret later. Think of this kind of break as recharging your batteries.

You have many options that involve distracting you from your current situation. Some of these options are helpful, and others may be harmful. Here are some helpful methods for coping: take a deep breath, go for a walk, count to ten slowly, look for alternative strategies, make lists, let your emotions surface, exercise, talk to someone close to you or meditate, practice yoga, or listen to soothing tapes.

Some structured ways of relaxing involve temporarily distracting yourself from your negative feelings and the world around you. The following sections cover these forms of relaxation or awareness, including deep muscle relaxation, breathing exercises, meditation, and mindfulness.

*Relaxation, meditation and similar activities.* You can use a number of physical and mental activities to become calmer and more relaxed. Using these techniques not only impacts your mental condition, but also changes your body's physiological state for the better. The most effective way to use these techniques is to make them part of your everyday routine. Instead of waiting for a crisis to occur, then searching for a quick fix, integrate one of these techniques into your lifestyle.

Most of these activities can be done in ten minutes or less. Considering the amount of time you may currently spend having coffee, reading the newspaper, surfing the Web, or watching TV, ten minutes is a small price to pay to create a calmer world.

Activities that involve motion help you physically by releasing endorphins, especially when you use a physical exercise routine. People who exercise regularly not only reduce stress but also tend to be more cheerful. Also, having a sense of control over your body increases your confidence.

*Progressive relaxation.* Originated by the psychologist Edmund Jacobson and further refined by Robert Benson and Joseph Wolpe, progressive relaxation can be effective in reducing high blood pressure, irritable bowel syndrome, and general anxiety.

You don't find relaxation exercises very effective during sudden or acute anxiety attacks. For these kinds of episodes, you might want to check out belly breathing and acupressure, covered in the following sections.

Don't attempt these exercises if you suffer from any muscle ailments. If necessary, you can modify the exercise to adapt to your condition, but check with a healthcare professional first.

*Diaphragmatic or belly breathing.* At first, belly breathing might sound unusual and maybe even peculiar. Usually, when you breathe, you fill your lungs with air by lifting your ribcage while inhaling and lowering your ribcage when exhaling. Breathing this way can actually magnify your hot emotional states. It can also raise your heart rate, adding to the feeling of anxiety.

When you belly breathe, you hold your ribcage steady. You actually breathe through your diaphragm, which is located lower, down in the stomach area. Wind-instrument musicians commonly breathe from the diaphragm. When I first started to play the saxophone as a child, I practiced breathing through my diaphragm. Now, when I'm practicing or performing, this type of breathing comes naturally.

When you practice, you can soon let your expanding belly do the inhaling for you and allow your contracting belly to direct your breath out. Repeat this cycle for five minutes. Afterwards, you should feel refreshed and relaxed.

One of the advantages of belly breathing is that you can use it during moments of stress. You can belly breathe while you're sitting, standing, or even walking. If you can't close your eyes, you can focus on an object nearby and continue the breathing.

*Acupressure* works along the same principles as acupuncture and Shiatsu massage. To practice acupressure on yourself, follow these steps: using your thumb and forefinger, squeeze the fleshy area between the thumb and forefinger of your other hand. You should feel a slightly uncomfortable, but not painful, sensation. Keep applying the pressure for about five seconds. Repeat, using your other hand. Repeat the entire cycle (both hands) two more times. Any sense of tension should recede.

*Purposeful distraction.* You can practice purposeful distraction in a number of ways: write down a list of things that you can do when you feel overtaken by stress. Sometimes, just writing out a list can give you a sense of control. It helps build confidence because you're planning ahead. Replace thoughts. Whenever you start having worrying thoughts, practice replacing them with pleasant and peaceful images, such as a seashore, clouds floating in the sky, or a forest filled with

the sounds of birds. Identify thoughts or actions that worsen your anxiety. For example, when you're stuck in traffic, continuing to look at the clock every 30 seconds makes you more tense.

*Mindfulness.* When you practice mindfulness, your purpose in life becomes being awake and aware of the moment, first and foremost. Mindfulness is one of the more popular versions of meditation that psychologists, coaches, and trainers use. Dr. Jon Kabat-Zinn developed this technique, which centers around being aware of the present moment. Using this method, you leave behind any judging, thinking, or reflecting that may be part of your usual pattern. You think of the moment as a breath of air and focus on one breath after the other, moment by moment.

Follow these steps to practice an exercise in mindfulness: sit in a comfortable chair or lie down in a comfortable position. Try to maintain a posture of dignity and wakefulness. This is a position in which you feel very secure and sure of yourself while being awake and aware. Think of this moment. Forget about anything in the past or the future that you may have been thinking about and focus on now. Hold this moment in awareness. Try, for as long as you can, to keep your focus on the moment. Attend to your senses. Pay attention to what you smell, touch, hear, and taste, as well as your breathing. Focus on your breathing. Pay attention to your breathing without trying to change it. Feel the breath coming in and out. Breathe gently in and out. Follow the air as it moves into your belly and then out again. (Optional) You can close your eyes, if you want, but continue focusing on your breath. Keep feeling it going in and out. Rest in your awareness by relaxing and keeping your focus. Try to ignore your thoughts. Your thoughts naturally try to comment on your experience. But drop down below, to a deeper, gentler level of awareness and experience your breath. Anytime you notice that your mind is no longer focused on your breath, let your awareness recognize what's on your mind. Return to focusing on your breath, thus focusing on the present.

Mindfulness is a skill that you need to practice if you want to get the most out of it. After you master remaining in the here and now, you can expand your awareness to your different senses. Instead of getting involved in sounds, thoughts, emotions, and so on, however, you just observe them passing through you. In your restful, calm state, you simply attend to the passing experiences. You don't judge or deal with any of your thoughts while they pass through your mind. You observe them, like a person outside of yourself, and then focus back to awareness of your breath.

*Working Your Way Out of a Bad Situation.* Although you can try to protect yourself by preparing yourself for the bad things that hit you in life, surprises do happen. In fact, life is full of surprises. And some of those surprises are bad ones.

You can have a wide range of bad experiences, from the really big ones (such as serious illnesses and loss) to the smaller ones (such as someone taking your coffee cup at work). A person's first reaction to bad news or a bad situation is always an emotional one. If the emotions run hot, then you may have more trouble problem-solving your way out of the bad experience.

You can't always predict where your next surprise will come from. But you can start to inoculate yourself to deal with unexpected events. Start by looking at your current way of dealing with unexpected events. How do you react, for example, when someone you know has let you down? Do you spring into anger mode? Or do you get depressed and blame yourself?

People aren't always reliable. At least, they don't always behave the way you want them to. Everyone has expectations of other people, and everyone has experienced people not living up to those expectations. So, part of your strategy should involve accepting that piece of reality.

When someone lets you down, you can react, in the short term, by accepting it. Acknowledge to yourself that something unpleasant has happened, and then start to look at any alternatives you may have for dealing with the behavior itself and your feelings about it.

You have to accept your feelings, as well as the other person's behavior. If you initially feel anger or depression, prepare yourself so that you can change anger to frustration or annoyance, or depression to sadness or disappointment. The sooner you can manage your feelings, the sooner you can deal with your thoughts and move on to the next steps of your life.

### **LONG-TERM SOLUTIONS.**

Taking a long view means you look at the way you see yourself here and now, as well as look ahead at where you want to be in two, five, or ten years down the road. Every once in a while, stop and think about your world and how you fit in - what you like, what you want to change - because you want most of your energy and effort in life to be going towards your long-term goals and happiness.

By using your emotions, you can make a gut check. How do you feel - in your gut - about your current place in the world? Follow these steps to get in touch with your gut:

- (1) In your notebook, write a list of things that you're currently happy with in your life. Spend a few minutes reflecting on your accomplishments.
- (2) Write a list of those things that you want to change in your life. This list can include your job, some of your friends, or how you spend your leisure time. Use your feelings to guide you along.
- (3) Write where you want to be in the areas that you want to change. This list might include such things as new friends or new hobbies.

