

## THE SELF AS TENSION OF WHOLENESS AND EMPTINESS

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### Abstract

The article provides a framework of the Self, understood as a dynamic semiotic system in constant evolutive tension rather than a system in equilibrium adapting to the environmental changing conditions. The aim of the whole special issue is indeed to provide new hints for the reflection about the relationship between Self and semiosis, from both the theoretical and philosophical points of view. The articles of Salvatore, Luleci and Silva Filho & Dazzani, discuss the relationship between the Self and the ideas of context, agency, belief and action as co-constitutive of the subject. The Self, as high level semiotic instance, is the process that results of and regulates the uniqueness of the experience in irreversible time. The continuity of the stream of Self and the culturally codified ways of producing signs about the experience in the world are also discussed. The articles of de Souza, de Mattos & Chavez, Fivush, Simao & Sampaio, instead, discuss the process of semiosis in different periods of the lifespan. Guimaraes, questions the generalization of Self across cultures, presenting the notion of “multiple selves”.

**Keywords:** Semiotic Self; Tensegrity; Holes, Wholeness, Evolutive tension.

### Resumo

O artigo fornece uma estrutura do *Self*, entendido como um sistema semiótico dinâmico em constante tensão evolutiva, em vez de um sistema em equilíbrio, adaptando-se às condições ambientais em mudança. O objectivo deste número da *Interacções* é fornecer novas pistas para a reflexão sobre a relação entre *Self* e

*semiosis*, segundo perspectivas teóricas e filosóficas. Os artigos de Salvatore, de Luleci e de Silva Filho e Dazzani discutem a relação entre o *Self* e as ideias de contexto, agência, crença e ação como co-constitutiva do sujeito. O *Self*, como instância semiótica de alto nível, é o processo que resulta de e regula a singularidade da experiência no tempo irreversível. A continuidade do fluxo de *Self* e as formas culturalmente codificadas de produzir sinais sobre a experiência no mundo são também discutidas. Os artigos de Souza, de Mattos e Chaves e de Fivush, Simão e Sampaio, por sua vez, discutem o processo de *semiosis* em diferentes períodos da vida. Guimarães, questiona a generalização do *Self* entre culturas, apresentando a noção de "múltiplos selves".

**Palavras-chave:** "Self" semiótico; *Tensegrity*; Totalidade; Tensão evolutiva.

## Introduction

I can talk about myself. That's a matter of fact. I can tell something about me at present, making distinctions and similarities between "how I used to be", "how I am now", and in case imagine "how I will be in the future". At the same time, I can talk about myself with a sense of continuity between the past and the present, and this "*thought is sensibly continuous*" (James, 1950, 225). I can even compare myself to someone else. In other words, I can produce a meaningful combination of signs that describes a system of psychological, affective, bodily and social characteristics I can label "my Self". To accomplish this task, I can use a repertoire of signs originated in different contexts: parents, teachers, peers, literature, advertisement, therapists, pictures, blog posts, etc. (Hermans, 1996; Iannaccone, Marsico & Tateo, 2012; Zittoun, 2006; 2012). If I have any creative skill, or if I am incidentally schizophrenic (Wrobel, 1990), I can even create brand new signs to describe my own Self, like for instance in Francis Bacon's periphrasis "The Arch-flatterer, with whom all the petty flatterers have intelligence, is a man's self" ([1597] 1985, 54). Nevertheless, this discourse can emerge only through the mediation of symbols: one can tell, draw, narrate, express, remember, dance or play the Self. This raises several questions about the relationship between the Self and the combination of signs used to represent it. For instance, the semiotic approach to the Self implies at least two dimensions: the longitudinal genesis



and elaboration of the Self and the relationship between the Self and the environment. These approaches, such as Peirce's and Mead's, conceptualize it by the triad "I-present-sign, you-future-interpretant, and me-past-object" (Wiley, 1994, 215). Of course, the problem of the Self, its nature, features, development and uniqueness is one of the fundamental issues of human thinking. It is not worth to mention here the infinite number of philosophical, psychological, logical works about it. The only common point that can be underlined is that something like the Self must exist, to the extent that this idea forms the cornerstone of the Western culture's building.

William James talked about the individual "*inner or subjective being*" (James, 1950, 296). Despite James' concept of Self is extremely elaborated, depicting a complex and open system ahead of his times, what we want to stress here is the idea of the Self as a sense of consistency, agency and awareness, a process rather than an "entity" located somewhere "inside" the person. In this special issue authors explore different aspects of the way human beings construct that complex, multifaceted and somehow still mysterious experience called "Self". How the Self is genetically constructed in semiosis, culturally inflected and situationally experienced? The contributions stress the psychological and philosophical perspective about the way culture constructs the Self and the Self constructs (and expresses through the mediation of) culture.

