

## *The Problem of Dualism: The Self as a Cultural Exaptation*

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### **Abstract:**

Human mind has undergone a complex evolution throughout the history of our *genus, Homo*. The brain structures and processes that make this mental activity possible have been the result of a series of evolutionary patterns not only biological but also cultural, so it is possible to assume that consciousness did not emerge with the same characteristics in our predecessors. One of the most distinctive features that reflects the conscious image of the archaic man is the absence of a dualistic interpretation of reality. This apparition stem from our analytical mind as an exaptation, commonly assigned to the activity of the left hemisphere which is attributed to play a greater role in linguistic activity.

This paper introduces the idea that, along with other abilities such as linguistic predisposition, spatial perception and pattern recognition, human beings are also born with an innate tendency to interpret and represent the surrounding world in antithetical terms, that is, in antinomies. The idea of Self as an exaptation arises from the cultural development of our species closely influenced by the ripening of our cognitive structures and the evolution of human natural language. This illusory perception of a Self also conditions scientific activity, giving birth to a new form of knowledge that attributes a new value judgment to man and life.

**Keywords:** antinomies, consciousness, dualism, exaptation, self

## The Tao and the Ten Thousand Things

In *Tao Te Ching*, Lau Tzu wrote:

The way that can be told is not the eternal Way. The word that can be spoken is not the eternal Tao.

Unnamed, It is the source of heaven and earth. Named, It is the Mother of all things. He who is ever without desires sees Its spiritual essence. He who is ever under desire sees only Its limits.

These two, differing in name, are the same in origin. They are the mystery of mysteries. This is the door of spiritual life (Lao Tzu, 2016, p. 17).

In Tao, the “Mother of all things” is the beginning:

The Way produced the One; the One produced the Two; the Two produced the Three; the Three produced all beings (Lao Tzu, 2016, p. 47).

As for the Pythagoreans the inception was the *monad* (from the Greek μονάς, “unity”), Lao Tzu conceives Tao as the supreme unity and from it the dualistic division of “heaven and earth” is reached. Thus, unity prevails as the principle of its philosophy, as a sign of tranquility and stability, while duality is difference, ambiguity and uncertainty. That is why each of the “all beings” are composed of contradictory principles that are an essential part for themselves. The “all beings” are born from that division and reach their stillness on return to their root in the extreme void, the Tao. The regress to the origin supposes to overcome this division. In Taoist myth, this division depicts the evolution of human consciousness, endowing man with an analytical, sequential, and logical mind that substitutes myths for reason as the true engine of knowledge.

## The Self as a Cultural Exaptation

The idea of Self seems to be conditioned by socio-cultural factors. For some authors, this is not an innate idea, but a notion that has had an anthropological development:

The idea of “self” (*moi*). Each one of us finds it natural, clearly determined in the depths of his consciousness, completely furnished with the fundamentals of the morality which flows from it. . . . My subject is entirely different, and independent of this. It is one relating to social history (Mauss, 1985, pp. 1–3).

To cite a few examples, in Canada, the *Ojibwa*, an indigenous tribe of nomadic hunters that live in the South of Lake Winnipeg, do not discriminate between human and animals, as well as between myths and reality, or the natural and the supernatural. In Africa, among the *Bantu*, there is no idea of Self as an independent reality but the human is intimately linked to the family and ancestral spirits forming part of a chain of vital forces. In Oceania, the *Gahuku-gama*, a tribe that lives in the Easter Highlands of Papua New Guinea, perceive no difference between the soul and the body, as well as between the individual and the group. The same happens with the *Bimin-kuskusmin*, a community that inhabits in the mountainous region of the West Sepik, which do not distinguish between spirit and matter. In Micronesia, the *Ifaluk* also do not possess such distinction, just as they do not distinguish between the conscious and unconscious mind. As in different societies, different religions promote different interpretations of Self. In West, the distinction between an egocentric Self and the rest of the

world is very accentuated and the individual is seen as a separate entity from the rest of the physical world. On the other hand, in East, in philosophies like Buddhism, the perception of Self is understood as an illusion since nothing is permanent. In Hinduism, the soul, or Self, is not something separate but together with Brahman, the universal consciousness, both constitute the unity of the world. And in Taoism, Yin and Yang are not antinomic principles as they are understood in West but they are complementary.