Taking a long view can help you better prepare for some of life's roadblocks. Having alternatives that you can pursue when your world changes or when you're ready to change your world can really enhance your life down the road. It makes it a bit easier to deal with some of life's major changes.

### 3. Self-actualization

There is a need to use self-management and self-control when it comes to emotions. We introduce a three-step process that can be used for self-management. This process will help us to improve our self-control and avoid emotional breakdowns.

Emotional breakdowns are often predictable and escalate slowly. Leveraging our self-awareness, we can take steps to understand the emotions and underlying cause. The three-step process includes identifying the feeling, determining the underlying cause, and taking action to get clear.

#### *Step 1. Identify the Feeling.*

The management of emotions starts with awareness of emotions. This awareness might simply be strong anger over a missed deliverable, unease about a meeting, or simply a nagging awareness of something that is not quite right. Whatever our starting point, we need to use the self-awareness techniques to identify the feeling. Once we are aware of the specific feeling or emotion, we can start to do something about it.

#### *Step 2. Determine the Underlying Cause.*

Once aware of our feeling or emotion, we need to trace back and understand the source or cause of that emotion. In the previous example of the anger over a missed deliverable, we can trace our anger back to the deliverable. But we need to look further than the simple act of missing the deliverable. We need to ask what else is leading to our anger. Are we angry because we don't tolerate mis-takes? Or, are we scared because we should have monitored the progress more closely or because it will make us look bad?

In the case of the unease over an important client meeting, we can trace the cause to the importance of the meeting. We are scared because the meeting is important to us. Our bodies automatically use fear to generate adrenaline that helps us prepare for the meeting and carries us through that stressful time. So it may be appropriate to feel scared.

#### *Step 3. Take Action to Get Clear.*

Once we understand the cause of the feeling or emotion, we can take action to get clear. This is critical. If we take action to get at the cause of the negative feelings, we can establish new ways of thinking and behaving. This doesn't necessarily mean we must take radical action. The appropriate action could be to simply recognize that our reaction was out of line or that our interpretation of the situation caused us unnecessary anger.

Taking action to get clear could involve a *do-over*. A do-over is when you repeat the situation but you change your behavior to achieve a different emotional outcome. A do-over may not even involve the other person in the conflict. It might be more appropriate to scream in your car on the way home (with the windows up, of course) or punch out your pillow or mattress.

Sometimes we can role-play the event and choose to handle the situation in a more responsible or appropriate way. You might role-play with someone besides the person involved in the conflict, for example, a confidant, peer, or coach.

How would we get clear in the previous situations? We can get clear with our anger over the deliverable by meeting with the team resource re-sponsible for delivering. We can explain that we are angry because of their behavior and then let them know why (it causes the client to lose confidence or some other reason). We might conclude with what we would want them to do differently in the future. By telling them we were angry, we are able to get clear.

The basic three-step process for self-management is helpful for most situations. Here are some additional techniques you can use to manage yourself and your emotions:

*(1) Reduce Your Stress Level.*

There are a multitude of stress reduction methods starting with easy things like exercise and self-care all the way through more radical approaches like getting a new job or leaving an abusive relationship. Previously discussed techniques include prayer and meditation. My coach is a big believer in using breathing techniques. The point is that there are a lot of different ways to reduce stress and I encourage you to experiment until you find one that works for you. On the other hand, if you are one of those people who thrive on stress and intentionally create it in your life, what I write here won't matter much to you anyway.

*(2) Conduct an Inner Dialog of Self-Parenting.*

You may find that you benefit by speaking to yourself as if you were parenting a small child. Replace any harsh self-talk with kind and gentle words. Just don't do this out loud in front of your project team or they may think you are losing it.

*(3) Talk It Out with Someone.*

Besides having several different mentors and coaches outside work, I have had the luxury over the last 2 years of having a good friend and member of my program management team who is always willing to be a sounding board for my ideas. I have found this invaluable. If you don't have someone in your professional life whom you can bounce ideas off, find someone. It is a bonus if you can also ask them to hold you accountable to make changes or follow through on your commitments.

*(4) Give Yourself a Time Out.*

If you find yourself heading toward a breakdown, give yourself a time out. Leave the building, go to lunch early, quit for the day, or just head out to the nearest coffee shop for a snack. If you are

at home, you can punch a pillow or hit a bed with a tennis racquet. Some people find exercise helpful.

*(5) Write a Letter or E-Mail You Will Not Send.*

A technique that Abraham Lincoln reportedly practiced was to write letters he did not plan to send. The idea is that through expressing your emotions in writing, you are able to release any emotional charge. This worked well for Abe when he used paper and pencil but may not work as well today with our modern office tools. For example, we may type an e-mail that we don't plan to send and then actually end up sending it inadvertently. Some organizations monitor all e-mails, even unsent ones. Other organizations use keystroke logging software to record everything typed at a keyboard including documents, unsent e-mail, and instant messages.

*(6) Use Appropriate Humor.*

There is nothing like laughter to remind us to not take ourselves too seriously. You can crack a joke, watch a sitcom, read something funny, or find some-one amusing to hang out with. Scott Adams is great in the Dilbert cartoon; check out his collection online. If you can afford it, add a really funny person to your project team. Of course, they would need to have an official role and work assigned to them or your project sponsors might not find it all that funny.

*(7) Take Care of Yourself.*

As noted in the chapter, we need to take care of ourselves to help prevent emotional breakdowns. This includes taking vacations, getting enough sleep, resting when sick, and getting support from others. Evaluate how you are doing at self-care and select one or more of these areas to make an investment in yourself.

## **OPTIMISING PERSONAL PERFORMANCE.**

So far, we have explored the theory behind applied emotional intelligence. In this chapter we start to look at what this actually means in practice by considering the impact our EI has on our personal performance, emotion-ally, physically and spiritually.

Tim Gallwey's formula is: performance = potential - interference. Think of this in your own context. How are you performing currently, in any or all areas of your life? Are you maximizing your potential as a human being or are you getting in your own way? Do you know the ways you undermine or limit yourself, for example by sabotaging your own attempts to self-manage or by keeping a lid on your awareness through denial of a truth that's staring you in the face?

Remember also that the four key determinants of our performance are: our knowledge, our attitudes, our skills and our habits. Our potential is developed through gaining knowledge about whatever inspires us or is important to us, by honing our existing skills and learning new ones

and through adopting healthier attitudes and habits. Again, these four determinants are liable to be undermined by our personal interferences.

But first, let's take a closer look at the links between our emotional intelligence and our body.

*Body intelligence.* Our human bodies are holistic systems, as represented by the feeling, thinking, doing and body pyramid.

These holistic systems are now studied through the subject of Psychoneuroimmunology, or PNI for short - yes, a big word, but also an important one. What it refers to is the study of the connections between the key systems in our bodies - how the brain, the heart, the nervous, the immune and the endocrine systems impact on each other and communicate with each other. Much of the early research into PNI was undertaken by the neuroscientist Candace Pert and is described in her book *The Molecules of Emotion*.

Dr. Alex Concorde of the Concorde Initiative has been carrying out pioneering research in the UK into PNI and related subjects, in particular stress and the connections between all of the systems of the body, including the links between our psychology and our biology. Her understanding of how the brain functions has led her to identify that the limbic system is in fact the powerhouse and "chief executive" of the human-mind / human-body system.

Dr. Concorde has described how the limbic system is the "house of our highest intents" - its overall purpose is to keep us healthy and safe. It is constantly determining whether or not we are under threat or safe, and whether or not we are well and in a state of well-being. It is active when we're asleep as well as when we're awake, monitoring our health and safety every millisecond, processing six *billion* bits of information per second.

