

Signs as Creators of Thought Processes

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Abstract

This paper elaborates on some of Saussure's reflections on the structure of signs, and the role these signs play in the constitution of conscious thought. In the notes of *La double essence*, Saussure argued that the sign "creates" and "guides" thought, but as part of a reflection that is both complex and hesitant. To clarify this position and examine its relevance, we first analyze the general conception of the status of signs and semiotics, that Saussure developed in his *Course II*. We then examine the way in which, in the twentieth century, the problem of how human thought is constituted was tackled by Piaget and Vygotsky. Finally, drawing on the notes of *La double Essence*, we try to highlight the arguments that led Saussure to adopt the position quoted below, and we will show how Saussure's approach provides decisive arguments in support of the social interactionist position inherited from Vygotsky.

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[...] it is not thought that creates the sign, but the sign that fundamentally guides thought (and thus in fact creates it, causing it in turn to create signs of its own, inevitably similar to those it received). (Saussure, 2006, pp. 26-27)

This chapter elaborates on some of Saussure's reflections on the status and structure of signs, and the role these signs play in the constitution and development of conscious thought. In the quotation above, from the manuscript *La double essence*, Saussure takes a clearly logocentric position, arguing that the sign "creates" and "guides" thought. But this passage is part of a body of notes testifying to a reflection that is both complex and hesitant (presumably undertaken between 1895 and 1906) which he took up and organized in the second course of general linguistics (*Course II*, 1908-1909), whose introductory part focuses on the essence of the sign and the scientific disciplines that address it. To carry out our examination, we will juggle with the chronology of the texts under consideration, by first of all analyzing the general conception of the status of signs and semiotics, as Saussure presents it in the introduction to *Course II*. We will then consider the way he treats verbal meaning and its role in human thought processes, and briefly consider the writings of philosophers, from Plato's *Cratylus* to the works of Wittgenstein. We will then examine the way in which, in the twentieth century, the problem of how human thought is constituted was tackled by the "warring brothers" of developmental psychology, Piaget and Vygotsky. Finally, drawing on the notes of *La double Essence*, we will try to highlight

the arguments that led Saussure to adopt the position quoted above, and we will show how Saussure's approach provides decisive arguments in support of the social interactionist position inherited from Vygotsky.

1. The Introduction to *Course II*: The Status of Signs and Its Implications

It is in the *Introduction* to *Course II* that Saussure provides the most organized and well-argued presentation of the properties of language and the units it organizes. In the initial phase of his reflections, he emphasizes that language is a complex object, endowed with particularly heterogeneous components, and that it constitutes a legitimate object for various scientific disciplines, from biology to sociology. And he adds that if linguistics can also take language as an object, it is insofar as it grasps it as a system of signs, which necessarily involves considering the nature of both parts of the sign and their very particular and complex relationship. Contrary to the positions defended in certain later linguistic currents, in particular *Generative Grammar*, Saussure strongly asserts that linguistics is primarily and fundamentally concerned with elucidating the question of meaning:

In order to assign a place to linguistics language must not be taken from all sides; it is clear that if it is, then several sciences, psychology, physiology, anthropology, <grammar, philology,> etc., will be able to claim the language as their object. This analytic path has thus never led anywhere. I shall follow a synthetic path. [...]

Is this so difficult? Is it not clear that before everything the language is a system of signs and that we have to appeal to the science of signs which tells us what signs, their laws, etc., can consist in? (Saussure, 1997, p. 7a).

For Saussure, linguistics must therefore focus primarily on the semiological properties of language, establish the place of language among the other sign systems, and consequently determine what place linguistics occupies in a "general semiological discipline". The properties to be considered for this purpose are by no means the static elements of sound or referential order, but rather the dynamic dimensions (in diachrony and synchrony) that constitute the "living conditions" of signs within the framework of their system.

In analyzing these living conditions, Saussure initially argued that the origins and foundations of language signs are located in the community, and that consequently these signs are beyond the consciousness and will of speaking subjects:

What is most interesting in the sign to be studied are the aspects where it escapes our will; there is its true sphere, since we can reduce it no further. (Saussure, 1997, p. 11a).