From an anthropological view it is known that in primitive human communities there was a conception of the subject, or Self, essentially sociocentric, tied to the clan or tribe and, of course, much less egocentric than in modern societies. In accordance with Jung, for the archaic man everything is animated in the sense that everything that is observed possesses a soul (Jung, 1970). This primitive mentality would be nothing more than another way of apprehending the world. It would not be so much to know the world in logical-analytical terms, but to apprehend it emotionally, to unite mystically with it. It is for this reason that in primitive communities it is difficult to trace the contours of Self as well as to define the boundaries between human and nature, which can be so strong as to almost completely annul the differences that sensible perception finds in the various forms of existence.

For Cantoni, both two worlds, the emotional and the logical-analytical one, coexist in the modern man:

Not only does participationalist and mythical thinking continually penetrate in scientific and rational thought, and rational thought confers theoretical form to myth, but in the end both visions give us, on the one hand, the dry and scaly universe of mathematical and, on the other, the irresponsible universe of emotion and fantasy. Primitive thinking is the historical reality in which the participatory thinking is best concretized and manifested, but our spiritual experience, individual and collective, is still very much moving today in participation<sup>1</sup> (Cantoni, 1968, p. 18).

Although for Cantoni primitive communities were pre-logical, what seems evident if the primitive man was not inclined to face reality in an analytical way but living within the totality of its mysterious forces. Unlike logical reasoning that avoids contradiction, the pre-logical and mystical mind is indifferent to the logical criteria. So, in this mystic world, the boundaries between the subjective and the objective, between dreams and reality, between the material sphere and the spiritual sphere vanish.

The cultural permeability of our species largely reflects our rational and dualistic mind, a capacity that is subsequently circumscribed in our logical-analytical reasoning. In the same way, it is plausible to suppose that this dualistic approach is an innate predisposition that has been accentuated by the development of human natural language, since it is not limited to being a mere tool of communication but also a powerful means of representation of our body and the world that extraordinarily maximize our self-conscious abilities.

### **Neurognostic Structures in Dualistic Brain**

In the second half of the twentieth century, the American psychiatrist Eugene G. D'Aquili found the biogenetic structuralism and postulated the existence of a neurognostic structure that allowed the division of reality by opposition of contraries. D'Aquili baptized it as the

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<sup>1</sup> Translation mine.

“binary operator” (D’Aquili, 1978, 1983) and located it in the lower parietal lobe of the left hemisphere, a region where important aspects of language are regulated (e.g., motor control of the speech apparatus, logical-mathematical information management, verbal memory, grammar, organization of syntax, phonetic discrimination, etc.). According to D’Aquili, this operator tends to ripen in the early stages of the toddler development until cancel the sense of wholeness and perceive the information of the environment in logical-analytical terms. If so, the emerging dualistic reasoning in our phylogenetic trajectory would largely explain our ability to project a mental construct of the world into antinomies which are nothing more than artificial categories constructed by a part of our brain architecture. This leads us to presuppose that language as well as logical reasoning and the symbolic sequencing of mathematics involve dualistic filters through which we interpret and represent our knowledge, and, later, we project outwards our inner representation of the world previously structured in artificial antagonisms. However, before D’Aquili, other contemporary researchers had already suggested that an injury in the lower region of the parietal lobe, specifically where D’Aquili located this binary operator, prevented the subject from forming antonyms due to being the area that regulates associative operations. As Geschwind asserts: “In man . . . this new ‘association area of association areas’ now frees man from the dominant pattern of sensory-limbic associations and allows cross-modal associations involving non-limbic modalities” (Geschwind, 1965, pp. 106–107).

