

HOW PRAGMATISM AND REALIST PHENOMENOLOGY CAN BRING COGNITIVE SCIENCE BACK INTO PHILOSOPHY

AARON MASSECAR



In this paper, I want to show that a strain of contemporary cognitive science could use phenomenology and pragmatism to help move its project forward. By going back to early phenomenology and early pragmatism, we find resources for being able to describe the active role that the environment plays in cognition.



Recent work in cognitive science is challenging the distinction between the inside and the outside of the mind. Many have pointed to the 1998 essay by Andy Clark and David Chalmers, “The Extended Mind,” as inaugurating this particular form of debate (Clark & Chalmers 1998). In that article, Clark and Chalmers argue that features of our environment play an active role in our cognitive processing. The term that they use is “active externalism.” Their theory is also known as the Hypothesis of Extended Cognition. The active process of the environment has been characterized by others like J.J. Gibson as “affordances,” (Gibson 1979) Jay Schulkin as “visceral appraisal mechanisms,” (Schulkin 2004) and Mark Johnson and George Lakoff as a form of “organism-environment coupling” (Lakoff & Johnson 1999). Each of these thinkers is pushing for an active externalism that seeks to explain how we offload cognitive functioning onto our environment and how that offloaded cognitive functioning influences future experience. Although this debate is relatively recent within cognitive science, it parallels a similar debate that took place one hundred years ago with Edmund Husserl and his students.

Many of Husserl’s students and contemporaries were displeased with his insistence that objects of experience were solely constituted by acts of consciousness. In particular, Roman Ingarden, Max Scheler, and Adolph Reinach were deeply concerned that Husserl’s position led directly towards an idealism that negated the role of the external world in constituting objects of consciousness. Each of these thinkers, in his own way, articulated a form of realism that supplements Husserl’s studies. Ingarden focused on aesthetic experience, Scheler on ethical experience, and Reinach on civil law. Ingarden, Scheler, and Reinach were representatives of a movement within phenomenology called “realist phenomenology” that was working to demonstrate the role that the external environment plays in our cognitive processing.

The main concept that hangs in the balance between Husserlian idealism and his students’ realism is the notion of intentionality. Husserl appropriated the medieval notion of intentionality through

Franz Brentano's rather nominalist reading of medieval thinkers like Duns Scotus. Had Husserl read the medievalists more directly, he might have derived a different notion of intentionality with a more realist bent to it.

This is the way that Charles Sanders Peirce read the scholastics and this is precisely the form of realism that he ended up with, a realism that he referred to as "extreme scholastic realism" (Peirce 1958). His reading of first and second intentions led him to argue for a view of experience that sees our feeling, acting, and thinking as mediated by signs that are themselves determined by objects that play an active role in determining different forms of interpretation. In other words, semiotics is another way of speaking about intentionality.

The phenomenology that we get from Husserl is a form of idealism. Husserl's students, however, describe a phenomenology that emphasizes realism, not idealism. Supplementing this with Peirce's semiotics provides a way of talking about active externalism that places intentional structures outside the mind rather than treating those intentional structures as being constituted by the mind. Intentional structures manifest principles operating in habits of behavior. On the smallest level, these are relations between objects. There are systems of relations that operate with enough regularity that they manifest laws. Laws are descriptions of regularity that manifest themselves in time. Peirce develops his semiotics as a description of the different ways in which the laws behave. The mind develops as a result of its attunement to these semiotic processes, these laws, these relations.

Part of the work of this paper will be a demonstration of the direct connection between these two lines of thought. Perhaps more importantly, the work of this paper will also be to provide a tradition, framework, and vocabulary that cognitive science can draw upon in order to enrich certain features of the debate.

THE CURRENT LANDSCAPE: CLARK AND CHALMERS

In Clark and Chalmers' 1998 essay, "The Extended Mind," the authors use the hypothetical case of Inga and Otto, who both want

to go the Museum of Modern Art. Inga consults her memory of the museum's location and remembers where the museum is. Otto suffers from Alzheimer's, but he is sufficiently aware enough to be able to use a notebook; he consults his notebook in order to determine that the location of the Museum of Modern Art is on 53rd Street. The only difference between the two is the "location," internal or external to their minds, of what they consult. Inga turns to her beliefs in the form of memories and Otto consults his beliefs in the form of information in his notebook. The point here is that the action-forming properties of the belief are essential, but not where the belief is located. In this sense, we can say that the environment plays an active role in the formation of our activities.

