

## THE ANTHROPOLOGICAL TURNS OF C. G. JUNG AND ALEXANDER LURIA AND THEIR CONTRIBUTIONS TO EDUCATION

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### INTRODUCTION

At the beginning of the twentieth century, anthropology was undergoing major transformations, the hierarchical paradigm that until then had proposed a vertical scale of customs, beliefs, and modes of thought was gradually being deconstructed and overcome in the face of the advent of the works of Franz Boas, Margaret Mead, Claude Lévi-Strauss, and Gregory Bateson. In this same movement, two exponents of Psychology, namely, C. Jung and A. Luria, contributed a lot – each in his field – to the rise of a horizontal view regarding the various modes of human thought. The reflections contained in his anthropological writings, derived from the deep study of collective psychology and contact with native peoples, are a fruitful source of provocations and subsidies for the construction of an understanding of human cultural nature that takes into account the valorization of knowledge and customs and their historical-social aspects. That said, the objective of this article is to demonstrate its possible contributions to a model of democratic, humane, and cultural education.

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## INTRODUCTION

### THE RELATIONSHIP BETWEEN NATURE, KNOWLEDGE AND CULTURE

Henri Wallon proposes that all knowledge is, at its core, an attempt to resolve the contradictions of the world, particularly the contradiction between order and chaos. This assumption links knowledge more intensely to the basis of reality, forcing it to adhere to its laws and mishaps. In this dimension, nothing can exist without being a constant response to the actions suffered, and nothing persists without being a victory over conflict, thus establishing a new balance, a new state that entails new ways of understanding and existence. To demonstrate this property, we can turn to mythology or religion, where we will find the recurring theme of the confrontation between the forces of life and mortality. These mythical narratives come from the interaction of the human psyche with the inevitable and constant tensions between the living being and its environment, which unfold in a sequence of actions and reactions that point to life or death. The results and vicissitudes of this chain of conflicts depend directly on the possibilities created through human organizations or structures, that is, they depend on the exercise of the human faculty of modifying the environment, either to sustain itself through the resources of the environment or to perish in the process. It is in this dialectical game between culture and the environment that the symbolic-cultural coordinates are reinvented and revived in social relations and ontogenesis. (2015)

This assumption raised by Wallon applies to any dimension of knowledge, from the first discriminatory perceptions made by the joint work of the neural apparatus and the sense organs in their relationship with the world to the complex formulations of modern science, passing through mythical and symbolic conceptions of the world. As an example, let us think a little about the trajectory of a myth: For a long time, in studies on the history of culture and mythology, the paradigm prevailed that the original tales came from the myths of nature. The Olympians and their "relatives" were believed to be mere personifications of the phenomena of the world and existence, such as the sun, the night, the moon, the dawn, passion, fear, anguish, and other such elements. Moreover, according to these theories, all the stories about these entities were allegories of natural transformations. The heroic epics, the great legends, and the sagas, in turn, only placed these universal narratives in real places and humanized them, associating them with heroes of the past, more powerful than the contemporary men who tell and write these tales, but still human. These general narratives would therefore be reduced over time and would become folk

tales, known in Europe as (2015) (Martorell, Papalia, & Feldman, 2020)(Engels, 2020)(Durand, 2001)*Märchen*, children's stories. Despite containing its sophistication and qualities, this type of explanation is not true or consistent. The theories of this current assume that there is no such thing as mythological deities. From this perspective, mythological figures would not have their personality; being nothing more than entities, astronomical, meteorological, mineral, or climatic objects that have become characters. It is therefore worth asking where the personality of these figures comes from. The answer lies in one place: humanity. Certainly, the gods derive their colors, beauty, strength, and other predicates from the graces present in nature. In this sense, indeed, the ferrous oxide, so abundant in the atmosphere of Mars, shining in the dark terrestrial sky inspired the bloody aura of the god Ares. However, it was still humanity that transferred the characters of the celestial body to the god of war, the war itself was granted to him by man, and the same was done about personalities: they are also gifts of humanity. It is from the human spirit that the deities receive from the metaphysical world their share of divinity. (Tolkien, 2013)

