

# Pleromatization, physiognomization and metaphoricity: a theoretical articulation of sense making processes of Valsiner, Werner and McNeill

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**Abstract:** This paper aims to develop a theoretical articulation of the different sense-making processes in human experience developed by Valsiner, Werner and McNeill. To this purpose, the mechanism of meaning-making – Pleromatization and schematization – developed by Valsiner; physiognomization in the perception of world developed by Werner; and the concept of metaphoricity as gestural representation of a mental construct developed by McNeill, are reviewed. In conclusion, a relationship between pleromatization, physiognomization and metaphoricity as phenomena – holistic, whole, organismic – that are integrated into the perception and construction of human experience, is established. On the other hand, a direct relationship between schematization, geometrical-technical perception and iconicity as another dimension – objectified, particularistic and cognitive – of making sense in human experience, is established.

**Keywords:** pleromatization, schematization, physiognomic perception, metaphoric gestures.

## Introduction

Cultural psychology has tried to study the different processes in which human beings construct meaning to their own life while in contact with the environment (Valsiner, 2014). The uncertainty of an encounter with culture and the possibility of an uncertain future have helped to develop strategies and skills to encode experiences. The human potential to construct meaning by definition is the ability to construct meanings so as to name objects, situations and psychological states (Valsiner, 2006).

Different authors in psychology have proposed different dimensions and processes through which human beings construct their experience in the world. Valsiner (2006), for example, described processes of schematization and pleromatization in the construction of meanings as forces acting in the direction of reducing – or encoding – the complexity of the experience and, on the other hand, increasing the complexity of the initial experience. These processes are constitutive of mental experience and implement their role at every moment in contact with the environment.

Werner (1955) described two modes of human perception – physiognomic and geometric – through which the world is experienced. From Werner's perspective, perception has always been described in modern psychology based on its geometric dimension, that is, by considering the physical characteristics of the perceptual object. However, from his point of view, the human perception and the experience of the world is always physiognomic rather than

geometric. That is to say, we perceive and construct the world from a meaningful cognitive-affective integration.

McNeill (1992) is another author in psychology who described the ways in which inner experience is transformed into gestures. McNeill could observe different forms of nonverbal behavior that respond to different internal phenomena. For example, one of its classifications is the distinction between iconicity – as a gesture that maintains a direct relationship with the referent in the mind – and metaphoricity – as a creative, abstract and idiosyncratic gestural expression of each individual – which are produced by different mechanisms in the internal experience.

Valsiner, Werner and McNeill were three important authors who have contributed to understanding the complexity of human experience, trying to elucidate their internal mechanisms and processes, on the one hand, and their external manifestations, on the other. It seems relevant to discuss these perspectives in order to achieve a better understanding of the sense-making processes in human experience.

This paper aims to develop a theoretical articulation of the different sense-making processes in human experience developed by Valsiner, Werner and McNeill. With this aim, we intend to provide integration with perception forms as described by Werner, schematization and pleromatization processes in the construction of cultural meanings and symbols from Valsiner, and the iconic and metaphorical dimensions of gestures described by McNeill.

The contribution of this article is mainly theoretical, however, it may contribute to the development of future methodological procedures and empirical studies seeking to explore complex processes based on human experience.

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## Heinz Werner and the two modes of human perception

Werner's works have given an important contribution to psychology. In 1956, he constructed the notion of microgenesis in his work *Microgenesis and Aphasia*, to refer to the gradual process of constitution of the human experience. His microgenetic studies on human perception have made it possible to understand the process by which human beings manage to comprehend the environment and construct meaning. Werner (1955), in his work *On expressive language*, distinguishes two modes of perception inherent to the human experience. First, Werner (1955) describes a mode of perception – called *geometric/technical perception* – that distinguishes “objective” qualities from environmental stimuli, comprising the object by separate or segregated parts that constitute it. On the other hand, the author distinguishes the *physiognomic perception*, in which objects are perceived holistically. For example, from the geometric-technical perception, objects are perceived by their physical quality, while from the physiognomic perspective, the object and the person to whom it belongs are perceived in an undifferentiated way. This is why a jacket is not only a garment with specific qualities, but it reminds us of the person to whom it belongs.

The world and its objects are perceived both geometrically and physiognomically. From Werner's (see Werner, 1955, 1956, Werner & Kaplan, 1963) perspective, human language would also have these dimensions. On the one hand, a sequence of words and sentences is governed by standardized rules, and on the other hand, a perception of language integrates content and form as an organismic experience.

