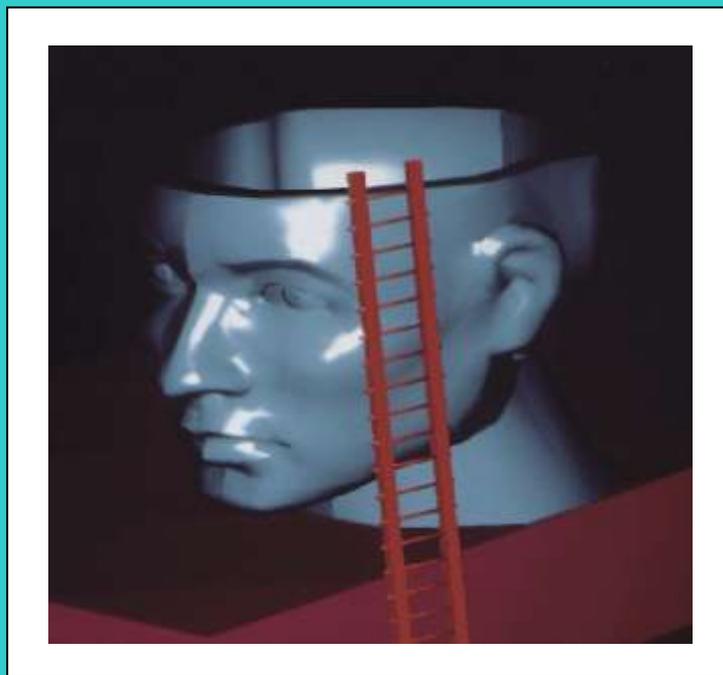


GIANNI GARGIONE

PSYCHOLOGY

THE SECRETS OF THE MIND



De Agostinis books

HOW HUMAN MIND WORKS

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NOTICE :it is a synthesis of Italian edition. We have translated only the most important part. Who is interested can translate Italian edition with an internet translator.

CHAPTER III

HOW HUMAN MIND WORKS



A question that man has set, since he became aware to be a thinking being, is: how human mind works? It's a question, at first sight, it may seem simple to answer, but which, even today in the age of computers and large technological developments, we have not been able to give an exhaustive answer.

The ancient Greek philosophers already in the sixth and fifth centuries BC conceived of men as intelligent beings, able to use their rational faculties to explain the phenomena of the perceptive world. Aristotle, a student of Plato, can be considered a true precursor because his book "On the soul" constitutes a veritable treatise on psychology.

According to Aristotle, psychology was the study of soul's functions, but by term soul he didn't mean the supernatural part of man who survives after death, but "that particular function of body which is constituted in such a way as to carry out vital tasks". Aristotle's doctrine is a synthesis between the most archaic conception, according to which soul cannot exist independently of body, and the Platonic conception of soul as a separate and immaterial entity.

The theories. One of the first, making a jumping to modern times, to propose a structure of human psyche was Freud. In his book "The Ego and the id", he divided the mind or psyche into three parts: the id, the ego and the super-ego.

According to Freud the id is already present at birth and it is the component from which comes all the energy necessary for the functioning of the psyche. Es includes all the primary impulses, those of food, need of water, warmth, affection and sex. Its nature is completely unconscious, which means below the level of awareness.



The id seeks immediate gratification and operates on the basis of what Freud called the pleasure principle. The failure to satisfy a need, gives rise to tension that Es tries to eliminate as quickly as possible. If, for example, a newborn feels the sensation of hunger, he begins to fidget and suck to reduce the tension that arises from unsatisfied instinct.

The ego, the second component, is conscious and begins to develop, starting from the id, during the second half-year of life. The task of Ego is to mediate between the id and superego. In fact, through its planning of decision, he realizes to act always in accordance with the pleasure principle as id would like to do, it is not the best way to achieve its objectives. The ego, therefore, acts according to the reality principle, mediating between other two instances of psyche.

The third component of psyche, according to Freud, is **superego**, which acts approximately as our moral conscience and develops during the whole childhood. As children discover many of their impulses, such as aggressive or to pee in bed, are not accepted by their parents, then they begin to appropriate the parental values in order to secure the approval of their parents or to avoid punishment.

Also, **Carl Jung, a follower of Freud**, who soon moved away from his teacher working, in his theory proposed his structure of human mind.

His model is quite complex; at the center of consciousness is ego, that contains the conscious thoughts, memories and feelings. Below the ego we find personal unconscious, which contains our personal experiences no longer accessible to our consciousness.

Even more hidden is **collective unconscious**, the most controversial aspect of the mystical and Jungian theory. Due to our common evolutionary root, we inherit, according to Jung, the predisposition to respond in a certain way to certain experiences.

These universal themes, defined archetypes, mainly provide a collective memory of humanity. Examples are the archetype of the mother, which pushes mothers to protect their children or the God one's which leads people that are in danger to seek help from an omnipotent deity.

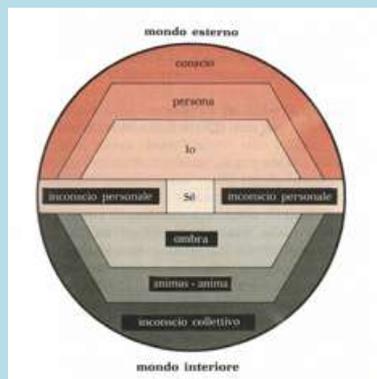


Fig. n. 2

The mind structure according to K. Jung

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The theories, seen in the previous pages, are laudable attempts, but none of them was able to explain exhaustively how the human mind works. For example, in the structure of human mind proposed by psychoanalysts, there is no mention of mental abilities such as memory and intelligence, that cognitive theorists later, in the second part of 900, highlighted.

Cognitivists, conversely, do not mention unconscious area of our mind, while the Gestalt psychologists focus their attention mainly on perception, lacking, for example, to speak about the production, which is the practical way in which we externalize our thoughts or our will.

In conclusion, nobody has been able to propose a comprehensive framework.

At this point, we were convinced to do an attempt to give unity of these studies, to integrate the contribution of all schools to give birth to a new theory, which, in a certain sense, can be considered a synthesis of the previous ones. We shall see them in next section.

OUR MODEL OF THE MIND



The birth of computer's science and the advent of computers, with studies on artificial intelligence, finally make us understand many things about the functioning of our mind. We understand, in fact, that it works just like a computer: it acquires data from outside (**input**), it elaborates them (**processing**) according to our skills and the information we have stored in memory, and then it issues other information (**output**). This wording was introduced by cognitive theorists, who center their mind model on this concept.

It was a major step forward, a light that opened up a world of darkness, but at this first basic scheme, however, missing a key element: understanding how the most important process takes place: **processing**. In other words, there was still to explain how thought is born and how it becomes behavior.

For drawing a map of human mind, we will depart precisely on how a thought is born and becomes behavior. This exam will allow us to understand how human mind works.

FROM THOUGHT TO BEHAVIOR

The path the thought follows, since it is born as "idea" until it transforms into action, is quite a long (not in the sense it takes a long time, but it goes through various stages) and complex process. In our opinion, the "implementation process", that is what it follows when the thought turns into behavior, passes through various stages. Let's look briefly.

The birth of thought. The thought usually arises as a result of a stimulus that can be **exogenous** or endogenous.

In the first case, something in the environment draws our attention and causes the birth of a drive, i.e. the "desire for action". For instance, we see a nice sandwich in a bar window and it arises in us the desire to buy one.

It is not strictly necessary a direct stimulus, the thought may arise as a result of an association of ideas. For example, a book in a bookstore window reminds us we have to do our homework.

Sometimes we can have a real chain of thoughts. We meet a woman, for instance, who wears her hair as our wife and we remember today is Saturday and she must go to the hairdresser, for this reason we have to stay at home to look after the children. Moreover, it means that tomorrow is Sunday and then we must remember to book a place in the theater, because there is a comedy we wanted to see.

Endogenous stimulus. In this case thought is born under the impulse of an internal stimulus, in other words it comes directly from our mind. It may be the result of a moment of fantasy, of a memory or a desire. Most of the internal stimuli have their origin in the unconscious or they are the result of the awakening of needs, such as sexual desires or the hunger we feel at lunchtime.

Other examples of endogenous stimuli are when we remember to do some services or we begin to draw the map of a house we want to build.

Reasoning. Once an idea or an intention is born, if it is worthy of attention, it is immediately introduced in our aware area, precisely in that part of mind we have called "processing room".

It is not, however, a new component of human mind, the "processing room" is our **work memory**. It is the hypothetical place of our mind where it takes place "the reasoning"; this last is the center for conscious activity, the site where all the information we have at a given moment flow into.

Information that come partly from outside, i.e. they are stimuli that enter through our sense organs, and partly from inside; they are data coming from our long-term memory, unconscious or other parts of our mind.



The "processing room" is somewhat like a little "inner parliament", the place where we examine the various proposals, we discuss, we make decisions, we solve problems, devise plans, etc., in other words we reason with ourselves.

Whatever we think or do is initialized here and it is in this *room* the impulses coming from all parts of human mind mix and meet giving rise to various mental processes. For this reason, many psychologists call it "reasoning"; other researchers, to emphasize the fact that decisions can be long debated, call it "inner dialogue".

Actually, each of us, every day, often without realizing it, talks to himself. For example, if a friend invites us to go to cinema with him, our mind immediately begins to weigh up the proposal: "Do I like that type of film? Is the cinema far away? What is the weather like? Do I want to go out or do I have other things to do at home?"

Another example of inner dialogue is when we lose something and we try to retrace our steps while talking to ourselves: “I came home, I put the books and my coat here, I took off my jacket, I went to the bathroom ...”

And this happens for any decisions, from the most ordinary to the most troubled and complex. We, even if quickly, always reason about things to do, except in the case they are established habits. If, for example, every morning we are used to drink a coffee at bar doorstep, we do not waste much time thinking about it but we will do it automatically.

