

## **Language Acquisition Part 1 of 3**

Dante Roberto Salatino ★

*It is a mistake to believe that personality is something that is formed at the moment the word develops. On the contrary, the characteristics that make us a person hide behind it.*

Dante Roberto Salatino, 2012

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### **ABSTRACT**

In this paper, we will develop some aspects of a psycholinguistic theory that tries to explain how our natural language is acquired. We have divided this paper into three parts: First part: includes a brief review of different theories on language acquisition that are valid today, used as a contrast element. In particular, we will analyze in depth the model R-R (representational redescription) of Karmiloff-Smith, contrasting its cognitive-computational model with our approach. Then, using evolutionary biology as a model, we will address the relevance of a Universal Language existing in socio-cultural reality and its genetic aspects. Second part: it will deal with a possible Genetic Typology of the natural human language elaborated on the base of the theory of the “hidden colors.” Third part: we will highlight the relevance of the Universals, a possible origin of the lexical contextures, and an analysis of the importance of socio-cultural inheritance, all fundamental elements in the acquisition of natural human language.

**Keyword:** Natural language, language acquisition, Psycholinguistics, Transcursive Logic.

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## 1.0 INTRODUCTION

The biological pattern, necessary for language to emerge, is only part of the story. The other part, which we will develop in this work, is as or more important than the first. It is not possible to approximate an adequate response to the problem of acquisition if the social aspects of the origin of natural language are not addressed coherently. Every individual or social subject has a double need, a primary one, that of survival manifested as desire and a secondary one, that of knowing, manifested as a belief. The social in the individual arises from a desire that ‘represents’ it at a deep level and from a belief that characterizes at the superficial level, the object of that desire. For this, we must make a refined characterization of the third adaptive system in which we have divided, for its study, the subjective reality (Salatino, 2009). That is the socio-cultural system. First, we will review some current theories to contrast them with our approach, then to analyze in detail the socio-cultural system.

## 2.0 ONTOGENETIC THEORIES OF LANGUAGE

Throughout its history, man has tried series of approaches to the enigmatic problem of language acquisition. This is how we can identify half a dozen of those attempts that arise from different currents of human thought. Thus, there is an empiricist current that maintains that language arises from the imitations that people make of environmental sounds. A rationalist current promotes the existence of innate linguistic universals and basic structures that suddenly appear out of nowhere. The environmentalist current that makes language depend on external factors coming from the physical environment and the social environment. This current has two aspects: one linguistic and another psychological. The nativist or innatist current that gives primacy to the internal factors to the subject be they biological or mental, subordinating thought to language. Finally, the cognitivist current that places cognitive development as the fundamental element, subordinating language to thought. This current is divided into three branches: a) constructivist, b) interactionist and c) mentalist.

As defenders of each school of thought, we find relevant characters, among which we can mention, not in strict order, to Saussure, Skinner, Chomsky, Piaget, Vygotsky, Bruner or Luria. We will not address the theory on any of them, considering that beyond being very well known, they do not provide something that can be compared with our proposal.

We will analyze, on the other hand, although in its general guidelines, the Karmiloff-Smith theory of 1992. From the cognitive mentalist oriented to development; in appearance, it constitutes an attractive proposal. She argues that the fundamental aspect of human development is the process by which the information found in the cognitive system is transformed into knowledge. Although, fundamentally I chose it, on the one hand, because today it has a remarkable validity, and, on the other hand, due to what the author says in the introduction of her book *Beyond modularity*: “The study of cognitive development must be treated as a serious theoretical science (emphasis added), capable of contributing to the question of the human mind.” (Karmiloff-Smith, 1992, p.xiii).

This theory, as suggested by the title of the book, adheres to the modularity of the mind proposed by Fodor in 1983. This is corroborated because it even uses the Fodorians terms: module or system, input/output data, as synonyms. It also accepts that each functionally distinct module has its data entry and performs exclusive processes. All this approximates the theory to the one proposed by Fodor, from which it elaborates a “critical version” that resembles more a manual of the user of a computer than a description of the human mind.

Using an example taken from Fodor (1983, p.66) and making an arbitrary interpretation of it, he concludes that the perceptual processing module is independent and does not have access to information from other parts of the mind. To reaffirm the above, he cites Gallistel (Karmiloff-Smith, 1992, p.3) who describes the “cognitive architecture” of other species and says, for example, that the rat can make use of geometric data to orient itself. Then, the author concludes that this is because the modules of the rat are impenetrable to non-geometric data. He also cites Anderson

(*Loc. Cit.*) who proposes an alternative: the data is entered into concentrating on its parts, and once the skill is achieved, the parts are “compiled” (a term used by Fodor), to be executed quickly, automatically and unconsciously. Paradoxically, he warns that all this should not be confused with a Fodor module, which was designed as a computer dedicated to a special purpose and owner of its own “database.”

Entry systems - says the author (*Loc. Cit.*) – “are the parts of the human mind inflexible and lacking in intelligence. They represent the stupidity of your machine.” It continues, during several pages, criticizing the proposal of Fodor, but it does not obtain another thing that to adhere more and more, unconditionally, to her. However, he makes a strong defense of his aphorism: “development implies a process that consists of going beyond modularity.”

