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The concept of meaning: The key to clarify the human cognition and psychopathology



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ABSTRACT

Meaning is a concept which is discussed everywhere. Besides being a common word, it is relevant for cognitive and linguistic studies. Nevertheless, translation problems and the specific definition of similar concepts by different disciplines hamper the discussion. In this paper, the authors discard some popular ideas about meaning (as being an image, an object or the relationship between signs), and highlights its relation with intentions, and the new concept of "embodied meaning". Following a suggestion by Timothy Crow, who studied schizophrenia and brain lateralization, the authors conclude that the right hemisphere (in right handed people) processes intentions and meanings, whereas the left hemisphere processes the signifier part of signs, including words, and their relationship to each other (the sense). This vision can elucidate some problems of Psychopathology and Philosophy of Mind.

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Introduction

Meaning is a basic concept for life. The meaning of life, meaning of words, and meaning of acts, are expressions that come to mind when we want to go deeply into the nature of thinking and life. Nevertheless, it is very difficult to reach a consensus on what meaning is. Several philosophers and linguists have tried to define this or similar concepts (sense, signified, signification, denotation, connotation, intension, extension), but different designations, problems of translation and specificities related to the different disciplines which study them maintain the confusion.

Basically, there are two branches in the recent discussion of the issue. The first is Continental European philosophy, namely Phenomenology and semiological studies. The second is American philosophy, leading to Philosophy of Language. In the last three decades, with the advent of computer technologies and brain imaging, the debate has intensified and evolved into several convergent ideas [1]. Intentionality and "embodied" meaning are now frequently used concepts when we discuss meaning [2–4]. Data from Psychopathology, brain dynamics and child development are invoked to substantiate new arguments [5,6]. Nevertheless, in spite

of the known functional lateralization of the body and brain, this fact is seldom taken into account.

In fact, ever since Broca's studies on aphasia in the 19th century [7], neuroscientists have been looking for functional differences between left and right brain hemispheres. As the unilateral lesions studied by Broca affect specific properties of language and cognition, some neuroscientists propose that brain laterality is at the origin of language and thinking. Schizophrenia is a psychiatric disorder where the meaning of the world, things and words is lost [8] [p. 98–100, 9]. Timothy Crow [10] asserts that schizophrenia is the price Homo-sapiens pays for language, and relates this disorder to brain asymmetry. Working within a broad range of disciplines [11–13], he eventually suggests that meaning is processed in the right brain hemisphere [14], whereas the left hemisphere processes the signifier part of signs, accompanying the manufacturing ability of the right hand side of the body (in right handed people).

Until now, the problem has remained unsolved because there is no consensus on what the difference is between meaning and the signifier part of signs. In fact, images, objects (or the perception of them) and the relationship between them and words (the sense) are frequently taken as the meaning. This idea, however, does not stand up to scrutiny. Images, objects, words and their relationships have the nature of significant signs and are generally processed in the left hemisphere.

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Meaning is not an image

The idea that meaning is composed of images is very popular. Nevertheless, the concept of image is ambiguous because it may be confused with imagination. Imagination is produced by the work of the mind; an image can be any artifact that depicts or records something which can be perceived, be it captured by artificial devices (mirrors, lenses or cameras) or natural ones (water or animal eyes). There is also the common experience that perceived images can be reproduced by memory and mental representation, giving us some support to speak about mental images, but the world of mental images has been strongly debated and is not as simple as our common experience may suggest. Mark Johnson [15], for instance, put forward enough arguments to support the idea that mental images are constructed by bodily movements (of the eyes, hands or feet) tracing the holistic form of these images. Moreover, the neurological literature is full of evidence that mental images have a different shape according to whether they are processed in the left or right brain hemisphere.

Gestalt psychology [16] has studied the conditions in which drawings or figures can make sense to human perception, leading to the assumption that the drawings that fulfill these conditions are meaningful. This could be a main source for taking certain images as the meaning, but drawings can be perceived and become mental images even in the absence of meaning or of their similarity with a real object. Interestingly, the perception of these "meaningless" images has been studied in neuroscience [17]. In contrast to "meaningful" images, they do not produce long-distance synchronization of human brain activity.