This is the same kind of organism-environment coupling that you can find in the works of Johnson and Lakoff. In Johnson's solo book, *The Meaning of the Body*, he discusses meaning instead of simply cognition. "The key to my entire argument is that meaning is not just what is consciously entertained in acts of feeling and thought; instead, meaning reaches deep down into our corporeal encounter with our environment" (Johnson 2007, 25). Meaning is constituted in our encounter with the world. The meaning that we experience is not based on some purely subjective feelings; meaning comes about as a result of organism-environment coupling. "They are qualities in the world as much as they are in us. They are the qualities of different experiences that involve both the structure of the organism and the structure of its environments inextricably woven together, and even attuned to one another" (25). The environment affords certain opportunities for engagement, and it is in this engagement that meaning is constituted. Within the situation, we find ourselves permitted to perform or not to perform certain activities, certain "possibilities for interaction and engagement" (90).

The embodiment of meaning that Johnson discusses is precisely the kind of embodied cognition that Jay Schulkin is referring to when he discusses "visceral appraisal mechanism." Much of Schulkin's empirical research has focused on the extent to which the

body is actively engaged in appraising the environment long before cephalic processes are involved. Schulkin writes:

At each level of the neural axis there are visceral appraisal systems that are integral in the organization of action. Cognition is not one side of a divide and viscera the other, with action merely a reflexive outcome. Research over the past fifty years, especially since the 1970s, has demonstrated that the brain is not carved up into structures functioning in isolation. Appraisal systems reside at every level of the nervous system. (Schulkin 2004, 208)

Information processing is not limited to cephalic or cortex-based processing; rather, information processing, appraisal mechanisms, are found all throughout the nervous system. Certainly, the skin on my knuckles can't simply decide which pair of gloves it wants to keep it warm, but my skin will respond to environmental stimuli before any of my conscious processes are involved. The point that I am driving at here is simply that there is empirical evidence to demonstrate that information processing, which is the heart of cognitive behavior, is not reliant on the cortex.

When we place Schulkin's work alongside Johnson's, we get the idea that visceral appraisal mechanisms are reflecting qualities of the environment: the body is the recipient of the activity of the environment. The kinds of structural conditions that are required for this kind of active externalism can be found earlier, in the work of J.J. Gibson's "The Ecological Approach to Visual Perception" (Gibson 1979).

Clark and Chalmers, Johnson and Lakoff, amongst others, make constant reference to J.J. Gibson's affordances as the kind of active externalism that allows us to make sense of the positive contribution of the environment for cognition. Affordances are features of our environment that permit certain forms of activity, forms of behavior. The door handle affords an opportunity for opening the door, the

coffee for elevating my mood. According to Gibson, these affordances are directly perceived in the environment.

When Gibson provides a brief historical account of the idea of affordances, he refers back to gestalt psychology. Within gestalt psychology, the whole object is perceived; colors are perceived right along with values. The first person to use the term “Gestalt” was Christian von Ehrenfels, who was a member of the school of Brentano, of which Husserl is probably the most famous student. So, digging a little deeper into the term that Clark and Chalmers use, “affordances,” we have come back to Brentano. Arguably, Brentano’s most influential follower was Edmund Husserl. We will turn to Husserl now in order to show how the contemporary understanding of active externalism was derailed from the beginning by Husserl’s idealism.