### **The Semiotic Construction of Self**

The semiotic nature of psychological processes implies that experiencing and semiotizing are quite overlapped phenomena (Valsiner, 2002). Thus experiencing the (or by the) Self, must be strictly related to the possibility of producing signs about the Self. In this sense, the Wittgenstein's famous sentence in the preface of the *Tractatus*: "what can be said at all can be said clearly, and what we cannot talk about we must pass over in silence" (1922, 27), acquires a different fashion. We can talk clearly about things that we don't experience "personally", drawing from a repertoire of signs, social representations, imagination, etc. In the case of the Self, instead, there is a direct experience, even though signs mediate the construction of such an experience (James, 1950; Peirce, 1965; Wiley, 1994).

The cultural semiotic perspective considers the production of a sign as a feature of individual's acting upon the world within irreversible time (Sampaio & Simao, in this issue; Valsiner, 2002). We add that producing a sign implies a movement of

differentiation, segmentation and abstraction from the flow experience in the irreversible time, co-creating both the Self and the context (Herbst, 1976; Salvatore, in this issue; Valsiner, 2002). But signs regulate both the flow in the present and provide guidance to cope with the unknown future. The semiotic process implies the construction and destruction of hierarchies of signs (Peirce, 1965; Valsiner, 2002). Thus, starting from a movement of differentiation, the semiosis goes back to a new form of more abstract generalization, which comprises again the world as a wholeness, that is no longer the phenomenological stream of consciousness (James, 1950), rather the cultural wholeness of hypergeneralized signs (Valsiner, 2002).

Nevertheless, to some extent only a part of what we experience as our Self is immediately accessible through signs mediation. Thus, it exists something we have immediate experience of but we cannot talk “clearly”. There are two apparently opposing sides of the coin.

On the one side, the Self is basically a dialogical process, semiotically constructed during childhood and adolescence, involving multiple voices expressing different points of view, modulated by specific sets of beliefs and experiences (Markova, 2006; Valsiner 2002). Young people interact with significant others, experiencing a dialogical and contractual space where adults and peers voices provide different “as-if” possibilities, contributing to define what a person could be in present and in future time (Iannaccone, Marsico & Tateo, 2012). The Self progressively comes into contact with other’s “voices” and is asked to negotiate, reject or accept the different possible definitions provided (Simao & Valsiner, 2007). The Self is thus the dialogical instance that organizes the different situated identities and voices at stake in the person’s network of social relationships.

On the other side, the experience of Self is not immediately and totally accessible by the others and through other’s mediation. We become aware of this inaccessible region of the Self partly because of our incapability of perfectly understanding others (James, 1950). At the same time, we become aware of the difficult to make our own Self totally transparent to ourselves and the others (Silva Filho & Dazzani, in this issue). Something still remains unsaid. It is because we can’t talk clearly about it, thus we are not experiencing it?

In semiotic perspectives, the Self is constructed starting from the child's active internalisation of the social interactions. The Self first appears as an interpersonal phenomenon: “I am a social relation of me to myself” (Vygotsky, 1989, 67). Others act



and refer to the individual as a Self-entity and in turn he responds to the others through signs-in-interaction (words, gestures, artefacts, etc.). By internalising, the child's "self comes to use the signs, once directed to others or received from others, in relation to the self" (Holland & Lachicotte, 2007, 108). This process implies that the definition of Self is expressed externally and is experienced internally (Bakhtin, 1986; Mead, 1934). The Self is polyphonic and dialogical from its very origin, related to the collective meaning and social judgment of the culture the individual belongs to.

Through the active internalisation of social relationships and the inner dialogue between socially valorised voices of the Self, the child learns how to manage interactions, how to understand emotions and the value of agency (Holland & Lachicotte, 2007). The Self thus coordinates the experiences in the relationship with others in different contexts and of regulating his own inner life and social behaviour with respect to the problems of everyday life. Internalization and mediation provide individual with the means to talk clearly about oneself. This implies that the Self is culturally guided, whereas culture provides the symbolic resources to model the experience and the expression of Self (Valsiner, 1997; 2002; Zittoun, 2006; 2012). But on the other side, the Self is exactly the term that defines the uniqueness of my inner experience and my agentic capability of making distinction between what happens, or used to happen, to me and what relates to others. When I produce a discourse about my feeling guilty or anguished, I can say that I feel "like" Rodion Raskolnikov in Dostoyevsky's novel "Crime and punishment". I can also say that I feel "like" my friend felt once. But at the same time, I am conscious that my feeling is a unique event that is not perfectly framed in a pre-formed fashion or captured by the same signs already used by myself or by others in the past (James, 1950). "Humans consist of present, future, and past; sign, interpretant, and act; I, you, and me; and all the overlap, and connectedness, and solidarity among these elements" (Wiley, 1994, 216). We are in the presence of an apparently paradoxical situation (Figure 1).