As for the theory itself, it is based on the proposal of domains that should not be confused with modules, so that, now the development is of specific domains and not modules. These domains will include language, mathematics, physics, etc. besides, incorporating in their description micro-domains, such as gravity in the domain of physics, or pronouns in the language domain. This justifies it because it is going to propose a model of phases of development, instead of the well-known Piagetian model of stages, which he calls behaviorist and where the baby's mind is empty of knowledge.

She points out the notion of development restrictions (*Op. Cit.*, P.9), where he says that for the general domain theorist (*i.e.*, Piaget), the word restriction has a negative connotation; that is, it refers to factors that reduce the child's competence. On the other hand, for the specific domain theorist (that is, the author), it has a positive connotation, since, by limiting the space of possible hypotheses, they enhance learning.

Then he evaluates the new ‘paradigms to study babies,’ not relevant at all, ending with the proposal of his paradigm, which he baptizes as the process of representational redescription. (R-R)

The RR model, which took several years to elaborate, incorporates a reiterative process of representational redescription, which would be a procedure by means of which the information that is 'implicit' in mind, becomes explicit knowledge for it, first within of a specific domain (for example, physics), to then do it in micro-domains and even across different domains. He explains that this whole process occurs spontaneously and as a consequence of an ‘internal impulse’ that pushes the formation of intra- and inter-domain relations. It is characterized as a phase model, of an endogenous nature and establishes it as an essential tool for theoretically locating empirical research. That will be dedicated to defining the child as linguist, physicist, mathematician, psychologist, and graphic artist or draftsman, which are the successive chapters that make up a book that, at this point, has not yet begun.

We will not address all these chapters, instead and in a very superficial way, only the one that is dedicated to the child as a linguist. And within it, we will say in the form of a tight summary that, according to the author the child, to acquire the language, part of attentional biases towards specifically linguistic information and innately specified. Then, using data abstraction mechanisms, he achieves a ‘behavioral mastery’ that allows it to cross several levels of representational redescription, to be finally able to ‘formulate verbally communicable theories’ on how the system work. She clarifies, however, that this is not all, but that he then has to develop the passage of the sentence functions of the different linguistic markers already acquired, to his discursive functions, which allow him to structure the narrations as a unit.

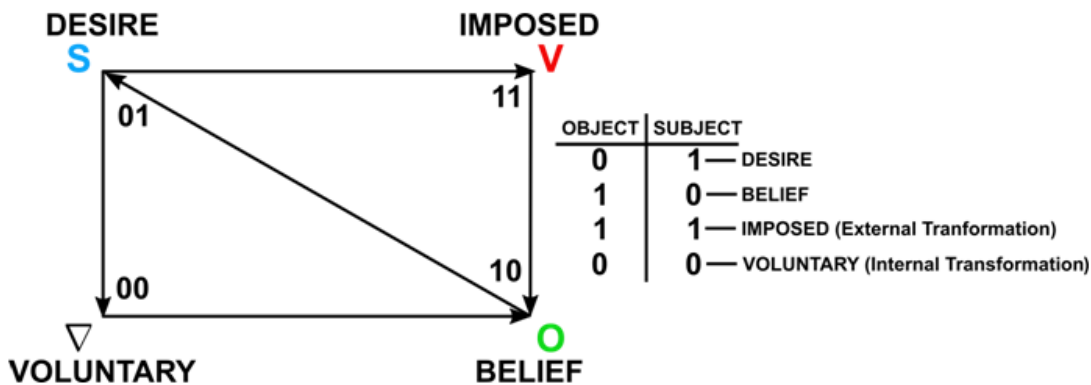
All the previous description, the author makes it against the Piagetian model to which he denounced but to the one who does not harm since all its conclusions are arbitrary and based on ‘experiments’ prepared to obtain what was sought to be demonstrated.

Karmiloff-Smith's theory, as we have seen, ends up being a sarcastic criticism, although not biting, of Piaget's work, confronted without the resources that such an endeavor would have required. It constitutes, in my view, a lukewarm stance between Chomskian innateness-mentalism and Piagetian cognitive-constructivism, which does not provide elements of value to prefer it, rather than its sources of inspiration, that despite their mistakes, have a degree much greater coherence.

### 3.0 LOGIC OF A REAL FACT FROM THE SOCIAL POINT OF VIEW

We have already developed this topic in depth in another paper (Salatino, 2017). Here we will only remember some fundamental aspects. On the one hand, the relationships that link primary elements determine an essential social act, (Figure 1).