The physiognomic perception is a total organismic understanding versus a purely sensory understanding of geometric-technical perception. An example referred to by Werner (1955) is to look at a picture of a bird. From a geometric-technical perspective, it is possible to observe the height, type of flight and location, but from the physiognomic perspective, the bird is moving without physical displacement: it's a bird flying. In this regard, we observe physiognomic expressions that give us information of that particular field of expression.

Werner and Kaplan (1963) propose that the human being has the ability to construct symbols through which to communicate with each other and interact with the environment. The process of symbol formation occurs in the organismic (i.e. physiognomic) relationship of human beings with their immediate context (Umwelt). In the case of animals, organism and environment are very close and interact with one another. Stimulus and its response are closely intertwined. Human beings, on the contrary, should generate symbols to transmit their experience to others and the environment. This symbol has a representational function, i.e. it must account for the relationship between representation and the represented.

On the other hand, this process of symbol formation, from the Werner and Kaplan's (1963) perspective, is expressive in itself and maintains physiognomic characteristics.

The main sign construction tool to communicate with the environment is language. From the geometric and physiognomic perspective, both dimensions are in the construction of signs and symbols, while the perception of language is an integration of both. When we perceive a concept, it is possible to observe its two dimensions. On the one hand, the concrete meaning of the word is generated by the association between the syntactic-sound combination with the object it designates, and on the other hand, its physiognomic perception is related to all aspects of consciousness that are removed by the ontogenetic relation of the subject with the represented object. That is to say, an organismic and holistic affective-cognitive integration of the linking of the subject with the object. From the physiognomic perspective, the perception of language and the world occurs through a form-content integration as a mental function characteristic of human consciousness. From Werner's (1955) perspective, the physiognomic dimension is equivalent to the geometric-technical appreciation. If we are asked to describe an object, we will surely make a geometric description, but that object was also perceived physiognomically, aspects that are not necessarily referred by the subject.

An example of physiognomic language according to Werner (1955) is poetry. In the poetic language, the form and the meaning appear more united than in any other form of language. The same can be observed in metaphorical language. Cornejo, Olivares & Rojas (2013) explained that the metaphor, like poetry, manages to condense an idea into a brief semantic expression. That is to say, the metaphor is always understood physically and removes all the meanings that inhabit it. For example, the expression “. . . and winter is finally over...”, a geometric-technical understanding is possible that allows us to understand that a weather season has ended; however, its physiognomic meaning allows us to understand that a sad and dark period, apparently extensive, has ended.

From Werner's (1955, p. 20) perspective, it shows “the indissoluble unity of form and content”. The objects of the world maintain physiognomic qualities (Werner, 1956; Werner & Kaplan, 1963) and these qualities are those that provide an internal relationship between the forms of the world and the organismic activity (Cornejo, Olivares & Rojas, 2013). In the words of Cornejo, Olivares and Rojas (2013, pp. 7-8):

physiognomic expressions are residues of the most primitive forms of language . . . it is the nucleus of the processes of symbolization . . . it is a dynamic postural-affective schematization that is closely linked to the conventionalized word-form-meaning. It is an organismic bodily matrix in which the body is experienced as being lived and felt.

Everyday language is constructed and perceived physiognomically. The perception of language evidences the impossibility of separating its content from its form. This is evidenced, for example, in a study conducted by Werner & Kaplan (1955) on the perception of physiognomic language, in which subjects were invited to observe words as lights in a dark room. The height of the participants' eyes at the time of observing a dark wall was calculated as a baseline observation. They presented different words that alluded to movements, mainly "upwards" movements or "downwards" movements (For example: climbing, descending, etc.), and asked the subjects to position the words in the center of the projection field (middle line). The results showed a tendency for subjects to position words referring to "upward" movements above the baseline, and words referring to "downward" movements below the baseline. The same thing happened with cheerful words which were referred to as more luminous and sad words as less luminous. That is to say, words have a physiognomic dimension which have intrinsic directional properties that determine their location in space.

Another experiment by Werner and Kaplan (1963) showed physiognomic aspects of sound patterns in fictitious words. Participants were invited to observe words without any meaning (budraf and medref). Subjects were required to refer all their experience with the word. Budraf was related to "weight" and Medref was related to "heaviness". Budraf, for example, was understood as heavier than medref. The tendency of the participating subjects realizes that the physiognomization of words incorporates the sound. That is to say, we give meaning to words based on how they sound to us and by what their sound represents in our experience.