2NDPHASE: **The decision.**

Turning to the subject in question, once the desire for action has arrived in data processing room, it finds all the *Ministers* ready to “judge” it.

What are the components of this small “inner parliament” that it has so much influence and power over our life?

At the first place among the permanent members of our *Parliament*, which we jokingly called “**the big five**”, we find a huge man: **the unconscious**, which has a hand in everything.

It’s the strongest minister as it has the power of veto over every deliberation. If it objects, everything stops and there is nothing more that can be done. For example, if we have to get to the 5th floor and we suffer from claustrophobia, this boorish and robust “man” mercilessly dismisses the desire to take the elevator before it even occurs to us. The only other possibility is to walk up 5 flights of stairs.

Millions of people believe to act voluntarily but this is not the case. Often there is unconscious behind their actions. They think they are free, but they are conditioned in their actions from irrational impulses or, sometimes, from mental disorders which work like a puppeteer hidden behind the scenes.

Their deliberations are other than the results of internal disorders or an unlikely amount of unconscious motives, through instincts, humour, fears, anxieties, neuroses.

How many young people don’t have the courage to ask a beautiful girl to go out with them because they are very shy? How many people continue to smoke even they are aware of the risks to their health?

Only who has a healthy unconscious, without mental disorders, truly acts freely. We will discuss this further when we will speak about will.

Secondly, there are decisions that arise directly from the unconscious, without any of us even ask why. Why do we like dark women and not blondes ones? Why do we order a veal steak and not a pork chop at the restaurant?

Some psychologists believe our unconscious determines 75% of our decisions, others even more. We are convinced that things change significantly from person to person. There are those who are dominated by unconscious motives and those who are quite rational.

However, every day more and more researchers begin to believe that man is not a rational being, fully aware of his action.

The second place in our inner parliament is occupied by **long-term memory**, which is our permanent deposit, where all the knowledge, learned in the course of life, is contained (in the computer it corresponds to the "hard disk").

While the short-term memory is the headquarters of processing (it corresponds to the computer memory RAM), the long-term memory is our store, our library, our archives. In fact, in memory we look for all the knowledge and data we need at moment. We control and draw comparisons with our similar past experiences to have some indications how to behave.

People who are well educated or who have a lot of experience can rely on well stocked libraries and so they have many more possibilities to find solutions to their problems. Others have to improvise with the little information they already possess or they are forced to call someone for help.

In third place, we find the **intelligence**. This ability plays a central role, because is attached to thought processing.

It helps us in many ways, first it interprets reality; for example, it understands if someone is cheating us; secondly it puts in order information and input data, it organizes them, it classifies them and tries to find the solution of our problems.

Lastly, it helps us to prepare a strategy to achieve a goal.

It is our "librarian", who analyses our prior knowledge. It compares it, it tries to put it in order and predicts, with the help of imagination, the consequences of our potential decisions. Without this mental ability, there wouldn't be difference between humans and animals, as last ones are dominated by instincts and unconscious motives.

Intelligence is our best ally because it uncovers tricks devised by our unconscious to make us do what it wants. If we are shy, for example, and we want to make friends with a beautiful girl at a party, the unconscious begins to raise many objections: "maybe she has a boyfriend" - "she does not seem respectable" - "she is not as pretty as I thought" - "it's late and it is almost time to go", and so on.



Intelligence, with the help of some psychological knowledge, understands that these are all excuses due to our shyness; asking will for help pushes us forward and we decide to act anyway.

In his work it is helped enormously by a mental capacity which occupies the fourth place: the imagination. We will see it in next paragraph.

Imagination. In what way does it help us?

In many ways; first of all, it cooperates, often significantly, to problems solving. In practical life, we are able to solve a lot of problems because we are able to do mental representations. A mechanic before to buy a replacement part, he tries to understand with the imagination if it is suitable for the motor to be repaired.

Secondly, it allows us to predict "what will happen". If, for example, a person is going to make a robbery at a bank, he can renounce because he thinks he will be recorded by cameras. In other words, with a surprising accuracy, often it foresees the results of a behavior. For example, if a student feels unprepared, he will not get an examination to avoid a poor showing.

Lastly, going back to our hypothetical inner parliament, we have **self control**. It is our supervisor, which checks all the drives or wishes of action. This mind component partly is unconscious (super ego) and partly is conscious. In other word, in this last case it is a function carried out by our conscious and rational part.

Super-ego, which is the result of education and social conditioning, checks whether our impulses and our decisions are in conflict with social norms. If, for example, while a guy is courting a nice girl, he is tempted to touch her breast with his hand, the super-ego blocks him.

The sex drive is removed or suppressed. At most, it can pass becoming a gallant compliment to the girl.

In the second case, the self-control function is carried out by our ego, that is, the rational component of our mind. Most people, in fact, do not harm to others, not because they are retained by social conditioning, but because they are aware of the negative consequences of his aggressive actions on others.

Decision. The discussion between the "big five" (unconscious, memory, intelligence, imagination and super Ego) sometimes is brief, due to the lack of opposition or contraindications, while at other times it is long and tormented.

Often it is the unconscious that conditions or prevents any decisions, other times it is intelligence which prevails and thus the path of a voluntary action is not straightforward. As we will see further on, reaching a decision is only the first part of this process because until the last moment we can change our mind.

In general, the struggle is between desire (behind which there is almost always unconscious and instinct drives) and will (which is usually supported by the superego or rational motives). Desire deals with immediate pleasure, it hates to make sacrifices and to work, it does not care about morals and it is selfish and arrogant.

However, will sees things from a long term point of view. It is careful of social conventions and of not trampling on the rights of others. An example of this struggle can be seen between the two main characters in a famous novel by R. Stevenson. Desire is personified by Mr Hyde, boorish, brutish and selfish. Alternatively Dr Jekyll well-educated, cultured and well-mannered represents will and superego.

At the end of the Council of Ministers meeting there are two possibilities;

- 1) We are unable to reach a decision, so we are faced with a weak and disturbed personality (we will talk about this again with regards to disorders related to will).
- 2) We reach a decision.

THIRD PHASE: execution of the decision made. At this point the decision has been made and it is now only a matter of carrying it out.

The road appears to be all downhill from here, but not always it is true. Although everything has already been decided, the unconscious persists in looking for thousands of excuses and putting forward various reasons so we become undecided and have doubts. In some cases we are completely paralyzed and unable to go through with the decision. On other occasions it is superego or intelligence which casts strong doubts.

To take a decision may seem hard, but, in most cases, put it into practice is more difficult, as the old proverb says: "Easier said than done".

At this point another important ability, which is a part of the conscious sphere, intervenes: will.

Will. This ability is capable of carrying out the decisions we have made.

It is easy to decide to write a book on astronomy, but what renders this decision difficult is gathering relevant material, putting it in order, drafting out the text and typing it out.

Another example, it is not difficult to decide to go on a diet, the hardest thing is to resist all the temptations of food we have in the whole day. It is will that makes us continue despite the results do not come immediately, drives us to work even after hours, sustains us even when things do not go the right way, and so on.

In the execution phase there are four important factors:

1) **The time** that elapses between the decision and the execution. The longer it is, the more difficult it becomes to maintain the fullness of the intention. The ideal condition is immediate execution; if we decide to ask for a pay increase, for instance, we should do it immediately so as to avoid dwelling on it and postponement.

2) **The commitment** that the execution of a decision requires. The harder it is, the more difficult it will be to keep. It is one thing to study every day get a degree which requires years of hard work and another to decide to get up early in the morning to go for a day trip to the mountains.

3) **The motivation:** the more motivated we are, the more committed we are to maintain the decision made. The trick is to have always an image of target we have set ourselves. This will support us in moments of disheartenment and will enable us to grit our teeth in times of difficulty.

4) The **willpower** everybody possesses. There are few individuals who have a lot of willpower, for these people to decide to stop smoking, means simply throwing away a cigarette and never lighting one up again.

On the opposite end of the scale there are those who are weak; these people are unable to maintain simple intentions or to carry out any action that is tiring or disagreeable: for example, writing a letter to a friend or making a call to an unpleasant person to ask for information.

The action plan. Once a decision is made and set a goal, our mind analyzes the situation and compares it with reality.

If it's a simple action, such as buying a book that costs a few dollars, there are no problems. We go into a bookstore and we'll order a copy, but if it is an ambitious goal, we must develop a plan of action. If, for instance, we decide to be candidate for election, we have to make a plan to have a serious chance of being elected.

We must begin to contact all the people who could be useful, engage some collaborators, to rent a flat to use as a headquarters and so on. In other words, as do the teachers at the beginning of the year, we must plan our work, having regard to our money possibilities and instruments in our possession.



Monitoring of results. It's the last step, once you get to your destination, most of the time we evaluate about results. Do we have achieved all the targets? Or only partly? Can the results be improved?

If we're satisfied, it ends up the whole process. If, on the contrary, we don't think to have reached the target, we come back and we restart. We make a new plan of action or we introduce corrective, work with continuous feedback. In the above example, if the polls give us falling, then we study new slogans and new posters to stick all over the city, we try to participate in a television broadcast etc..

Usually we stop when we believe to be satisfied or when we give up, for example because we convince ourselves the target is no longer within our reach.

HABITS AND SIMPLE DECISIONS

Described in this way, voluntary action can seem a long process, but luckily our thought process is very fast and what is described in many pages in reality occurs in a few hundredths of a second.

Certainly there are many decisions which are over thought, for example important ones; the choice of our course degree, whether or not to except an abroad good job's offer; or others which cause inner conflicts.

However, many decisions are simpler and faster. Not all actions follow such a long and laborious course. To cite an example, once habits have been established, they follow a quick path, a type of arch reflex. The stimulus is immediately followed by the action without thought of changing the mind.

Fortunately, the battle between Dr Jekyll and Mr Hyde doesn't last for a long period of time. Once a bad habit has been discarded and has been replaced by a good one, the task becomes easier. When we have learned to go without cigarettes, we become accustomed to not smoking and therefore we no longer find this sacrifice very difficult.