The limbic system takes all this incoming information and provides its best strategic response for managing the overall resources in our bodies, given the total demands. Accordingly, it transmits messages throughout our minds and bodies letting the whole system know "the state of play".

*Going Limbic.* We know that our feeling and thinking brains evolved separately, and they are separately located, the feeling brain in the midbrain and the cortex on the outside, particularly at the front and on the top, but that nonetheless they are well connected by neural circuitry. Our emotional and logical brains are completely intertwined. We cannot make a decision, or take action without engaging our emotional brain. And that's why our emotional intelligence is so important.

Concorde's study into the functioning of the brain has brought clarity to the interconnections between the limbic system and the cognitive mind (the cortex).

In contrast to the limbic system's ability to process 6 billion bits of information per second, the cognitive mind processes just 10-100 bits of information per second. Our cognitive mind is there to help process and organize information.

If the limbic system is working through its higher function of our meaning, it engages the cognitive mind to help devise a strategy with which to enable our meaning to be created through conscious thought and action.

This seems to describe the neuroscience behind the concepts of Self-1 and Self-2 that Tim Gallwey describes in his book "The Inner Game of Tennis". Self-2 powers the incredible human machine capable of achieving great intellectual and physical feats if it is left to get on with its automatic doing function. Self-1, which Tim Gallwey describes as the "thinking, ego-mind", "tells" Self-2 what to do, but more often than not ends up hindering the performance of Self-2 rather than helping it.

This also fits with the way the brain evolved, with the limbic system forming first, and the cognitive mind evolving as man became more sophisticated and needed to plan, organize and relate with other humans. The cognitive mind is a sophistication, but this does not mean it is - or should be - king, which is a bit of a challenge to many of us who value very highly our cognitive abilities. By not recognizing the purpose of the limbic system and acknowledging its importance, we are underutilizing it, limiting our perceptions of what we can achieve, and not making use of our non-cognitive capabilities.

*A Self-Managing System.* Dr Concorde's research is defining how the human body works as a self-managing system. The instructions that we give to our limbic systems define the level of safety and well-being at which they will manage our bodies' internal resources.

Besides ensuring your safety, the limbic system also checks all incoming information against its stores of data about your personal life experience, including all the data in your "brain banks" which is "tagged" with emotions. It then looks at all this information - current, past and future-oriented - in view of your highest intentions, your purpose in life, you as an individual, you as a being. And, having first secured your safety, it then determines how to use your overall resources in view of what it is that you seek to achieve - at the highest level.

So, if we are coming from a position of purpose, intention and meaning, then our perspective broadens, and we can see more possibilities and opportunities that are in alignment with our aspirations. If however we allow our cognitive mind - which operates in a linear, reactive manner - to instruct our limbic system, the limbic system is stifled and we limit the effectiveness of our overall system. Anything that is negative, linear, to do with trans-acting (as opposed to really interacting) with another person, or small in its "outlook" and restricted is likely to be cognitive.

Because the cortex works within a restrictive norm, it doesn't take much to go outside that norm. And when you do that puts stress on the system.

The limbic system is, however, expansive. It senses things and transforms minutely, second by second, updating your stores of information about what matters now and your personal experience. And so, the limbic system codes information in a different way to the cognitive mind.

To create transformational change the limbic system has to be involved. Transformational change (limbic) is change that fundamentally changes how you see things and how you do things as a consequence. Linear change (cognitive) tries to alter behaviours without really changing what drives them at a fundamental “this is who I am” and “this is what I am about” level.

This is why emotional intelligence is so important. Dr Concorde considers that the vast majority of coaching and consultancy is cognitive and linear. In her view, behavioural change that is not transformational simply adds stresses to the system because it further restricts the cognitive mind’s already small outlook - “You can do this. You mustn’t do that.”, as opposed to “I really want to do this”. Cognitive change is about providing more guidelines and rules - that is more restricting. Limbic change is about fundamentally changing the individual’s intention by addressing any emotional intelligence that is not really in alignment with who they are now, their current purpose - and that creates more choices.

This matters in performance because any positive changes that happen at the limbic level enable an individual to do what is really going to make a difference with less effort. More performance for less stress! Isn’t that what every individual and every business organization wants? This is what Concorde calls “high performance, low stress systems”. And because our emotions and feelings underpin our attitudes, by working with attitudes we have a means of starting to reach the limbic system.

Stress arises when the demands on and within the human system exceed resources in any give timeframe. And so, to reduce stress, the aim is clearly to ensure that demands are minimized and resources maximized. So, if an individual *wants* to do something, well that makes it OK - fun, even! That adds resources even though they are working, so that is less stress. But if they are just doing something “cognitively” because that is what the rules are, then that requires effort which increases demands and reduces resources. So, the same work can create less stress or more stress.

Dr. Concorde emphasizes that internal demands are therefore much more important than external demands - as we have just illustrated. And that is what we know from an emotional intelligence perspective also. In EI we know that demands and resources can be internal as well as external. The demands of a stressful job situation may appear to be external, but the individual’s more unhelpful thoughts and feelings - which are internal and which are within an individual’s reach - create internal stress that matters much more biologically than external pressures. This is because these thoughts and feelings generate stress that is internal, both by adding to the demands and by limiting the availability of resources.

Now if we come at this with a limbic approach by taking the highest possible perspective, we will enable an individual to have choices over a stressful situation, rather than viewing a limited range of options at a linear, cognitive level.

This further reinforces the need for the managing of internal demands and resources, the understanding and management of our emotions and ultimately non-judgement of ourselves and others - minimizing our interferences.

Our emotional intelligence depends upon: our current level of awareness, our skills and competencies and how we view the world and what we value in it, in particular the degree to which we value ourselves and also other people.

The simplest way to identify your interferences is to complete your which has been designed as a diagnostic tool to help you recognize the pattern of your relative strengths and weaknesses in the various components of emotional intelligence.

*Considering your motivations.* Maslow, the humanistic psychologist, suggested that we have a basic set of survival and growth needs, all of which need to be met if we are to achieve our potential (self-actualization). He represented these needs as a hierarchy with the basic physiological needs at the bottom, moving upwards towards *self-actualisation* and self-transcendence at the top.

Whilst we are not here to add to the debate on Maslow's work, what we have noticed in our studies of emotional intelligence is that when we are acting in an emotionally unintelligent way, we are likely to be focusing on one or more of our lower needs. For example:

- (1) Physiological issues may include worrying about putting food on the table or having somewhere to live.
- (2) Safety concerns may include fear of attack on the streets, fear of financial insecurity.
- (3) Belonging issues may include lack of friendships, many short-term relationships.
- (4) Esteem issues may include a lack of self-belief, worrying what others think.

*Integrating feeling, thinking and doing.* Applied emotional intelligence is about giving ourselves a choice in how we think, feel and act. To achieve this, we need to be balanced in our thinking, our feeling and our doing. For most of us this can be quite a challenge because, as we saw before, each of us usually favors one of these three aspects of our-selves, rather than being able to switch naturally between them and to integrate all three. As we develop we become unconsciously competent at integrating the three functions.

Giving significance to your thinking: stop. Take a deep breath and count to 6. Allow your cognitive mind to connect with whatever you are feeling or doing. Learn to think positively by seeking the positive aspects of a situation first before considering the negatives

Giving significance to your feeling: take a moment to notice the feelings you are experiencing in your body. Learn to recognize which of your feelings are emotional, which are physiological, and which are intuitive

Giving significance to your doing: rather than asking “Why?”, ask “What can I do to change this?” If you find yourself dwelling in thinking or feeling for a period of time, re-energise yourself by going for a brisk walk and getting some fresh air.