To better scrutinize this quarrel, we can resort to any well-known myth. Take *Thórr* As an example, the Scandinavian god whose name means *thunder*. It's not hard to take your mighty hammer *Mjöllnir* like the lightning that crackles in the eyes just before the thunder. Unwary thinking might well reduce both figures to simple caricatures of these natural phenomena. But *Thórr* He has a complex and deep personality, as well as charismatic, which is not present in the lightning or the thunder, although he shares some details with these events, namely, the sparkling and scarlet beard, the violent temper, the powerful voice, and his destructive and untamable force. Even so, there remains a hiatus in the inquiry into what came first: anthropomorphic allegories about thunder that reside in the mountainous confines, splitting stones and setting trees on fire; or stories about a red-haired and irascible farmer, a taura, not very wise, but of implacable strength – a figure, please, very similar to the *bændr*, northern farmers who had *Thórr* as your primary deity? The emptiness of such an inquiry is a consequence of the virulent conclusions that derive from each of the options posed. On the one hand, there is the reduction of the figure of *Thórr* to the image of the peasant, of the other, an expansion of the image of the *Bændr* to the figure of *Thórr*. Faced with this Manichean bifurcation, Tolkien chooses to affirm that the image of the (2013) *Bændr* appeared at the same moment that the thunder acquired personality, features, and voice. That is, "There was a distant roar of thunder in the hills every time a storyteller heard an angry farmer" (p. 24). The image of *Thórr* is, therefore,

one of several possibilities of immediate constructions of the psyche, which are based on the phylogenetic structure of the nervous system and unconscious patterns of perception, Jung called these constructions archetypal images. This type of image has an unconscious origin and emerges and acts as a mediator between humanity and nature. Even though it has phylogenetic roots, which determine the aesthetics of an image, archetypal, that is: the content it wears, has its foundations in ontogenesis, that is, in the cultural history of the individual. In this way, we can say that the images of (2012a) *Thórr* that emerge in an attempt to understand the thunder and fury of the *Bæendr*, are, so to speak, products of human archetypal activity mediated and excited by the materiality of culture and nature, by the contact between one psyche and another. Using these examples and digressions we can understand how the higher faculties of individuals are transformed in the relations in which they maintain with the cosmos. But humanity is not only a product of the external environment, by placing itself between the "divinity" and the gods, the human being emerges as a living agent in the constant process of transformation of the environment. (Jung C. G., Considerações teóricas sobre a natureza do psíquico, 2013a)(Luria, Diferenças Culturais de Pensamento, 2019)

## **METHODOLOGY: THE ART OF ORGANIZING CONTRADICTIONS**

This anagogic principle explained here is what sustains the most fundamental aspects of the construction of knowledge and understanding of the world since the formation, establishment, and communication of knowledge is also an archetypal and projective phenomenon insofar as it resorts to images and representations that have a symbolic nature. That is, we dialogue with the world to understand it, walking (Pauli, The Influence of Archetypal Ideas on the Scientific Theories of Kepler , 1994) *Pari passu* From sensible certainty to perception and concept formation, in this process, the events of nature are first perceived according to magical forces or substances, attributed to the actions and wills of spirits, as well as heroes and gods. These images are refined in contact with rationality and culture, becoming the foundations of religions around the world and their respective worldviews and mythologies, this type of image dynamic crosses the entire culture, reaching modern science at the roots of irreducible concepts that are difficult to assimilate, such as (Hegel, 2012)(Jung C. G., Considerações teóricas sobre a natureza do psíquico, 2013a) *number, psyche, life, Energy, Atom* and the already obsolete *ether*. Such

images, as they enter the scientific discourse, are gradually reduced and become concepts of science and academic language.

