
Pragmatism, Semiotic mind and Cognitivism

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Abstract

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Pragmatism was born as the method of ascertaining the meanings of abstract concepts. In Peirce it was a method developed in a radical anti-Cartesian temper, through an unpsychological view of logic and the denial of introspection as a guide to knowledge. It identified the meaning with the habit, and the mind with the Final Logical Interpretant, that is the signs and the habits which mind extends itself to.

Pragmatism, semiotics and the cognitive sciences are deeply concerned with the origin of mind and the articulations of knowledge and thought. While semiotics assumed the primacy of language and culture in determining the ways and the content of thought, and pragmatism transferred the analysis of meanings to the conceivable ‘external’ and practical effects of concepts, the initial versions of cognitivism assumed the primacy of universal mechanisms internal to the individual. By sketching a minimal history of the concept of cognition in early pragmatism, linguistics, semiotics and cognitive sciences, we argue that a progressive convergence is happening, fostered by the embodied, extended, distributed and enacted epistemological turns. Cognition is investigated as an activity constitutively relying on culture, context and history. An increasingly pragmatist and semiotic perspective is thus needed to integrate and re-assess conceptual frameworks, methodologies and results mostly focused on the individual and the biological, in order to overcome the opposition internal/external concerning cognition. Another view of mind is needed, too, off the Cartesian, but also the Kantian, horizon.

We will sketch a pragmatist approach to meaning and a structural theory of cognition, and we will argue that this perspective can contribute to the epistemological turns of cognitive sciences.

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Claudio Paolucci (University of Bologna)

Semiotics, Pragmatism and the New Science of the Mind

I will present a theoretical comparison between Semiotics, Pragmatism and contemporary developments of Cognitive Sciences which go by the names of "extended mind", "distributed cognition" and "situated cognition", claiming that Peirce's cognitive theory, which is constitutively grounded on his Semiotics and Pragmatism, represents an appropriate epistemological frame for investigating some of the current problems that are central to the debate in contemporary cognitive science.

I will try to show: i) how pragmatism is first of all a *semantic* theory which has to do with *cognition* while giving special attention to the meaning of *beliefs*; ii) how in the pragmatism of Peirce, the meaning is subject to the community and to the extension of thought in the environment; iii) how inside this pragmatic conception of meaning and thought, "doubt", "belief" and "habit" have nothing to do with mental or personal terms of introspective and internalist kind; iv) how this pragmatic conception of thought leads to a theory of "extended mind" which is explicitly formulated by Peirce (CP 7.364); v) how this theory of the extension of the mind based on the identification of thoughts with signs freed cognition from any kind of personal, psychological or computational/inferential mechanism that would take place under the individual's skin; vi) how Peirce is able to build a concrete logical-mathematical model of the extension of the mind with his system of existential graphs; vii) how Peirce's synechism, defined by Peirce as the "The Law of Mind", the first part of which is constituted by the cognitive semiotics found in the anti-Cartesian essays, defines a formulation which is equivalent to the "parity principle" defined by Clark and Chalmers (1998); viii) how the union of Peirce's cognitive semiotics, pragmatism and synechism defines a frame which is even more anti-Cartesian compared to Clark's theory of the extension of the mind, and which, in our view, represents a theoretical horizon which we think is particularly relevant to the discussion and solving of some current problems of cognitive sciences.

Marta Caravà (University of Bologna)

Pragmatism and Enaction: for a peircean Account of Cognition and Mind.

The aim of my paper is to outline a philosophical conjunction between some contemporary researches in cognitive sciences and the peircean thought.

After a brief contextualization of the issues of mind and cognition in Peirce's philosophy and in contemporary researches, I will focus my attention on peircean pragmatism and semiotics, in order to sketch an intersection with the enactivism and the "extended" approach to knowledge.

In the last twenty years, new anti-Cartesian paradigms as "4E Cognition" and "Distributed Cognition" become more and more studied, discussed and applied in the domain of cognitive sciences, but also in philosophy of mind and recently in semiotics. This issue contributes to create the right context in which the thought of Charles Sanders Peirce, philosopher, "scientist of the mind" and semiotician, can be related to contemporary researches on mind and cognition, in order to underline the explanatory effects of a pragmatist and semiotic approach to these domains of inquiry.

The first interesting aspect of this intersection can be found in the common idea in which these contemporary researches and Peirce's thought are grounded: both are interested in cognition in the same way; that is, the first step to analyze cognition consists in an anti-Cartesian approach to knowledge. Although these contemporary theories have different features, they share the idea that cognition and mind are not bounded to the skull or to a *res cogitans*, but they represent processes which spread out in world, in the body, in the cultural environment, in the social interaction and co-operation.

I think that Peirce's account of cognition and mind leads to very similar conclusions. In the Anti-Cartesian essays of 1868, Peirce defines knowledge as an inferential process in which cognition is produced in the distribution of signs-representations, which are neutral with the respect the opposition internal/external. If cognition and mind can be located, their place is a sort of "non-place", that is the limit in which the Interpretants escape.

