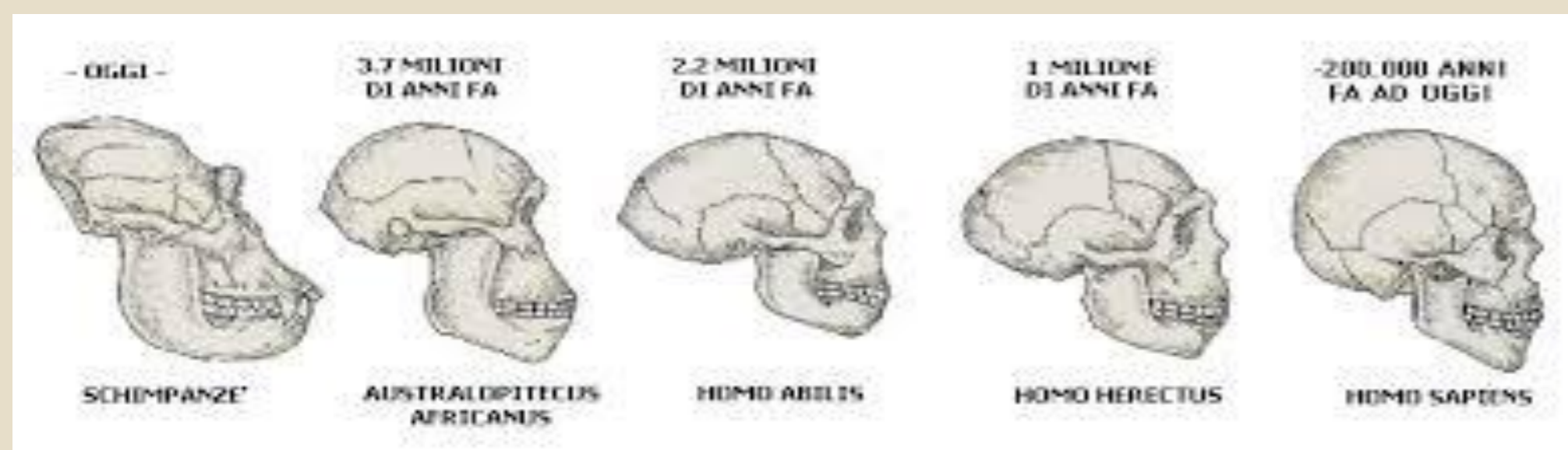


The Role of Self-Control during human evolution in the society; degenerative diseases as a consequence of Self-Control failure.

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INTRODUCTION: “Man is by nature a social animal” says Aristotle in his *Politics*. Evolution teaches us that *H. Sapiens* was, indeed, a social animal. It is extremely skilled in the use of communication systems. Communicate allows to express and, most of all, to share any thought or emotion. Sharing creates a connection. The main communication system is *language*, but we can’t ignore facial expressions, tears, laughter and gestures. Social integration is the product of a successful genetic evolution in human beings, it exploits the capability of communicating and understanding other’s communicated messages; but it also requests a strict self-control of the aggressive behaviors and the wish to share one’s own experiences. Many genetic changes and different brain structures came in succession during centuries to help the development of social integrations. The limbic system evolved from the olfactory lobe, it is able to encode reactions connected to survival (such as fight, run, reproduction), but also functions of learning and memory storing. The next step was the development of neocortex and, in particular, of the frontal lobe, the real main controller, placed inside the brain as analyzer and controlling of our behaviors.

EMOTIONAL EXPERIENCES: The emotional experience is not only made up of assessment of the situation and consequent corporal reactions, it is a process which is externalized through some facial, vocal, postural, and, in general, corporal expressions. Duncan suggested a list of unspoken behaviors which are able to communicate emotions, the list contains facial expressions, eye movements, look direction, gestures, posture, tonalities and inflections of the voice, the pauses during a speech, giggling and yawning, the use of surrounding space during social interactions. Even tears can be consider as an unspoken kind of emotional communication. It was proofed that the tears generated during an emotional stress have a different chemical composition than the one produced by our organism to keep the cornea wet. Many of the studies, from Darwin to nowadays, concerning the expression of feelings focus on the facial area and facial expressions. A human being’s face represents the most important part of our body in terms of expression and communication, because it is actually the favored channel for emotional externalization. It gives, in fact, crucial elements to recognize the characteristics of a specific emotion. Already in 1872 Darwin spoke first about universality of facial expression, his insight was confirmed many years later with some experiments by Ekman and Friesen. The existence of a genetic plan connected to “emotional facial expression”, and the universality of this plan, are proofed by the fact that, even people suffering of the Moebius disease are able to recognize the kind of feeling communicated by the facial expression of other people. Any kind of communication used by a human being includes the filtration of the message by unaware channels, this filtration contains the essence of what we are.