[...] when a semiological system becomes the possession of a community, it is futile to try to assess that system outside of what has resulted from that collective character, and it is enough <in order to have its essence> to examine what it is with respect to the collectivity. (Saussure, 1997, pp. 13a-14a).

In this perspective, *it is the social fact that creates the semiological fact*, and signified signs within the language system are values that have been assigned and consecrated by the community. The essential properties of signs thus have a genesis and a status which are situated upstream of the cognitive processes and which, therefore, rather

than being products of cognitive operations, are on the contrary constitutive properties of this specifically human capacity which is conscious thought.

But in the course of this analysis, Saussure also indicates, very explicitly, that if language has a constitutive effect on thought processes, it is because the production of delimited verbal units necessarily leads to a division of representations into units that are themselves delimited, which is one of the conditions of the deployment of thought operations:

the <characteristic> role of language with respect to thought is not <to be> a phonic, material medium, but rather is to create an intermediary environment of such <a nature> that the compromise between thought and sound inevitably ends up in <specific> units. Thought in its chaotic nature is forced to take shape because it <is> taken apart, divided up by language into units. (Saussure, 1997, p. 21a).

This position is re-worded in the *Incidental Remarks* that conclude this chapter of the *Introduction*, in formulations that, in the notes taken by the students, remain somewhat confusing, but nevertheless highlight the major role of significant units in the functioning of language as in that of thought:

[...] the idea of unit would perhaps be clearer for some if we spoke of meaningful units [...] we are liable to misconception <and to believing that> there are words existing as units to which a meaning becomes attached. It is on the contrary meaning which delimits words in thought. [...] What is meaningful is conveyed by a delimitation of units, it is meaning which creates it, it does not exist before. (Saussure, 1997, p. 24a)

2. More than Two Millennia of Debates on the Status of Signs

As is well known, during Greek Antiquity a long debate opposed essentialists and conventionalists. The former believed in the existence of a pre-established harmony between the outside world and *λογος* and considered that words constitute *reflections of the essence of objects to which they apply*; the latter, more sensitive to the diversity of the empirical properties of languages, maintained that the words and structures of languages are established by *human convention*, which gives rise to doubts about the possibility of true inter-comprehension.

The main objective of Plato's *Cratylus* was to find a compromise between these two positions, arguing on one hand that the objects and events of the world exist permanently and have properties independent of individual judgments, and on the other that names are indeed conventional human constructs, but which nonetheless have the capacity to "reveal" the nature of the entities of the world to which they apply: "The name is therefore an instrument capable of teaching and distinguishing reality, as the shuttle (serves) to untangle the threads" (Plato, *Cratylus*, p. 388c).

In *De interpretatione*, Aristotle re-examined this problem, admitting like Plato that although their sound or visual surface varies according to communities and languages, words nevertheless translate states of the soul that are identical for all because they are faithful reflections of the things they designate. In this conception, words are combinations of sounds conventionally attributed to things and therefore have an arbitrary dimension. This led Aristotle to call them *symbols*, but these symbols carry meaning only because they are faithful images of actually existing things.

Dominant for a long time, though largely simplified by scholasticism, this conception was challenged in the 17th century, by Hobbes in particular, who was one of the first philosophers to consider the historicity and variability of languages, to re-examine the status of human knowledge, and firmly maintain that human cognitive abilities are built in and through language:

[The] Faculties [...] which seem proper to man onely, are acquired, and increased by study and industry [...]; and proceed all from the invention of Words, and Speech. For besides Sense, and Thoughts, and the Trayne of thoughts, the mind of man has no other motion; though by the help of Speech, and Method, the same Facultyes may be improved to such a height, as to distinguish men from all other living Creatures. (Hobbes, *Leviathan*, 1651/1991, p. 23)

Locke (1689) and Leibnitz (1704/1996) developed similar positions, emphasizing the role of social and verbal interactions in building human psychological capacities, and the cultural dimension of language was later masterfully emphasized by Humboldt (1835/1999). However, the lingering influence of Descartes's epistemology (1637/1951), and later Kant's deafening silence on the question of language (1781/1922), caused these criticisms to be forgotten, and the conception of a language as a mere translator of cognitive operations took over.