I experience two types of uniqueness: of the experience that happens once in irreversible time and of myself experiencing; and two types of similarities: of myself as stream of Self and of the culturally codified ways of producing signs about the experience of Self. In this sense, guidance and appropriation are a complementary couple that must be always considered as a whole.

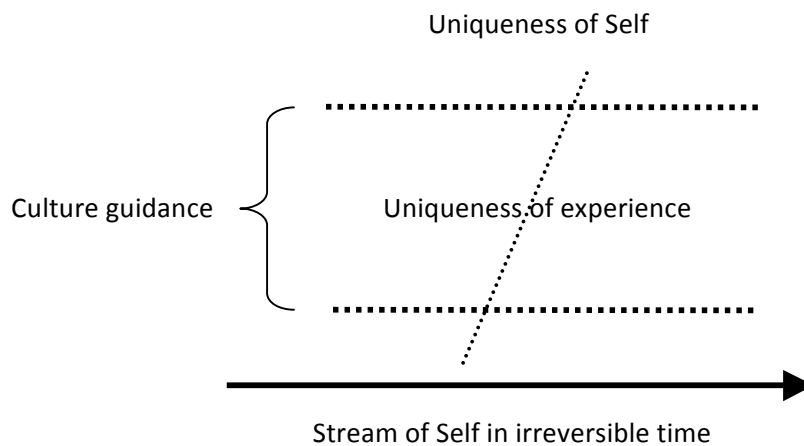


Figure 1: Uniqueness and similarity in the Self

According to Peirce (1965), this relationship between uniqueness and guidance is resolved through the hierarchical and synthetic features of semiosis. Each act of interpretation indeed leads to a higher level of complexity and synthesis, becoming the object of a new semiotic cycle. This process establishes a progressive abstract hierarchy of signs, whom the Self could be considered the highest degree of synthesis. On the other side, the Self as sign is subject/object of semiosis, ensuring that the continuous development over time is not a teleologically closed system. This semiotic cycle can be found also in James' idea that: "The self experiences itself as experience of being other than the otherness. In other words, the *experience of otherness* (i.e. the presence of the object for the subject) *feeds the otherness of the experience* (the recognition of the subject as something more and else compared to the experience and as such the source as well as the target of the experience) *that feeds it*, in a never-ending circle" (Salvatore, in this issue).

The idea of the semiotic cycle can account for the co-constitutive relationship between the Self and the environment and the complementarity between uniqueness and guidance into irreversible time. As Wiley explains:

*"All signs are semiotic triads, consisting of "sign," interpretant, and object, but humans are triads in a unique way. They are the signs behind the signs, or to put it another way, they are bi-leveled signs. The triadic semiotic structure of the self is the same as the triadic relation the self has to time. Sign, interpretant, and object are also present, future, and past. This means that for humans time is not just a line or continuum, nor even an experiential or "felt" flow. It is these things to*



*be sure, but in addition it is a reflexive circuit of meaning (Giddens, 1991, pp. 1-9). It is a "history" in the sense of a narrative or story. The present constantly projects and re-projects the meaning of the past onto the future (Jacobs, 1984, pp. 30--44). Time is an inherently meaning-generating process. Or, to put it another way, it is a semiotic flow within which one segment (the present) shapes another (the future) in response to a third (the past). The three temporal legs are, at the same time, the three semiotic elements. For humans, the structure of time and that of the self-as-sign are the same. Not only are they both triadic, they are the same triad, looked at in different ways" (Wiley, 1994, 217-218).*

Nevertheless, there is always the risk to conceptualize the Self in terms of stability, continuity, adaptability, still evoking an fixist and essentialist vision, while the semiotic cycle implies the historicity of the Self (Pizarroso, 2013). Guidance and appropriation in the construction of Self through semiotic cycle lead to a higher level of structure and functional organization, that has been often conceptualized as a system in equilibrium between two phases of disequilibrium (De Souza, in this issue; Erickson, 1968; Piaget, 1936). Whereas the production and interpretation of signs always leads to the crystallization and fixation of a part of the meaning, which constitutes the legacy of the Self continuity in the culture (Fivush, in this issue; de Mattos & Chavez, in this issue), semiosis is a process of tension rather than equilibration. Whether one agrees on a strong – the Self is a sign – or mild – the semiotic nature of subjective experience – version of the semiotic Self, the tension is related to the fact that the Self is basically an acting agent, so that in the very end “to reflect is to interpret one’s own flow of signs (but not in the idealistic sense, since it also involves emotions and feelings) in order to act” (Silva Filho & Dazzani, in this issue). The semiotic construction of Self is related the child’s need to tune his own action with the world and the others’ irregularities, implying the inevitable need to make sense of errors (Peirce, 1956), and to the adult’s need to find his own way to coordinate agency, deed and universal categories of good and evil (Luleci, in this issue).