FROM IQ TO EQ: The ancient Greek philosophies for first, put the rational side of the human mind above the emotional one. They thought that the rational side was the one to make human beings superior to other animals. During the '50, the birth of first computers was an occasion of thinking on this theme. In fact, however those machine copy the operation of human brain, they aren’t actually able of those complex perceptions and those judgments that any human being can do without any apparent effort. They are also unable to feel emotions and to use them to organize feelings and to give them an understandable meaning. Only in 1996 Goleman was the first to give a definition of emotional intelligence, considering it as the capability to motivate oneself, to persecute a goal in spite of the difficulties, to avoid that suffering could prevent us from thinking. Emotional intelligence is the core of “personal knowledge”, intending the capability of understand and manage with the different feelings, and of the “social knowledge”, intending the capability to sympathize with other people and to fit in a community.

BEHAVIOR DISEASES CAUSED BY THE FAILURE OF EMOTIONAL CONTROL:

“Cluster”	Alterazioni Comportamentali	Circuiti Frontosottocorticali
Disturbi della motivazione	Apatia Anedonia	Cingolato anteriore Mesolimbico corticale
Disturbi da disinibizione frontale	Impulsività Alterazioni della condotta motoria Alterazioni della condotta sociale Disturbi ossessivo-compulsivi Aggressività Sociopatia acquisita	Orbitario mediale Orbitario mediale e cingolato Orbitario e cingolato anteriore Orbitario e cingolato anteriore Orbitario mediale Orbitario laterale
Disturbi affettivi	Depressione Mania	Orbitario e dorso laterale (di più a sinistra) Orbitario (di più a destra)

(da “Neuropsicologia dei lobi frontali” D. Grossi e L. Trojano)

Motivation is a state of mind that includes both aware and unaware processes, which bring a subject to behave in a certain way. As motivation disease we can name *apathy* (lack of initiative), and *anhedonia* (inability to feel pleasure in situations that should bring one to).

Frontal Disinhibition Disease: It is a complex behavioral disease, a patient affected with this kind of disease knows perfectly how to behave during social interactions, but it can’t behave like that in everyday life. They rationally know how they should act, but actually they have unaware different behaviors. This syndrome can reveal itself through *verbal and physical aggressiveness, impulsiveness, diseases of movement* (such as dromomania and unmotivated fuss), *social and personal behavior diseases* (actually social behaviors, not universally unsuitable, but improper in the contest in which they are expressed), and *antisocial tendencies* (the patient is unable to understand other people’s state of mind and to predict their reactions).

Affectivity and Mood Disease: Mainly intended as *depression* (the mood get worse and the patient becomes sullen, sad and pessimistic) and as *mania* (usually the patient is in an euphoric state of mind, expressing excessive jesting and lack of awareness of the social and ethical consequences of its own behavior).

CONCLUSIONS: Beyond being a modifier of the place he lives in, human being is also a modifier of another environment, the cultural one. No other living organism shows this characteristic. For this reason, only intellectual abilities can’t be sufficient. To interact successfully in a cultural environment, human beings need control on their emotions. For many years studies on emotional and cognitive aspects followed parallel paths. Definitely genetic and anatomic changes in the human brain meant for human beings a way to develop an emotional self-control, necessary to live with other people and survive together. But, actually, a personal, emotional aspect of the character deeply affects our behaviors in everyday life, often in an unaware way. Every single human being as a particular genetic inheritance and a cultural background which is different from the other’s. More and more often in surgeries we have to face with patients whose problem is mainly represented by a bad management of their emotional sphere. Behavioral diseases are glaring in patients with degenerative progressive cerebral diseases, which break the connections with the frontal lobe. The most disturbing element is getting in touch with a lack of capability to manage with fears and weaknesses, even in young people and adults. Often we have corporal repercussions of these unsuitableness (parenthesis, migraine, functional impotence). Also the increasing of patients who claim out a subjective memory impairment, which results undetectable during neuropsychological tests, should bring us to reflect about an alarming situation: the common emotional awkwardness of the present generation. The failure of emotional self-control, can be an intentional way to escape from the responsibility to face a problem cognitively, hiding oneself behind “stress-difficulties”. Also the huge role of computers risks to delegate cognitive abilities to the machine, bringing human beings to face an excessive emotional aspect, which can’t be managed and can be a firing spark for degenerative diseases even in early age. The fact the management of the emotions and feelings is a serious issue, has been definitely understood by companies which tend to choose their managers not only on their IQ, but also and most of all on their EQ. A person who is able to face difficulties keeping calm, is more useful for a company than an extremely intelligent person with higher IQ. It is, for sure, important to start from the functionality of the cognitive abilities, in visiting a patient with “emotional problems”, but we can’t just stop there. We should remember that nervous connections and chemical mediators encode as much for cognitive functions than for emotional ones. I personally think it is very important to start educational paths for the new generations. The goal should be trying to contain issues caused by poor cultural backgrounds and bad behaviors, giving to the educational patterns the main objective to prevent future diseases, potentially unmanageable and hard to be defeated.

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