*Checking your judgements or assumptions.* The more you reflect on your thoughts, your feelings and what you do, the more likely you are to begin to notice patterns in your responses. Most feelings have an evaluative component but it is an entirely subjective one: we like something or we don't, we are attracted or repelled, we respond with sadness or with joy. Often, however, people move on from this subjective evaluation to a more cognitive pseudo-objective evaluation - to a judgement.

For example: “I like this cake” is an evaluative response coming from me. “That cake is nice” is a pseudo-objective statement, a statement of opinion dressed up as a fact. The cake may be nice to me, but my friend may not care for it. The key is to remember to always use “I” statements, to avoid pseudo-objectivity, and to own your views and opinions.

Beyond the variable of whether or not one moves from the subjective to the pseudo-objective, from emotional response to judgement, another variable is who or what the judgement is directed towards. One of the questions you can ask yourself is “Who am I judging here? Am I judging someone for what they've done or for how they are, or am I judging myself some-where? Am I making assumptions about someone or something without checking the facts?”

For example: you may make a very generalized statement saying, “Peter is unreliable”, when what you are actually saying to yourself is, “Peter should turn up five minutes early for any meeting like I do”.

Having identified the nature of the judgement or assumption involved, if there is one, we can ask ourselves to what extent the judgement is justified or the assumption is accurate. Is there a different way to view the person or situation, thereby diffusing the emotional response and changing the possible outcome? Why is Peter always late for meetings? What could you do to help Peter be more self-managing?

*Giving yourself choice.* We can raise our own conscious awareness of why and how we respond to a stimulus, and we can learn to understand and be aware of the great variety of types of stimuli that we respond to. In doing this, we can intercept our automatic responses and start to give

ourselves choice in all sorts of situations. Indeed, we sometimes use “choicefulness” as a synonym for emotional intelligence.

For example, there may be a person who always manages to press one of your emotional buttons, causing you to respond in an emotional way every time you interact with each other. The first level of awareness is to notice this pattern of behavior in yourself.

As you become more aware of the pattern you may notice that it only happens when you’re discussing certain things or when the other person speaks in a particular way. The second level of awareness is to then recognized what internal reactions are also triggered that can perpetuate the loop, making it difficult to step out of it without awareness.

Here are some examples of the different processes that can escalate an emotional discussion or keep us locked in the same response loop:

- (1) *Over-generalization,*
- (2) *Judgement from Parent,*
- (3) *Rigidity,*
- (4) *Prejudice and*
- (5) *Trying to satisfy your conditions of worth.*

Most people in childhood acquire a belief that their OK-ness depends on fulfilling some specific criteria. In trying to avoid the unpleasant feeling of being “Not OK” we considerably limit our range of choice. For example, if we believe that we are only OK if we please other people, then we will tend to be conflict avoidant, which will mean that we will find it difficult to stand up for ourselves and get what we want.

*Maximizing your potential.* Developing our potential requires a positive attitude towards ourselves in the first place. We have to believe that there is some potential within us to develop. Here are some ways in which you can start to think about your own potential and, we hope, come to realise that your potential is unique and worthy of your utmost focus.

*Recognize your strengths.* Whenever we ask people to list their strengths and weaknesses, or to review what they did well during an experiential exercise, they can usually come up with a list as long as your arm about what’s wrong with them. But to identify what their strengths and qualities it’s a completely different matter.

## **BE PREPARED TO STRETCH THAT COMFORT ZONE!**

Understanding comfort zones and how they work is a useful way to open up your self-concept. As the name suggests, a comfort zone is a place where you feel completely comfortable. There’s no stress there, you do not feel inhibited or fearful. It is easy, comfortable and safe. And it’s a

great place to be for a time. The problem with staying within our comfort zones is that, at some point, uneasiness will creep in. We all have a natural tendency for growth.

If we do not permit ourselves this natural growth, our existing comfort zone will actually start to shrink as we feel the unease and try to compensate for it. A far healthier thing to do is to recognize that we are seeking some change and allow the process to start to unfold.

As we become more adept at recognizing our comforts and discomforts in situations, we can start to see how we have variable comfort zones; we have a number of comfort zones operating at any one time. As we work with these, we can start to hone in on the specific situations that cause us particular discomforts, so that we can look at these more closely as we develop our emotional intelligence.

We can then start to observe our emotional recovery rates in different situations too, again giving us more information on our emotional make-up, which in turn will give us more choice in how we respond to and handle the more challenging aspects of our lives.

Achieving our potential requires *transformation*. This takes courage; courage to embrace the unknown. The real challenge in our pursuit of growth as human beings is to create our own change rather than waiting for circumstances, or other people, to force change upon us. “Sometimes you just have to take the leap, and build your wings on the way down” Kobi Yamada

Align with your purpose. Maslow’s concept of self-actualization means knowing who you are, where you are going, having a sense of wellbeing and being all that you can be. Self-awareness, and self-knowledge built upon it, is the key to achieving this. Without understanding who we are, and separating our values and beliefs from the ones we were taught as children, we cannot easily identify what is uniquely important to us. When we take time to reflect on what is truly important to us and find something in which we want to invest our energy, time and resources, we can speedily move towards being all that we can be.

Each of us, on our journey to writing this book, have followed our own personal meaning. For Andrei, his passion is Truth and he wanted to get to the truth of emotional intelligence. For Maria, her meaning is found in Equality, that we all have as much right as the next person to be here and to experience a happy and successful life. By recognizing the importance of our meanings, and by committing ourselves to these, we were then able to make choices that enabled us to live through our meaning.

Working on your self-awareness and identifying your innate strengths and qualities will help you discover your meaning. Identifying your highest meaning will enable you to realize your potential.

Living through your meaning, purpose or potential facilitates a state of wellbeing, of experiencing being fully alive. Maximize your personal performance and you will grow your comfort zone!

## BIBLIOGRAPHY

1. Abbas, M. Y. (2000). *Proxemics in Waiting Areas of Health Centres*. Sheffield: University of Sheffield.
2. Abramo, A. C., Do Amaral, T. P. A., Lessio, B. P., & De Lima, G. A. (2016). Anatomy of forehead, glabellar, nasal and orbital muscles, and their correlation with distinctive patterns of skin lines on the upper third of the face: reviewing concepts. *Aesthetic plastic surgery*, 962-971.
3. Adler, R. B., Rodman, G., & du Pre, A. (2017). *Understanding Human Communication*. New York: Oxford University Press.
4. Agachi, S. (2019). *Tehnici de citire a chipului*. Editura Nicolae N. Adriana.
5. Ahn, J., Gobron, S., & Silvestre, Q. (2010). Asymmetrical Facial Expressions based on an Advanced Interpretation of Two-dimensional Russell's Emotional Model. *Proceedings of ENGAGE*.
6. Alabdullah, M., Saltaji, H., Abou-Hamed, H., & Youssef, M. (2015). Association between facial growth pattern and facial muscle activity: a prospective cross-sectional study. *International orthodontics*, 13(2), 181-194.
7. Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., Norman, M. K., & Mayer, R. E. (2010). *How Learning Works - 7 Research-based Principles for Smart Teaching*. Jossey-Bass.
8. Andreasson, P., & Dimberg, U. (2008). Emotional Empathy and Facial Feedback. *Journal Nonverbal Behavior*, 215-224.
9. Andreasson, P. (2010). *Emotional Empathy, Facial Reactions and Facial Feedback*. Digital Comprehensive Summaries of Uppsala Dissertations from the Faculty of Social Sciences 58.
10. Argyle, M. (1994). *The Psychology of Interpersonal Behavior*. London: Penguin Books.
11. Argyle, M., Ingham, R., Alkema, F., & McCallin, M. (1973). *The Different Functions of Gaze*. Semiotica.
12. Argyle, M. (2007). *Social Interaction*. New York: Routledge.