In another study, the authors analyzed the act of repeating words in the performance of contradictory behaviors. Different subjects were invited to repeat the word "push" by performing the pushing action. In another phase, the subjects were invited to repeat the word "push" while squeezing their hands. The results showed a tendency to show no lapses of meaning in the first condition, while in the second, lapses of meanings were more frequent (Werner & Kaplan, 1963).

In a similar study, the authors presented different words (for example: pull and push) through the tachistoscope, at the same time as they asked the participants for concordant and discordant movements. The results show that the concordant activity allows you to understand and decipher the word presented at the tachistoscope faster than the individuals who participated in the discordant condition (Werner & Kaplan, 1963).

Through these studies, it is possible to observe the organismic and physiognomic nature of the symbols. These studies account for the physiognomization of verbal forms in human experience. In addition, it is possible to observe in these apprehension studies of verbal forms a phenomenon to which Werner (1955, 1956) and Werner and Kaplan (1963) called a loss of distance. That is to say,

the words are physiognomized and their perception is an organismic rather than linguistic experience, by which their expressive dimensions are perceived at the same time as their geometric-technical meaning.

In different studies with schizophrenic subjects similar to those previously presented, the results are presented in the same direction although with a higher level of intensity. The same phenomenon of loss of distance observed in normal subjects is observed in these experiments. In schizophrenia, the perception of linguistic forms is similar to the represented referent. That is to say, the representation is the thing itself.

In another study by Werner (1956) with subjects with language disorders, specifically aphasia, the author observed other dimensions of the physiognomization of language. He presented, tachistoscopically, words, combinations of words and short sentences. After each application at 1/50 seconds, each participant had to refer all their experience to the stimulus. The word presented in one of his studies was Sanfter Wind.<sup>1</sup> The procedure is detailed below (Werner, 1956, p. 348):

1. "\_\_\_? Wind": That was put in front of "wind" feels like an adjective that specifies the nature of the wind; it feels like "warm", "soft" or something similar. Definitely, it not a word of direction.

2. "\_\_\_er Wind": Now I know the word is "heavier" than "hot" . . . somehow more abstract.

3. "\_\_\_cher Wind": Now it looks more like an adjective than a direction.

4. "\_\_\_ter of the wind": Now again a little more concrete, I think something like "Weicher Wind", but "ter" . . .

5. Now very clearly: Sanfter Wind. Absolutely not. I had the idea clear before presenting the word. I already felt the idea.

This study shows two important reflections. One of them is an early appearance of the general sphere of meaning of the word ("warm", "soft") before the specific recognition. The second reflection points to the undifferentiated physiognomic perception of the nature of the experience ("it feels like warm"), which suggests the participation of an organismic-bodily dimension. In this sense, the organismic experience is total bodily sensation. These are some examples of the physiognomization of the perception of language and human experience as a physiognomic expression.

In short, human language is physiognomized, since the fusion of the spiritual and the material is evidenced

<sup>1</sup> Sanfter Wind (Alemán): Viento apacible. Soft Wind (Inglés): Viento suave.

in it. We construct language physiognomically, from which this process is expressive based on the sender's experience. From the perspective in this revised section, the physiognomization of language accounts for its expressive and holistic nature. Hence, the word "stone" can give us the feeling of "heaviness" or "coldness".

The philosophy of language and much of language psychology has focused their efforts regarding the study of geometric-technical language, a sub-dimensioning that the construction of human language and the perception of the world is also physiognomic (Werner, 1955; Werner & Kaplan, 1963).

### **Pleromatization and schematization in the Jaan Valsiner's sense-making process**

From Valsiner's (see Valsiner, 2006, 2014; Diriwächter & Valsiner, 2008) perspective, the human being is an incessant constructor of meanings. The sense-making process is a dimension of cognition that allows us to construct signs and symbols to transmit the experience of the environment and internalize signs for the construction of the internal experience. This symbol internalization and externalization process is what gives meaning to our experience in a world that seems ambiguous and diffuse.