Another interesting feature of primitive man would be a tendency to perceive specific images along with a certain aversion towards abstract reasoning. For D’Aquili, this type of abstract reasoning would also be located in the left hemisphere, also called the “dominant hemisphere”. In primitive man, optical memory would have greatly developed and everything would be expressed in spatial relationships. This spatial relationship may have been rooted in a corporeal experience with the perceptible reality (e.g., counting with fingers, measuring with arms, hands, or feet), and later this scheme of measurement evolved until reached a verbal structure and, finally, a writing form. It is plausible to assume that in primitive man the non-dominant hemisphere was more important than in modern one. The same can be said about language. This would be very poor in logical and conceptual elements, so it would be structured on an asymptotic scheme where the word would not be separated from the object that it designates and making it understandable only through the ostensive gesture that accompanied it. Similarly, it is not unreasonable to presuppose that the travel of long distances by our nomadic ancestors might influence in some way in our sequencing of time within a pre-linguistic stage.

From an ontogenetic perspective, the toddler is not born with the notion of Self. In early years of life, the infant is in an undifferentiated state of fusion with the world, in other words, without self-consciousness. The progress of the sensory-motor intelligence leads to the construction of an objective universe where the toddler appears as an element among the others to which is opposed. As Piaget showed, it is from the age of two or three that subjective impression emerges and differentiates itself from the rest of reality and confronts it (Piaget, 1950). Similarly, there are parallels between the mentality of primitive man and the mentality of the toddler. At least so do authors, such as Simmel who suggests that the distinction between the subjective mind and the world of objects must belong to a relatively late stage in the history of mankind (Simmel, 1950). Piaget reported this in his study of cognitive development in infants and held that the idea of Self is subject to an ontogenetic development and the egoic representation of the environment and the division of reality into antinomies do not develop until reaching a certain age.

At a perceptual and sensorimotor level, the construction of the practical object, so slow and laborious, presupposes a preliminary stage in the course of which there is no delimitation between the subject and the objects. Therefore, no object is permanent and, as a consequence, no subject is aware of itself as a subject: the universe, then, is adualistic, everything that is felt and perceived is put into an alone and the same plane, without distinction between an external world and an inner world (Piaget, 1950, p. 275).

So, this ontogenetic development of Self is not innate but gradually developed. In its first stage, the infant acts driven by subcortical basic reflexes of the stimulus-response type and begins to acquire the capacity of representation of objects as independent units due to an increase in the development of cognitive structures. In this first stage, the infant is not able to attribute mental states to other people and unable to understand thoughts that are different from his own. This capacity develops in the second stage, and it is precisely here when the infant acquires an image of himself, that is, a supposed consciousness of Self.

Thus, for Piaget the ability of the infant to represent himself in space occurs before any form of language use. So, if we assume that logical reasoning and mathematical sequencing are linguistic structures, one might presuppose that logical-symbolic reality derives from language. Since logic and mathematics are linguistic structures that underlie the pillars of modern science it would be inferred that science is based primarily on an egoic consciousness where the distinction of the world in antinomies is present. Facing with a fractal vision of reality, this prevailing dualistic thinking that operates through this epistemic Self could explain why there is a hopeless intuitive desire in human beings to achieve unity in the world. Bringing up the words of H. S. Sullivan, quoted by Hadley: “The emphasized individuality of each of us, our self, is the true mother of all illusions, the fruitful source of preconceived ideas that invalidate almost all our efforts to understand the world” (Hadley, 1942, p. 133).

The idea of Self as a separate entity from the physical world is not present innately in our brain, so this division is something that is acquired gradually due to the capacity for accommodation and assimilation of certain biological structures. In the early stages of development, the sense of Self is not fully developed, being accentuated by the maturation of the ego in the phase of formal operations. The infant acquires the capacity to transcend reality when symbolic reasoning is included in the processes of reasoning and thoughts are not limited exclusively to the present time, since we are capable to develop abstract reasoning and constructing and verifying hypothesis exhaustively and systematically. In the last stage of this phase the idea of Self is born and with it the awakening of an egoic consciousness that imposes a new filter on our perception of the world based on antithetical terms. Moreover, syntax and recursive reasoning also play a crucial role.