This is one of the innovative ideas that the whole picture of the contributions collected in this issue suggests: tension, rather than equilibrium, is the theoretical concept that can help to understand the semiotic construction of Self.

### **Tensegrity and the Self**

In classic physics, the concept of tension is related to that of deformation. That is

tension results from an ongoing process of adaptation of a system to the changing conditions of the environment, under the form of vector of forces acting upon the system. In this view, the system is in equilibrium when no environmental forces are exerted upon it. This idea has been often imported in psychology, as for instance in Gestalt theory with the Zeigarnik's effect (Zeigarnik, 1967) or in field theory (Lewin, 1936; 1939). In this case, tension is generated by the conflict between the organism's tendency to maintain a status of equilibrium, or to move towards a new equilibrium, and the changing conditions of the environment opposing such a tendency. In this case, only two outcomes are possible: deformation, understood as a metaphor of adaptation, or rupture and both the outcomes put the question of the organism's identity. To what extent the organism is "identical" to itself in case of adaptation or rupture? Or in other words, to what extent the idea of Self's continuity can be understood in terms of equilibrium out of tension?

The idea of tension as a constitutive element of systems has been developed into the concept of "tensegrity", a contraction for "tensional integrity", which has been initially formulated with respect to innovative architectural structures (Fuller, 1961). The idea is that tension is not a pathology of a system, rather one of its complementary constitutive elements, providing stability and integrity. Every system, natural or artificial, is made of sub-parts that are in a hierarchical relationship of continuous tension and discontinuous compression, which is called "self-stress" or "prestress". "As the term 'tensegrity system' implies, the interplay between the tension and compression elements may be interpreted as a whole as systemic behaviour unpredictable from the behaviour of the parts considered individually" (IUED, 1978, 261). The tensegrity principle found several theoretical applications for instance in biology (Ingber, 2003) and social sciences (IUED, 1978) (Fig. 2). "Our bodies provide a familiar example of a prestressed tensegrity structure: our bones act like struts to resist the pull of tensile muscles, tendons and ligaments, and the shape stability (stiffness) of our bodies varies depending on the tone (prestress) in our muscles" (Ingber, 2003, 1158).



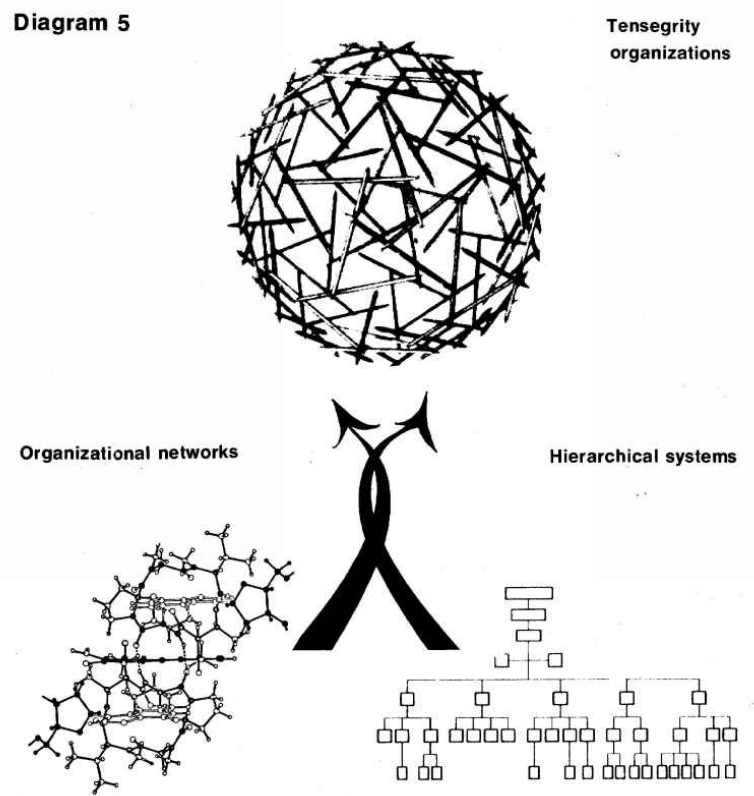


Figure 2 - Tensegrity structures. Source: IUED, 1978, 262.