13. Bandura, A. (2013). The Role of Self-Efficacy in Goal-Based Motivation. In E. A. Locke, & G. P. Latham, *New Developments in Goal Setting and Task Performance* (pp. 147-157). New York: Routledge.
14. Barnard, M. (1998). *Fashion as Communication*. London: Routledge.
15. Barrett, J. (2009). *Aptitude, Personality and Motivation Tests*. London: Kogan Page.
16. Bassili, J. N. (1979). Emotion Recognition: The Role of Facial Movement and the Relative Importance of Upper and Lower Areas of the Face. *Journal of Personality and Social Psychology*, 2049-2058.
17. Beeler, T., & Bradley, D. (2014). Rigid Stabilization of Facial Expressions.
18. Bell, C. (1824). *Essays on the anatomy and philosophy of expression*. London.
19. Bentsianov, B., & Blitzer, A. (2004). Facial anatomy. *Clinics in dermatology*, 3-13
20. Birkenbihl, V. (1999). *Semnalele corpului. Cum să înțelegem limbajul corpului*. București: Gemma Press.
21. Borțun, D. (2004). *Semiotica vizualului*. București: Editura Universității Naționale de Arte.
22. Bratman, M. E. (2018). *Planning, Time and Self-Governance - Essays in Practical Rationality*. New York: Oxford University Press.
23. Brooke, N. M., & Scott, S. D. (1994, April). Computer graphics animations of talking faces based on stochastic models. In *Proceedings of ICSIPNN'94. International Conference on Speech, Image Processing and Neural Networks* (pp. 73-76).
24. Brooke, N. M., & Scott, S. D. (1998). TWO- AND THREE-DIMENSIONAL AUDIO-VISUAL SPEECH SYNTHESIS. In *AVSP'98 International Conference on Auditory-Visual Speech Processing*.
25. Buck, R. (1980). Nonverbal Behavior and the Theory of Emotion: The Facial Feedback Hypothesis. *Journal of Personality and Social Psychology*, 811-824.
26. Burrows, A. M. (2008). The facial expression musculature in primates and its evolutionary significance. *BioEssays*, 221-225.
27. Cacioppo, J. T., Petty, R. E., Losch, M. E., & Kim, H. S. (1986). Electromyographic activity over facial muscle regions can differentiate the valence and intensity of affective reactions. *Journal of Personality and Social Psychology*, 50(2), 260–268.

28. Cantrell, J. (2015). *Mastering the Body Language - How to read people's minds with nonverbal communication*.
29. Caruso, D. R., & Salovey, P. (2004). *The Emotionally Intelligent Manager. How to Develop and Use the Four Key Emotional Skills of Leadership*. San Francisco: Jossey-Bass.
30. Cattaneo, L., & Pavesi, G. (2014). The facial motor system. *Neuroscience & Biobehavioral Reviews*, 38, 135-159.
31. Chelcea, S. (2005). *Comunicarea nonverbală: gesturile și postura*. București: Editura Comunicare.ro.
32. Cherecheș, R. M. (2014/2015). *Comunicare publică. Manual de campanii sociale*. Cluj-Napoca: Editura Universității Babeș-Bolyai.
33. Churches, R., & Terry, R. (2007). *NLP for Teachers – How to be a Highly Effective Teacher*. Crown House Publishing Limited.
34. Clement, J. G., & Marks, M. K. (2005). *Computer-Graphic Facial Recognition*. Burlington: Elsevier Academic Press.
35. Codoban, A. (2014). *Gesturi, vorbe și minciuni. Mic tratat de semiotică gestuală extinsă și aplicată*. Cluj-Napoca: EIKON.
36. Cohn, J. F., Zlochower, J. A., & Lien, J. (1999). Automated face analysis by feature point tracking has high concurrent validity with manual FACS coding. *Psychophysiology*, 35-43.
37. Cohn, J. F., Ambadar, Z., & Ekman, P. (2007). Observer-based measurement of facial expression with the Facial Action Coding System. In J. Coan, & J. J. Allen, *Handbook of emotion elicitation and assessment* (pp. 203-221). Oxford University Press.
38. Cotofana, S., Fratila, A., Schenck, T., Redka-Swoboda, W., Zilinsky, I., & Pavicic, T. (2016). The Anatomy of the Aging Face: A Review. *Facial Plastic Surgery*, 253-260.
39. Craig, K. D. (1992). The Facial Expression of Pain Better than a thousand words? *APS Journal*, 153-162.
40. Crano, W. (2008). *Attitudes and Attitude Change*. New York: Psychology Press.
41. Damhorst, M., Miller-Spillman, & Michelman, S. O. (2005). *The Meaning of Dress*. New York: Fairchild Publications.

42. Danesi, M. (2004). *Messages, Signs, and Meanings: A Basic Textbook in Semiotics and Communication Theory*. Toronto: Canadian Scholars Press.
43. Danesi, M. (2008). *Of Cigarettes, High Heels, and Other Interesting Things - An introduction to semiotics*. New York: Palgrave Macmillan.
44. Darwin, C. (1967). *Expresia emoțiilor la om și animale*. București: Editura Academiei Republicii Socialiste România.
45. Darwin, C. (1897). *The Expression of the emotion in man and animals*. New York: D. Appleton and Company.
46. De Gelder, B. (2016). *Emotions and the body*. Oxford: Oxford University Press 2016.
47. De la Cruz, N. (2016). *Autonomous Facial Expression Recognition using the Facial Action Coding System*. Western Cape: University of Western Cape.
48. De Vito, J. A. (1989). *The Nonverbal Communication Workbook*. Illinois: Waveland Press.
49. Dee, J. (2005). *Face Reading plain & simple*. Library of Congress Cataloging.
50. Devriese, P. (1992). *Rehabilitation of Facial Expression ("Mime Therapy")*. European Archives of Oto-Rhino Laryngology.
51. Dilts, R., Grinder, J., Bandler, R., & DeLozier, J. (1980). *Neuro-Linguistic Programming: Volume I. The Study of the Structure of Subjective Experience*. Cupertino: Library of Congress.
52. Dimberg, U. (1982). Facial Reactions to Facial Expressions. *Psychophysiology*, 643–647.
53. Dimberg, U. (1987). Facial reactions, autonomic activity and experienced emotion: A three component model of emotional conditioning. *Biological Psychology*, , 105-122.
54. Dimberg, U., & Lundquist , L. O. (1990). Gender Differences In Facial Reactions To Facial Expressions. *Biological Psychology* , 151-159.
55. Dimberg, U., & Karlsson , B. (1997). Facial reactions to different emotionally relevant stimuli. *Scandinavian Journal of Psychology*, 297-303.
56. Dimberg , U., & Thunberg , M. (1998). Rapid facial reactions to emotional facial expressions. *Scandinavian Journal of Psychology*, 39-45.
57. Dimberg, U., Thunberg, M., & Elmehed, K. (2000). Unconscious Facial Reactions to Emotional Facial Expressions. *Psychological Science*, 86-89.