### **Language as the Stage of Dualistic Reasoning**

The *Enûma Elish*, a Babylonian poem from the 13th century BC that tells the origin of the world, narrates:

When the sky above was not named,  
And the earth beneath did not yet bear a name,  
And the primeval Apsû, who begat them,  
And chaos, Tiamat, the mother of them both,  
Their waters were mingled together,  
And no field was formed, no marsh was to be seen;

When of the gods none had been called into being,  
 And none bore a name, and no destinies were ordained;  
 Then were created the gods in the midst of heaven,  
 Lahmu and Lahamu were called into being (Sanders, 2016, p. 6).

In the Babylonian myth the act of creation is profoundly connected to language. This personification of the word as a creator is also found in other ancestral cultures. In Memphis theology in ancient Egypt, Ptah creates the world with his mind and with the power of the word. In the Psalms (Ps. 33: 6) of the Christian Old Testament: “By the word [*logos*] of the Lord the heavens were made, and by the breath of his mouth all their host”, as well as at the beginning of the Gospel of St. John: “In the beginning was the Word, and the Word was with God, and the Word was God”. The word appears as a way of creation, as the self-expression of God’s own being. Also, in the ancient Vedic scriptures of India, language is considered one of the vital cosmic forces in creation. Prajapati, the Vedic deity presiding over procreation and the protection of life, pronounces the first words: “Om Bhūr Bhuvah Svah”, creating the Earth, the Sun and Heavens. But not only in the myths of ancient civilizations the word is found as a cosmogonic and theogonic element. In Micronesia, in the mythology of the Marshall Islands, the islands were created by the word of Lowakalle. In Samoan mythology, in the beginning there was nothing but Tangaroa ordered a stone to split into two, and then the Earth was created. And, for San, a tribe of indigenous hunter-gatherer bushmen of Southern Africa, the supreme God is Cagn that created all things by verbal orders: Sun, Moon, stars, wind, mountains and animals.

In all these myths, language appears as one of the fundamental cosmic forces. The word suggests an approach between man and God as well as a link between the physical and the represented world. This emergence of language is accompanied at the same time by a necessary dualistic view of reality where the act of creation provides meaning to linguistic expressions. But human natural language is not only an instrument for communication, but also a powerful means of interpretation and representation of the world and ourselves. It seems as if these dualistic filters were somehow bound to language, for there is a certain sequentiality in time, just as it exists in language and in conscious thought. This also leads us to presuppose that the concepts of time and space are nothing but fictions driven largely by a growing linguistic development.

As far as language is concerned, the linguistic capacity takes place, so far as we know, in two brain regions: the Broca area located in the frontal lobe, the third frontal gyrus as the motor area of language, and the Wernicke area in the temporal gyrus, at the junction between the temporal, parietal and occipital lobes as the sensory area of language. This linguistic development occupies regions that in the right hemisphere (also called non-dominant) regulate the perception of visual and audio-spatial tasks which seems to be of gestalt nature. The studies conclude that the division of labor in the brain is that the left hemisphere deals with the tasks of verbal, sequential, temporal, digital, logical-analytical, and rational processing while the right hemisphere would be non-verbal, intuitive, emotional. Freud, the father of psychoanalysis, quotes the German linguist Carl Abel in the following:

Let thus suppose, if such an obvious piece of nonsense can be imagined, that German the word [*stark*] “strong” meant both “strong” and “weak”; that in Berlin the noun [*Licht*] “light” was used to mean both “light” and “darkness”; that one Munich citizen called beer [*Bier*] “beer”, while another used the same word to speak of water. . . . In view of these and many similar cases of antithetical meaning it is beyond doubt that in

one language at least there as a large number of words that denoted at once a thing and its opposite (Freud, 1957, p. 156).