As in the example of human body, tensegrity principle is not acting only at the level of the structure, but also at the level of the functions of the sub-parts. Indeed, in a tensegrity system, the sub-parts specialize in functioning as modular sub-systems with their own tensegrity organization, which is functional to the maintenance of the whole system integrity. “It is the unique equilibrium (made possible by a tensegrity pattern) between what unites (i.e. the tensional network) and what divides (i.e. the many distinct compressional incompatibilities) which gives rise to (and derives from) the new kind of organizational structure” (IUED, 1978, 260). Thus, environmental pressure does not exert on a system in a state of static equilibrium, rather interact with a self-stressed system which is already in a state of dynamic tensegrity.

Take for instance the particular kind of structure in figure 3: the Pavilion of the Federal Republic of Germany by the architects Frei Alto and Rolf Gutbredhe, at the Expo 1967 in Montreal, whose theme was “man and his world”.

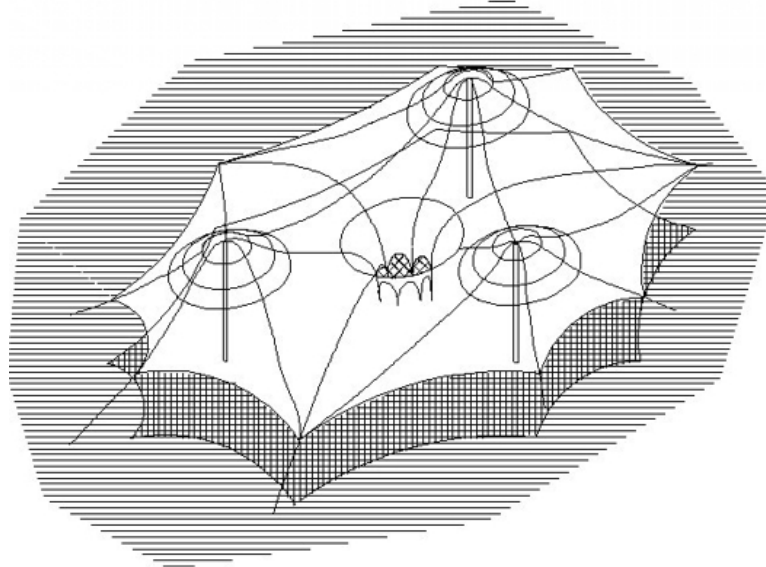


Figure 3 - Tension as structural feature

In this example, tension cannot be considered as a momentary condition of environmental pressure upon the system, is rather a constitutive element of the system itself. It is also worth noting that the tension is related to the ratio between peaks, hollows and *holes*. In this kind of structure, the interruption of tension would lead to both the deformation *and* the rupture of the system. In this specific case, tension, equilibrium and identity are no longer opposing rather complementary concepts. But the Pavillion is still a static structure, a closed system, no development is possible.

Consider now an open system, like the representation of William James' idea of the stream of consciousness in relation the identity of the Self, presented in figure 4.

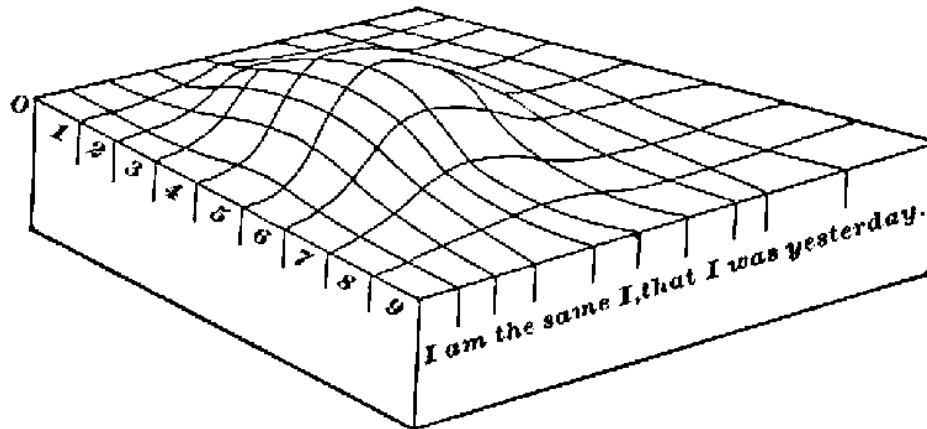


Figure 4 – James' illustration of the unity of consciousness (1950, 283)