From Valsiner's (2006) perspective, the sense-making process advances towards (hyper) generalization. That is to say, from the diffused cognitive-emotional experience passing through its codification in a linguistic sign, until reaching its maximum complexity in a hyper-generalized symbol. This process towards hyper-generalization is dialectical and causal, on the one hand, the expression of experience to lose its complexity. However, there is another force that moves in the opposite direction, thereby increasing the complexity. This is how semiotic mediation works on these two parallel lines: one that tends towards homogenization – called *schematization* – and another that tends towards heterogenization – called *pleromatization* – of experience. Both processes contribute to the generalizing function of the sense-making process.

Valsiner takes the idea of pleromatization of the notion of pleroma. Pleroma is a Greek concept that has been translated as totality, wholeness, completeness (Valsiner, 2006). It has been used to refer to a state, thing or person that has reached its maximum perfection or development. It has mainly been used by philosophical-religious traditions to refer to the divine nature of the human being, to the expression of a vital interiority that seeks to be expressed (Pérez de Laborda, 2002).

On the other hand, the concept of schema has its origin in the notion of Kant's *schematism*. Kant (1781/1883), in his *critique of pure reason*, devotes several pages to the phenomenon of the schematism of pure concepts. According to him, for an object to be expressed by a concept, the representation of the first must be homogeneous with the second. That is to say, the concept

must clearly represent the object, so that an explanation is not necessary regarding the application of the concept to the object. The scheme, then, is "this formal and pure condition of the sensibility, to which the concept of understanding is restricted in its use" (Kant, 1781/1883, p.120).

Kant (1781/1883) states that the scheme is directly related to the human imagination. For example, when we imagine a number (e.g. 1000), we have constructed an image that allows us to think about that concept, since it would not be possible in the imagination to present all the elements that make up the concept (i.e. 1000 units). Kant (1781/1883, p. 120) states: "in reality, at the basis of our concepts, there are no images of objects, but schemes".

For that author, the relationship between image and schema is solved as follows. The image is a product of the empirical faculty of imagination; the scheme, on the other hand, is a product and monogram of imagination through which images are made possible.

Schematism is then the process by which a synthesis that makes the category somewhat representable of the object is performed. The scheme makes the synthesis of a sensation representable. That is to say, the process of schematization is nothing more than the process of schematic significance of a felt interiority.

Valsiner (2006), essentially following Kant's perspective, concludes that schematization is an expression of the tireless mental function of categorizing experience – diffuse and ambiguous in contact with the environment – in a simplified scheme. This is possible thanks to the function of abstraction and generalization of human language. This ability to "code" experience into a verbal concept or sign allows constructing formal categories that simplify the complex. This process is part of the mental economy in the sense that it allows the construction of complex ideas and experiences in a single concept. Although this process loses the complexity of the real phenomenon, it is largely based on ordinary language such as daily opinions, prejudices, social norms, etc. Through the process of schematization, the complex experience is homogenized, thus it loses its emotional and mental richness.

However, there is also evidence of an opposite force in human language, i.e. the use of *pleroma*. Through complex signs, we construct even more complex signs that allow us to experience the heterogeneity of the cognitive-affective life and congregate a complex system of meanings, images and affections into a single sign, constructing a symbol that, unlike the scheme, generates totality and a holistic image of the original experience. These are hyper-complex representations that find their richness in the variability and heterogeneity of the experience, such as, for example, the iconic signs that advance in the opposite direction to schematization. This process is called *pleromatization*.

Schematization is therefore the process by which complexity is reduced to a sign or conceptual category. Pleromatization, on the other hand, is the process by which complexity is turned into a complex field of meaning, that



is even more complex than the original object. From this perspective, pleromatic objects – namely iconic signs or symbols, allow all people to share this psychological context to understand the meaning in the direction that the object or symbol presents it.

The sense-making process, through the use of pleroma and schema, is presented both in vocalized language and in the deepest experience. The internal language also displays a phenomena of schematization to turn a diffused and hybrid sensation into a schematic concept. This scheme can be generalized again in a scheme with a higher level of abstraction. That is to say, a second process of schematization that brings together several schemes in one generalized scheme. Then, through the process of pleromatization – transformation of a sign into a symbol of greater complexity – a hyper-generalized sign emerges.