More an action is repeated, more it's imprinted in our mind and less will power we need to accomplish it.

The same goes for simple decisions or unimportant ones; what suitcase do we put first in the trunk of the car? Without dwelling on it for a long period of time, we automatically place the biggest one at the bottom.

HUMAN MIND STRUCTURE



The examination of the decision-making process, by which a thought is transformed into behavior, helped us to outline how human mind works and to identify its main components. It was a starting point to help us building a general scheme of operating, or, better, the structure of the human mind, structure that has become the synthesis of the cognitive model we proposed.

As it is clearly shown by many studies, in the human mind we can distinguish two parts: a conscious area and an unconscious one.

THE CONSCIOUS, that Freud called Ego, is the sphere of psychological activities where rational activity and consciousness take place.

Therefore, everything we do and we're fully conscious of is due by Ego. Examples include writing, walking and talking. Also, everything which is voluntary and can be explained rationally falls into our Ego domain.

Until 1900, when Freud published his first works, it was believed the Ego was the only component of human mind and we were perfectly conscious of all our actions and behaviours. The father of psychoanalysis realized that this was not the case and that something else exists and strongly influences us in our daily life: the unconscious.

We believe **the Ego is composed of three mental abilities**: memory, intelligence and imagination, that all studies of cognitive scientists have highlighted.

THE UNCONSCIOUS is the sphere of psychological activities of which we are not conscious. Therefore, everything that results from impulses, or that we don't know how to explain rationally, is of unconscious origin.



The unconscious can be divided into four parts:

- **THE COLLECTIVE UNCONSCIOUS**. According to the Swiss psychiatrist Carl Jung, because of our common inheritance and evolution of brain structures, we inherit a predisposition to respond in a certain way to some experiences. These universal themes, called archetypes, constitute a collective memory, that each of us shares with humanity, because it goes back to the dawn of time and encapsulates the history of man on earth.

Examples are the archetypes as the father, the mother, the sun, fire, water etc.. They're universal and they have an unique meaning in almost every culture in the world. In our model, the collective unconscious contains mainly: motivations, emotional responses and universal archetypes (which doesn't coincide perfectly with those introduced by Jung).

Archetypes. The Swiss psychiatrist noted that life on earth has always been regulated by sun's path and by the succession of night and day, that since the beginning of time man has always trusted in the rain to fertilize the soil and in the dawn to dispel his fears. He has always greeted new births with joy or has celebrated certain moments of his life with ceremonies, such as weddings, while he has always mourned death with sad funeral rites.

When we're born, our mind isn't a tabula rasa: it already has tendencies, innate responses and attitudes that are guided by powerful symbols such as the sun, the father, the mother, fire, water and so on. It is a mind quality that each of us has in common with all humanity, because it goes back to the beginning of time and holds in itself the history of humankind.



2) **THE SOCIAL UNCONSCIOUS**. The first to speak of the social unconscious was Erich Fromm, an American psychoanalyst of German origin. He claimed the human being is profoundly influenced by the environment in which he lives, because there is a close correlation between personality and culture. In our model, the social unconscious is determined by the social and cultural conditioning of the community to which we belong.

Every country or every social group, regardless of size, has its own usages, its own customs, its own religion and mentality. And all these factors influence the growth of the individual much more than one might expect. To site an example, an English person is different from an African, not in a racist manner, because he or she dresses, eats, studies, thinks and lives in a society with very different social and cultural values than those held by people who live in the heart of Africa.

3) **THE PERSONAL UNCONSCIOUS** is constituted of personal baggage taken from our own experiences, from birth until present day, whether they be positive or negative. It is here that all our individual memories, our habits, our manias, our tastes (and also our mental disorders and traumas)

are registered. For example, if a child is bitten by a dog, he is likely to develop a phobia of this animal.

4) **THE SUPER EGO** is our inhibitory brake that controls all of our instincts and our desires. It's the result of education, of our moral principles and of the social and cultural conditioning of the environment in which we live. Even if the Super Ego is essentially unconscious, some of its aspects are undoubtedly conscious. Thus it would be more appropriate to place it as most psychologists do it, halfway between the conscious and unconscious spheres.

The term unconscious, however, shouldn't deceive us and lead us to believe in processes we are completely unaware of.

In our opinion, we are partly aware of "movements" that take place in our unconscious sphere, even if we rarely know how to explain them or understand the complex mechanisms that control them.

PERCEPTION AND PRODUCTION



However the picture is not complete; it is necessary to add another two mental processes, which we use to communicate with the outside world; that is **perception**, which is the cognitive process of acquisition of external data (*input*), while **production** is the way by which we manifest to others our will and our thoughts (*output*).

The whole process can be summarized in a vertical line like this:

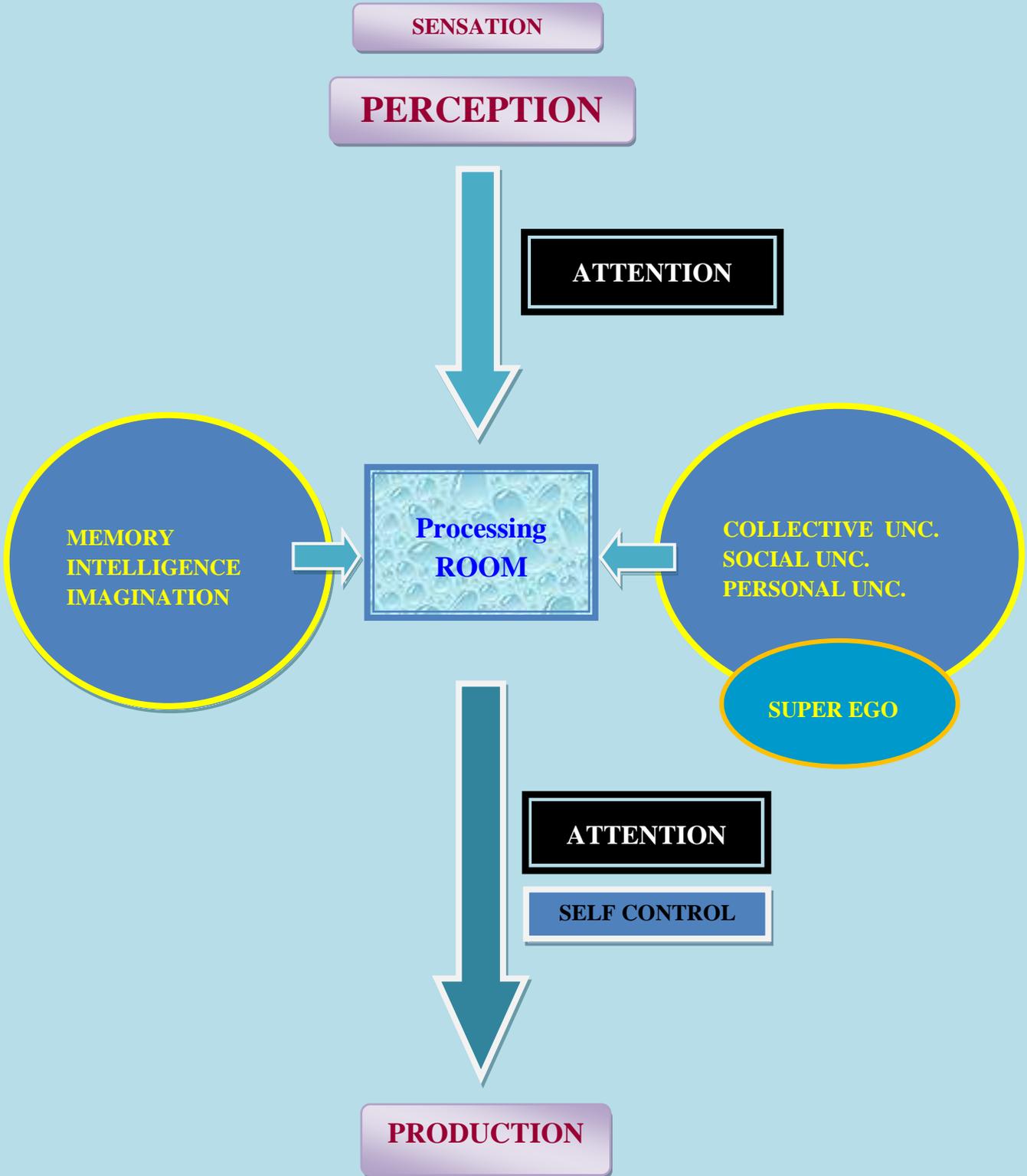
PERCEPTION --->PROCESSING --->PRODUCTION.

In effect, as the cognitive theorists maintain, our mind works exactly like a sophisticated computer: it **acquires information, elaborates it** again in relation to the data already processed, to mental abilities and, finally, **produces new information.**

On the other hand, impulses from both spheres (conscious and unconscious) participate in processing according to the horizontal line constructed as follows:

CONSCIOUS --->DATA PROCESSING ROOM <---UNCONSCIOUS

In conclusion, our thoughts and our actions are the result of either fusion of unconscious impulses and rational reasons, coming from our conscious sphere (in particular memory and intelligence); this type of "fusion" occurs in a part of our mind we have called the "processing room". Look at the scheme:



CHAPTER IV

THE CONSCIOUS SPHERE



It's the part which allows us to be conscious of our surrounding environment. Without the Ego, so called from Freud, there would be little difference between humans and animals. The lion, being the King of the forest, never asks itself: "Who am I?"; "Who created the universe?", Or "Why do I pursue antelopes and not cheetahs?"

The Ego makes us aware of existence and asks the meaning of it. This is the greatest achievement in the evolution of life: organic matter becoming aware of itself.

At birth a child is a living unconscious. According to Piaget a child has only reflex behaviours: sucking, crying and so on, but as time goes by, and with the completion of his psycho-physical development, his Ego grows, becomes bigger and develops more importance. He makes the most noticeable leap in adolescence when he no longer depends on his parents and becomes autonomous.