James' original explanation of the figure is:

*“Let it be the thought, 'I am the same I that I was yesterday.' If at the fourth moment of time we annihilate the thinker and examine how the last pulsation of his consciousness was made, we find that it was an awareness of the whole content with same most prominent, and the other parts of the thing known relatively less distinct. With each prolongation of the scheme in the time-direction, the summit of the curve of section would come further towards the end of the sentence. If we make a solid wooden frame with the sentence written on its front, and the time-scale on one of its sides, if we spread flatly a sheet of India rubber over its top, on which rectangular co-ordinates are painted, and slide a smooth ball under the rubber in the direction from 0 to 'yesterday,' the bulging of the membrane along this diagonal at successive moments will symbolize the changing of the thought's content in a way plain enough, after what has been said, to call for no more explanation. Or to express it in cerebral terms, it will show the relative intensities, at successive moments, of the several nerve-processes to which the various parts of the thought-object correspond” (James, 1950, 283).*

Beyond the visual similarities between figures 3 and 4, what is relevant here is that also James' stream metaphor includes continuous tension in the form of peaks and hollows. Change and continuity are thus not conceptualized in terms of alternation between equilibrium and tension, rather in terms of differential of potential (*“relative*

*intensities, at successive moments*") within the stream of consciousness. In this way, the dynamic element is brought into the picture. Nevertheless, James figure does not provide for holes, to the extent that even the potential interruption of the stream of consciousness during the sleep is rejected (James, 1950).

### The Impossible Aesthetic of Self

As human beings, we have a natural aesthetic feeling that guides the understanding of the world around us, to the extent of guiding our perception of the shape and the content of the things we deal with. The tendency to capture the wholeness of the perceived object is one example of this aesthetic feeling. Gestalt theory (Wertheimer, 1912; Koffka, 1935) offers a conceptual apparatus in explaining the processes that lead us in perceiving the totality like something different to the sum of their distinguish parts. Look at the very well know Kanizsa's triangle (1980) (Fig. 5).

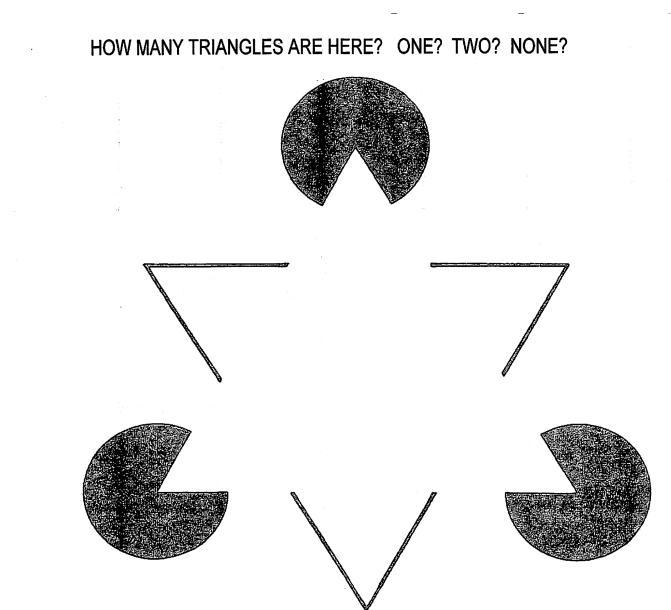


Figure 5 - Kanizsa's triangle

No single closed object is in this figure, but by overlooking the totality, we perceive regular triangles instead of the discrete elements. We are able to grasp a *wholeness* making connection among the parts.

Paying attention to this special visual phenomenon, we easily see that *wholeness* is made through *emptiness*. A large empty space exists among the not closed objects.



Nevertheless, they are in connection each other thanks to an invisible tension between them. By assuming a limited vision, our natural aesthetic feeling (as a tendency in perceiving the “beauty” of the whole) fails with a sense of internal discomfort.

The *holes* that compose the *whole* are disquieting objects as well as the existing tension (commonly perceived as negative force) which links each other. How all of this deals with the Self?

We usually conceptualize the Self as an entity, whose main feature is the consistency over time. This kind of definition fits with our aesthetic feeling, but seems a very simplified vision when we look at the ordinary life of each and every human being. We are constantly in moving, transiting from one space to another, assuming different roles, having very many different identities. How is it possible that all this come together? The Self notion has to deal with this multifaceted complexity. What is the relationship between this discrete “objects”?

Following the suggestions arisen from Kanizsa’s triangle (Fig. 5) we can conceptualize the Self not as filled concept, but in terms of *dynamic tension between wholeness and emptiness*. In such a way we must admit the impossibility of an aesthetic sense of Self.