Based on Valsiner's (2006, 2014) model, the sense-making process is hierarchical and occurs in clearly identifiable phases. At the first level, there is a diffuse and hybrid cognitive-affective experience. At this level, pre-verbal signs occur as incarnate symbols that have not yet been coded. At the second level, the pre-verbal sign is schematized as a verbal sign. During this phase, the diffuse experience loses complexity by being categorized into a verbal sign. At the third level, the schematized verbal sign is generalized. That is to say, the schematized verbal sign is now generalized through a process of abstraction or second instance of schematization. Finally, at the fourth level and through the process of pleromatization, the generalized verb sign is hyper-generalized towards a sign of greater complexity than the original experience was presented as a whole. In Valsiner's words (2006, p.3), this sign "captures the entire affective and cognitive domain of the human mind".

From the author's perspective, human experience exceeds the limits of language, and although the passage from one level to another reduces or increases complexity, each sign in its different levels of hierarchy is charged with meaning. The excess of meaning in human experience and the construction of signs occur at both level 1 and level 4 of Valsiner's hierarchy, thus constituting a dimension of the psychism.

Schematic and pleromatic signs can occur both in vocalized language and internal language. On the other hand, it is possible that the processes of sign construction such as pleromatization and schematization transit through all possible directions of experience, that is, from the verbal to the nonverbal and from the nonverbal to the verbalizable. This means that Valsiner's model, as described above, constitutes a process of constructing meanings from the inner experience to the social and cultural world. Level 1 shows the initial state of an experience, not yet verbalizable. Then, levels 2 and 3 allow categorization into a verbal sign (vocalized or internal) that initially diffuse experience. Finally, level 4 allows the hyper-generalization of the verbal or non-verbal sign and its manifestation into

the external world. However, Valsiner's model is also an inverse process – taking place in both directions – that is, with a tendency not only towards externalization, but also towards the internalization of signs. Through the processes of schematization and pleromatization, social and cultural signs are also internalized in the experience to give meaning to the inner life, or that can later be used for the construction of new signs that will advance towards hyper-generalization. In conclusion, Valsiner's model of meaning construction describes the semiotic processes that allow the formation and expression of internal states, at the same time that these semiotic processes contribute to the construction of experience as a person.

## **Iconicity and metaforicity in David McNeill**

McNeill (1992) is one of the leading contemporary investigators of human gestuality. His studies have shown the direct relationship between non-verbal behavior and thinking. That is to say, the body gesture would express variations of mental states, specifically certain mental contents and processes.

For McNeill (1992), gesture and language constitute a single communication system. However, the gesture is more closely connected to nature than the spoken language because, from the author's words, the gesture would be "a form of expression not yet distorted by the conventions of spoken language" (McNeill, 1992, p. 35). The gesture and the word are inseparable components of the act of declaration. For him, the co-expressive relationship of gestures and speech shows the thought processes involved in the construction of the human experience in the here and now.

His theoretical foundation is based on the psycholinguistics and microgenetic perspective developed by Werner (1955, 1956). From psycholinguistics, it acquires the position that the gesture and the word share a semantic and communicative function. That is to say, both represent internal states and thoughts while attempting to communicate them to the recipient. They are semantically and pragmatically co-expressive. They present a semantic relationship and a pragmatic function. From microgenesis, McNeill (1992) takes the notion of studying the processes of construction of experience at the micro level, considering the smallest component of the phenomenon that has the possibility of development as the unit of analysis.

Each gesture is a spontaneous, unique and personal creation, and reveals the idiosyncratic imaginary of thought. Gesture and language coexist in time. Language is not only a linear progression of segments, sounds and words, but it is also instantaneous, nonlinear, holistic and imagistic.

The basic premises proposed by McNeill (1992) are that language is more than words, gesture is a form of language, and that each gesture reflects thought. In this way McNeill (1992) performs a classification of gestures through his empirical studies.

The two major types of gestures that are directly related to thought contents are *iconic gestures and metaphorical gestures*. Iconic gestures are those that have a close relationship with the content of speech. For example, in a statement, a subject may be talking about a ball and with their hands mimicking the shape of a ball at the same time.

Metaphorical gestures, on the other hand, accompany speech in the same way as iconic gestures, but the content they manifest are abstract or indefinite. It is the expression of an abstract idea through gesture or an image of an abstraction. In this type of gestures, it is not possible to identify a concrete figure, but rather to demonstrate the idiosyncratic nature of gestural representation to account for a personal and intimate content in thought.

The iconic gestures by the fact that they constitute movements that present figures or concrete images of the external world give account of the imagistic process to the interior of the mind. On the contrary, the metaphorical gesture of being abstract is rather an internal creation of content or image.