Although this issue is a sort of unavoidable passage in the discussion of the role of Peirce's thought in relation to the contemporary "transcranialist" theories of knowledge and mind, I think that the discussion about cognition has to be more deeply developed, linking the semiotic theory to pragmatism. As a matter of fact, in the pragmatist reflections some theoretical issues, which inhere knowledge as unlimited semiosis, can be solved (and then linked to the enactive approach).

In *CP* 5.284 Peirce writes: "There is no exception, therefore, to the law that every thought-sign is translated or interpreted in a subsequent one, unless it be that all thought comes to an abrupt and final end in death": the cognitions are always distributed in a unlimited semiosis; that is, each cognition escapes in a subsequent representational cognition. There is a *regressus ad infinitum* in which it is not clear how cognition becomes useful: a solution to this problem can be found in a pragmatist approach to knowledge.

If we consider the classification of the Interpretants developed between 1905 and 1907, we find that Peirce, aware of the issue of the "cognitive usefulness", elaborates the notion of "ultimate logical Interpretant", in which the "usefulness of cognition" is embodied. The "ultimate logical Interpretant" is a pragmatist notion, by which cognition or, in a more correct way, the ultimate cognition, is conceived as an habit change. This is produced by the "multiple reiterated behavior of the same kind, under the similar combination of percepts and fancies" (*CP* 5.487).

So, by the notion of habit, the cognition can be described as a conditional, reasoned and generalized practical action. I think that this enhancement of the semiotic theory by the

pragmatist interpretation of signs is the core of Peirce's thought and it demonstrates its actuality in relation to contemporary researches. Peirce seems to link together, in a justified way, two central issues of the contemporary debate on mind and cognition, through the intersection of the semiotic account of knowledge and pragmatism.

First, he gives an account of a representational feature of mind which is able to successfully overcome the opposition internal/external, the main aim of one of the contemporary accounts described by the label "4 E Cognition", that is The Extended Mind Theory.

Second, the author succeeds in the explanation of the role in cognition of (generalized) action-interaction with the world by his pragmatist reflections. The notion of habit is a perfect example of a non-contingent cognitive enhancement produced in the active responsiveness to conceptual issues and environmental conditions, where these conditions are selected parts of the unlimited semiosis. For some aspects, this point is central in enactivist approaches to the production of knowledge, in which the cognition is supposed to never occur in abstract process, but rather in a context created by the interaction of the agent and the environment.

These two conceptual points, now just sketched, will be discussed in my conclusions, in which I'll try to better comprehend the role which a peircean approach to cognition and mind could play in the contemporary debate in the cognitive sciences. As a matter of fact, if it is true that Peirce's thought shares with these different theories an anti-cartesian framework, in which cognition can not be located "in the head", it is also true that the two accounts considered, the Extended Mind Theory and Enactivism, have some divergent points, which maybe a pragmatist and semiotic account on knowledge and mind can connect.

Rossella Fabbrichesi (University of Milan)

Peirce, Mead and the Theory of "Extended Mind": a Divergent Convergence.

In 1998 Clark and Chalmers addressed a question that remained pivotal in the discussion afterwards. "Where does the mind stop and the rest of the world begin?" Their inquiry, developed by many others, led to question the idea of the mind as a thing – a simple *res cogitans* – with a precise localization. I will not discuss the cognitivist theses, but I will try to see traces of their leading ideas in some pragmatist suggestions about the constitution and the functioning of mind and consciousness. I will also see how the pragmatism stance would improve the cognitivist perspective.

I will begin with Peirce, that 100 years before Clark and Chalmers' article, wrote: "Whether there be ultimate premises is a difficult question. It amounts, however, merely to this: whether the boundary of consciousness is in consciousness or out of it" (W1:515). As we know, Peirce concluded with a complete semiotization of the existent: consciousness is an inference, we have no power of introspection, but all knowledge of the internal world is derived by hypothetical reasoning from our knowledge of external facts. Man itself defines himself through the *external* signs (as language) that he uses. Peirce has then a non localistic view of consciousness and mind: "In my opinion it is much more true that the thoughts of a living writer are in any printed copy of his book than that they are in his brain" (CP 7.364). So, consciousness is, very simply, wherever it produces effects of representation, recognition, acknowledgement, or, in a word, signs of conscious experience.

Peirce devoted some interesting, though scattered, thoughts also to the mind problem, clearing that my faculty of discussion, for example, is localized in my brain, but also in the practical devices through which I am able to exercise this very faculty (for example, my inkstand, cf. CP 7.366). Mind is spread out and embodied in signs: external signs and habits. As Clark and Chalmers maintain: "Cognitive processes ain't (all) in the head" (Clark and Chalmers 1998).