**Fig. 1:** PAU of an elemental social act PAU

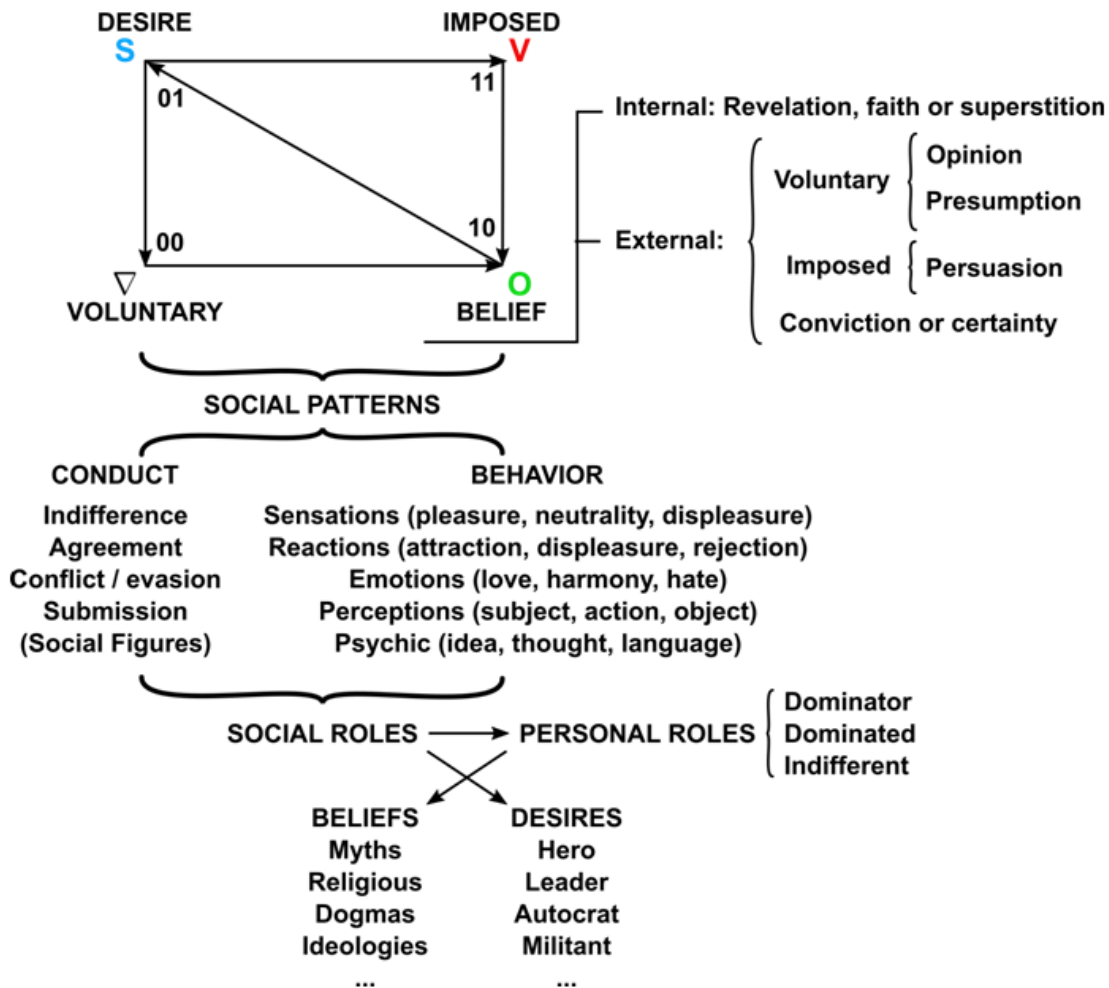


The previous figure confirms, on the one hand, the interrelationships that are established between the desire and the belief in a social individual, that is to say, the imposed or voluntary character of each of them and the emergence from there of the different beliefs. The codes assigned in the graph obey to have considered the desire as a heritage of the subject and the belief as an object of that desire. On the other hand, this scheme corroborates, without a doubt, that the logical core of every social act as we see it here is a PAU (universal autonomous pattern), according to the definition given by the Transcursive Logic (TL) (see Appendix).

On the other hand, the needs that give rise to the social act are satisfied through the ‘social patterns’ that are evidenced, individually, in the behavior of the subject or individual and at the social level, in the behavior of a person, through a series of ‘social figures.’

These 'social figures' fulfill the non-trivial function of establishing the ‘social role’ that becomes evident through a specific behavior; that is, for that behavior that is limited by a norm, *see* Figure 2. The two social aspects considered are vital when it comes to establishing how we acquire our natural language.

Fig. 2: Logic of social relations

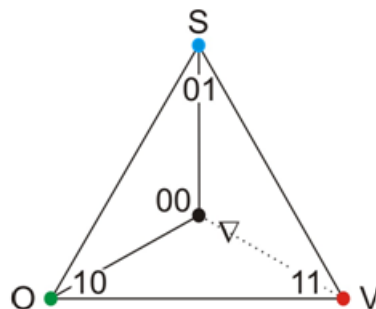


**4. FUNDAMENTALS OF A UNIVERSAL LANGUAGE**

As we have already established (Salatino, 2009), we can admit a figure of our own for everything that is present to us. That is, the real facts as they are structured by representing interrelations between a subject and an object that, faced with an apparent phenomenon, they are engaged in a transformation. To the ontological commitment that accounts for these relationships, we gave it the name Socio-cultural System. To the operative unit of this system, real fact or REM, which can reach different characteristics according to the “region” of the reality considered (Figure 3).