Gestures are then symbols that display meanings created by the speaker. They are idiosyncratic of the subject and constitute a symbolic vehicle that finds expression in space, movement and form. Gestures and language are a single expressive and communicative system.

From McNeill's (1992) perspective, gestures relieve the inner mental processes and the imagistic function of mental life (and inner language). The gestural difference with respect to the same semantic expression in different subjects gives account of the relation between gestural expression and thought. The speaker is not aware of the gesture that he/she displays and the latter gives an account of his/her thought processes regarding the subject matter on which his/her discourse (internal and external) is concerned. On the other hand, the displayed gestures also show the most salient or relevant aspects of the discourse for each particular subject. Gestures emerge in different parts of the discourse to emphasize or highlight those concrete aspects that are being visualized in thought.

Gestures are another way of constructing signs, with them being a privileged way of observing thought and internal mental processes. They constitute the deepest level of experience that is visible to observation and through which we can get closer to the ideas of another person.

### **Pleromatization, physiognomization and metaphoricity: Towards integration**

From what has been reviewed in this work, it is necessary to move towards an integration of the different perspectives to obtain a greater understanding of the sense-making processes and the perception of the environment.

If we accept Valsiner's (2006) hypothesis that the sense-making processes move in parallel lines – pleromatization and schematization – towards

generalization, it is possible to think that these processes also take place in the internal, non-vocalized language.

From Valsiner's (2006) perspective, the diffuse cognitive-affective experience, which is always bigger and more complex than that represented in language, is transformed into a scheme, that is to say, a verbal category that schematizes the initial phenomenon, despite sacrificing its complexity. This phenomenon – schematism – occurs successively at the same time as it moves towards generalization. Then, through the use of pleroma, the verbal sign (of the internal or external language) is hyper-generalized and becomes a major iconic symbol that captures the affective-cognitive complexity of the initial state.

It is possible that this process moves from inner mental life to social and cultural life; that is, from the internal to the external and vice versa. In other words, the verbal gesture in the inner language can be generalized and hyper-generalized into an external gestural symbol. In this way, the sense-making process in the mental world is transformed as a non-verbal gesture in the social and cultural world. Thus, the inner experience becomes visible to observation.

If we go even deeper into this perspective, it seems interesting to reflect on the different gestures identified by McNeill (1992) and the internal sense-making processes that generate them. From McNeill's (1992) perspective, the iconic gesture has a direct relationship to the content of meaning, while the metaphorical gesture accompanies speech through an abstract and diffuse gestural expression.

Following this argument, it might be possible to think that the iconic gesture is generated by a schematization process. That is to say, the inner experience is turned – now abroad – into a symbol that is homogeneous to inner thought and whose form/meaning is taken from the social and cultural world.

On the other hand, the generalized verbal sign, through schematization, is pleromatized towards gesture through metaphoricity. That is to say, schematized inner experience (generalized verbal sign or schema) is displaced by the use of pleroma into a complex gesture that highlights the complex and ideographic nature of the original experience, namely a metaphorical gesture from McNeill's meaning. Unlike the iconic gesture – generated by schematization – the metaphorical gesture is an intimate mental construction, therefore, idiosyncratic of each subject.

In this way, the iconic gestures, which are directly related to the semantic referent, could constitute the continuation of an internal sign that has been schematized and manifested in the external world. While on the other hand, a metaphorical gesture is a mental creation that continues a pleromatized inner sign. Both phenomena may constitute the microgenetic pathways of internal signs to the social and cultural world.

If we go even further in this integration and retake Werner's approach, it is possible to further complicate

the phenomenon in question. From Werner's (1955) perspective, we perceive reality physically. The process of transforming an internal verbal sign into an external metaphorical gesture – complex and charged with meaning – through the use of pleroma constitutes a physiognomic expression of the internal verbal signs in human experience. The verbal sign presents itself to us as a mental image that goes beyond the limits of language to be expressed, and its manifestation in the encounter with the environment is necessarily accompanied by a felt corpo-reality. It is as if language does not allow itself to encode experience into a verbal sign and it needs the body to transmit the complex inner experience in a social and cultural space.