Another source of taking images as the meaning could be a mistaken figure inserted in the seminal work of Ferdinand de Saussure, Cours de Linguistique General, published by his students after Saussure's death. This figure is a diagram where the word 'arbor' is written in the lower semicircle, representing the signifier (signifiant), and a tree is drawn in the upper semicircle, representing the signified (signifié). This diagram is frequently used to illustrate the two parts of the Saussurean sign: the signifier (the mental image of the vocalized or written word) and the meaning, supposedly, the named object or its image. Nevertheless, this is a mistake. As Tino de Mauro explains in a critical edition of the book [18], [p. 97-99, see also notes 129, p. 439, and 132, p. 441], Saussure only drew two other diagrams, not the one referred to here. This latter diagram is apocryphal, since it was posthumously inserted by the publisher. In fact, on the same page of the book, Saussure denies the idea of the sign as a nomenclature, and defines the signifié as similar to the concept. He left the signified for psychologists to study, and dedicated himself, as a linguist, to the study of signifiers and their diachronic and synchronic relationships. But the idea that an image corresponds to the signifié, or meaning, became popular in the literature about signs.

Nevertheless, an image or drawing can be used as a signifier sign, for instance, in iconographic writings. A contemporary of Saussure, Charles Sanders Peirce, created the discipline of semiotics after his study of signs. However, while Saussure only dealt with linguistic signs, Peirce generalized the definition to other signs, including images, icons, drawings, symbols, indices, symptoms and even objects. His definition of a sign as "something which stands for something to somebody in some respect or capacity" [19], introduced the sign in human life, in contrast to its classical but abstract definition: *aliquit que stat pro aliquo*. In a well-known book published in 1973, Umberto Eco [20] demonstrated that the general ideas of Saussure and Peirce were very similar, in spite of the different names they used. Both Peirce and Saussure consider the sign in a triadic relationship. For Peirce, the vertices of this triangle would be the *representamen*, the *interpretant* and the

object. For Saussure, the corresponding designations would be the *signifiant*, the *signifié* and the *referent*.

Meaning is not the referent or object

Saussure clearly distinguishes the *signifié* from the *referent*, naming with this latter designation the object that we can point at in order to refer to the signifier. Peirce classified signs according to their reference to an object: indices (continuity in space and time with the object – the smoke standing for the fire), icons (an analogous relationship) and symbols (a random relationship, as Saussure postulated for words). This relationship may also be more complex. For instance a clinical symptom is a sign whose referent is hidden, and medical semiology consists of attempts to discover it. Referents are also things, states of things and facts in the world which we can point at in order to find the trueness of a proposition.

Furthermore, a specific object can also be a signifier (*signifiant*) as it stands for all similar objects in the world [20], [p. 151]. If a client in a restaurant holds up a bottle of beer, the waiter understands that he should bring another bottle. Thus, the bottle stands for the expression "bring me another bottle of beer". In other words, a referent or object, as well as an image, could stand for a signifier. In this case, the concept (or the signified) includes not only the presented object but all the objects in the world which are represented by this signifier (and which are impossible to point at in their totality).

Thus, as well as a drawing, a word or a sequence of words, an object can also be a sign and is related to other signs in the same way that a word is related to other words, expressions, images and objects. Objects are neither meanings nor signifieds, but they have the nature of Saussure's signifiers or Peirce's signs. They are characterized by having multiple and regulated relationships, which have been exhaustively studied in Semiology and Semiotics. The relationship between the sign (signifier) and the referent is known as the referential sense [21] or denotation, but it is not the meaning.

Meaning is not the sense

Saussure called the horizontal relationship between signifiers *value*, by analogy with the value of monetary pieces, but contemporary linguists and communication theorists prefer to call it sense. Besides the referential sense, they distinguish between the contextual, denotative (or referential) and structural (or syntagmatic) senses [21]. Nevertheless, this does not exhaust the several ways in which signs may relate to each other. Signs are also related by hierarchical categories (live beings, animals, vertebrates, mammals, dogs) specific collections (the Saussurean paradigmatic axis) and multiple other ways that linguists try to discover. In the spoken language, they evolve diachronically through similarities and contrasts [18].

In spite of sense and meaning being distinguished in every language – 'sense'/'meaning' (Engl.), 'Sinn'/'Bedeutung' (Germ.), 'sens'/ 'signifié' (Fr.), 'sentido'/'significado' (Port. and Sp.), 'senso'/'significato' (It.) – some linguists take the relationship between signs to be the meaning. Until the beginning of the century, this was precisely the mainstream way of thinking of Philosophy of Language, whose main representative was Jerry Fodor [22]. In fact, dictionaries describe words by using other words or drawings. This tendency was also enhanced by computational sciences, which attempted to base cognitive sciences on networks created in computers. Classical cognitivism and its new computational version, connectionism, led to a number of controversies and it seems to be "in a blind alley" [23]. The criticism began with a well-known

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