58. Dimberg, U., Thunberg, M., & Grunedal, S. (2002). Facial reactions to emotional stimuli: Automatically controlled emotional responses. *Cognition & Emotion*, 449-471.
59. Dimberg, U., Andréasson, P., & Thunberg, M. (2011). Emotional Empathy and Facial Reactions to Facial Expressions. *Journal of Psychophysiology*, 26-31.
60. Dimberg, U., & Thunberg, M. (2012). Empathy, emotional contagion, and rapid facial reactions to angry and happy facial expressions. *PsyCh Journal*, 1(2), 118-127.
61. Dinu, M. (2014). *Comunicarea. Repere fundamentale*. București: Editura Orizonturi.
62. Domjan, M. (1997). *The Principles of Learning and Behavior*, 4th edition. Brooks/Cole Publishing Company.
63. Domjan, M. (2014). *The Principles of Learning and Behavior*, 7th edition. Wadsworth Publishing.
64. Douglas Brown, H. (2006). *Principles of Language Learning and Teaching*. Pearson ESL.
65. Eco, U. (1976). *A Theory of Semiotics*. London: Indiana University Press.
66. Eco, U. (1984). *Semiotics and the Philosophy of Language*. Willshire: The Macmillan Press.
67. Eco, U. (1992). *Interpretation and Overinterpretation*. Cambridge: Cambridge University Press.
68. Eco, U. (1994). *The limits of interpretation*. Indianapolis and Bloomington: Indiana University Press.
69. Eco, U. (2006). *Istoria frumuseții*. București: Grupul Editorial Rao.
70. Eco, U. (2007). *On Ugliness*. London: Harvill Secker.
71. Eggert, M. A. (2015). *Understanding body language*. Edinburgh: Pearson Education Limited.
72. Ekman, P., & Friesen, W. V. (1972). *Emotion in the Human Face*. New York: Pergamon Press.
73. Ekman, P. (1992). Facial expressions of emotion an old controversy and new findings. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 63-69.
74. Ekman, P. (2002). *Facial Action Coding System*. Salt Lake City
75. Ekman, P. (2003). *Emotions Revealed: Recognizing Faces and Feelings to Improve Communication and Emotional Life*. New York: Times Books.

76. Ekman, P. (2003). *Unmasking the face*. Cambridge: Malor Books.
77. Ekman, P. (2009). Lie Catching and Microexpressions. In C. Martin, *The Philosophy of Deception* (pp. 118-138). Oxford: Oxford University Press.
78. Essa, I. A. (1995). *Analysis, Interpretation and Synthesis of Facial Expressions* (Doctoral dissertation, Massachusetts Institute of Technology).
79. Fan, J., Yu, W., & Hunter, L. (2000). *Clothing appearance and fit: Science and Technology*. Cambridge: Woodhead Publishing Limited.
80. Fan, Z., & Jiang, X. (2021). Influence of Clothing Color Value on Trust. *International Journal of Engineering Research & Technology (IJERT)*, 6.
81. Fang, X. (2018). *Perceiving and producing facial expressions of emotion. The role of dynamic expressions and culture*. Amsterdam: University of Amsterdam.
82. Farkas, L., & John, K. (1987). Anthropometries and Art in the Aesthetics of Women Faces. *Clinics in Plastic Surgery*, 599-616.
83. Fârte, G.-I. (2004). *Comunicarea. O abordare praxiologică*. Iași: Casa Editorială Demiurg.
84. Fiske, J. (2003). *Introducere în științele comunicării*. Iași: Editura Polirom.
85. Flack, T. R. (2016). *The Neural Representation of Facial Expression and Viewpoint in the Human Brain* (Doctoral dissertation, University of York).
86. Ferring, V., & Pancherz, H. (2008). Divine proportions in the growing face. *American Journal of Orthodontics and Dentofacial Orthopedics*, 472-479.
87. Fernandes-Dols, J. (1997). Spontaneous facial behavior during intense emotional episodes: Artistic truth and optical truth. In R. James, *The Psychology of Facial Expression*. Cambridge: Press Syndicate of the University of Cambridge.
88. Fernandez-Dols. (2017). *The Science of Facial Expression*. New York: Oxford University Press.
89. Fulfer, M. (1996). *Amazing Face Reading. An Illustrated Encyclopedia for Reading Faces*. Q Publishing Services.
90. Gates, K. (2011). *Our Biometric Future*. New York: New York University Press.
91. Gilman, C. P. (2001). *The Dress of Women: A Critical Introduction to the Symbolism and Sociology of Clothing*. London: Greenwood Press.

92. Glass, L. (2002). *I Know What You're Thinking. Using the Four Codes of Reading*. New York: John Wiley and Sons Inc.
93. Glass, L. (2014). *The body language of liars*. Pompton Plains: The Career Press.
94. Goldfinger, E. (1991). *Human anatomy for artists* . Oxford University Press.
95. Goleman, D. (2001). *Inteligența Emoțională*. București: Curtea Veche.
96. Grant, E. C. (1969). *Human Facial Expression*. Royal Anthropological Institute of Great Britain and Ireland, 525-536
97. Graur, E. (2001). *Tehnici de comunicare*. Cluj-Napoca: Editura Mediamira.
98. Gravells, A., & Simpson, S. (2008). *Planning and Enabling Learning in the Lifelong Learning Sector*. Exeter: Learning Matters Ltd.
99. Gross, R. (1999). *Peak Learning - How to Create Your Own Lifelong Education Program for Personal Elinghtment and Professional Success*. New York: Penguin Putnam Inc. .
100. Grossberg, S. (1987). *The Adaptive Brain I - Cognition, Learning, Reinforcement, and Rhythm*. Boston: North-Holland.
101. Grumbine, J. (1921). *Psychology of Color*. Ohio: The Order of White Rose.
102. Hall, E. T. (1959). *The Silent Language*. Garden City: Doubleday & Company.
103. Hall, E. T. (1966). *The Hidden Dimension*. New York: Anchor Books.
104. Hall, M. L. (2014). *Cartea Cărților în NLP*. București: Editura Vidia.
105. Hannaford, C. (2005). *Smart Moves - Why Learning is Not All in Your Head*. Salt Lake City: Great River Books.
106. Happak, W., Liu, J., Burggasser, G., Flowers, A., Gruber, H., & Freilinger, G. (1997). *Human facial muscles: dimensions, motor endplate distribution, and presence of muscle fibers with multiple motor endplates*. *The Anatomical Record: An Official Publication of the American Association of Anatomists*, 276-284.
107. Hayes, C. D. (1989). *Self-University - The price of tuition is the desire to learn. Your degree is a better life*. Wasilla: Autodidactic Press.
108. Holmes, D. (2005). *Communication Theory. Media, Technology, Society*. Londra: SAGE Publications Ltd.

109. Hoobyar, T., Dotz, T., & Sanders, S. (2013). NLP - The Essential Guide to Neuro-Linguistic Programming . William Morrow.
110. Hoover, J. (2007). Time Management - Set Priorities to Get the Right Things Done. Harper Collins e-books .
111. Irintchev, A. (1992). Denervation and Reinnervation of Muscle: Physiological Effects. European Archives of Oto-Rhino-Laryngology.
112. Ivan, L. (2009). Competența în comunicarea nonverbală. București: TRITONIC.
113. Ivy, D., & Wahl, S. (2019). Nonverbal Communication for a Lifetime . Kendal Hunt Publishing Company.
114. Izard, C. (1997). Emotions and facial expressions: A perspective from Differential Emotions Theory. In J. Russell, The Psychology of Facial Expression. Cambridge: Press Syndicate of the University of Cambridge.
115. Jack, R. E., Garrod, O. G., & Schyns, P. G. (2014). Dynamic facial expressions of emotion transmit an evolving hierarchy of signals over time. *Current biology*, 24(2), 187-192.
116. Jalongo, M. R., Rieg, S. A., & Helterbran, V. R. (2007). Planning for Learning - Collaborative Approaches to Lesson Design and Review. New York: Teachers College Press.
117. Kaiser, S. (1985). The Social Psychology of Clothing. New York: Macmillan Publishing.
118. Karen, S., & Cohn, J. (2001). Human Facial Expressions as Adaptations: Evolutionary Questions in Facial Expression Research. 1-62.
119. Kendon, A., Harris, R. M., & Key, M. R. (1975). Organization of Behaviour in Face-to-Face Interaction. Paris: Mouton Publishers.
120. Khademi, M. H. S. (2010). Analysis, Interpretation, and Recognition of Facial Action Units and Expressions Using Neuro-Fuzzy Modeling. 161-172.
121. Kiviluoma, L. (2013). Vital Face Facial Exercises And Massage For Health And Beauty. Londra: Singing Dragon.
122. Knapp, M. L., Hall, J. A., & Horgan, T. G. (2014). Nonverbal Communication in Human Interaction. Boston: Wadsworth Cengage Learning.