The goal of Wittgenstein's *Tractatus* was to give a rigorous philosophical base to this "Aristotelian semiology", by explicitly defining the *a priori conditions of any language*. Based on the observation of the functioning of "ordinary language", Wittgenstein argued that the primitive sign of language is the name, which has a reference (*Bedeutung*: it refers to an object in the world which is the very condition of its existence), but which takes its meaning (*Sinn*) only in the context of a proposition, itself an image of an ontologically possible fact. As part of this approach, the formulation of the rules of world-language translation (defining the ideal language or *Begriffsschrift*) requires an *a priori knowledge* of the form of objects and facts of the world. However, Wittgenstein finally acknowledged that this direct knowledge is inaccessible (we cannot say anything about objects and facts except that they exist), and consequently adopted a new, *empirical*, method consisting of analyzing the sentences of ordinary language to access knowledge of elementary propositions, names and their rules, that is to say, knowledge of the ideal language. But this approach led to a dead end, namely that to access the meaning of a word, we can certainly give a definition mobilizing simpler words, but then how do we determine the meaning of a simpler word, if not by producing a sentence made of simple words that will still have to be explained, that is by paraphrasing? And these paraphrases are endless, as Wittgenstein notes:

The meanings of primitive signs can be explained by elucidations. Elucidations are propositions which contain the primitive signs. They can, therefore, only be understood when the meanings of the signs are already known. (*Tractatus*, 3.263, p. 33)

In other words, we can only understand a sentence if we know the meaning of the words that compose it, but the meaning of the word itself depends on the sentence in which it is located, and therefore we cannot apprehend that if we have already understood the sentence. In short, we can understand a word only if we have already

understood it, and so we have no kind of certainty about the meaning of words, or, consequently, the possibilities of inter-comprehension. We are left with loneliness, doubt, solipsism: “*The limits of my language mean the limits of my world*” (*Tractatus*, 5.61, p. 74).

Wittgenstein resumed his analyses of ordinary language in a radically different perspective, presented in *Philosophical Investigations* (1953), which highlights the irreducible diversity of the language games which constitute manifestations of human activities or forms of life: the term “language-game” is meant to bring out the fact that the use of language is part of an activity, or a “form of life” (*Philosophical Investigations*, 23). In this new approach, language games are the frameworks in which a great diversity of use of signs takes place, and the meaning of signs is built in language practices, and more generally in human activity: “it is our acting which lies at the bottom of the language-game” (*On Certainty*, 1969, p. 204).

It is because there is a common act, an agreement in action that the rules of language can appear and be followed, that meanings are possible; it is because we participate in common “life forms” that inter-comprehension is possible.

Approaches of this type, such as those later developed in various currents of functional or discourse linguistics, thus propose, in opposition to the Aristotelian tradition, that the significations of signs are constructed within the framework of social and communicative activities; but these approaches nevertheless leave open the question of the role played by semiotic units in the constitution of thought processes.

3. Two Conceptions of the Role of Language in Developmental Psychology

The problem of the constitutive conditions of conscious thought was addressed by the two major authors of developmental psychology, Piaget and Vygotsky. Piaget treated this question in detail in a late text, *L'explication en psychologie et le parallélisme psychophysiologique* (1974), which, like the *Tractatus*, is decisive both because of the rigor of its reasoning and because of the impasse to which this requirement leads. Piaget argues that behaviors and primary (non-operative and non-conscious) psychic processes function according to the principles of causality. He goes on to argue that if conscious thought exists, not only does it not act causally on bodies, but it does not act causally on itself; uniquely human mental phenomena operate according to a *logic of implication*, or sequences of *signifying implications*, governed by social values or norms:

In the domain of intelligence, the essential mode of connection peculiar to logical consciousness is the implication [which] is characterized by a sense of necessity [or] of obligation that *must be* respected. But this is not always the case, so the logician Lalande rephrased the implication as “*p* implies *q* for the honest man”, so as to emphasize its normative character. [...] We will use the term “signifying implication” to characterize the logical relation [which] controls the relation between signifier and signified that intervenes in categorizations or designations [...] Thus our hypothesis is that the mode of connection proper to the phenomena of consciousness is the signifying implication. (Piaget, 1974¹, pp. 177-178. Our translation²)