Fig. 3: Real fact of REM

S: subject – O: object – V: apparent transformation - ∇: hidden transformation



The REM thus defined, shows as a logical relational core a PAU. Where does the first REM come from?

The biologist Julián Huxley (1939, p.87) shows us that attempts to extrapolate biological conclusions to human aspects are supported in an invulnerable logic. This is so because everything social occurs exclusively between living beings who evolve as members of a community. No living being can deny this situation, even if it wanted to. Therefore, they are bound by a question of individual survival, to act together.

According to Huxley (*Op. Cit.*, p.98), man departs from everything that is alive, not because his immeasurable bearing diminishes the rest of living beings under his shadow, but because man is capable of thinking and speaking. These two evolutionary achievements allow him while sharing the biological inheritance with all other organisms, to access another type of inheritance that empowers the word (oral and written). This is manifested in a continuous collection of experiences, which from generation to generation, constitutes what we know as tradition. As an expressive projection of its natural language, which configured by ideas and thoughts, In humans, according to Huxley (*Op. Cit.*, p.99), there are two types of inheritance: (a) Biological mediated by germ cells and modulated by natural selection (genetic inheritance), and (b) The inheritance of experience or social, which is transmitted through tradition. It is the one that allows human being to inherit acquired characters (epigenetic heritage).

In man, the development of a more complex psyche allowed him to have a natural symbolic language. This provided him with a notorious capacity to penetrate deeply into a past that was traditionally preserved for him. This heritable “collective memory” is the one that in this study, we will call, if I am allowed the term, “social DNA,” the germinal base of culture.

We will use the concept of symbiosis as an evolutionary and even germinating element, under a particular aspect, to explain how the first REM could have emerged.

Finally, we will take from biology to project it into the social the concept of development and progress that complement the germinally new forms emerged and guided by the inheritance.

In summary, we will say that both phenomena: the biological and the social, occur in living beings. That both tend to survival; that both are evolutionary, being therefore subject to a specific development and progress; that both promote an optional symbiosis suitable for individual purposes; and finally, that both are marked by an inheritance that imposes characters, traits, ideas or circumstances that, in the strictly social, are given in the tradition.

#### **4.1. ORIGIN OF UNIVERSAL LANGUAGE**

To study the origin of the universal language, we will use as a metaphor by analogy (Aristotle, *Poetics*, Chapter XXI: 1457b, Salatino, 2009, p.55), the theory of evolution, but from a more modern perspective and that keeps a considerable distance of the current evolutionary synthesis or Neo-Darwinism. We will take as reference the work of Lynn Margulis and the research of Hyman Hartman, applying, in part, the well-known concepts of the Theory of Serial Endosymbiosis (TSE) by Margulis.

In the “Symbiotic Planet,” Margulis (2002, p.12) introduces us to the concept of symbiogenesis, warning us that the similarities between humans and other life forms are much more important than differences. By symbiogenesis, we must understand that natural and common phenomenon, promoter of evolutionary change through the inheritance of acquired sets of genes. Endosymbiosis is the association in which an organism lives inside another organism.

According to the TSE, ancestors once wholly independent and physically separated merged following a specific order to become a cell (*Op. Cit.*, p.46). It is a theory of meetings, of mixing cells with different histories and abilities. Its underlying foundation is to show how independent life tends to merge, to resurface as a new whole, with a higher and broader level of organization, *see* Figure 4.

**Fig. 4:** PAU of the first nucleated cell

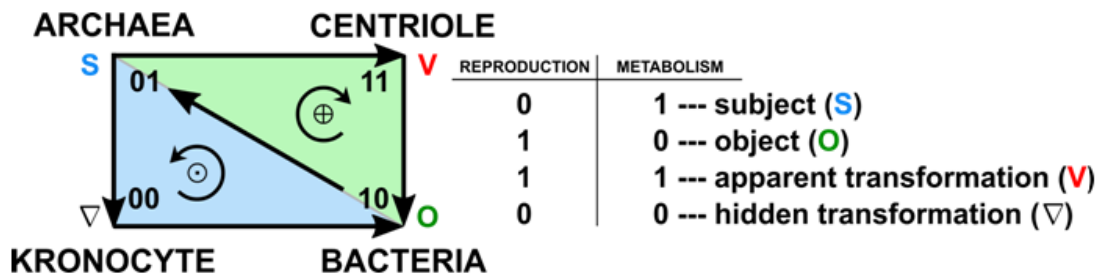


Figure 4 indicates how the formation of the first nucleated cell (eukaryotic) could be, according to Hartman (1984). The scheme suggests that the eukaryotic nucleus, its main internal organelle, derived from the endosymbiotic concurrence of: (1) A chronocyte (the cell, evolutionarily, older and based on RNA) that as a host has the possibility of endocytosis (to swallow other microorganisms), provides a signal receiving system and a factory of the nucleus to be formed (transport of materials inside and outside of it). (2) Some archaea (unicellular microorganism without a nucleus or internal organelles, 3500 million years old.) That as an endosymbiont contributed with its metabolism and with its DNA; and (3) A bacterium (unicellular microorganism without a nucleus and of antiquity similar to the previous one, but with the ability to move) that as a second endosymbiont contributed its DNA, its reproductive apparatus and its mobility.