The iconic gesture – although no less charged with meaning – tends to be more “objectifiable” due to its direct relationship with the referent. In this sense, it constitutes a gestural “copy” of the mental image, and therefore, its meaning is more easily understood. If we observe a person explaining the shape of a concrete object, we will be able to appreciate concrete movements with their hands as “representing” the dimensions and the form, that is to say, replicating a mental image of the object. From this perspective, there is the possibility that the schematization of an internal sign in corporeality is perceptible, and describable, geometrically/technically in Werner's (1955) meaning, namely, representing its height, texture, form and dimension. On the other hand, if we observe the gestural movement of a person expressing a complex idea, we will be surprised by the diffuse and abstract of their gestures, as if trying to explain an image – an idea – in an even more complex mind. With the help of these gestures as a mental creation, the subject can or cannot transmit their experience to the environment.

The internal sign is then physically experienced and, at the same time, we physically perceive symbols in the environment that have been constructed pleromatically, while on the other hand, the geometric-technical perception of the environment is more easily expressed in signs that have been constructed by schematization.

On the other hand, and considering the double process of internalization/externalization in the meaning-construction of human experience, it is possible to think of the complexity of the inverse process. So far, the arguments that have shown gestural expression as the displacement of internal pleromatized and/or schematized signs have been developed. However, it is plausible to think that gestures also contribute towards the internalization of meanings, in addition to expressing internal states. In this sense, it is possible to think of the function that the nonverbal signs of the external space – social and cultural – would have in the construction of the inner experience. From McNeill's (1992) perspective, language and gestures are co-expressive, so that gestures contribute to the expression and communication of meanings, while they allow them to be understood and internalized.

This line of thinking allows us to think of an even more complex hypothesis: the possibility of a hierarchical

theory of gestures. If the sense-making process is hierarchical from Valsiner's (2006, 2014) perspective, that is, from diffuse and incarnate experience to hyper-generalization, it is possible that gestures move towards the same expressive direction, while they contribute to the internalization of meanings. That is to say, the existence of generalized and hyper-generalized gestures that constitute expression of the construction of internal symbols and at the same time maintain a semiotic function in the construction of the experience in the consciousness is possible.

From what was developed in this work, the geometric-technical perception can be understood as a process of schematization – namely codifying the experience into a scheme – which in the bodily experience is codified as iconic gesture. The latter implies deploying a “gestural scheme” taken from the outside world to represent an internality/interiority. On the other hand, physiognomic perception is a holistic, total and organismic process, in which what is perceived is a pleromatized sign in the object or perceptual context. In human experience, the use of pleroma constitutes the manifestation of an affective-cognitive experience in a hyper-generalized sign that presents aspects of the initial state. Therefore, gestural metaphoricity – as a diffuse and abstract gesture – constitutes a complex manifestation of an even more complex inner sign. In particular, it is a complex idiosyncratic gestural creation, built by the mind to represent greater internal complexity. In the opposite sense, it would be plausible to move towards a hierarchical theory of gestures and that these in turn would contribute to the internalization of meanings for the microgenetic construction of experience. In conclusion, the pleroma-metaphoric relationship is evidence of the physiognomic dimension of human language and experience, while the schema-iconicity relationship is evidence of the geometric/technical dimension in the meaning-construction of human experience, both processes in the two possible directions: from the inner experience to the social space, and from the latter to the construction of the inner experience in consciousness.

## **Conclusion**

In this article, I have tried to show the complex sense-making process in human experience, based on meaning internalization/externalization mechanisms. These processes allow the microgenetic transition of the internal signs to the social and cultural world, while contributing to the internalization of meanings for the construction of the inner experience. All these processes and transitions occur during the experience in contact with the world at the same time as we feel, think and act.

Here we develop the perspectives of three important authors in psychology who have studied the semiotic phenomena of sense and meaning construction as the constitutive dimension of the mind and fundamental

characteristic of human beings with higher psychological functions.

The notions developed in this article – pleromatic and schematic signs, physiognomic and geometric perception, iconicity and metaphoricity – provide us with adequate approaches to look at the microgenetic construction processes of human experience. Experience goes from the inner to the outer through processes that reduce complexity, while other processes allow maintaining – and increasing – the complex nature of the initial experience. On the other hand, the possibility of a hierarchy of expressive gestures allows us to think about the semiotic function that the gestures would have in the internalization of meanings. Apparently, the experience is built moment by moment through the intersection of the processes in this work.

The main contribution of this work was to propose the possible microgenetic route of the internal signs at the theoretical level until they became dominant external signs in the social and cultural space, and vice versa. In this way, what we perceive in the world and through contact with others is the world that we have constructed through these different processes of the human mind.

