

HUMAN INTELLIGENCE

All the previous attempts to define what is giftedness, talent, intellectual precocity, etc., have always been made difficult by the nonexistence of a previous definition of human intelligence. They also have found difficulties in the necessary conjunction, harmonization and consensus between authors of scientific approaches and partial contributions.

In each culture there is an idea of human intelligence, and of what the human being is. As Prof. Marina says, the idea that we have of what is human intelligence is going to determine the idea that we have of we ourselves, and this idea determines what we really are.

A definition of human intelligence of wide acceptance is: "Intelligence is the ability to receive information, elaborate on it and produce effective answers". But this definition does not distinguish human intelligence from animal or from artificial intelligence.

Definitions of human intelligence like "the ability to adapt to the environment" are also not "satisfactory". To an ape, its level of animal intelligence can be enough for it to adapt perfectly to a group of its equals and its environment, or even to feel happy.

Allen Newel, in his book "Unified Theories of Cognition", recognized unanimously by the international scientific community, considers intelligence as "the ability to connect two independent systems: that of the knowledge and that of the aims". Certainly this definition means an important advance, because the human being, in the solving of problems, interacts his knowledge with the goals that constitute the solution to the problem. But this definition forgets that human intelligence is able to collect and to create new information, to propose and to promulgate other aims or goals, to invent new possibilities, to recognize and to judge its own intellectual products, to create its own self.

The psychometric theory of intelligence has not even been able to define the intelligence that it tried to measure. When Binet, promoter of the first test of intelligence, was asked: What is intelligence? He used to answer: "It is what my test measures".

In the end of the psychometric experience we ask ourselves: Why are there so much differences between the psychometric tests results and those of life?

After one hundred years of scientific research, human intelligence and its phenomena have begun to be understood thanks to representation of cognitive processes. It is a qualitative jump that allows us to pass from the mere measurement of what could not even be defined to the understanding of the processes and the phenomena connected with human intelligence, and consequently, to the possibility of an approach to the methods of diagnosis, and the criteria of education, oriented towards happiness.

Cognitive Science has evolved, but it must continue evolving much more. It cannot consider that being reduced to the scope of human intelligence is an impoverishment. Cognitive Science has centered its study on "all the beings who know", "that compute information", "that use representations". (Pylshyn, Z.W.: "Computation and knowledge").

Cognitive Science is based, according to D. Michele: "On Machine Intelligence", in the "systematic theory of the intellectual processes wherever they have been found", starting from the approach expressed by Newel and Simon in "Human Problem Solving" (Englewood Cliffs, Prentice may), according to which, at an abstract level, the human being and the computer are devices of the same type.

Human intelligence reaches planes that animal intelligence or artificial intelligence will never be able to reach. Paraphrasing Prof. Marina we will say that human intelligence is the complete transfiguration of computational intelligence. Human intelligence, in its definition, can be based in the definition of computational intelligence, but man begins creating it and ends up organizing it, controlling it, directing it and transforming it. Because, the human being has feelings, sensations and emotions, in constant interaction with the cognitive system: dreams and loss of interest, distresses and pleasure. Also intellectual pleasure, the ability to recognize itself, and to manage its own limitations, to create new problems, to intuit or to invent new capacities and possibilities. Ability to transfigure itself in freedom by means of will: to determine itself.

For that reason, we conclude by agreeing with Prof. Marina that "human intelligence is the computational intelligence that determines itself".

We also agree with Marina on the need to create a "Science of Human Intelligence", which should discuss not only formal logic, but also of creative logic; not only means, but also aims. Not only reason, but also emotions and feelings, and their permanent interaction. Because human intelligence needs, and is able, to create the "Science of Human Intelligence". If not, it would not be human intelligence.

The development of the brain is not linear but there are key moments in the development of specific mental abilities. The early interactions determine how "it is wired" and how "the brain is interconnected", taking into account the emotional system and its permanent interaction with the cognitive system, the emotions as being crucial for learning, for generating patterns and for molding the brain.

An adequate education, from its early beginning, constitutes the brain architecture, creates new synapses, increases the number of neuronal connections, their quality and functional abilities, the axons' growth, the necessary dendrite branches increase. Human intelligence is can be taught: teachable, and conceivable. This is education's great responsibility.

The development of the brain in highly talented children – as has been demonstrated scientifically- is different, as is the reeducation.

In the considerations of high capabilities of human intelligence phenomena, discussed below, we do not mention aspects like creativity or memory, because starting from the definition of human intelligence like "self-determining computational intelligence", human intelligence is creative intelligence in its own nature, as it is creative memory.

In this approach we can say that human intelligence is an emergent reality, able to develop itself, until surpassing the daily determinisms.⁴⁰

It is the ability to not only know what things are but also to intuit and discover what they can be. It is the ability to assimilate inputs giving them meaning. It is creating perceptive possibilities. It is to know how to think but it is also the freedom and the value of thinking, and the will to continue thinking. It is the ability to know, to recognize and to address our mental activity to fit it to reality and, if we want, to overflow it. It is, the ability to address the mental activities, and through them, the behaviors.

It is the ability to create itself, to constitute an intelligent self, to recognize itself, to ask itself and to rectify itself in this creation, to activate the self-correction of the possible processes of heterocronica maturation. It is the developmental ability of the met cognitive processes. These imply, will, freedom, and ethics, as the science of human aims. And it is to create human dignity as its supreme project, that, in the social dimension of the human being, is to create the true social peace, fruit of justice. Because the existence of human intelligence in the cosmos answers an aim.

This conceptual base - which needs to be developed - will allow us to understand, determine and create our own personal and social reality. To know and to understand high talent as the highest expression of human intelligence. Carl G. Jung said in 1947: "the exceptionally gifted children are the most beautiful fruit of the human tree", and added: "at the same time they are those that are in greater danger, because they hang off its more fragile branches which frequently break". Through scientific understanding we will be able to make possible their right, the same as everyone else, to happiness and having a worthy life.

There is still a way to go, since that initial concept to the current monolithic intelligence multidimensional paradigm, and reach their full development. We must recognize and address its supreme incarnation in "the most beautiful tree of humanity" in the words of the disciple of Freud, Carl Young: Girls and gifted children, to get longer "break", and for its high capacity can be developed in order to your happiness and benefit society as a whole. In short, to build true peace.

Cover Art: *"The supreme project of human intelligence: To construct true peace, fruit of justice ". Under the light of intelligence, from an open book that symbolizes an opened constitution, held by people, not by a mass, the three pillars arise independent: Legislative, Judicial and Executive powers. In the dawn of a new day and in the placidness of a sea that is illuminated, dreams and hope in the future are symbolized. It is then, when the balance of the scales of justice goes to drink the true peace in form of stylized doves. But, in the dark left bottom corner, where the light of intelligence does not reach, and under dense clouds, two witches: the ignorance and the arrogance continue interacting, weaving their networks: the meanness and maliciousness*