In the same way, animals are dominated by the unconscious with instincts guiding them their entire life. They have instinctive behaviours, which are passed down either genetically, or are handed down from father to son by learning. Animals aren't conscious of existing and do not ask questions of origins or the motives of behaviour.

Unlike animals, in man the Ego is the most complex and articulated part of the human mind. It is composed of three mental abilities: **memory, intelligence and imagination**. We will look at each individually.

MEMORY

THE STORAGE PROCESS



The storage process is an essential function for learning and thinking. Without memory we couldn't remember anything, so not even learn, nor we couldn't think because our mind. When we elaborate or reflect we continually draw information from the knowledge that we have about world and they are stored in long-term memory.

Definition. Memory is the mental ability which allows us to capture, store, organize and retrieve information. As we said, it is an essential function for learning and thinking. Memory is vital to the functioning of the human mind of which we become aware only when there is a loss of information.

The first studies on human memory were conducted in 1876 by German scholar, Hermann Ebbinghaus (Barmen 1850 - Halle 1909). He developed a series of memory tasks, such as remembering a series of nonsense syllables.

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Another pioneer of studies on memory was William James, who in 1890 advanced the first theories proposing, among other things, the distinction between two types of memory, that he called primary and secondary memory.

The first corresponded roughly to what we today call the short-term memory, while the second one was long term memory.

In subsequent years, there was a decline of interest in studies on memory, mainly due to the influence of behaviorism, which lasted until the "cognitive revolution" of the sixties. These researchers realized that the mnemonic process could not be explained in terms of conditioning and association, but we had to start to think that there were several storage compartments.

The three stages of memory. The standard model is based on the analogy between mind and computer, it foresees the storage of information in an area of the brain, similar to the system hardware, and the recovery of these information by a program.

According to this model, the memory would be made up of three compartments: **sensory memory** (MS) or sensory register, **the short-term memory** (BTM) or working memory and **long term memory** (LTM).

All the mnemonic process, then, consists in the transfer from one area to the next information to remember, therefore if we want to keep it for a long time we must deposit it in the long-term memory, the only one that has a lasting nature.

For their recovery, instead, information follows the reverse path. It passes from long term memory to short term memory or working memory, which is the seat of conscious mental activities.

The storage process. This term refers how information is retained, that is not a simple and linear process.

It can be divided in three phases:

- 1- Sensory memory is the phase where the stimulus enters our sensory system.
- 2- Encoding is the phase where information passes from the short-term memory into the long term.
- 3- Recalling or recovery of stored data is the inverse phase, the one where previously stored information is recovered.

1- SENSORY MEMORY

Information, as already mentioned at the beginning of the chapter, enters for the first time in our memory system, through one of our sensory organs: sight, hearing, smell, etc, and then it is stored in our initial memory system: the sensory memory.

Even if it does not seem so, all the sensory inputs, with rare exceptions, which come from the external world are analyzed, acknowledged and recognized. If it was not this way, our mind could not decide to which stimuli pay attention to and which one to ignore.

Attention, comes forward in a following step, even if it does not seem so, only when our mind decides which type of stimulus to pay attention to.

Once we make the choice, we concentrate on one of them and ignore (or at least we try to ignore) the other stimulus, which we hear from outside. For instance, although we hear noises from the street and voices from next door, we decide to listen to the news on television.

Regarding visual stimulus things are easier. As a matter of fact, you simply have to turn your eyes away or move somewhere else; therefore, we are not forced to see a scene. For instance, if we must study, we simply shut the windows and fix our attention on our books, ignoring the invitation of our friends to play basket with them.

The sensory storage, as already mentioned, maintains for a few tenths of a second an almost literal recording of the sensory input. If this input may be considered worth being heard or acknowledged, it is furthered to the short-term memory, also known as the work storage.

During this lapse of time the selected stimulus is once again analyzed and interpreted (by the light of our knowledge and our patterns of thought). For instance, when we decide to watch the news on television we are not only concentrate on the speakers' voice, but we try to understand and interpret what he is saying.

In fact, as we are not able to acknowledge the entire stimulus that reaches us from the outside world, our mind initially lets them all enter to be recognized, and then we select what we find of interest (rejecting the rest). Like a computer transforms given inputs in electronic ones. Our mind transforms sensory information, which comes from the outside world in information regarding objects and events of the surrounding environment.

The capability to acknowledge information, extracting important and useful representations of the world, is described as **perception**. A subject that we have already discussed about in other pages of this book.

Once the information is in the **short-term memory**, it's not only just kept for a consistently longer period, but it is almost always compared with other information already acknowledged, and it is sometimes elaborated. Some psychologists have rightly equated work memory to conscience, because it is what allows us to live and work.

The most important feature of short-term memory is that it can not keep information for longer than 15-20 seconds. After that, it drops out naturally, unless something is done to encode them into the long-term memory. We will deal with this subject in the following paragraph.

2 - ENCODING

It is the process of **storing data**, that is the way in which information is passed from the work memory to **the long-term memory**, which is the real memory as it is capable of retaining information for a long time. If you are studying a chapter about psychology because of a university exam, it is clear that you are encoding consciously the book's contents.

We have two kinds of encoding: **automatic encoding** and the voluntary one. The former is the natural and spontaneous one and it does not require will. Simply witnessing a scene or seeing an image fixes it in our mind. Automatic encoding allows us to memorize a great amount of experiences without any effort.

The voluntary encoding, instead, is a deliberate process and is a result of will. We not only consciously decide to memorize selected content, but we often carry out strategies to do it in the best way possible. It is the case of a student studying for a university exam. It is a process that requires will and attention.

There are two important aspects regarding encoding:

1- Why does our mind decide to encode some information and drop out others? Why does only a part of the information, pass through the short-term memory to be encoded in the long-term?

2- Which are the most suitable strategies in memorizing a set of information? In other words what helps us recall and what instead, interferes the storage process?

Regarding the first aspect, the elements, that make our minds decide to store information in the long-term memory, are various, but one of the most important is **motivation**. The more we consider an information important, the more we record it in a more steady way.

In contrast, we ignore old news or news we consider of scarce importance, we pay more attention to that stimulus which provides new material. This is why strange or extraordinary things attract our attention, because they may contain useful elements for the future.

Interest does not only come from curiosity or from the desire to learn, but it can also be determined by the need to perform a task avoiding to be punished, by the mere need to please a superior, to attract people's attention or even the wish to quickly free oneself from a boring task.

We are attracted, moreover, from what pleases our senses, in particular food and sex. The sight or the smell of food, which we like, is always an excellent call, like the sight of a beautiful woman (if we are men). In the same way we also show interest for whatever regards our hobbies and interests.

CHAPTER V

INTELLIGENCE



What is intelligence? It is a question to which psychologists, cognitive scientists, neurobiologists, neuropsychologists have tried from long time to answer, but until now nobody has been able to be exhaustive.

The concept of intelligence, in fact, is an intuitive one in the sense that everyone knows roughly what it is, but nobody knows exactly what it is.

If we ask people “what intelligence is?”

Most of them will answer that it is the ability to solve problems, at most they will say it is the ability to adapt to the environment. Two American researchers, Mark Snyderman and Stanley Tothaman (1987) to find out how psychologist who specialize in intelligence define it, asked more than 1.000 of them to examine a list of abilities that they considered to be aspects of intelligence. Nearly all checked abstract reasoning, problem solving and the capacity to acquire knowledge; more than half checked memory, adaptation to one’s environment, mental speed, linguistic competence etc..

The definition of intelligence is controversial. According to “Mainstream Science on Intelligence” (1994), an editorial statement composed by fifty-two researchers, it is a very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It reflects a broader and deeper capability for comprehending our surroundings - "catching on," "making sense" of things, or "figuring out" what to do.

The nature of intelligence. Even there are still many doubts, however, in recent years, almost all psychologists have recognized that intelligence has many aspects, although if it does not exist an uniqueness of views on its nature.

The positions range between two extremes. **From one side** there is the tradition of the English school which recognizes that intelligence is a multifaceted phenomenon, but it is convinced that at the base there is a mental capacity called “general intelligence”, in other words it is formed by a factor “g” and many specific factors.

The first to speak of it was Spearman, who in a famous book of 1927 (The abilities of man) theorized the existence of a factor “g”, and various factors consisting of the specific skills required for the performance of individual tasks.

Spearman noted that children with high school grades obtained high scores, with few exceptions, in all disciplines, which led him to theorize the existence of a general intelligence factor. He believed that the factor G. explained why in almost every pair of item assessment of intellectual abilities turned out a correlation between the two elements.

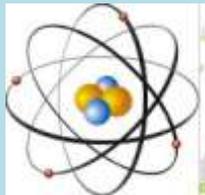
On the other side there is the American tradition that supports the theory multi factorial, according to them what is called intelligence it would be really a combination of sundry factors almost completely independent of each other. In fact, these psychologists deny absolutely the existence of a general intelligence.

The first was LL. Thurstone (1938), who sided against the existence of a prevailing factor G., identifying seven key instead of intelligence: verbal ability, comprehension, numerical computing, spatial skills, associative memory, reasoning and speed of perception.

Guilford (1967) was like-minded, according to him there is not a "g" factor, i.e. a general intelligence, but it is possible to be skilled in a sector and completely inept in another. It is sufficient to think of the case of talented scientists in their field, but with a bankruptcy social life. Beethoven, for instance, it seems that he was unable to perform mathematical calculations that required multiplications or write a letter without making spelling errors.

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INTELLIGENCE POLYHEDRAL



A new theory on intelligence. Another intelligence theory was proposed by us in 1996. Taking up an idea of A. Binet, we have argued in a publication intelligence is unique but it is composed of various mental abilities, not always related to each other.

When we discovered the atom we have thought for long time it was the smallest particle of matter is not divisible chemically. Other scientists, with the help of more sophisticated (electron microscope, with the help of nuclear physics, etc..), showed that it was not right.