In this work, I have tried to establish a relationship between pleromatization, physiognomization and metaphoricity as phenomena that are integrated into the

perception and construction of the human experience that accounts for a holistic, total and organismic experience. On the other hand, a direct relationship between schematism, geometric-technical dimension and iconicity is established as another dimension – objectivable, particularistic and cognitive – of the meaning construction in experience. When applied to gestures and cultural signs of the environment, it is possible to speak of an iconic schematization and a metaphorical pleromatization.

As a conclusion, an integration attempt was developed in this work, which of course is not the only one nor the last. This first attempt allows us to encourage the continuation of articulating these three theories to understand the complexity of the mind and the human conscience even more. The challenge will be to develop empirical procedures to test this thesis. Laboratory studies and in nature contexts with microgenetic orientation could allow the processes described here to be observed as well as clarify the complex process of development of the human mind in the challenge of constructing and internalizing signs. We probably do not have these devices yet. For the moment, the fine and everyday observation of social processes and human interactions is sufficient to see how these processes intersect permanently and at every moment in the incessant challenge of giving meaning to the experience in contact with the world.

### **Pleromatização, fisionomização e metaforicidade: a articulação teórica do processo de construção de sentido de Valsiner, Werner e McNeill**

**Resumo:** Este trabalho tem por objetivo desenvolver uma articulação teórica sobre os diferentes processos de construção de sentido na experiência humana propostos por Valsiner, Werner e McNeill. Para este fim, trabalha-se com os mecanismos de construção de sentido propostos por Valsiner – pleromatização e esquematização –, a fisionomização na percepção do mundo desenvolvida por Werner, e o conceito de metaforicidade como representação gestual de uma construção mental desenvolvida por McNeill. Em conclusão se estabelece uma relação entre pleromatização, fisionomização e a metaforicidade como fenômenos os quais se integram na percepção e construção da experiência humana, como uma experiência holística, total e organismica. Além disso, é feita uma relação direta entre esquematismo, dimensão geométrica-técnica e iconicidade, como outra dimensão – objetivável, particularista e cognitiva – da construção de sentido na experiência.

**Palavras-chave:** pleromatização, esquematização, percepção fisionômica, gestos metafóricos.

### **Pleromatization, physiognomization et métaphoricité: une articulation théorique du processus de construction du sens de Valsiner, Werner et McNeill**

**Résumé:** Cette article vise à développer une articulation théorique des différents processus de construction du sens dans l'expérience humaine proposés par Valsiner, Werner et McNeill. A cet effet, on développe les mécanismes de la construction de signification – pleromatization et schématisation – proposés par Valsiner; la physiognomization dans la perception du monde développé par Werner; et le concept de métaphoricité comme représentation gestuelle d'une construction mentale développée par McNeill. En conclusion on établit une relation entre pleromatization, physiognomization et métaphoricité comme des phénomènes qui s'intègrent dans la construction de l'expérience humaine, comme une expérience holistique, totale et organismique. D'autre part on fait une relation directe entre la schématisation, la perception géométrique-technique et l'iconicité comme une autre dimension – objetivable, particulariste et cognitive – de la construction du sens de l'expérience.

**Mots-clés:** pleromatization, schématisation, perception physiologique, gestes métaphoriques.



## **Pleromatización, fisionomización y metaforicidad: una articulación teórica de los procesos de construcción de sentido de Valsiner, Werner y McNeill**

**Resumen:** El presente trabajo tiene por objetivo desarrollar una articulación teórica sobre los diferentes procesos de construcción de sentido en la experiencia humana propuestos por Valsiner, Werner y McNeill. Con este fin, se desarrollan los mecanismos de construcción de significados propuestos por Valsiner –pleromatización y esquematización–, la fisionomización en la percepción del mundo desarrollada por Werner, y el concepto de metaforicidad como representación gestual de una construcción mental desarrollada por McNeill. Como conclusión se establece una relación entre pleromatización, fisionomización y metaforicidad como fenómenos que se integran en la percepción y construcción de la experiencia humana dando cuenta de una experiencia holística, total y organísmica. Por otro lado, se establece una relación directa entre esquematismo, dimensión geométrica-técnica e iconicidad, como otra dimensión –objetivable, particularista y cognitiva– de la construcción de sentido en la experiencia humana.

**Palabras claves:** pleromatización, esquematización, percepción fisionómica, gestos metafóricos.

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Received: November 24, 2015

Reviewed: March 17, 2016

Approved: April 25, 2016