And later:

It is clear that everything on this planet is relative and has an independent existence only in so far as it is differentiated in respect of its relations to other things. . . . Since the concept of strength could not be formed except as a contrary to weakness, the word denoting “strong” contained a simultaneous recollection of “weak”, as the thing by means of which it first came into existence. . . . Man was not in fact able to acquire his oldest and simplest concepts except as contraries to their contraries, and only learnt by degrees to separate the two sides of an antithesis and think of one without conscious comparison with the other (Freud, 1957, pp. 157–158).

With these examples Abel seeks to explain the conceptual becoming as well as the division into antinomies of some words present in the most primitive stages of language, suggesting that this antithesis indicates the emergence of a dualistic reasoning in archaic communities. Following Abel, it seems obvious that much of our concepts are born by way of comparison. This can be observed in the early stages of writing where the conceptual attribution of meaning used the so-called determinative images which served as conceptual reinforcement to the characters. In the case of the Old Egyptian, if the Egyptian word *ken* had to mean “strong”, the image of an erect and armed little man was placed after its written sound alphabetically; but when the same word had to mean “weak”, after the character that contained the sound the image of a small man crouched in attitude of abandonment appeared. Similarly, most of the other ambiguous words were accompanied by explanatory images.

Freud also quotes the philosopher Alexander Bain in the following:

The essential relativity of all knowledge, thought or consciousness cannot but show itself in language. If everything that we can know is viewed as a transition from something else, every experience must have two sides; and either every name must have a double meaning, or else for every meaning there must be two names (Freud, 1957, p. 159).

In addition, there are few more cases as in Latin, where *altus* means “high” and “deep” or *sacer*, “sacred” and “cursed”. Words such as *clamare*, “shout”, and *clam*, “silent”; *siccus*, “dry”, and *succus*, “juice”. In German, *boden* means both “attic” and “floor”, *bös*, “bad”, is close connected with *bass*, “good”. In Old Saxon we find *bat*, “good”, in contrast to the English word *bad*. In contemporary English, *to lock* is in contrast to the German word *loch*, “hole”; and the German *kleben*, “to cling, to stick”, with the English word *to cleave*. Also in German, the word *stumm*, “silent”, and *stimme*, “voice”, etc. Or the German term *mit*, that corresponds with the English term *with*, originally meant both “with” and “without”; or the German word *wider*, “against”, and *wieder*, “together with”.

## Conclusion

The notion of Self is a fiction that human beings tell to themselves in a moment of their cultural development since it becomes decisive in adaptive terms. However, this fictitious Self is not such a real fiction so it implies a necessary division to adopt an egocentric consciousness, a division in which we become into an independent entity separated from the

rest of the physical world. Having a brain structure responsible for the division of the world in antinomies, that is, artificial categories that we use to describe the world we live in, affects crucially our way of reasoning in science. The analytical and logical-mathematical mentality of the left hemisphere is dualistic by nature and has nothing to do with the holistic view that characterizes the activity of the right hemisphere, much more connected with the limbic system. Consequently, this dualistic reasoning is only a small part of the brain activity, most probably as the result of the recent history from the phylogenetic point of view and that serves to analyze the world by dividing it into opposites. However, this materialization of Self that occurs especially in Western culture as an extreme form of individualism is strongly conditioned by the language. This development of Self as something separated from a presumed external reality configures the basic structure of our mental scheme which is generated through the socio-cultural environment where the individual is inscribed.

In any case, the idea of Self pays an expensive tribute to the knowledge given by the dualistic reasoning. It loses the paradise. The human being ceases being part of a whole and happens to become a part limited in time and space, abandoned, alienated from nature, lonely and orphaned. The consciousness of the existence of a primordial unity is divided into two equal and opposite forces, originating a dualistic thought that separates the world into opposite terms: good and evil, Heaven and Earth, and so on. This suggests that in the ancestral memory of mankind there is a desperate attempt to recover that lost unity, a return to the Greek *pleroma*. This yearning remains dormant in natural human language, emerging from myths that place man on his way to paradise.

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