Today we know it is composed of protons, neutrons and electrons and research went on until they discovered that it is formed by very small particles such as quarks (actually we know 6 types of quarks).

We think we must do the similar thing with the intelligence. It has become time we begin to consider this mental capacity multi-componential, that means: composed of many components.

Basing our studies not only on personal research, but also on the studies of Guilford and other researchers, we believe that the skills that make up the intelligence are:

- **Ability to analyze**, that is the ability to break down the elements of separating quality information and data.

- **Ability to understand**, that is to understand a concept (for example Einstein's theory of relativity), a mechanism (such as a VCR works), a natural phenomenon (because the rain falls), a problem, the significance of a speech etc..

- **Ability to formulate hypotheses** or to propose answers to the solution of a problem.

- **Ability to compare two hypotheses or two facts**, to evaluate the benefits of either. It is also the ability to establish rapport and relationship.

- **Ability to classify and order incoming information**, to distinguish the essential from the secondary or marginal, and thus to establish priority scales.

- **Ability to apply**, that is to use our knowledge to solve a problem (for instance, to find the area of a football field using the information learned in school).

- **Logical-mathematical ability**. That is, the capacity to understand and apply mathematical theories, to do mathematical calculations etc..

- **Powers of deduction**, that is, to be able to move from the universal to the particular (deductive method).

- **Ability to predict**. It is the faculty that allows us to draw conclusions from the observation of certain facts (i.e. imagine "how it will end").

- **Ability of space-time orientation**. The ability of spatial orientation is the awareness of one's position in space relative to the reference points.

Temporal orientation, while, implies the consciousness of the "flow" of time making us interpret events that have already occurred as past, current ones as present and those that still need to be done as the future.

- **Expressive and linguistic abilities**. It is the capacity to explain clearly own thoughts, to communicate with others, both in oral and written form, in orderly and concise manner.

The talent or aptitude in a field can be explained in two ways:

First, it depends partially on education; secondly because nobody develops in the same way every ability that makes up the intelligence, and this for various reasons (we will discuss about it later). For example, who devotes himself to the study of music from a young age, he will develop in excellent manner only the ability (mentioned in the list above), but he will have neglected all the others, that for several reasons, but mainly for lack of time.

Clearly they are not the only grounds, to the base of the non-uniformity of talent there are genetic factors, commitment, interest and motivation, too.

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IMAGINATION



Since ancient times, the imagination or fantasy, a term often used as a synonym, has been the subject of study.

Plato argued that imagination was largely independent from the sensations, while Aristotle attributed greater importance to the experience coming from the senses, whose imagination would be an enrichment and extension, once the objects of the same sensation is absent. During the Renaissance, however, Giordano Bruno, correlated the imaginative activity to the faculty of memory and to the presence of universal themes.

The imagination, as it says the same word, is the ability of the human mind to produce mental images (in English there is a very significant term: *visualization*).

Images that not necessarily relate to real memories or experiences, but they can also be invented and unreal. It happens, for example, when we fantasize to get on the Olympic podium to be awarded with a medal or when we dream of winning the lottery, without it ever really happened. In this case, even if we produce images "not real", however, these are built with material obtained from reality.

Our mind can, however, go further, it can even create images absolutely unreal, that is, it can imagine things or actions inexistent. We can imagine, for example, a horse with wings that flies or an invisible man that goes through the walls. To have other examples it is sufficient think about the scenes of a science fiction movie like Star Wars.

IMAGINATION FUNCTIONS

What is the function of imagination? Even if it does not appear, it is not autonomous mental ability, but it is at the service of the others (like attention and will). Imagination, in fact, it is a tool, that, depending on the case, can be used from the memory, intelligence or unconscious.

In the first case (when it is used from **memory**), it is used to remember facts, faces or scenes that we have seen. They are simply visual memories. Among the mnemonic skills, as we have said about the memory, there is also that one to remember images or visual scenes, in a non-verbal form (iconic memory). If someone asks you, for example, to describe your bedroom, it is likely that to do it firstly you retrieve to your mind the image of this room. Only later you will transform the visual memory in a verbal description.

In the second case, it can be used by **intelligence** for three purposes:

First, to understand the world around us, to interpret the stimuli coming from the environment or to make us understand how a mechanism works. Often guessing means imagining. A child can solve the problem of taking the jam on top, on a shelf, going to take a chair in another room, because it is able to imagine. Often if there is no imagination, there is not even intelligent.

Take the case of the monkey that has to reach a banana out of the cage, in one of the experiments described by Köhler (we have seen it in the chapter about intelligence). The solution consisted in bringing the shorter stick, out of cage, with that one longer; a time took the latter to approach the banana near the cage in order to reach it with his hand.

It happened because the monkey was capable to make a mental picture of the act, that is to imagine.



Second, to let us predict the **consequences of our actions**. It is the ability to combine different elements to give rise to projections into the future in which, thanks to mental simulations, imagine situations that do not exist yet. If, for example, we have the idea to leave our car parked on the sidewalk, we think it could pass a cop and he will do a fine.

We can anticipate with considerable accuracy many future events: the weather, if certain securities on the stock exchange will fall, if we will fail an exam etc.. Some people make this by profession: stockbrokers, real estate speculators, businessmen and so on.

Third, to find the **solution of the problems**. Imagination lets us see things in a new way, to make connections, find similarities or contrasts, to reset the problem in new terms etc., sometime to verify the solution of a problem. For example, a repairman, before losing time to mount a spare part, tries to understand, with imagination, if it is suitable for the engine on which it intends to mount it.

Lastly, imagination can also be used from the **unconscious**. This time for a less noble purpose, but equally important: to push us to satisfy our needs. If, for example, it is almost lunch time and we begin to feel hungry, our mind begins to "give birth" to images of a nice steak with fried potatoes. People who had been for days without eating (for example due to a shipwreck) related that in moments of strong hunger they had continuously fantasies of food.

It's the same thing for the sexual instinct, erotic fantasies are recognized as the best aphrodisiac that exist. It is a method invented by nature to "induce us" to satisfy our survival needs.

CREATIVE THINKING

It is the ability to produce significant results, in an original way; it is certainly the most appropriate definition of creativity. With the term creative thinking, in fact, the researchers intend the ability to process information in order to create ideas, objects or machines (new and valuable) and the ability to solve problems with original solutions.

To indicate this ability we should use the term "creative intelligence" because in reality it is a form of intelligence. We utilize the intelligence, in fact, not only to understand the world around us, to interpret the stimuli coming from the environment, to solve problems or to organize a set of information, but also to produce new ideas or objects or machines.

CHAPTER VI

THE SERVICE CAPACITIES

In this chapter we will speak about two mental abilities: attention and will. They are not autonomous but service skills, because they help the main ones to work.

Attention, as we said, is a filter, to select the stimuli “entering” in our mind; while will is our “power abilities”, because it help us to get the target we intend to achieve.

ATTENTION



One of the most noted characteristics of the human mind is that it is not able to simultaneously focus on all of the stimuli coming from the environment. For this reason man is forced to selectively act on input. U. Neisser and R. Becklen (1975) carried out the following experiment. People who were unaware of the aim of this research were asked to simultaneously follow two types of games. The aim was to find what they managed to absorb when watching two television programs simultaneously and on the same channel.

Some were asked to watch only one of the games, ignoring the other, and to press a button every time a particular event occurred, as when every time a player threw a ball. Almost all of the subjects in this group succeeded in completing the exercise without making any mistakes.

A second group was asked to pay attention to both games. In this case the subjects were more likely to make mistakes and were easily irritated.

The faculty, which allows us to concentrate on only one of the incoming pieces of information, ignoring the others, is called **attention**.

If we try to follow two messages simultaneously, we manage to get the general meaning only by moving our attention quickly from one to the other.

However, like other studies have confirmed (A. Treisman, 1964), even when we are concentrating on one problem our residual perceptiveness is not completely switched off but is in a stand by position, that is we are capable of understanding if there is something, which interests us beyond our scope of attention. For example, Ann Treisman carried out the following experiment: she sent two messages via head phones to her subjects, one for each ear.

They would follow one of the two messages without understanding anything of the other. If however, in the second message their name was mentioned, they were able to acknowledge it even while listening to the first message. This is the same mechanism which allows us to hear the phone rings while we are reading.

In our opinion, attention is not only used by our mind for perception, for example, when we understand a message, listen to a lesson or learn a concept; it is also used in all the **thought processing procedures**; such as the problem solving, inventing something or planning a house. In production processes when we have a discussion or when we talk or write and complete actions attention plays a role. And generally in these cases attention is called **concentration**.

Three functions. It is useless to underline the importance of this mental ability in these processes. If we do not manage to focus our attention on a problem, we will not find a solution easily. It would be impossible to write a book if we did not sit at a table and concentrate on the appropriate subject. For this reason it seems absurd to consider attention, as the majority of authors do, as one of the processes that regards the perception. There are no doubts that attention or concentration are the same thing.

The exactness of my hypothesis is confirmed by the assertion of other authors. J. Darley (1991) maintained: "The majority of processes, which recover information in our memory, appear to require attention." G. Lindzey (1989) also arrived at a similar conclusion: "Our attention is not limited to external events and stimuli.

When we dream or daydream our attention is turned inwardly, towards our thoughts. We have all thought intensively about something and have consequently not heard somebody talking to us".

Roger Shepard (1971) and his colleagues at Stanford University set up a procedure - mental rotation - which involved objectively measuring some aspects of this process. They showed people copies of geometric objects and asked if the two objects were identical. The problem was solved by mentally rotating one of the two objects.

The results pointed out that when the two objects showed a slight rotation, the subjects used little time to solve the problem (about 1 second), when however, they were shown a wide angle of rotation the subjects needed more time (about 4 seconds). This is a clear example of attention being used in processes which are not regarded as perception (in this case attention is used for the processing of a mental image).