Hartman (1992) suggests that the chronocyte (named for the Greek god Krónos) began “swallowing” its evolutionary progeny (archaea and bacteria) and after many endosymbiotic events, formed a nucleus. Then, it incorporated a mitochondrion (energy-producing organelle) and finally, a chloroplast (organelle that contains chlorophyll and produces photosynthesis); thus, giving origin to the animal and vegetal cells. Hartman and Fedorov (2002) show that the chronocyte was the one that made possible the appearance of the nucleus, for its ability to “manufacture” a membrane around the DNA contributed by the bacteria and, thus, isolate it from the cellular cytoplasm.

Once the nucleus was “manufactured,” it provided it with a mechanism for dividing the chromosomes (DNA) and with it the mitotic reproduction. It also gave rise to the cytoskeleton, or the three-dimensional network of proteins that provide internal support to cells, organizing their structures and intervening in the phenomena of mobility and cell division. Within the cytoskeleton, it gave rise to the centriole, the organelle responsible for cellular dynamics, both external (causing the movement of cilia and flagella) and internal (cell division).

In the previous paragraphs, we have witnessed the formation of a “universal language” that has been the support of life, as we know it today. This language, as we see in the previous figure, is not only structured by the mere intervening elements but also by the function that each element fulfills. The latter, in the end, is what provides life to the cell, as a whole. In other words, cellular vitality depends not only on the “content” (RNA, DNA, proteins, etc.) of the elements but on the “continent” that surrounds each of them, that is, their function (support, dynamics, metabolism, reproduction, etc.). The binary codes that we have placed on each component of this nucleated cell, according to the attached allocation table, allow us to identify them according to this pair of characteristics. Thus, the archaea contribute to the metabolism (01). The swimming bacterium adds their reproductive mechanism (10). Both are related in appearance; by the centriole (11), an element formed to organize and regulate the explicit dynamics of the DNA of the two main endosymbionts. Finally, the chronocyte (00), does not share any of the characteristics that identify its symbionts, but preferably it is who, in a hidden way, reorganizes the intrinsic activity that makes life possible,

giving physical support (cytoskeleton and energy). All these codes, correctly founded, form a group and therefore, a PAU.

Deliberately, we have associated to these codes, the generic elements that according to TL, determine the foundation of subjectivity, which, without hesitation, are life itself, knowledge and language (Salatino, 2009, p.30). In this way, and invoking the metaphor by analogy, we could say that the first REM that supports the existence of a “universal language” based on a PAU is defined. This generic REM will be the “chronocyte,” which by a mechanism similar to “endosymbiosis,” will incorporate other REMs that will leave a record of different aspects of subjective reality. In this way, we will be able to create a “subjective nucleated cell” that will represent the germ of a specific language within the natural human language.

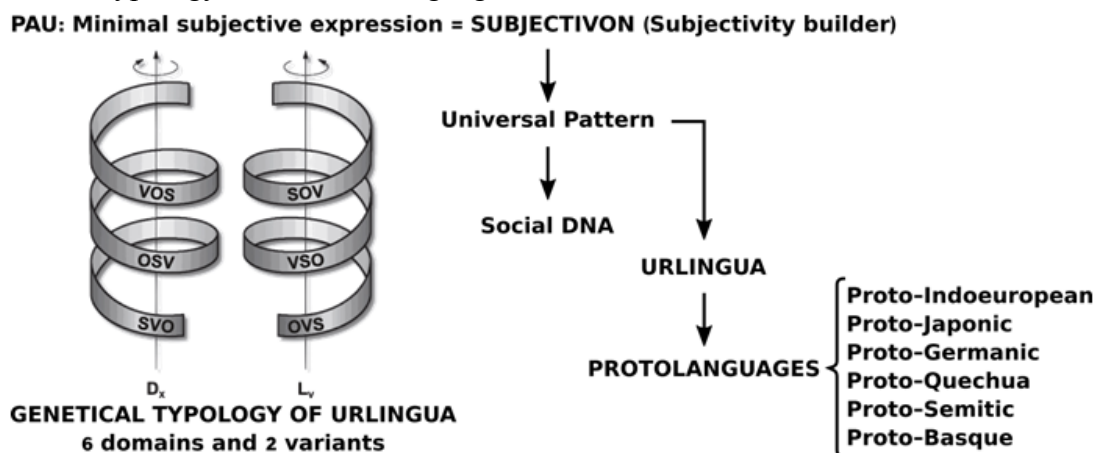
The generic PAUs (six in total) are universal patterns that constitute the minimum subjective expression. Without being an object, nor subject, integrated, they are equivalent to the first nucleated cell and to which, abusing the neologisms, we will call: subjectivon. This virtual “cell,” in some way, will be established as a “subjectivity constructor,” or what is the same, a generator of subjective aspects, among them, as we have already seen, language.