To close his analysis, Piaget then posed the question as to which factors are likely

to explain the emergence of conscious thought: how do we go from a causal logic organizing the sensorimotor to a logic of meaningful implication characteristic of conscious thought? As he was unable, given his epistemological framework, to invoke the role played by language and social interaction, he left the question unresolved and admitted a kind of failure:

The central problem in this respect, which we fortunately did not have to deal with in this chapter, since it is currently unresolved, is that of the beginnings of consciousness, prior to any language (op. cit., p. 181. Our translation³)

In *Thought and Language* (1934/1962), Vygotsky firmly maintained that the internalization of language provokes a real *revolution* in the psychological functioning of the human body; the psyche of the young child, initially based on natural processes, is entirely reorganized by signs and language structures, and so will henceforth be part of a sociohistorical process:

With the development of inner speech and of verbal thought, we must conclude that the later stage is not a simple continuation of the earlier. *The nature of the development itself changes*, from biological to sociohistorical. (1962, p. 51)

In his analysis of this revolution, Vygotsky argued that the unity of thought lies in the meaning of the word, conceived as a single psychic phenomenon, and that meanings develop in ontogeny and remain dynamic. And this analysis led to the thesis that signs are the forms of expression of human socio-historical consciousness: “words play a central part not only in the development of thought but in the historical growth of consciousness as a whole. A word is a microcosm of human consciousness” (op. cit., p. 153).

However, although Vygotsky’s theoretical position is absolutely clear, neither empirical evidence of the actual role of social interactions in the process of emergence of thought, nor a demonstration of the processes by which language generates conscious thought, are to be found in his writings.

4. The Flashes of *La double essence*

As presented in *La double essence*, Saussurean analysis of the sign provides powerful technical support for Vygotsky’s general thesis that the meaning of signs is the material that makes possible the organization of psychic functions and conscious systems.

Saussure indeed demonstrates that signs have an absolutely specific modality of existence: they are simultaneously: *negative*, that is to say not definable a priori or with reference to any external foundation; *correlative* in the sense that they are defined in relation to each other; and *complex* in that neither the forms nor the senses exist as such outside their association:

form = Not a *positive* entity in a given order, and a simple order; but an entity both *negative* and *complex* (lacking any material basis), born of *difference* from other forms combined with the *difference* of meaning of other forms. (Saussure, 2006, p. 19)

In other words, this particular mode of existence is characterized by the *co-determination of forms and meanings*, which implies that any delimitation of entities is realized exclusively *within* the semiological order. Hence, the order of signs is nothing but the space of co-establishment of complex entities, whose unity is only the irreducible product of *three simultaneously active relations*: the differential relations of forms among themselves; the equally differential relations of meanings to each other; and finally associative relations between forms and meanings:

We are already led back to the four irreducible terms and the three irreducible relationships between them, which add up to a whole in the mind: (a sign / its meaning) = (a sign / and another sign) and furthermore = (a meaning / another meaning). [...] That is what we term the last quaternion and, as far as the four terms in their interrelationships are concerned: the irreducible triple relationship. (op. cit., p. 22)

Pursuing his analysis, Saussure concludes that signs are actually *empty entities*, that is to say entities whose very essence is constituted neither by physical elements (sounds or external objects), nor by the cognitive operations of a subject. For him, signs are only ghosts, “soap bubbles”. And he goes so far as to assert that signs are based “on *unreason* itself”, and that the organization of the language system is not “correctable or controllable by human reason”.