Only in one case attention does not appear to have an important role: when the data comes from the unconscious. The latter appears to flow directly into the data processing room without any filter, or without being previously selected in any way.

To sum up, we use attention in three cases: in the process of perception (stimuli coming from environment), when we think or study (concentration) and in the production (for instance when we speak to give order our thoughts).

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ATTENTION DEFICIT

Attention has a great importance in the life because one of its possible disorders can result in considerable damage: it can interfere with learning, thinking, studying, the processing of

information and even the treatment of a mental disorder. Imagine having to proceed with a patient who cannot stand still for a minute.

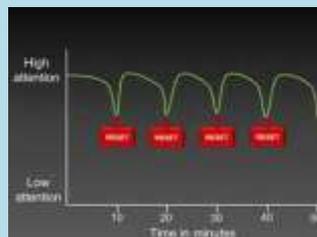
External stimuli, images and situations do not have the same clarity and intensity. There are things which require minimum attention and that are within everyone's capabilities. For example, if a friend calls and asks: "Would you like a coffee?"

We do not have to make an effort to understand what he said. It is a message which requires only a limited attention span and which, in reality, everybody possesses. It is different if this friend gives us a physics lesson or has to explain how a complicated video recorder works. In this case, in order to understand the message we need a considerable span of attention (which not everybody possesses).

In effect, full attention is necessary for difficult contents or when a long period of time without distractions is demanded.

Attention disorders are often the consequence of other factors. They can be the result of natural causes: tiredness, drowsiness, tense moments or strong emotions. They can also be related to pathological causes: physiological illnesses, certain forms of intoxication, liver problems, hyperthyroidism, confused states, a variety of neurosis or hysteria.

In these cases attention is unsteady and inconstant. We cannot say that these subjects are incapable of focusing their attention on anything, but their attention is easily distracted from one object to another.



However, when an attention deficit is not the result of other mental disorders, it is a consequence of bad habit which causes our mind to continually change the aim of our thoughts. This type of disorder is called **mental dispersion** and it consists of the inability to focus a lot of attention on a subject.

A person suffering from mental dispersion disorder is someone who starts to do many things but never finishes any of them. Every stimulus is followed by an action but the action is never completed. If, for instance, a man affected by an attention deficit has to hoe a field, he does not begin at one point and systematically proceed in order until he has finished (unless he has been taught a methodical way of doing it from other people), but he hoes at random.

When he is listening to a conversation he is already thinking about another subject to discuss. In general, he is unmethodical and inconstant. He may find himself getting tired without having done anything of productive.

It is necessary to make methodically our way through life to be well aware of what has to have priority and to complete an action unless there is a good reason for not doing it. We will return to this topic when we discuss stress, here it is only necessary to underline two things:

1) It is very important to have a good attention span because it is fundamental to all psychological processes.

2) It is not true that those who do not have a good attention span will never have one, with practice and with will, it can be developed it like any mental faculties.

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WILL



Will is the executive formality of intelligence. It takes care of the execution of decisions and acts on the outcome of our thoughts. On the computer it would be the ENTER key.

The best evidence supporting the existence of this wonderful human faculty is to cite some examples: How many people cruelly tortured have died without divulging the names of their comrades? What made them withstand extreme pain if not willpower? What drives some people who are dieting to resist the temptation of food? What's the strength which allows many university students to remain glued to their books, ignoring the attractive invitation of friends to a football game on a beautiful sunny day? Or the chain smoker, who wants to stop smoking?

Will can be defined as “the ability to pursue the purposes that intelligence foresees as good” P. Daco (1972). As I have already said regarding voluntary action, will intervenes twice in the decision making process:

- 1) At the time of the decision, making us opt for the solution which benefits us most.
- 2) At the time of execution, making us transform practical actions into the decisions made.

We have already spoken about this human faculty with regards to the voluntary action, but it would now be appropriate to discuss certain concepts in greater depth.

CONDITIONS OF TRUE WILL

What does it mean to act voluntarily? How do we distinguish whether an action results from either instinct, unconscious impulses or free choice? It is important that we are aware of the following pertinent facts:

1) Considering all the possibilities. To make a voluntary decision means, above all, weighing up all the possibilities, that is, spending an appropriate amount of time considering the various

options. He who rushes without a moment's thought or a minute of reasoning acts from impulse and not will.

2) To work for our own good. The Belgian psychologist P. Daco affirms that "will is a rational appetite which tends to follow what our intelligence believes to be good". Modern psychology tends to consider only what it regards to be good or better as a voluntary decision. The pursuit of pleasure or joy does not at all implicate the presence of will.

Choosing the more comfortable route, that brings immediate pleasure, means to suffer the consequences of unconscious conditioning.

The drug addict does not act voluntarily when he further abuses himself, in the same way that the alcoholic, when he drains another bottle, is not making a free choice. Only will which acts for our good and respects the rights of others is true will. This seems to suggest a lack of freedom of choice, but this is not the case.

If a train leaves its rails, this is not a freely chosen act, it is auto-destructive. A bird in flight cannot decide to close its wings because this would cause it to crash to the ground.

One of man's characteristics is the ability to predict the consequences of his own actions. He knows perfectly well that excessive consumption of alcohol will reduce him to a state of ill health and suffering. If he continues to drink it is because he is pushed by unconscious motives.

Mental disorders can obstruct the action of true will. At times decisions are made obeying these unconscious mechanisms. Without our awareness, someone enters our house and assumes the role of patron. Will is a superior faculty which is based on a superior or purified personality. Therefore the first step towards true will is the liberation of Ego from the fateful influence of a pathological unconscious.

3) The whole must prevail over the part. If an arm develops gangrene, it must be amputated otherwise the disease will spread and kill the whole body. In the same way in the field of psychology, if something disturbs our internal balance it must be eliminated. It is necessary to remember that the good of our body and mind must always prevail over all. Every choice which brings an auto-destruction to our body or our mind (excessive eating, drinking or the use of harmful drugs) is an involuntary choice.

4) Complex or final pleasure is considered rather than immediate pleasure. We must not reason in the short term, but rather in the long term. If we leave our books to go and play football, we will enjoy an hour of leisure. However, we will be ill prepared for our exams and will fail resulting in a series of unpleasant consequences.

Bear in mind, that the unconscious almost always seeks to build an alibi to push us in the direction it wants. This mechanism, called rationalization (we will come back to the defence mechanisms), forces us to always try to justify our behaviour with rational motives. We need to try to uncover and neutralize this mechanism. For example, if we have to study and our friends invite us to the fairgrounds, our unconscious is immediately telling us to go as we do not have an exam the following day.

5) **The need to respect others.** Everything that effects the freedom and rights of others is merely a dominating or powerful will and not true will. Often there is confusion between will and the uncontrolled need of self-realization or power; the latter is generally derived from the desire for compensation of the inferiority complex or the exasperation of competitive instinct. Adler has well described these cases, even if he has exaggerated by making such a general application.

6) **Keeping our feet firmly on the ground.** At the time of the decision, we need to bear in mind the principle of reality (Assagioli, 1973), i.e. we need to aim for realistic goals. To decide to take a degree in medicine, without the aptitude to do so and with little desire to study, is utter madness; just as it is irrational to want to be a basketball player without having the appropriate physique.



If we do not weigh up the right possibilities it can cause bitter delusions and frustrations. It is necessary to try and avoid any failures in our studies or in any of our undertakings, because we are not always capable of enduring the psychological fallout. To decide to try out a new field (for example to become a successful writer) is without doubt a positive decision.

However, to give ourselves excessive illusions could in actual fact be very harmful for our self-esteem, a quality which is very important for a healthy balance as C. Rodgers and other humanists have taught. To set unrealistic objectives has been recognized as one of the most common causes of stress. Messages from television lead many young people to unrealistic expectations for their future. When they have to content themselves with more practical and smaller goals, they become more dissatisfied and frustrated.

I suggest not tormenting yourself with incorrect choice. As the ancients once said: “to err is human”. Fallibility must always be taken into account. It is right to do everything possible to achieve our ambitions, but if it goes awry, we should not blame ourselves. In life the best saying will always be: “The important thing is to try”. Dwelling on failures may at times, be the first step towards certain mental disorders, in particular alcoholism.

WILL DISORDERS

The most important deficits of will are:

- INDECISION. The inability to arrive at a decision can be mainly due to either the inability to concentrate or the inability to make a choice.

In the first case, it is clear that it is primarily necessary to develop the **ability to concentrate** which will subsequently lead to the acquisition of wilful abilities. Numerous exercises exist to aid in the honing of this ability, they are cited in almost all handbooks (a particularly easy exercise is counting, without error, the grains of rice in a packet). The important aspect in these cases is

gradualness; to begin with exercises which require a short attention span and then go on to the more difficult exercises.

In the second case, the material inability to make a choice, will is paralyzed by continual doubt. The subject is in a state of indecision and perplexity which he cannot resolve. He is unable to decide on one situation or another and when he succeeds in deciding, he is attacked by atrocious doubts primarily because he concentrates on the negative aspects of the solution chosen.

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IMPULSIVENESS. An impulsive person is one who carries out his action immediately. Such a person does not consider different possibilities. An impulsive person does not think, he merely acts. He makes the action precede the thought or he gives it such little time that the thought is rendered pointless.

He is an adventurer, who eagerly involves himself in schemes without weighing the pros and cons, and he often ends up in trouble. It is enough for an idea to appeal to him. If he is in business he may end up penniless.

At times he may will have an inspired success because prudence is not always the best approach. By taking a risk he succeeds in hitting the nail on the head.

An impulsive person is pushed by an inner force to complete an action without thinking it through. "He is guided by his rudimentary desire" - P. Daco writes - "by his automated unconscious and troubled emotional behaviour. An impulsive person, to everyone else appears to really want it. In reality he is unable to control his actions and his will is the same as that of a weak person".