It is decisive to understand the deep relationship that exists between identity and subjectivity. As well as, to submit to rigorous analysis the old idea of an essential, innate and perennial identity of a set of predetermined qualities (race, color, sex, social class, culture, etc.). This will allow us to understand that identity is instead the result of a polycontextural interrelation, from where a complex psycho-bio-socio-cultural framework gives rise to the unique phenomenon of subjectivity. The subjectivon, which we will talk about later, is proposed like the universal mold from where the basic subjective patterns arise, that are not other than those that will give sustenance to a supposed “social DNA.”

#### 4.2. GENETIC TYPOLOGY OF UNIVERSAL LANGUAGE

The book of subjective reality is written in a language that is not that of the Pythagorean number, nor that of Galilean mathematics, nor English, as the prevailing science seems to suggest, but in a universal language (LU) that is the patrimony of the natural thing and the policontextuality. This LU is arranged according to six domains, in two different variants (dextrorotatory and levogyrate) and its typology is based strictly on the order of its elements. This LU is proposed here as the presumed origin of our natural language for what we will call it: *urlingua* (*Ur*: from German - original; *lingua*: from Latin – language) (Fig. 5).

**Fig. 5:** Genetic typology of universal language



The *urlingua*, unlike the conjectural “Ursprache of Tlön” of Borges (1998, p.13), with only the syntax would determine the form (functional geometry) and govern the 'grammatical accidents' of each natural language. The *urlingua* is specified in its structure by the real domain or respective



subjectivon, thus representing a 'way of seeing reality'. Although this approach could well be taken as a kind of Whorfian relativism, we must clarify that what we are trying to reflect is the exact opposite. Because we have a way of seeing reality, which is given by subjectivon which he touched us luck, arises in consequence, a vernacular language adequate to express that reality.

Figure 5 shows the complementary disposition of the six domains in which the *urlingua* is distributed according to its syntax (syntactic order typology). These domains would be valid in different 'regions' of subjective reality, and from there they would serve as a template, perhaps, for a given proto-language.

Protolanguage may seem an inappropriate term since it means a reconstructed language or a retrospective reconstruction of a language as the probable origin of a group of other languages. The fact of using the reconstruction based on the coincidences of common features that do not mean loans or innovations and of responding to the historical comparative method (genetic evolution), allows in some way, even though in lateral form, to relate the domains proposed here and the six proto-languages accepted. Without for that reason we losing sight of the fact that this comparative classification that tries to find a common origin is not natural, far from it.

Many varied and important efforts have been attempted to classify existing languages. The different investigative currents took paths sometimes convergent and sometimes opposed but focused on two aspects fundamental: the typological and the genetic. The latter, not only about the search for the common origin of all languages but also as regards biological genetics specifically. The kinship that was tried to establish was not restricted to the linguistic structure but also extended to the biological inheritance. Thus, among those who devoted themselves to this study, in at least the last 200 years, we find philologists, anthropologists, geneticists, philosophers, linguists, etc.

Two milestones in the history of biological knowledge indelibly marked the genetic approach of languages, on the one hand, Darwin's theory of evolution (1859) and on the other, the discovery of DNA structure by Watson and Crick (1953). While adhering to this biological knowledge, brought "new blood" to the old structure of linguistic study could not avoid the excessive weight that assumed its influence, and that is still notorious in our days.

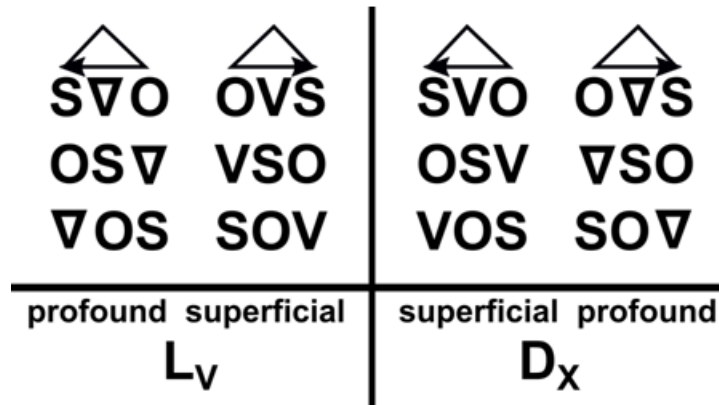
We will review very briefly the aspects on which the genetic approach is based. A fundamental concept is that of kinship, which tells us that each language has evolved from another: the mother tongue. That two sister languages share the same mother tongue and that two linguistic forms in different languages come in the same way. All this gives rise to a 'genealogical tree' where each node represents an immediate relationship of kinship (hierarchical order).