But signs nevertheless have a positivity, or acquire a value, and this value results only from social usage; it is only the product of exchanges or social interactions, in synchrony (in daily exchanges) or in diachrony: “a word only truly exists, however one views it, by being sanctioned in actual use by speakers of the language” (op. cit., p. 56). For Saussure as for Vygotsky, signs, and language as a system of signs, are therefore fundamentally social, or the social is the site, or medium, of the realization of language; the social is consequently an internal property of language, and even its only positive property:

[...] if this community environment changes everything for the sign system, this environment is also [from the beginning] the true locus of development, towards which, right from its very inception, a sign system moves. A sign system is destined for community just as a ship is for the sea. Its only role is that of allowing comprehension between people in groups large or small, but not for the use of a sole individual. That is why, contrary to appearance, semiological phenomena, of whatever kind, are never devoid of the social, collective element. The community and its laws are among the *internal*, rather than *external* elements, as far as we are concerned. (op. cit., p. 203)

But the Saussurean analysis of signs provides above all the technical and conceptual elements that make it possible to validate the Vygotskian thesis according to which the internalization of verbal signs is the cause of the constitution of the system of properly human thought.

In the first place, signs have no substantial or referential foundation: “the unity of each linguistic entity itself results [...] moreover from a union of a very particular sort in that there is nothing in common in essence between a sign and that which it signifies” (op. cit., p. 5); their internalization during the child’s development consequently leads to the constitution of psychic entities that are independent of the conditions of reinforcement of the environment, and therefore autonomous and

potentially stable, whereas the mental images of the sensorimotor disappear if we stop reinforcing them.

Secondly, language is constitutive of the units of representation relating to the objects of the world: “*Langue* is ever on the move, pressed forward by its imposing machinery of negative categorization, wholly free of materiality, and thus perfectly prepared to assimilate any idea that may join those that have preceded it” (p. 51). And as Saussure pointed out in *Course II*, insofar as signs are delimited entities (by their opposition), the cognitive entities that correspond to them are themselves circumscribed (“It is the meaning which delimits the words in thought”, *Course II*, p. 24) and this stability of cognitive entities is a *sine qua non* condition for the deployment of thought operations.

Thirdly, since signs are constituted by social envelopes that federate sets of individual images and whose phonic form is perceptible and analyzable, this accessibility of entities with splitting power makes possible the return of thought to itself, or the capacity of consciousness, as the ultimate property of the human psyche: “[...] neither the word nor its meaning exists outside the consciousness that we have of them, or are prepared to grant them at any moment” (2006, p. 56).

To conclude in our own terms (see Bronckart, 2015), we will argue that the appropriation of verbal signs, as Saussure described and analyzed them, constitutes the very place of transition, or continuity/rupture, between the animal world and the human world. On the one hand, the psychic processes mobilized in the making of signs are elementary processes which the work of Piaget has shown to be common to humans and other animals; this construction only involves inherited processes, in natural continuity. But on the other hand, these inherited processes now apply to interactive objects (to relations, practical and conventional, of sound entities and worldly entities), whereas in the animal world they apply exclusively to physical entities. And it is this change in the status of the objects to which the elementary processes apply that constitutes the rupture between animals and humans: signs have the radically new property in evolution of constituting *psychic crystallizations of social exchange units*, and find themselves carrying representations that are always of the order of shared and/or shareable meanings⁴.

Notes

- 1 This chapter of the *Traité de Psychologie expérimentale* (edited by Fraisse and Piaget), originally published in 1961, underwent a substantial modification in 1974.
- 2 Sur le terrain de l’intelligence, le mode essentiel de liaison propre à la conscience logique est l’implication [qui] se caractérise par un sentiment de nécessité [ou] d’obligation que l’on *doit* respecter : or ce n’est pas toujours ce que l’on fait, si bien que le logicien Lalande énonçait l’implication en disant « *p* implique *q* pour l’honnête homme » de manière à souligner son caractère normatif. Nous appellerons [...] « implication signifiante » cette relation logique [qui] commande la relation elle-même de signifiant à signifié intervenant dans les catégorisations ou désignations [...] Notre hypothèse est donc que le mode de connexion propre aux phénomènes de conscience n’est autre que l’implication signifiante.
- 3 Le problème central à cet égard, dont nous n’avons heureusement pas à traiter dans ce chapitre, puisqu’il est sans solution possible actuellement, est celui des débuts de la conscience, antérieurement à tout langage.
- 4 We would like to thank Ian MacKenzie for help in revising the English version of this text.

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