123. Kodzoman, D. (2019). THE PSYCHOLOGY OF CLOTHING: Meaning of Colors, Body Image and Gender Expression in Fashion. University of Zagreb, Faculty of Textile Technology, Zagreb, 14.
124. Lacruz, Rodrigo S, Stringer, Chris B, Kimbel, William H et al. (5 more authors) (2019) The evolutionary history of the human face. *Nature Ecology and Evolution*. pp. 726-736
125. Langer, E. J. (2016). *The Power of Mindful Learning*. Boston: Da Capo Press.
126. Latham, G. P., & Locke, E. A. (2013). Goal Setting Theory, 1990. In E. A. Locke, & G. P. Latham, *New Developments in Goal Setting and Task Performance* (pp. 3-15). New York: Routledge.
127. Lauwereyns, J. (2012). *Brain and the Gaze. On the active boundaries of vision*. Cambridge: The MIT Press.
128. Lawson, B. (2001). *The Language of Space*. Oxford: Architectural Press.
129. Le Doux, S. (1996). *The Emotional Brain*. New York: Simon&Schuster Paperbacks.
130. Le Doux, J. (2002). *Synaptic Self. How our brain become who we are*. New York: Penguin Group.
131. Le Louarn, C. (2016, April). A new approach to functional anatomy of the lower face: role of the hyoplatysmal ligament, of the platysma and of the depressor labii lateralis. In *Annales de Chirurgie Plastique Esthetique* (Vol. 61, No. 2, pp. 101-109). Elsevier Masson.
132. Lencioni, P. (2002). *The Five Dysfunctions of a Team*. San Francisco: Jossey-Bass.
133. Lewis, B., & Pucelik, F. (1990). *Magic of NLP Demystified. A Pragmatic Guide To Communication & Change*. Portland: Metamorphous Press.
134. Lewis, M., Haviland-Jones, J. M., & Feldman Barrett, L. (2008). *Handbook of Emotions*. New York: The Guilford Press.
135. Lesenciuc, A. (2017). *Teorii ale comunicării*. Braşov: Editura Academiei Forţelor Aeriene Henri Coandă.
136. Lightoller, G. S. (1928). THE ACTION OF The M. Mentalis In The Expression Of The Emotion Of Distress. *Journal of Anatomy*, 319-332.

138. Linden, A., & Perutz, K. (1997). *Mindworks. Unlock the PRomise within.NLP tools for building a new life* . Andrews McMeel Publishing .
139. Littlejoh, S. W., & Foss, K. A. (2009). *Encyclopedia of Communication Theory*. Los Angeles: SAGE Publications.
140. Lurie, A. (1981). *The Language of Clothes*. New York: Henry Holt & Company.
141. Mahtani, R. (2015). *The Power of Posture*. Mumbai: Jaico Publishing House.
142. Mandal, M. K., & Awasthi, A. (2015). *Understandig Facial Expressions in Communication. Cross-cultural and Multidisciplinary Perspectives*. New Delhi: Springer India.
143. Martone, A. L. (1962). *Anatomy Of Facial Expression And Its Prosthodontic Significance. The Journal of Prosthetic Dentistry*, 1020-1042.
144. Marur, T., Tuna, Y., & Demirci, S. (2014). *Facial anatomy. Clinics in dermatology*, 14-23.
145. Matsumoto, D., Hee Yoo, S., & Chung, J. (2009). *The Expression of Anger Across Cultures. International Handbook of Anger*, 125-137.
146. Mauk, M. D., Li, W., Khilkevich, A., & Halverson, H. (2017). *Cerebellar Mechanisms of Learning and Plasticity Revealed by Delay Eyelid Conditioning. International Review of Neurobiology*, 21-37.
147. Mersino, A. C. (2007). *Emotional Intelligence for Project Managers*. New York: American Management Association.
148. McKay, M., Davis, M., & Fanning, P. (2018). *Messages. The Communication Skills Book*. Oakland: New Harbinger Publications.
149. Meisner, G. B. (2018). *The Golden Ratio. The Divine Beauty of Mathematics*. New York: Race Point Publishing.
150. Mendelson, B., & Wong, C. H. (2013). *Anatomy of the aging face. Plastic surgery*, 2, 78-92.
151. Miehke, A. (1981). *Management of Hemi-Facial Spasm*. In M. Samii, *The Cranial Nerves*. New York: Springer-Verlag.
152. Mohorea, E., Ciobanu, E., & Capcelea, V. (2018). *Introducere în știința comunicării*. Bălți: Editura Indigou Color.
153. Molden, D., & Hutchinson, P. (2010). *NLP - What the most successful people know, do and say*. Harlow: Pearson.

154. Molden, D. (2011). How to manage with NLP. Harlow: Pearson Education.
155. Morgan, P. (2003). Managing yourself. Edinburgh: Pearson Education Limited.
156. Mortensen, K. (2011). The Laws of Charisma. New York: AMACOM.
157. Movileanu, P. (2009). Psihologia comunicării. Chișinău: Universitatea Agrară de Stat din Moldova.
158. Navarro, J. (2018). The Dictionary of Body Language. Pymble: Harper Collins Publisher.
159. Neacșu, I. (2015). Metode si tehnici de invatare eficienta. Bucuresti: Polirom.
160. Negrescu, M. (n.d.). Formarea în psihoterapia cognitiv-comportamentală. Modulul de Comunicare Terapeutică. Suport de Curs. Colegiul Psihologilor din România.
161. Nierenberg, I., & Calero, H. (2001). How to read a person like a book. Barnes & Noble Digital.
162. O'Connor, J. (2001). THE NLP WORKBOOK - The Practical Guidebook to Achieving the Results You Want. London: Thorsons.
163. Peck, S. (1987). Atlas of facial expression: an account of facial expression for artists, actors, and writers. New York: Oxford University Press.
164. Parkinson, B. (2005). Do Facial Movements Express Emotions or Communicate Motives? *Personality and Social Psychology Review*, 278-311.
165. Patterson, C. N., & Powell, D. G. (1974). Facial Analysis in Patient Evaluation For Physiologic and Cosmetic Surgery. 998-1003.
166. Paulsen, F. (2018). Atlas of anatomy. Munich: Elsevier.
167. Pease, A. (1993). Limbajul Trupului. București: Polimark.
168. Pease, A., & Pease, B. (2004). The Definitive Book of Body Language. Buderim: Pease International.
169. Peck, H., & Sheldon, P. (1970). Aconcept of Facial Esthetics. *he Angle Orthodontist*, 284-317.
170. Peck, S. (1987). Atlas of facial expression: an account of facial expression for artists, actors, and writers. New York: Oxford University Press.
171. Prendergast, P. M. (2013). Anatomy of the face and neck. In *Cosmetic surgery* (pp. 29-45). Springer, Berlin, Heidelberg