REALIST PHENOMENOLOGY

In *Ideas: General Introduction to Pure Phenomenology* (1913), Husserl articulates the different reductions that are necessary in order to grasp the essences of objects. In bracketing and suspending the natural attitude, Husserl thought that he was able to simultaneously grasp the essences of objects as constituted by consciousness and leave aside any questions about the relationship between objects of consciousness and their existence external to consciousness. The essences were important, not their existence apart from any possible experience. This is an echo of Hegel’s move against Kant’s *ding an sich*. Instead of claiming that we don’t have access to the thing in itself, Hegel claims that the object as it is grasped by consciousness is in fact more than a mere shadow of the thing in itself, but is in fact the real object. Husserl takes this seriously and says that we have access to the real essence as constituted by noetic acts of consciousness. But because of the *epoche* that brackets the natural attitude, the connection between the object and the external world is lost. The problem with this approach is simply that it generates an idealism that is necessarily disconnected from the external world. As such, the intentional object and intentionality itself are necessarily constituted by the

mind, on Husserl's account. But the point from the realists' perspective is that the intentional structures are at least partly found in experience rather than simply constituted by acts of consciousness. This, I believe, is what Gibson is offering and what Clark and Chalmers are pointing towards.

Three of Husserl's students were not happy with this idealistic turn, in particular Roman Ingarden, Max Scheler, and Adolph Reinach. Together they form what has been called the "realist rejoinder" to Husserl's idealism. The basic point was the phenomenological *epoche* provided Husserl with access to the essential structures of objects but simultaneously cut those objects off from the world. The intentionality and intentional structures that one finds accompanying these essential structures are then internalized instead of found in experience of the world. Ingarden attempted to demonstrate that aesthetic objects are not wholly dependent on the mind for the continued existence; Scheler, through his critiques of Kantian formalism, attempted to show that values are direct objects of perception, thus showing that ethical objects are not dependent on sustaining acts of the mind; and, finally, Reinach attempted to show that laws are similarly not dependent on sustaining acts of consciousness for their continuity. Unfortunately, partly because of the war, these students were not able to fully develop the kind of thinking that might have moved contemporary phenomenology away from idealism towards realism.

THE PEIRCE CONNECTION

This move towards a realist phenomenology is precisely the direction I read Charles Sanders Peirce as moving in. It is interesting to note that Peirce and Husserl both started using the word "phenomenology" most prominently around 1901. Peirce then switched from phenomenology to "phaneroscopy" around 1903. Spiegelberg claims this move was made as phaneroscopy allowed for a discussion of the phaneron, or the real object, which for Peirce was important because of his work in the development of a foundation for the sciences (Spiegelberg 1981). In any case, Peirce's description of the nature of philosophy begins with

phenomenology/phaneroscopy, then moves up through the normative sciences, and then to metaphysics. From the basic description of the way in which experience presents itself, through aesthetics, ethics, and logic, we are able to grasp the ontological principles that underlie the appearing of phenomena. It is worth noting that the normative sciences of aesthetics, ethics, and logic/laws map on to the areas explored by the realist rejoinder against Husserl.

Peirce, building on the medieval conception of universals, sees objects in terms of their relational structures, in terms of the patterns of behavior that they manifest when they come into contact with objects around them. These relational structures are not static and transcendent, as some critiques of universals would have it, but are, in fact, constantly in the process of development and are immanent to experience, constantly conditioning objects of experience in a law-like and general manner. Laws describe relations among relations. Peirce develops this description of laws into a theory of semiotics. Semiosis describes patterns of behavior that individual objects manifest when they interact with one another. Semiotics, then, is the formal description of patterns of behavior.

Peirce's classification of the forms of behavior, or semiotics, develops into 10^{66} different kinds of signs. His characterization is different than what we would find with Husserl, insofar as Husserl talks about intentionality and Peirce is talking about semiotics; but they both go back to the medieval tradition of talking about first and second intentions. The point that really distinguishes Peirce from Husserl is Peirce's insistence that thought is not in the mind, but mind is in thought. The mind develops out of a more primitive semiotic process. The structure of thinking is certainly something in which the mind is heavily implicated, but that the content of thought is rather the relational structures that one finds immediately present in experience. They are given in experience and are not constituted by activities of consciousness. It is these structures that play an active and constitutive role in cognition. Without these structures, there would be no cognition.

RELATION TO CONTEMPORARY COGNITIVE SCIENCE

I would now like to move past the nebulous concept of affordances and to offer a more nuanced characterization of affordances as semiotics. This move attempts to break down the general category of affordances into different types or kinds by showing that, on a Peircean model, affordances do not exist in isolation; rather, they always already belong to a network of relations.