It can be said, then, that knowledge moves in a dialectical movement through a conflict, a contradiction, constant between what is known, what the object is, and what is discovered, that is, a succession of leaps from the thing to abstraction and from abstraction to the thing, which is actualized in each new movement from the conflicts present in the thing. It is precisely from these movements described in this topic and the previous one that the contradictions between the reality of the original peoples and the main anthropological investigations traced in the nineteenth century will be analyzed here. It will also be demonstrated how Carl Jung and Alexander Luria, each in their epistemological project, were able to perceive these contradictions and overcome them. Bringing to light feasible constructions about the customs and potentialities of native peoples, thus generating contributions that cross general psychology, anthropology, mental health, and education. (Gadotti, 1995)

## **PROBLEMS ABOUT BICYCLES**

Such psychological principles also apply to the teaching and assimilation of scientific knowledge, that is, despite their common archetypal origin, knowledge is molded according to the culture that surrounds the subject. To demonstrate this dialog, in the mid-1930s, under the initiative of Lev Vygotsky, Alexander Luria and a team of researchers presented to the nomadic and peasant populations of regions of Kazakhstan, Uzbekistan, and Kyrgyzstan a series of problems involving generalizations, categorization, and abstract logical reasoning. The central objective of this endeavor was to understand how cultural structures relate to thought, language, perception, and higher symbolic representations. During the survey, respondents often refused to answer or even ponder logical operations. For them, the lack of practical experience with the proposed situations – reports Luria – was a good justification for evading the questions. However, when presenting problems imbued with practical situations, the researchers were well-accepted and the questions seemed more palatable. It is worth highlighting here some segments:(2017)

Subject: Illi-Khodzh, twenty-four years old, an illiterate woman from an isolated village.

The following problem was given:

E: It takes thirty minutes to ride to village X, and a cyclist rides five times faster on a bicycle. How long does the cyclist take?

S: My brother in Dzhizaz has a bicycle, and he goes much faster than a horse or a person.

The problem is repeated:

S: Five times faster... If you go on foot, you get there in thirty minutes, but if you go by bike, you get there much faster, of course, probably in a minute or two.

(All reasoning was outside the conditions of the problem.) (Luria, 2017, p. 186)

This fragment, as well as many others contained in the work, demonstrates a certain resistance of the villager when dealing with a problem formulated about a foreign situation. However, his difficulty in solving the given situation has nothing to do with the cognitive capacity required to operate (in this case, ), given that, as soon as he proposed a concrete version of the same problem, namely, when asked to divide 30 dumplings among five people, the task was completed immediately.  $\frac{30}{5}$  (Luria, 2017)

The same phenomenon occurred in the interview with Nurmat, an almost illiterate resident of the village of Yordan. She was asked the following question: "It takes 20 hours to walk to Dzhizak, or five times faster on a bicycle. How long would it take a cyclist?" The interviewee does not reach a concise answer even with the help of 20 buttons as an arithmetic resource. Their answers revolve around such a model: "Twenty hours walk to Dzhizak, and five times faster on a bicycle... I can't tell you all that. Maybe ten o'clock? I know that by bicycle is faster than by ox cart. It would probably take me ten hours to get there." When asked how it achieved such a result, Nurmat replies: "I guessed it." However, when asked to divide 30 rubles by 6 people; She built 6 stacks with 4 buttons each, and eventually topped up the stacks with the protruding buttons, demonstrating that "a simple division operation using external assistance" is within her capabilities. (Luria, 2017, p. 188)

The lack of skill of the participants when dealing with mathematical problems of an abstract order is located by Luria in three fundamental categories: the abstraction of problematic conditions derived from foreign experiences, the construction of specific reasoning about the limits of a closed logical system and, finally, the inclusion of conditionals that operate with abstract mediators and create barriers to logical operations. The difficulties arising from these categories lead the participants to exchange logical operations (of which they are fully capable) for divinations that go beyond the boundaries of the problem. When the same problem is built on concrete references, the interviewees quickly solve the demands. That is, the fundamental coordinates of organization and computation of the inhabitants of the villages were directly linked to the material guidelines with which they lived. (Luria, 2019)