An impulsive person puts himself in the midst of an action; he runs continuously, he is often agitated, even if he gives the impression of being a decisive man. In reality he is weak and insecure.

Various ways of combating impulsiveness exist, the easiest is that of counting slowly to thirty before completing an action. It seems stupid, but once thirty has been reached, the impulsive person has often changed his mind.



APATHY. This is a total or partial lack of interests or impulses. Everything becomes indifferent, snowballing into indolence, laziness, slowness and the inability to act.

The apathetic person lacks any emotional reaction to external circumstances and for the most part, gives way to physical inertia. Sloth kills will and often desire.

Apathy can be temporary and caused be by a serious trauma: the death of a person to whom we are very close, divorce, a serious let down. However, to remain normal this period of apathy should

never go beyond a general period of six months. If it does, it must be interpreted as a symptom of a personality disorder.

Apathy can exist on various levels: partial or serious. On one hand it's recoverable. On the second it's a very grave indicator of a mental disorder. Serious apathy can become the antechamber of schizophrenia. Sometimes it has organic causes such as hypothyroidism. But often it is of a psychological origin. It is important not to undervalue. Serious apathy, in fact, can be the first step toward certain mental disorders, in particular depression.

STUBBORNNESS. One of will's abilities, as somebody has noted, is tenacity, that is the capability to have faith in a decision made. Unfortunately this highly positive trait can flow into excess: stubbornness.

What distinguishes a keen person from a stubborn person?

The **stubborn person** is a prisoner of a decision made and is literally unable to retrace his steps. It is like a train travelling at 200 miles per hour. No one can stop it. If during this journey the stubborn person realizes he has taken the wrong road he continues none the less.

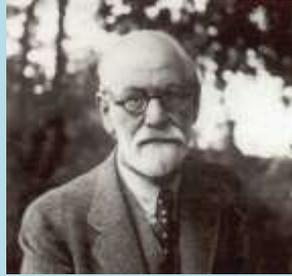
A wilful person, while, is open in spirit and is broad minded. If he understands that his decision is wrong, he is able to rectify his mistake. Furthermore, if the situation changes, he is able to adapt.

The stubborn person however, is like one of those teachers who continues with the curriculum even if he is aware that his pupils have not understood anything.

CHAPTER VII

THE UNCONSCIOUS

The first person to understand that our behaviours cannot all be explained by the rational part of our mind was Freud.



He realized there was something separate from our conscious part which often heavily conditioned our way of life and our way of thinking.

What does a chain smoker drive to smoke? Even if he knows the dangers of cigarettes yield a high propensity to lung cancer, or that he can suffer cardiac problems, he continues indifferently his bad habit.

What does a claustrophobic drive to refuse to take the elevator? He knows the only alternative is to walk up many flights of stairs. He knows he will appear foolish in front of others and he understands it is irrational to not want to use a method of transport millions of people use every day.

There is no answer to this question. Every call for reason is in vain. He continues to refuse to go into this narrow cage. He should allow himself to be persuaded to take the elevator only by experiencing a great anguish.

And a shy person? Why does he blush in front of a beautiful woman, or is panic-struck if asked to speak in public?

In all three cases, there is something hidden that escapes rationality, which drives people in certain directions. Freud realized this and discovered the unconscious.

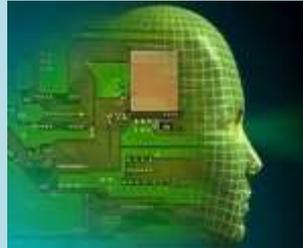
The proof of the existence of the unconscious goes well beyond phobias or pathological behaviours that cannot be rationally explained. There are dreams which, as Freud discovered are not merely fantasies constructed at random by our mind or the dead people communicating to us, but they are the way in which our subconscious unburdens the emotions which remain imprisoned: fears, worries, frustrations, unfulfilled or repressed desires.

Sometimes dreams are provoked by physical stimuli: hunger, thirst, digestive problems, the need to urinate, pain caused by injury, heat or extreme coldness (Freud, 1899). Dreams are almost always made up of the so called “remains of the day” that is, what is left of the activities which occur while we are awake.

Furthermore, there are lapses and “free associations”, used in psychoanalysis, which are mental processes, connected to unconscious motives. There is also the hypnosis phenomenon which is difficult to explain without admitting the existence of the unconscious.

Every time we find ourselves faced with impulses that cannot be explained rationally, this is our unconscious. Why is it that sometimes, when we are introduced to somebody, he immediately appears unpleasant to us without reason?

By now the majority of psychologists are inclined to admit the existence of the unconscious (see also Kihlstrom's research, 1984; 1987 and that of Bargh, 1984). The only doubts which still exist are of its exact nature and of the role it plays in the mental processes.



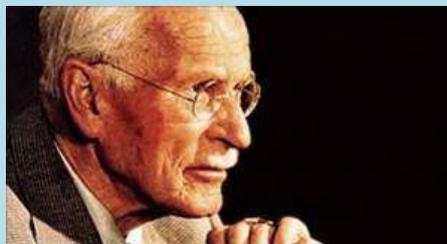
Psychoanalysts give great importance to the activities of impulses, to thoughts and to unconscious conflicts. They maintain the majority of mental activity takes place from outside the individual consciousness.

Meanwhile, the humanists give little weight to the unconscious. Allport and other theorists of the trait model maintain the sane individual is first motivated by conflicts and conscious desires. The emphasis psychoanalysts give to the unconscious has produced an excessive interest in psychopathology. We will study this subject further on.

We have divided the unconscious, into four parts: the collective unconscious, composed of the reservoir of instinctive impulses; the social unconscious, the Super Ego and the individual unconscious. The divisions are created for research purposes because a clear distinction between these parts does not exist.

[JUNG AND THE COLLECTIVE UNCONSCIOUS](#)

“It would be a serious error” - says Carl Jung - “to suggest that the psyche of a newly born child is a tabula rasa, in the sense it is completely empty”.



The child at birth has already inherited the collective unconscious, something it has in common with all of humanity.

When faced with certain external stimuli or in certain situations, the newly born child does not act randomly, but with specific attitudes, innate responses and preconceived ideas. “As a consequence” - Jung notes - “all of these factors which were essential to our ancestors are still essential to us and are incorporated in our inherited organic system.”

The psyche of a new born would be, in other words, as Stirnimann affirms, “a photographic plate which has remained exposed during all the previous generations”.

Jung encourages us to find the primitive man in ourselves. He claims our ancestors have a strong influence. As I have said earlier, life on earth has always been regulated by the sun’s path, by the succession of night and day. Since the beginning of time man has always worried about preserving his life, eating and reproducing.

He has always trusted in the rain to fertilize the soil, in the sun to rise and dispel the fears and the anguishes induced by the darkness. He has always greeted with joy new births and cried over the dead with sad funeral rites. The collective unconscious is the characteristic each of us have in common with humanity. It dates back to the beginning of time and holds in itself the history of man on earth.

The collective unconscious is an immense reservoir supplied directly by natural instincts. For Pierre Daco (1965) it contains “unconscious, but active emotions”, which “determine powerful symbols of artistic creations, of religions and of colossal movements of people”.

These symbols, which were called “archetypes” by Jung, are very similar for everyone, whatever their language, their education or the country they live in. Legends from all times and races have surprising analogies between them and are an eloquent confirmation of this.

The concepts expressed in this chapter, even if they have a clear point of reference in the writings of K. Jung, are in part the result of my personal studies. From the work of the Swiss psychiatrist, we have only considered the most significant facts and those which were based on real and observable comparisons.

Furthermore, we do not believe archetypes are passed on in a genetic way from father to son, even if a natural predisposition such as this exists. According to our point of view, the symbols which we will consider are mainly associated by the individual with the environment as they are in culture and in the religions of various people. In fact, despite their diversity they present analogies and similarities.

MASCULINE ARCHETYPES

THE SUN



Let us imagine that a civilized man gets lost in the woods and darkness falls unexpectedly. “After a few minutes the modern man will experience the same sensations as a man from ten thousand years ago” - says P. Daco - “faced with these sensations, in this situation his car and his television will seem a mocking futility.

This man is alone, in the middle of a nature which is rendered hostile by the night. He will react in the same way as his ancestors: he will be afraid.

And above all what will he want ?

That the sun rises!

The appearance of the sun will eliminate nocturnal terrors, real or imaginary. The sun will give out light, heat, life and beauty”.

Therefore, the sun rising is always a beautiful moment. It marks the disappearance of fears, the birth of a new day and the hope of new and positive experiences. By contrast the setting of the sun is seen as a return of the fears, of the darkness in something that dies.

Rising, the idea of ascent, acquires the positive and desirable power we wish for. Nobody says to descend toward the light. Light is always above us. Descent, on the other hand, has a negative power to be avoided.



Jesus rose to the heavens, he did not descend to the earth. Heaven is located in the sky. Ascent is linked to feelings of purification or exaltation. Hell is underground. Without the sun there would be no life on earth; sun provides light and heat. Our ancestors were aware of this and hence the sun is one of the most worshipped gods of ancient times.

Let us not forget that man has always been a diurnal creature. During the night he sleeps, he relaxes. He is very vulnerable and an easy victim for any predator.

Man’s life is influenced, or rather regulated, by the sun’s path. This blazing star rises at dawn and dispenses light and heat. It rises to the radiant and implacable zenith and ultimately descends toward earth to disappear over the horizon.

Man’s life follows the same phases: Man is born and is most beautiful as dawn, he grows in maturity as the sun’s rising; he falls as the sun does at twilight. But as the death of the sun is temporary, man reaches for the concept of the afterlife, of heaven and of eternal life.

The symbol of the sun is almost always associated with that of the Father because it sees us and guides us from above. It is a giver of life with its phallic rays. It fertilizes mother earth which bares her fruits for us. Without the sun not only plants, but also all living beings could not survive. Life on earth would come to an end.