In terms of what Peircean semiotics can offer to help explain this, we can turn to the immediate and dynamic object, and the immediate and dynamic interpretant. For Peirce, semiotics always involves a triadic relation between a sign, an object, and an interpretant. A sign is anything that conveys meaning or information to someone about some thing. The point is that it puts us in connection with something beyond itself. What this means is that each sign belongs to a network of relations that points beyond itself. The nodes in the network are the individual objects. These individual objects do not demonstrate the entirety of their relations all at once, of course, but do so over an extension of time.

An interpretant is the effect that the sign has on the interpreter. Peirce makes a distinction between the emotional, energetic, and logical interpretants. Emotional interpretants involve affects, energetic interpretants involve activity, and logical interpretants involve thought. An emotional interpretant might be the rush of anger that you experience when you are cut off by someone else on the road. The energetic interpretant involves hitting the brakes and swerving out of the way. A logical interpretant might be the thoughts that you have about the other driver. Each of these can be the immediate response to a particular object. For example, seeing a dog might make one feel the pangs of loss, or make one run, or make one think about owning a dog. The immediate response is the immediate interpretant and the dynamic response, such as going to the local humane society to pick out a new dog, is the dynamic interpretant. There is also a final interpretant that articulates how anyone would tend to respond in these situations. This final

interpretant gets closer to articulating the kinds of general laws that were spoken about above.

Interpretants, just like affordances, are multi-dimensional and directly found in experience. Moreover, they are found belonging to networks of possible relations. These networks are the intentional structures that constitute our experience.

In perceiving and anticipating these relations, we use our memory and our imagination to determine possible courses of action. It is through these means that the mind develops. One might ask if there is any sort of empirical basis for positing these relational structures. It is here that we need to turn back to the work of Jay Schulkin. One aspect of Schulkin's account is his description of anticipation. Drawing on the work of Antonio Damasio, Schulkin states that "The hypothesis is that bodily representations informs cortical sites in anticipating future consequences for actions" (Schulkin 2004, 97). Anticipation, though it can clearly take place through imagining future states of affairs, need not be relegated solely to the imagination. Pervasive throughout the body are appraisal mechanisms that anticipate future states of affairs. These different forms of anticipation can be empirically verified through measurement of skin excitation — perspiration being one of the means by which it is measured.

Each of these different interpretants is afforded by an interaction with the object. There is an immediate object and a dynamic object. The immediate object is the particular aspect that is presenting itself at one moment in time, and the dynamic object is the object that gives rise to the immediate object as manifested over time. It should be clear that interpretants without objects are empty — one cannot speak about the content of interpretation without speaking about the object of interpretation. The overarching point for both Peirce and science in general, is to have a convergence of the dynamic interpretant and the dynamic object. For the purpose of this paper, the point is that any discussion that does not take into consideration both the interpretant and the object will either end up with a worldless mind or a mindless world — dependent upon whether it focuses on the interpretant or the object. Peircean triadic semiotics

moves past this binary classification and says that relations are real and the mind is constituted in the perception of these relations. If contemporary cognitive science adopts this triadic approach to addressing the problem of the extended mind, then I believe that many of the current problems will dissolve.

Independent Scholar
Aaron.massecar@gmail.com

REFERENCES

- Clark, Andy and David J. Chalmers. 1998. "The Extended Mind." *Analysis* 58: 7-19.
- Gibson, J.J. 1979. *The Ecological Approach to Visual Perception*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Johnson, Mark. 2007. *The Meaning of the Body: Aesthetics of Human Understanding*. Chicago: University of Chicago Press.
- Lakoff, George and Mark Johnson. 1999. *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*. New York: Basic Books.
- Peirce, Charles Sanders. 1958. *Reviews, Correspondence, and Bibliography*. Vol 9 of *The Collected Papers of Charles Sanders Peirce*. edited by Charles Hartshorne and Paul Weiss. Cambridge: Belknap Press of Harvard University Press.
- Schulkin, Jay. 2004. *Bodily Sensibility: Intelligent Action*. New York: Oxford University Press.
- Short, T.L. 2009. *Peirce's Theory of Signs*. New York: Cambridge University Press.
- Spiegelberg, Herbert. 1981. *The Phenomenological Movement: A Historical Introduction*. 3rd edition. The Hague: Martinus Nijhoff.