## PRE-LOGICAL THINKING AND COLLECTIVE REPRESENTATIONS

This a priori aversion to purely logical, discursive, and foreign reasoning had long since been recorded in the anthropological writings of Lucien Lévy-Bruhl. In (2015) *The Primitive Mentality*, Lévy-Bruhl lists and comments on a series of reports of missionary incursions to America, Africa, Greenland, and Australia. Often, in these diaries, the reporters expounded on the difficulties presented by the adult natives in dealing with abstract issues, while the children quickly learned the abstract logic games. In this sense, the anthropologist comments that:

It is not a [question of] inability or impotence, for those very ones who show us this disposition of the primitive mind expressly add that there are among them "minds as capable of science as are the Europeans," for we see Australian, Melanesian, etc. children learning as easily as French or English children what the missionary teaches them. (Lévy-Bruhl, 2015, p. 12)

Lévy-Bruhl's anthropological system is based on the difference between logical consciousness and pre-logical reasoning. While the first category explains the world based on logical-causal relations arising from previous experience, the second form of thought is based on its own and unverifiable laws that vehemently deny the most tangible relations, abdicating even simple chance as a link between events, its answers are definitive and loosely organized. Pre-logical thinking is based on what the anthropologist calls collective representations, that is, psychic forms constituting a structural network that, in original societies, sustains all human thought and its multiple relationships with nature, thus generating ideas shared by the community whose veracity is granted a priori, such as the action of spirits, curses, spells, witchcraft, shamanisms, etc. (2015)

The evolutionist-cultural paradigm, very popular in the mid-1920s, preached that pre-logical thinking was a rudimentary or inferred variant of conventional thinking, although empirical facts such as the effectiveness of learning in original children attested against this thesis. This type of exposition was present in the most important reference work for anthropology at the time, namely, the treatise (Luria, 2017) *Primitive Culture*, by Edward Taylor. In this writing, Taylor evidences the existence of "primitive man" hidden in some customs of the rural communities of the "civilized" world. And, in an exercise of comparative anthropology, demonstrates the material similarities between the most diverse so-called "primitive" peoples of different cultures around the world, thus overcoming the idea of a supposed racial influence on the development of cultures. Despite his successes, Taylor, however, sins by coining a scale of cultural and civilizational levels in which pre-

logical reasoning is one of the inferior points, thus conferring on the worldview of the original man the status of equivalence about infantile thinking, attributing to it a certain evolutionary retardation. (1871)

Lévy-Bruhl, on the other hand, points out that the abode of astonishment about pre-logical thinking is the observer's gaze. If we had the opportunity to witness the "primitive" mind operating in its environment, that is, in its appropriate contexts and institutions, it would appear completely reasonable and normative about the coordinates over which it operates. In addition, in rural activities such as foraging, hunting, migration, localization, and planting, this mind would prove to be a sophisticated and satisfactory device for such demands. What justifies, however, the absence of thinking with logical-causal categories in the worldview of these peoples is the harmony between pre-logical thinking and collective representations. That is, Levy-Bruhl believed that the original cultures maintain a hermetic system, responsible for the (2015)*status quo* through their networks of beliefs.