### **Self Needs the Holes**

As in James’ and Kanizsa’s examples, psychology seems to reject vacuum, everything should be filled by some concept, not considering that the Self as a whole could include “holes” as well, like in the Henry Moore’s sculpture (Fig. 6).

The apparent opposition between “full” and “empty” can be depicted as that of *inclusive separation* (Valsiner, 1997), that makes possible a kind of joint completion. The opposites are distinguished and separated from one another but, at same time, they enter into a relationship with one another. This relationship becomes the basis for the functioning of the system that includes them. That mutual integration recognizes the “full<>empty” distinction using it to have a careful look at the boundary of two categories.

The issue of boundary is very central in Mereotopology – a qualitative mathematical perspective in contemporary philosophy – whose abstract principles shed light on the parts-whole relations (Smith, 1997; Varzi, 1998), providing some theoretical hints to understand the holes and their peculiar relation with the whole

(Varzi,1997).



Figure 6 - Henry Moore in his study, working at the preparatory model for a sculpture at Kew Garden

A hole does not exist without its complement - the host - and it is not the owner of its boundary, since the boundary of a hole is the surface of its host. Hole is bounded from the outside and it is a special example of interconnection and of Complementarity Principle (Bohr, 1948/1998).

Acting like “membrane”, the boundary simultaneously separates and unifies the connected parts of a whole (Herbst, 1976; Marsico, Cabell, Valsiner & Kharlamov, 2013) or, in other words, the *emptiness* with the *wholeness*.

What keeps this configuration up is a dynamic tension among full and empty parts of the system. Locating on liminality of those parts and on borders, the tension, while shaping the surfaces of the single elements (keeping the open/close distinctions), allows the communications and the exchanges from one side to another. By stressing the porosity and the inhomogeneity of the Self, it is possible to provide an alternative perspective on Self, no longer conceived as a static entity, but rather as a system in perennial tension whose main features are the instability and the capability to cope with the uncertainty of lived experiences.



Why does the Self need the Holes? For surviving and developing. Human beings are naturally oriented toward development and change. The entire human existence is played on the borders between inner and outer parts of the Self (Marsico, 2013). If the self is conceptualized as a stable and static structure, how its develop take place? Like the grass grows in the interstitial spaces along the street, also the Self needs the holes as a semiotic space for the emergence of novelty.

Wholeness, Emptiness and their boundaries are the elements that create an evolutive tension of the Self. In our view the semiotic construction of Self emerges from the emptiness that is not a symbolic void. On the contrary, the emptiness is both highly idiosyncratic, divergent, ambivalent, sensitive to the context and dynamically interconnected with the whole representing, in such a way, a real semiotic source.

### **Concluding Remarks**

The aim of this special issue is to provide new hints for the reflection about the relationship between Self and semiosis. The authors have tried to reflect upon some fundamental questions about the Self and the semiosis, both from the theoretical and philosophical point of view and their unfolding life span.

The three articles of Salvatore, Luleci and Silva Filho & Dazzani, reflect upon the relationship between the semiotic approach to the Self and the ideas of context, agency, belief and action. The discussion of the philosophical and epistemological foundations of the semiotic Self leads to the idea of these elements as co-constitutive through an evolutive tension. Thus the Self, as higher level semiotic instance, is the process that results of and regulates the uniqueness of the experience in irreversible time and of the Self experiencing, on one side, and the continuity of the stream of Self and the culturally codified ways of producing signs about the experience in the world.

The other contributions, instead, focus on the historical and genetic nature of the semiotic Self. By using different research materials, the authors explain why the Self must be understood as an historical concept, with its own history and geography, both at the individual and cultural level. The tendency to reify the Self (Pizarroso, 2013) is indeed rooted in the forgetting of how the concept of Self has been constructed in our individual lives – through a very dialogical and hard fought process. De Souza, de Mattos & Chavez, Fivush, Simao & Sampaio, instead, bring phenomenological evidence of this process of semiotic cycle in different periods of the lifespan. While Guimaraes, underlines the historicity of the theoretical construction of the idea of Self,



by questioning the generalization of this psychological “entity” to all the cultures and claiming the notion of “multiple selves”.

Thanks to the contribution in this special issue, we are able to stress some innovative ideas about the semiotic approach to the Self. First, the Self is a dynamic semiotic system in constant evolutive tension, rather than a system in equilibrium adapting to the environmental changing conditions (fig. 7). Secondly, rather than the concept of stability and continuity of the Self, it is more fruitful to develop the idea of tensional integrity to account for the complementarity between uniqueness and guidance in the construction and development of Self.