172. Prokopakis, E., Ioannis, V., Valerie, P., Gilbert Trenité, N., Regan, T., Cemal, C., & Peter, H. (2013). The golden ratio in facial symmetry. *Rhinology*, 18-21.
173. Richmond S, Howe LJ, Lewis S, Stergiakouli E and Zhurov A (2018) Facial Genetics: A Brief Overview. *Front. Genet.*
174. Ricketts, R. (1982). The biologic significance of the divine proportion and Fibonacci series. *American Journal of Orthodontics*, 351-370.
175. Ridley, M., & VanHook, S. (1992). *Aesthetic Facial Proportions. Facial plastic and reconstructive surgery*. St. Louis: Mosby-Year Book, , 119-133.
176. Roberts, A. (2018). *Evolution Human Story*. New York: DK Publishing.
177. Rose, C. (1985). *Accelerated Learning*. Accelerated Learning Publishing.
178. Rosenberg, E. L., & Ekman, P. (2005). Coherence Between Expressive and Experiential Systems in Emotion. In P. Ekman, & E. L. Rosenberg, *What the Face Reveals: Basic and Applied Studies of Spontaneous Expression Using the Facial Action Coding System (FACS)*, 2nd Edition (pp. 63-85). Oxford: Oxford University Press.
179. Rossano, F. (2012). Gaze in Conversation. In J. Sidnell, & T. Stivers, *The handbook of conversation analysis* (p. 22). Wiley-Blackwell.
180. Rozin, P., Haidt, J., & McCauley, C. R. (2008). Disgust. *Handbook Emotion*, 757-776.
181. Russell, J. A. (1998). *The psychology of facial*. Cambridge: Cambridge University Press.
182. Samii, M. (1981). *The cranial nerves*. New York: Springer-Verlag Berlin Heidelberg.
183. Scannell, M. (2010). *The big book of conflict resolution games*. New York: McGraw Hill.
184. Schmidt, K. L. (2001). *Human Facial Expressions as Adaptations: Evolutionary Questions in Facial Expression*. Pittsburg: University of Pittsburg.
185. Schroder, H. (1992). *The Facial Nerve - Peripheral and Central Connections of Proprioception*. *Oto-Rhino-Laryngology*.
186. Schroder, J. (1992). *Changing Ratio Between Myelin Thickness and Axon Caliber in Developing Human Facial Nerves*. *Oto-Rhino-Laryngology*.
187. Scott, N. B. (1994). *Computer Graphics Animations of Talking Faces Based on Stochastic Models*. School of Mathematical Sciences, University of Bath, 73-76.
188. Sebeok, T. A. (2002). *Semnelele: O introducere în semiotică*. București: Humanitas.

189. Seckel, B. (2010). *Facial danger zone*. New York: Thieme Medical Publishers.
190. Seyfeddinipur, M., & Gullberg, M. (2014). *From Gesture in Conversation to Visible Action as Utterance. Essays in honor of Adam Kendon*. Amsterdam: John Benjamins Publishing Company.
191. Siegel, D. (2012). *The Developing Mind. How Relationships and the Brain Interact to Shape Who We Are* . New York: The Guilford Press.
192. Siemionow, M., & Sonmez, E. (2008). Face as an Organ. *Annals of Plastic Surgery*. 345-352.
193. Shah, N. (2011). *NLP - Neurolinguistic programming - A practical guide*. London: Icon Books Ltd.
194. Smith, C. (1997). A Competential Approach to the meaning of facial expressions. In J. Russel, *The Psychology of Facial Expression*. Cambridge: Press Syndicate of the University of Cambridge.
195. Smoleny, S. (2018). *EMOTIONAL PROCESSING. How to Work Your Way through Almost Anything*. Miami: Indigo Reef Publishing.
196. Sokol, L., & Fox, M. G. (2009). *Think Confident, Be Confident*. New York: Penguin Group.
197. Sommer, R. (1969). *Personal Space. The Behavioral Basics of Design*. Englewood Cliffs: Prentice-Hall.
198. Sousa, D. A. (2001). *How the Brain Learns - A Classroom Teacher's Guide*. California: Corwin Press.
199. Sparrow, T., & Knight, A. (2006). *Applied EI. The Importance of Attitudes in Developing Emotional Intelligence*. San Francisco: Jossey-Bass.
200. Stachowiak, S. (2019). *Eye Movements and Gestures in Simultaneous and Consecutive Interpreting* . Cham: Springer Nature Switzerland.
201. Stein, S. J. (2009). *Emotional Intelligence for Dummies*. Mississauga: John Wiley & Sons Canada.
202. Stănciugelu, I., Tudor, R., Tran, A., & Tran, V. (2014). *Teoria comunicării*. București: Tritonic.
203. Ștefaneț, M. (2007). *Anatomia omului*. Chișinău: Centrul Editorial-Poligrafic Medicina.

204. Stennert, E. (1992). Why Does the Frontalis Muscle "Never Come Back"? Functional Organization of the Mimic Musculature. *European Archives of Oto-Rhino-Laryngology*.
205. Stone, D., & Heen, S. (2014). Thanks for the feedback. The science and art of receiving feedback well. New York: Penguin Group.
206. Swoboda, K. (2018). The Courage Habit. How to accept your fears, release the past and live your courageous life. Oakland: New Harbinger Publications.
207. Szekely, G. (1992). Comparative Anatomy of the Central Representation of the Facial Nerve. *Oto-Rhino-Laryngology*.
208. Szpirglas, J., & Saint-Onge, D. (2018). Train Your Brain - How Your Brain Learns Best. New York: Crabtree Publishing Company .
209. Tad, J., & Shephard, D. (2001). Presenting Magically. Transforming Your Stage Presence With NLP. Williston: Crown House Publishing .
210. Teng, L. S. (2017). Micro-expression recognition analysis using facial strain. Kuala Lumpur: University of Malaya.
211. Todorovic, T., Pavlo-Kuden, A., & Toporistic, T. (2014). Clothes and Costumes as Form of Nonverbal Communication. *Tekstilec*, 14.
212. Todorovic, T., Pavko-Kuden, A., Kosak, K., & Toporistic, T. (2017). Language of Dressing as Communication System and its Functions – Roman Jakobson’s Linguistic Method. *Fibres and Textiles in Eastern Europe*, 10.
213. Ţilea, M. (2014). *Semiotica vizualului*. Craiova: Editura Universitaria.
214. Vaknin, S. (2008). *The Big Book of NLP Techniques*. BookSurge Publishing.
215. Wagner, H. (1997). Methods for the study of facial behavior. In J. Russell, *The Psychology of Facial Expression*. Cambridge: Press Syndicate of the University of Cambridge.
216. Warnick, B. J., Davis, B. C., Allison, T. H., & Anglin, A. H. (2021). Express yourself: Facial expression of happiness, anger, fear, and sadness in funding pitches. *Journal of Business Venturing*.
217. Watanabe, K. (2016). *Anatomy for plastic surgery of the face, head and neck*. New York: Thieme Medical Publishers.

218. Wilson, S. B., & Dobson, M. S. (2008). *Goal Setting: How to Create an Action Plan and Achieve Your Goals*. New York: AMACOM.
219. Wittmann, F. J. (1930). THE JUDGMENT OF FACIAL EXPRESSION. *Journal of Experimental Psychology*, 113-151.
220. Xu, F., Zhang, J., & Wang, J. Z. (2017). Microexpression Identification and Categorization Using a Facial Dynamics Map. *Ieee Transactions on Affective Computing*, 254-267.
221. Young, P., Uttam , S., Dale , R., & Fred, S. (2006). Circles of Prominence. *Archives of Facial Plastic Surgery*, 263-267.
222. Zafeiriou, S. (2008). *Discriminant Graph Structures for Facial Expression Recognition*. Thessaloniki: Aristotle University of Thessaloniki.
223. Zhang, L., & Arandjelovic, O. (2021). Review of Automatic Microexpression Recognition in the Past Decade. *Machine Learning & Knowledge Extraction*, 414-434.



INFOR ELEA - San Secondo di Pinerolo / Torino - ITALY



SOLARIS FOERDERZENTRUM FUER JUGEND UND UMWELT  
GGMBH SACHSEN - Chemnitz / Saxony - GERMANY



ASSOCIATION OF CITIZENS CEFE - Skopje - MACEDONIA



TRAINIFIQUE – Bucharest – ROMANIA