Levy-Bruhl's work was pioneering in bringing to light the qualitative particularities of primitive thought and the historical character of logical processes. His writings provided the anthropological rudiments for the development of the main psychological theories of the first decades of the twentieth century, which tried to overcome the simplism embedded in theories that saw the human mind as a product derived from natural selection, starting to contemplate it as the result of a complex socio-historical development. Lévy-Bruhl's analyses, however, fail to separate categories that are closely related to each other; By determining that thought in the early historical stages derives exclusively from collective representations, the anthropologist dismisses the intrinsic historical and ensemble development of thought, with activity and cognitive processes. That is, thought is a historical product of the historical conditions of activity and cognitive processes. Now, there is no lack of examples in the anthropological collection of communities of the same genesis that have their behaviors and beliefs altered according to the course of history. In this sense, the free and carefree English of the Elizabethan period contrasts greatly with the modest Victorian, as well as the atrocious voracity of a Viking in no way consistent with the customs of the current Norwegians. That said, we can agree with Alexander Luria that "If primitive people thought according to the laws proposed by Lévy-Bruhl, they would hardly have been able to survive for a single day", because these laws depend on a constancy that does not exist in nature, especially in the original communities. (Luria, 2017) (Luria, 2019)(Boas, 2004)(2017)(p. 25)

In this same critical sense, the anthropologist and psychiatrist William Rivers inverts the logic of Lévy-Bruhl's accounts to demonstrate that such narratives indicate that the original man and the "civilized" man think according to the same logical assumptions, with the difference that the former generalizes the facts of the external world through different categories from those we use. (1926a)

We analyze an object, say a human being, in several parts, its skin, hair, head, torso and limbs, internal organs, etc., and consider these samples to have more or less independence of their own, so if we cut a portion of someone's hair, it becomes a separate object. We do not care about any necessary connection between the person and his hair, except that both were once part of a recognized whole as an individual. Primitive man indeed has a system of analysis similar to ours, but his category of individuality is differentiated, because he believes in a connection between the parts and the whole that had existed before. The mere separation between a man and his hair, even if they are destined for completely different places, makes these components nothing less than parts of a previous whole, of the same individual, and, pragmatically, he [primitive man] believes that by intervening on one part even if separated from individuality, he can impact the other. (Rivers, 1926a, pp. 37-8 - Tradução nossa)<sup>2</sup>

The thinking of native peoples, therefore, does not reflect any inferiority and is not even based on different beliefs. By understanding the real conditions of survival of these peoples and the language used by them, we can then understand the foundations of their categories and generalizations. That is, we can contextualize their thoughts and customs socio-historically. (Boas, 1938)

## **THE IMPLOSION OF PRE-LOGICAL THINKING-AND FUNDAMENTAL DIFFERENCES**

Aiming at a way of honestly knowing the original man, Jung, in the same way as Luria and Boas, implodes the concept of pre-logical thought by stating that the term is a mere consequence of the biased view of a Western man who, when observing the original from a distance, categorizes him without properly understanding him. Such a gap in understanding makes the native's explanations sound absurd to the ears of the unwary anthropologist and the missionary whose main objective is conversion. What happens –

<sup>2</sup> We analyse an object, say a human being, into various parts, his skin, his hair, his head, body and limbs, his internal organs, etc., and we regard these products of analysis as having a more or less independent existence, so that if we cut off a piece of hair it becomes a separate individual object. We have no idea of any necessary connection between the person and his hair, except that they once formed part of an object which we regarded as an individual. It is certain that primitive man has carried out a process of analysis similar to that of ourselves, but his category of individuality has remained different from ours in that he still believes in a connection between the parts of what was once a whole. The mere separation of a man and his hair, so that they come to occupy separated regions of space, makes them no less parts of the same individual, and, on the practical side, he believes that by acting on one part of the separated individuality he can act on the other.

Jung explains – is that explanations differ only in their assumptions. If the so-called civilized man were persuaded of the presence of spirits, ghosts, enchantments, magic, and other supernatural forces to the same extent that the original ones are, he would not have recourse to logical-causal explanations as the primary foundation for understanding the events of nature, since mystical explanations would sound perfectly plausible to him. The original man is no more or less logical or illogical than the Western man, and the term pre-logical is more linked to an inherent difficulty in understanding the tribal man than to the epistemic value that it claims to carry, that is, the real and specific qualities of the original worldview. What differs between the modes of thought is, as already stated by Rivers and Luria, nothing more than the set of assumptions that foster them, they are merely distinct fundamental hypotheses, arising from specific historical-material conditions. (2013b) (2017)(1938)(1926a)(2019)(Jung C. G., 2013b)