The historical-comparative method established that those languages that shared basic words must have a common ancestral origin and that the DNA of languages, therefore, could be represented by their elementary lexicon. The establishment of similarities in this primordial lexicon made it possible to reconstruct proto-forms and proto-languages, both phonologically and morpho-syntactically. This gives the feeling of having advanced a lot in the knowledge of the evolution of language and languages, whose change in time can be evidenced in both the lexicon and in the sounds, as well as in the grammatical aspects. Although not without accepting that the direction of linguistic change is in most cases not very predictable since it cannot be isolated from speakers and socio-cultural factors. The evident limitation of the historical-comparative and reconstructive method does not make it useless, but it warns about the non-provenance of the excesses committed.

In an attempt not to get caught up in ultra-conservative, even racist positions, from which they derived from the so-called social Darwinism that sought to justify social differences by appealing to false biological categories, even the 'perfect languages' of Humboldt. The proposal here presented is framed in a symbiotic conception of both classificatory currents, for that reason, we call it genetic typology with the purpose of using in a coherent and fertile way the biological-social homology.

We must emphasize that each of the six superficial triplets of the *urlingua* has its corresponding profound triplet: its opposite, complementary and concurrent.

**Fig. 6:** Universal autonomous patterns

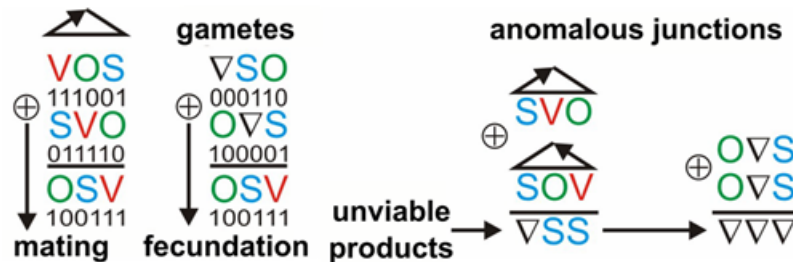


The transcurssive logic (TL) explains the emergence of new forms (new languages) through “mating” between two superficial triplets, thus giving something similar to a “fertilization.”

The production of a 'discontinuity' in the complex structure of the PAU, promotes the functional split between the superficial (the phenomenal) and the deep (the essence). To the separated deep triplet, we can assimilate it perfectly to a gamete because it possesses genetic totipotenciality since when it join, by means of XOR or union of the differences, to another complementary gamete chosen at random, it gives origin to a new PAU (emergency) that 'inherits' all the characteristics of the group to which their 'parents' belong.

This process has its limitations and in a similar way to what happens in biological reality, there are certain unions that are not viable because they give rise to subjects with such an anomaly that prevents their 'birth.' Such limitations are presented in the impossibility of union of gametes of different groups ( $D_x$  and  $L_v$ ) and the union of identical gametes (e.g., OVS and OVS). Figure 7 considers what has been said in some detail.

**Fig. 7:** Mating and Fecundation



In the previous figure, on the left side, the mating process is characterized, which is the one that occurs between superficial patterns, and the process of fertilization, which is what happens when deep patterns are related. As we can see, both are equivalent. On the right side of the figure, we can see the same in the anomalous unions, between patterns of different variants (superficial patterns) or between identical patterns (deep patterns).

### 4.3. GENETIC OF UNIVERSAL LANGUAGE

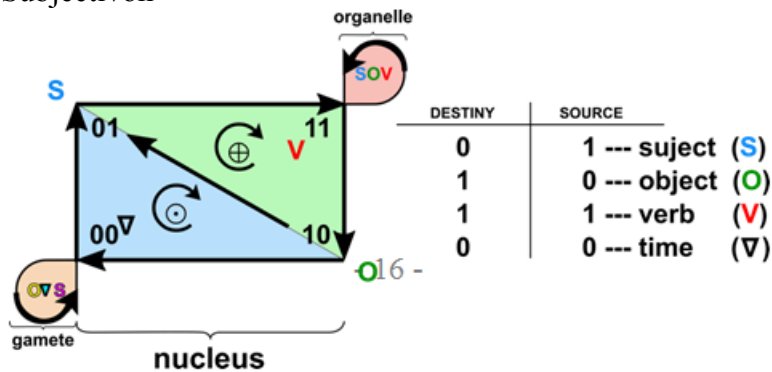
As it has been raised from the beginning in this work, the reality is integrated by adaptive systems, and as it was also seen, these systems are adapted to evolve. Such evolution is observed in two different ways: on the one hand, developing and growing (morphostasis), and on the other, giving rise to new similar structures (morphogenesis). The first of these is carried out by duplication, equivalent to cellular mitosis or asexual reproduction, while the second is achieved through fertilization, which is comparable to cell meiosis before mating or sexual reproduction. These

comparisons so close to biology, far from being irrelevant, meet the objective of allowing the proper application of evolutionary concepts, such as adaptation, speciation, inheritance, etc.

Given the similarity that we have already established between a *subjectivon* and a nucleated cell, it is then legitimate to say that, like her, the *subjectivon* it has a nucleus (superficial) and a gamete (profound).