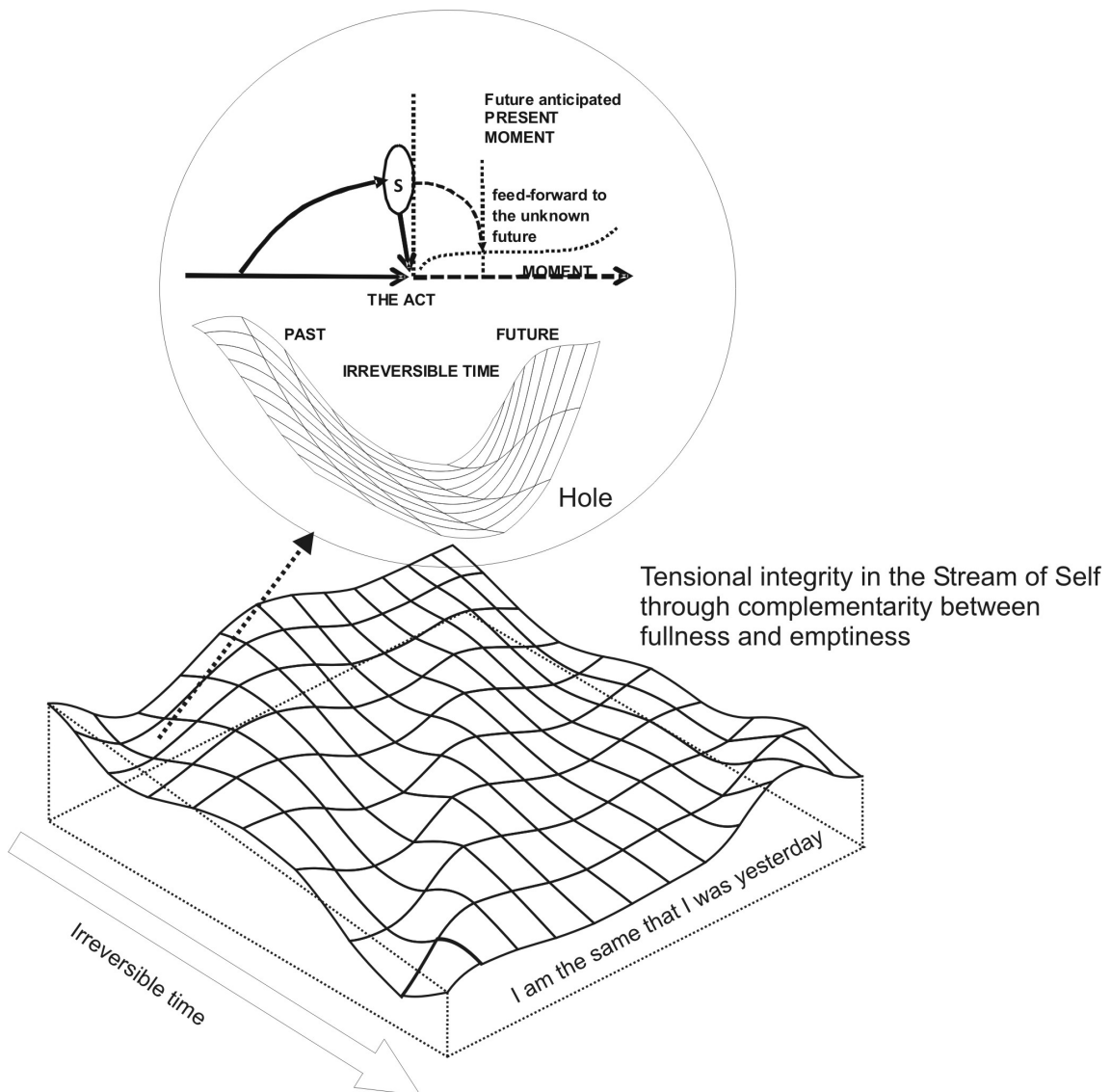


Figure 7 – The Self as a tensegrity dynamic system





Tensional integrity emerges from the co-genetic complementarity between Wholeness, Emptiness and their boundaries. In this respect, psychology has mainly focused on filling the holes and hollows of Self with concepts, without paying enough attention to the possibility that the Self system could be also made by empty zone. The further developments of the idea of Self as dynamic tensegrity semiotic system will contribute to fill this gap. We argue that semiosis, in the form of novelty, emerges exactly from tension and emptiness, understood as the feed-forward semiotic act (Valsiner, 2002) of producing a sign where no light has been yet shed on the unknown future.

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