For the original man, everything is part of his sensible world, when something escapes normality, this cause must be supernatural, if lightning strikes a house, it is because a sorcerer used his powers to do so. And there is nothing that cannot be explained by this system. We can say that they are pragmatic, if the explanation is given to them, then it is enough and life goes on. If we look more carefully at ourselves, we will realize that we act in the same way, that is, we do not think much about the precepts of our explanations. If for the originator the cause of an illness lies in partially known witchcraft, for the Westerner this cause can only be attributed to some pathogen of which he also knows little. (Jung, 2013b)

We don't differ much in moral precepts either. There are tribes in which treading on the shadow of a companion is a mockery, in certain hunting communities the slaughtered animal must be skinned with a stone of fire, and this is a sign of respect for the hunted. In the same way, we also have our strange customs, our little ethics without much justification: it is disrespectful to have lunch wearing a hat, as well as to greet a person with a cigarette in his mouth, it is impolite to put one's elbows on the table and cut the lettuce with the knife. There are reports of kindness between headhunter Indians and anthropophagous, it is also known that honor is a lack of them, they qualify as evil but we also qualify as such, they feel and do good as much as we do. The ethical functions are therefore the same, the variations that occur in customs reside in the forms only. (Jung, 2013b)(Staden, 2021)

Certain currents persisted in anthropology that considered that the original individuals had more refined meanings or were even different from those attributed to civilized man. In this case, what occurs is a professional differentiation in the senses of orientation, hearing, and vision. In other words, it is a simple matter of training and improving daily activities. Much has also been discussed about concentration and reasoning, and what observation has shown is that when confronted with topics that escape their expertise, the original individuals take some time to think and sometimes offer somewhat clumsy answers. In these episodes, the supposed inability to abstract and concentrate is only an impression of the observer, as anyone forced to focus on something that does not belong to their world or does not arouse their interest will face difficulties in maintaining attention. In this sense, it is worth checking out the report of W. Rivers: (Jung, 2013b) (Rivers, 1926b, pp. 51-2 - Tradução nossa)

In my investigations into the beliefs and customs of native peoples (including Malaysians, Polynesians, Papuans, Australians [Aborigines], Dravidians, and Nilotic Africans), I have never found any absence of mental concentration, since the interest of the interviewee is aroused, not only in matters of perception and memory but also in the context of severe intellectual effort. Quite the contrary, when the interest of the Malaysians or Toda was aroused, I was the first to fail in mental concentration. Time and again, a conversation sustained not for a minute or two, but for three hours or four brought me into a tone of exhaustion and mental incapacity which I had rarely, if ever, experienced in the most complex conversations I had in my surroundings, and my companion remained alert and enthusiastic to the end. Seemingly ready to continue the subject indefinitely. Someone may object that in such conversations I was trying to understand beliefs, feelings, and practices dramatically different from my own, also trying to fit the pieces of a highly complex enigma together, while my informant was at ease in his territory. In another way, I warn, however, that the role of my informant in this context is the same as that of the teacher who carries the most tiring task, that is, trying to make the other understand principles which for him are elementary.<sup>3</sup>

Throughout his expeditions to Africa and America, Jung describes situations similar to those reported by Rivers. In one of his exhibitions, Carl Jung claims to have shown a

<sup>3</sup> In my own inquiries into the beliefs and customs of lowly peoples (including Melanesian, Polynesian, Papuan, Australian, Dravidian and Nilotic African), I never found any lack of mental concentration, once the interest of my informant had been aroused, not merely in matters of perception and memory, but where severe intellectual effort was required. On the contrary, when the interest of Melanesian or Toda is once awakened, it is I who have been the first to fail in mental concentration. Over and over again a conversation, sustained not for "a minute or two" but for three or four hours, has reduced me to a pitch of mental exhaustion and incapacity such as I rarely, if ever, reach as the result of the most complex conversations at home, my companion remaining alert and enthusiastic to the end, apparently ready to continue the conversation indefinitely. It may be objected that in such conversations I am trying to comprehend beliefs, sentiments and practices widely different from my own, and am seeking to fit together the pieces of a highly complex intellectual puzzle, while my informant is on his own ground all the time. On the other hand, it must be remembered that the role of my informant in such case is that of a teacher carrying out the most wearisome of all tasks, in that he is seeking to make another understand matters which seem quite clear and simple to himself.