Each *subjectivon* behaves like a *universal mother tongue* (UMT) that tends to be, structurally speaking, of a specific form. This tendency is marked by order of its elements at a superficial level, its syntax or the structure of its nucleus. Nevertheless, it admits multiple mutations at the level of its other organelles, at a deep level, see Fig. 8. We must take into account, that “mating” and therefore “fertilization” is only possible between *subjectivons* belonging to the same variant; that is to say, or dextrorotatory or levogyrate, but not between variants.

**Fig. 8:** PAU of the Subjectivon

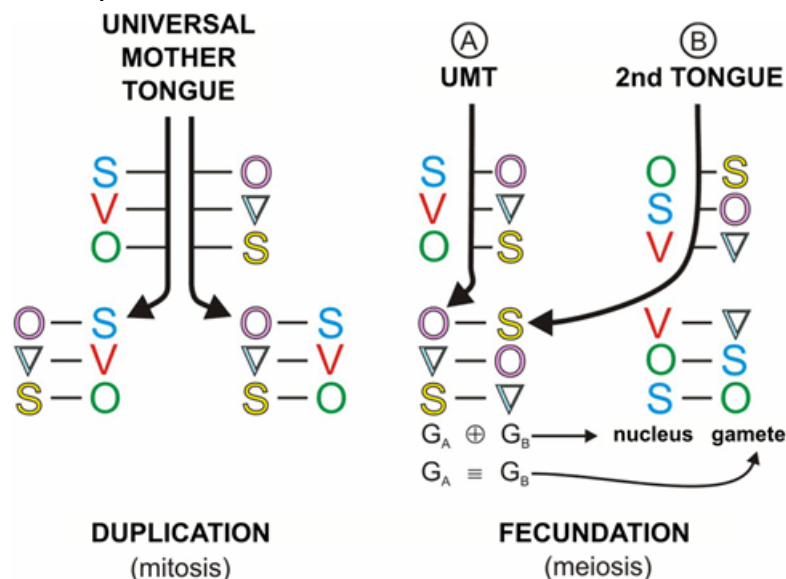


In the specific case of a particular UMT that matches with a second UMT, belonging to the same variant, it will give rise to changes in the central tendency that will explain why a UMT is as lawful in a ‘region of reality’ as another that has different syntax. That is because part of their “offspring” has inherited their genetic material (by 50%) and therefore, by the fact of belonging to the same variant, shares characteristics with its “congeners.” Let's look at this last situation in detail in Figure 9.

**Fig. 9:** The natural evolution of a universal mother tongue

References:  $G_A$ : gamete of UMT A –  $G_B$ : gamete of UMT B

$\oplus$ : XOR -  $\equiv$ : equivalence



The previous figure tells us, in its left part, about the way in which a UMT grows and develops by duplication, thus keeping its essential characteristics intact over time. On the right side shows us how mating with another UMT of the same variant allows generating a new UMT, which will have in its “genetic material,” 50% of each of its “parents.”

In the case of duplication, nucleus and gamete are separated and by a mechanism of complementary attraction they are linked to the missing part that originates in the environment, thus giving rise to two identical subjectivons. In fecundation in exchange, they mate the gametes coming from two UMT<sub>S</sub> of the same variant. That is, they are linked through transcurssive operations: XOR ( $\oplus$ ) and equivalence ( $\equiv$ ), giving rise to a new subjectivon in which, its nucleus is the product of the application of the superficial transcurssive operation (XOR) to the gametes of its parents while your gamete is the result of applying the profound transcurssive operation (equivalence), respectively.

All the above explains quite well the case of UMT<sub>S</sub> that belong to the same variant, although this is not the case when a UMT belongs to a different variant. We have already seen that when UMTs are different, the union is incompatible. The solution is achieved by including the second language as an organelle.

## **5. CONCLUSION**

In this first part of the work, we have addressed from the relevant theories about the acquisition of natural language to the existence of a possible universal language that serves as a "mold" for the construction of the bases of what will be a natural language, diversified in thousands of vernacular languages. To achieve the final task, after giving a structural characterization to the socio-cultural system (one of the real systems that make up our subjectivity), metaphorically invoking evolutionary biology, we generate a universal pattern that will allow us to reach our goal.

On the other hand, we have genetically characterized the different universal mother tongues, which derive from an original language: urlingua. It was also possible to show how a new universal mother tongue can be originated from two others, from the same or different variants.

Beyond that the projections from the biological that may seem excessive, they reaffirm the strong biological and genetic, as well as socio-cultural, roots of our natural language. On the other hand, they will allow us to risk a possible origin and evolution of the “order of words” and the “type of words,” the two criteria most used to characterize, typologically, a specific language.

## **APPENDIX**

**Universal autonomous pattern:** (PAU) fundamental logical core of subjective reality. An ontological-relational pattern that shows a complex structure, that is, its structural elements have a triple relationship of opposition, complementarity, and concurrency (simultaneity). These interrelationships occur between different contexts (or continents of fundamental elements): subject (S), object (O), apparent transformation (V) and hidden transformation ( $\nabla$ ). This disposition forms two triads that constitute, in turn, two levels: 1) superficial level (SVO) that represents the quantitative, and 2) deep level (OVS) that accounts for the qualitative of a system.

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