Yet, Peirce doesn't think we have to choose between an internalist stance (mind is equiv-

alent to brain and is inside our body) and an externalist one (mind extends itself outside the skin and the skull), because "mind", as any other thing, is "wherever it acts" (W5:78), wherever it produces habits of behavior, wherever it guides action and produce conscious effects. Thoughts and percepts don't *stay* in the consciousness, except as signs and living habits, that is, they don't *stand*, but *stand for*. Thus, any thought is a sign, any sign leads to a belief, and any belief produces a habit (Clark and Chalmers don't see the last point). It is exactly the Interpretant, the Final Logical Interpretant, i.e. the habit, that assures the functioning of the 'mind'. For Peirce habit is the key-word, not consciousness, not mind. Habit is not internal, and not properly external. It is something that lives "in the exercises that nourish it" and in the "actions to which it gives rise" (CP 5.487)

In conclusion, the "internalization" is a semiotic operation, made possible by our multiple social and 'external' relations (languages, habits, praxes, rituals, etc.), All the superior functions that make the cognitive mind are born as social and pragmatic relations. This is the explanation that we find in George Herbert Mead's major work, *Mind, Self and Society*. Mead refers to his own theory speaking of "a social theory of mind": if the mind structures itself in a social way, he writes, "the field or locus of any given individual mind must extend as far as the social activity or apparatus of social relations which constitutes it extends; and hence that field cannot be bounded by the skin of the individual organism to which it belongs" (MSS 223, n.25). The reference to the horizontal extension of consciousness, outside the borders of the individual brain and skin, leads us to think of an extended and distributed mind, just as the one which many cognitivist thinkers (see for example Clark 2008) maintain today.

Mead enriched his social theory with many other interesting references, from the process named "taking the role of the others", as the recognition of the inwardness in the exteriority of the other's gesture, to the acute analysis of the role of the vocal gesture in the constitution of the internal consciousness. The social origin of consciousness, and the relevance of habits, as social and public structures that situate the mind, are effective pragmatist keys of interpretation that can enhance the actual cognitivistic field.

Emanuele Fadda (University of Calabria)

What the actual debate on language and cognition can learn from classical pragmatism

The history of pragmatist semiotics (which can be roughly identify with the Peirce-Mead-Morris-Sebeok line) is nothing but a continuous development of the debate between Peirce and Chauncey Wright in the years from 1860 on. The debate is indeed a clash (or, in the best cases, a merging) between a *logical* soul, *i.e.*, mathematical, that orders the typologies of signs by combinatorial principles of organization and a *biological* soul, *i.e.*, language-centered, that views experience as adaptation and adjustment of organism and environment. The debate gives as a result (in Morris and Sebeok, namely) what may be called an assumption of the peircean method in a meadian fashion.

Today, perhaps more than ever, it is interesting to resume the opposition between the Peirce' and Mead's approaches to cognition and language. In the case of the founder of pragmatism, the Kantian heritage is brought to its *extreme* idealist consequences, hence becoming a form of objective idealism, marked by a radically anti-psychological view of experience (*Erfahrung*, not *Erlebnis*). The mind to which Peirce refers is nor any living being's mind, neither a *species-specific* mind, and the only aspects of experimental psychology he's interested in are the ones which describe *a priori* limits of *every conceivable* knowledge and perception, in their mathematical roots. For Mead, Kant is the archenemy (not only in relation to the concepts of space, time and perception): in his view, there's no possible cognition aside from the actual biological relation between a form (or organism) and its environment, both built – in phylogeny as in ontogeny – by the relation itself, not pre-existing to it.

If, on one hand, the Peircean (*a priori* and a-linguistic) and the Meadian (*a posteriori*, based on the species-poietic role played by human language's emergence) ways are opposed

– each filling the gaps of the other, it is possible to discover a wide range of epistemological principles that are common to both approaches, allowing a comparison of each other. The two most important principles are to be found also in Darwinism, properly understood – *i. e.*, continuism and anti-reductionism. From a *metaphysic* point of view, objective idealism (Peirce) and perspectivism (Mead) are but two faces of the same coin. From an *epistemological* point of view, attention to scientific, experimental psychology (*all* classical pragmatists studied psychology, Peirce included) never entails a reductionist attitude: empiricism has its role, which is necessary, but never sufficient.

This crossing and complementarity of *a priori* and *a posteriori* views closely resembles the history of cognitive sciences, but with an important difference: attention to language, in cognitive science, is especially in *a priori* approaches, while *a posteriori* approaches tends to minimize the role of language, focusing on non-linguistic elements of cognition – an obvious result of the influence of the Chomsky-Fodor line, or the identification of language with a mathematical/computational feature, recursion, that totally disregards its empirical features.

The Peirce-Mead couple, indeed, shows just the opposite attitude: the focus on mathematic and *a priori* structures entails a loss of importance of language (and of languages, considered in their multiplicity – *e.g.*, the different ways they express logical and predicative structure) and, inversely, the focus on language entails an *a posteriori*, emergentist approach, which assigns an important role to empirical features, *e.g.*, the relation between articulatory and auditory system.

Finally – last but not least – the semiotic framing allows managing both similarities and differences between linguistic and non linguistic cognition in human beings, and between humans and other living beings, giving actuality to metaphysical assumptions on continuism. Today, the rapid growth of brain sciences and the resizing of the classic, computationalist paradigm in cognitive science needs a new philosophical framing – and pragmatism may be the one.

Keywords: Pragmatism, Semiotics, Cognitivism, Enaction, Peirce, Mead, Habit, Extended mind, Language, Biology