group of natives, whose social function was hunting, a series of newspapers illustrated with clearly recognizable human figures. The natives, however, only "deciphered" the figure after much exposure. They handled and investigated the images for several minutes at a time, until one of them circled an image with his finger and said: "They are white men!" (p. 63), everyone then celebrated as if a great swear had finally been solved. In another episode, Jung says that he tried to engage in an abstract but simple conversation with a native, who showed some irritability and difficulty in maintaining concentration for more than two hours. And on a later occasion, the native sustained his concentration for hours at a time by participating in a hunt. The same goes for the sense of direction, which in the originals seems to be a supernatural gift, what occurs, however, is a strong professionalization arising from a social history in which orienting oneself in the jungle and the savannah is crucial for daily life. (2013b)

We know from General Psychology that the perceptual process is the result of a complex network of psychic phenomena, because, even if the perceptive apparatus captures the physical stimuli of the environment, the construction of the perceptual image and its appropriation and interpretation by cognition, are processes crossed by psychic activity and the development of the psyche in ontogeny. It is possible to state, therefore, that perception is a psycho-physiological phenomenon crossed by history and culture, this crossing can influence the final result to a greater or lesser degree. Over time, the advent of anthropological and psychological experiments reinforced the validity of this thesis. We will expand on this discussion in the following paragraphs. (Palácios, 2004)

## **THE SUBJECT IN THE WORLD AND CULTURE**

All perception stems from an associative process inherent to the devices of language, that is, to appropriate something unprecedented that is presented to us, we resort to familiar mediators acquired throughout our ontogeny. When this assimilation is not possible, given the novelty, strangeness of the object, or complexity and numinosity that go beyond the dimensions of consciousness, the subject naturally resorts to the symbol as a semiotic resource. In a nutshell, it can be said that the symbol is the best way to allude to something that is not yet well known, something unconscious, complex, or unknowable. Ontogenesis and phylogenesis, species, and culture are intertwined in the perceptual process. For example, it is known, through physiology, that the human eye distinguishes about two or three million colored hues, however, a well-literate subject will have in his

lexicon about 20 or 25 names by heart. This occurs because the human perceptual process of assimilation of an unprecedented tonality begins with the discrimination of a primary property, and then this property is associated with a chromatic category. The same process occurs in the field of geometric forms that, at first contact, are rarely associated with ideal figures. What occurs, however, is the discrimination of an essential attribute of form, which is then added to the most similar geometric category, and this category, in turn, can come from a practical reference. The perceptual product is, therefore, the result of the collision between the physiology of the sensitive apparatus and the historical-material crossings of the subject that act on the psychic interpretation. For example, the peoples who inhabit the Arctic have in their native language at least a dozen words that concern the different shades of white, this myriad of words refers to the various types of snow, distinguishing them according to their properties and functions. There is robust snow, clean snow suitable for consumption, solid snow, used in igloo construction, shifting snow, etc. These are facts of practical importance. On the other hand, the language of these people has very few words for variations of red and green, colors of little relevance in their daily practice. (Luria, *Diferenças Culturais de Pensamento*, 2019) (Jung, *Definições*, 2012b) (Luria, 2017)