A King dressed in normal clothes would be an ordinary mortal. When he wears the crown, the sparkling clothes of gold. He takes his place on the throne and everything changes. Emotions are released, the people curtsy and the soldiers obey. The real crown, therefore, is brilliant and radiant, it is circular like the sun.

The steps we find before a throne, symbolize the act of climbing toward God. A man thus transformed passes from the material sphere to the spiritual sphere.

He is capable of arousing strong emotions. He becomes like a god and as in the past, he has been worshipped like a god.

THE FATHER

The sun is clearly linked to the archetype of the Father. Often there is no clear distinction between the three symbols: Father, God and sun.



GOD - A whole atheistic nation has never existed, there have been intellectuals, atheistic ideologies but never an entire nation. Even Communism which tried to extinguish the burning desire for God failed. Once the regime fell the people's faith rekindled as before.

Our ancestors faced the immensity of natural phenomena much greater than themselves; the rising and setting of the sun, rainfall, lightning the stars and the moon. They asked themselves: who was responsible? The answer: a hugely powerful God.

In Him they looked for their creator, their guide, the leader, the father. It was he, they believed, who controlled the sun, the moon, lightening and death.

People have always imagined God in the sky. They have credited Him with knowledge and absolute powers, the ability to carve from the void, to make man from the dust, to love, to protect, to guide but also to punish and chastise. Many credited God with lethal arms such as lightning; Zeus who hurled his bolts on common mortals. Thunder, wind or storms were his displays of fury.

It has been the concept of evil to counter the good God with an antagonist: an evil god. In Catholicism has its Satan but the archetype of the malign, of the evil exists in almost every culture and religion. If the serpent tempted Adam and Eve to eat the forbidden apple, then man has been largely relieved of his responsibility and sense of blame. In practice a scapegoat has been created, an excuse which justifies, at least in part, this blame.

THE FATHER - He is the figure, together with his maternal counterpart, who dominates our childhood. The father feeds us, guides us, protects us, he defends us from adults and older children and he accompanies us on our path to adulthood.

He is the first and most important role model for the child, who wants to become, like his father, strong and secure. He boasts about his father, defends him from his friends and puts him on a pedestal. Every child unconsciously desires his father to be powerful and glorious, without fear or flaw, because he must guide, radiate, illuminate and lead us into the promised land (maturity).

But not all fathers correspond to this image. They are often weak, mediocre, full of fears and complexes and so with the age of reason the child overcomes his expectations and harshly confronts reality. If the father's work is not prestigious he is seen as weak.

If the father is not well-educated, nor respected with a significant role in the social hierarchy, then his figure is marred. When this occurs the preadolescent looks for a role model outside the family: a teacher, a political leader or an authoritative figure to believe in.



The archetype of the father is portrayed by all that represents authority: the state, the police, official dignitaries, men in uniform and so on. All who have the power to punish or pardon, to be severe or benevolent. Some see the father figure in the psychotherapist, in the prison director or in a more experienced friend, and thus it is not uncommon to be led astray.

THE HERO



Another archetype found in past or current literature is that of the hero - an extraordinary man capable of exceptional feats and incredible adventures. They are abundant in Greek mythology from Hector to Ulysses, equally in Roman mythology: Muzio Scevola, Julius Caesar.

In 1950's America we find Superman: the hero par excellence and possessor of extraordinary power. His adventures captivated entire generations of Americans. The hero is never evil but is almost always an executioner capable of winning against evil and of defending the weak and the oppressed from the bully.

Yet he is not the only type of hero in existence. The presence of God and a moral code, presuppose the idea of sin and sin bears its own sense of blame and the need to be redeemed. Hence the archetype of the Saviour, the prophet, the Messiah, a heroic but non-violent figure and a revolutionary who won the battle armed only with the word of God.

This figure is also present in most major religions. He is the mediator between man and God, a bearer of a new order. Heroism, splendour, courage, virtuosity and resurrection are intimately linked to the symbol of the sun.

In myths the hero ascends to the sky and is surrounded with light. Like the sun he does not die and if he dies it is only temporary. He is reborn or raised from the dead in order to ascend to the heavens and become eternal.

The hero does not die because he is defeated or because he encounters someone stronger than himself. Generally, the hero dies because he is betrayed. Christ had his Judas, Caesar his son Brutus.

“In the cinema” - states P. Daco - “heroes perhaps die, but they never die in their beds. They are slain in full glory.

Western heroes are often moral executioners: “the public will not let them die, but will accept they are betrayed.” This merely serves to intensify their mourning.

THE FIRE



Fire is another of the great archetypes which in primitive society was, at times, worshipped like a god. Let us not forget that the discovery of fire, or rather the ability to produce and control it, has been one of the most revolutionary innovations in the history of mankind. It has enabled us to cook food, produce crockery or fuse metals.

Above all it symbolizes three things:

1) Heat, not only in the sense of physical heat but also emotional warmth. It is used to express love, passion and rapture. Lovers say to the next one “I burn with love for you”, “my heart burns with passion”.

The Olympic Games begin with the **lighting of the flame**, the symbol of fraternity and love amongst man and it is extinguished when they end. In front of the tombs of our dead burns a small flame to show our love continues after death.

2) Light, which dispels the gloom of the night and wards off wild animals also dispels our fears and our anguishes. Fire is a symbol similar to the sun. And it is a small artificial sun which we can build ourselves. It is often used in magic and religious rituals. It is used to make sacrifices to the gods and it symbolizes life which burns, which continues: the hope which does not die.

3) Purification, in the same way water does, fire purifies, not only materially but also morally. In Medieval ages witches were burned at the stake in order to consume with flames the evil who lived inside them. The Greek warriors burned their heroes who died in battle on enormous piles of

wood. Caesar was burnt in the Imperial Forums on a grand stone altar. The flames were intended to encourage their passage to Heaven.

In Medieval ages the dead were burned in order to avoid the spreading of epidemics. And fire has been used for millenniums in order to disinfect surgical tools or as a means to sterilize wounds.

FEMININE ARCHETYPES THE MOTHER



Mother is one of the most important and powerful archetypes because she dominates the first part of our existence.

For the child the mother is everything: food, guidance, security and protection against dangers. Any young animal follows his mother like a shadow for the effect of imprinting. Without the mother he would have little chance of survival.

Why do children instinctually go into large concrete tubes which can be found in almost all playgrounds in Europe? Because they represent the mother's womb.

In children's drawings the maternal figure is represented by curvaceous lines referring to the mother's breasts.

The archetype of the mother does not only represent refuge and security. It has many other meanings:

1) Femininity, the mother symbolizes everything which gives life or bears fruit: earth, fruit and trees.

2) The unconscious, the maternal womb from where we came and to where we return temporarily with sleep or definitively with death.

Certain suicide cases are no more than the desire to escape harsh reality and return to prenatal bliss and unconsciousness. In fact every man has, unconsciously, a life time nostalgia for time spent in the womb. Who has never had the desire at least once to return to a state of unconscious well-being with neither thoughts nor problems?

The great maternal symbol does not have only positive values, often it is overshadowed. This is why at times distressing emotions emerge from our memories, laden with hostility, bivalent sentiments of love/hate or heavy feelings of guilt.

In fact, not all mothers carry out their job well. At times they are too repressive, at other times too permissive, often they have neither the time nor desire to concern themselves with their children or they only cater for their material needs. The mother should be a safe and friendly refuge so that the child's personality may develop successfully and with total confidence.

However, many mothers are authoritarian, neurotic and often far from their natural role and in this way they cause painful traumas to their children. They create in the child feelings of hostility and diffidence which are then projected onto everything the maternal symbol represents: the unconscious, femininity, the sea, the church.

At other times the problem is different: a child too attached to his mother refuses to embark upon the journey to autonomy and adulthood. Not all mothers encourage this detachment, many adopt unconscious strategies to keep their children close to them in a regime of perpetual dependence. As such the children become insecure, infantile and incapable of becoming an adult or psychologically self-sufficient.

THE WATER



The other great archetype is water. It can symbolize three things:

- The mother, the womb is represented by what constitutes a mass of water, the sea, lakes, river bends and even a well.

Why do we love to relax in a hot bath? Because this reminds us the womb. In general immersion in water reminds us in some way our prenatal experience. This is the same reason why children love playing with water. In a certain sense, it is like the amniotic fluid.

- Purification, not just material but also a moral rebirth. Water washes, cleans and restores life. The image of rebirth in a pool of water is often found in universal legends. Man immerses himself and a new man emerges.

This is a ritual which is not only found in Christianity with baptism but also in many other religious rituals. In India people immerse themselves in the Gange to purify and to reconcile with God. Sick people are immersed in miraculous water to be healed. God sent the Flood to purify the earth and to give new life to humanity.

Myths of the fountain of youth, of miraculous fountains, of sacred rivers and springs are formed due to this archetype.

- Phallus, clearly refers to rain. It is a masculine symbol which falls to penetrate and fertilize mother earth. We should not ignore the fact that sperm, in antiquity a symbol of fertility, is a liquid. This archetype has been, therefore, with the birth of religious ethics, obscured by sexual taboo.

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Archetypes and religions. All religions make ample use of symbolism because they address people's emotions and not their reason. They use the image of God the Father who leads and enlightens the archetype of the mother (in Christianity the Virgin Mary) and the hero figure: Jesus, Mohammed and Buddha.

Some instruments are used abundantly in sacred ritual: water to purify and fire to express love. All rituals are celebrated in a sacred environment such as Churches or Mosques. The religious rituals use sacred vestments in the ceremonies, the ceremonial is almost always impressive and symbolic for example, such as the placing of hands on the head and the sign of the cross made with Holy Oil.

Advertisements amply use many archetypes and status symbols. We are not encouraged to buy a certain car because it has a good engine or because it has an excellent road holding capacity. Rather, we are shown a car (phallic symbol) which shoots rapidly down the motorway cutting through the air, followed by a shot of the warm and welcoming interior (the womb), carrying a beautiful woman (success symbol) in the passenger seat.

The end