In communities where carpentry plays a central role, villagers readily distinguish detailed geometric concepts, such as different types of angles, curves, and lines. On the other hand, in communities with different activities and conditions, this type of stimulus is almost imperceptible. Luria's experiments in perception and cognition with the Kazakh and Uzbek peoples revealed that, among the villagers interviewed, only teachers and students named figures using school terms such as "circles," "squares," and "triangles." This same group also named figures constructed from discrete and incomplete variations of circles, triangles, and squares, using expressions such as "something similar to a circle" or "something like a triangle". On a few occasions, they resorted to specific names such as "ruler" or "metro". The group of illiterate villagers, however, often used concrete names to identify the figures: to circles, words such as "plate", "bucket", "clock" or "moon" answered. For incomplete circles, they used "moon" or "bracelet"; the triangles were called "tent" or "amulet"; and, finally, the squares were categorized as "windows", "mirror" or "house". Figures composed of series of dots or crosses were often called "stars". (2017)

It is worth resorting to another example from the field of investigations in the psychology of perception. It is well known that every healthy human being is

phylogenetically capable of perceiving and recognizing a face. Such a process occurs in a very ingenious way: once the eyes, nose, and mouth are identified; the psyche automatically produces the natural convexity of the faces. This illusory mechanism is responsible for the *Illusion of depth on concave faces*, which consists of the perception of a convex face even in front of a concave representation. If the tools for the perception and recognition of a face are given phylogenetically, the resources for differentiating between one face and another are built up in the course of ontogeny. We perceive this construction in the impression that all faces are equal when we need to identify people of a different ethnicity from ours. We call this phenomenon (Quaglia & Fukusima, 2006) *all look alike*. This specific type of differentiation is refined through subsequent exposures to the same or similar stimuli, that is, as the subject lives with a new ethnic group, he gradually learns to discriminate the different faces. (Vizioli, Rousselet, & Calsara, 2010)

These examples demonstrate that the contact between man and nature is the primary stimulus to produce an image of understanding. Since the psyche is intentional, it will therefore try to understand – either consciously, using a cognitive device, or unconsciously, through the symbol – everything that is presented to it. Thus, images and understandings are updated with each new contact with the world and with each new mediation, in a correspondence between the individual, world, and society. The fundamental faculties of organization, of phylogenetic origin, establish the first contingencies so that, in contact with culture, perceptions are transformed into a breadth of new understandings about the world. It is in the dialectic between the phylogenetic apparatus and the mediators obtained in ontogeny that knowledge is constituted. (Durand, 2001)

## FOR AN EDUCATION FOCUSED ON CULTURE

The understanding and appreciation of this dialectical game between phylogenesis and culture favors education to the extent that it invites the student to participate in the world as a connoisseur and researcher. Based on this understanding, nothing is erased. The history of the learner is intertwined with what will be taught and the student ceases to be a mere assimilator and, later, a reproducer in the evaluation process, to then insert himself in the logic of teaching as a full participant who is capable of transforming his acquired knowledge into scientific knowledge. Moreover, this type of practice removes from scientific knowledge the ethereal aura of unattainable practice, which had been artificially

imposed on it, and then relocates it again in the world as a datum of nature and also of culture, now of a culture that is both scientific and participatory, which creates mediations between the student, the content of books, The world and society. (Khan, 2011)

The paths of Jung and Luria demonstrated, although from different epistemological perspectives, that there is no immediate incompatibility between original and scientific thought, and that the supposed difference in thoughts is nothing more than a difference in the way of being in the world resulting from contact with the surrounding environment. And yet, as Luria demonstrates in his experiments and Jung in his dialogues, the different modes of thought are perfectly intercommunicable and interchangeable. In this way, nothing should be destroyed in the educational process, but rather assumed – or transformed, if you prefer – into a game in which previous knowledge will be transformed into scientific knowledge that now, due to its transformations throughout teaching and study, has historical value for the student. That is, the student not only learns but recognizes the history of his learning, thus knowing where he started from, what he knew before, what he believed he knew, and where the aspirations of this new knowledge point. Becoming an agent of a truly democratic education. (2013b)(2019)(2019)

### **THANKS**

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