

Some Remarks on Process Metaphysics and Representation

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In “Emergence: Process Organization, not Particle Configuration” (this issue) I argued that conceptual barriers to understanding emergence as a metaphysically real kind of phenomena trace back to the pre-Socratics – Parmenides and subsequent philosophers in particular – and that shifting to a process metaphysics dissolves these barriers, making emergence a natural and ubiquitous kind of phenomena rather than something mysterious or impossible. In their remarks, Queiroz and Merrell (this issue) show that Peirce’s model of semiosis is deeply involved with his own process metaphysics, in this respect making some strong convergences with the process based emergence model that I outlined here, as well as with the interactivist model of representation that has been elaborated elsewhere (e.g., Bickhard, 2000, 2004, 2005, 2006, in press-a, 2008).

I am in full agreement that Peirce’s process metaphysics is in general convergence with the considerations that I discussed in the paper, and, further, that there are similarities between the interactivist model of representation and Peirce’s semiosis model, and would like to thank Queiroz and Merrell for introducing these points. I would like to take the opportunity to expand a little on these topics — in particular, with some comments on 1) some additional process metaphysical frameworks, 2) a few further consequences of a shift to a process metaphysics, and 3) some questions concerning Peirce’s work.

Process Metaphysical Frameworks

Process metaphysics have been rare in Western thought, but such proposals do exist, some rather straightforwardly and some more partial or indirect (Rescher, 1996). Here I will mention just a few. Perhaps the earliest, of course, is Heraclitus, whose metaphysical proposals were arguably much more sophisticated than is sometimes appreciated (Graham, 2006). Parmenides work seems to have been an argument against Heraclitus, so the alternative conceptions were established as competing frameworks from very early on.

Leibniz and Hegel are two of the few subsequent Western philosophers to propose, at least in part, process metaphysics prior to the late 19th century. Perhaps triggered by Darwin’s work, considerations of process metaphysics became more common, with Peirce, James, Bergson, and others being examples. Process philosophy became almost identified with Whitehead’s work (Whitehead, 1979)

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throughout much of the 20th century, though I have some strong reservations in this regard: 1) Whitehead proposes something more akin to an event ontology rather than a process ontology, 2) Whitehead builds into his central notion of concrescence everything that he wants to get out of it, including various mental properties, 3) in this way, Whitehead “accounts” for mind in the universe, but at the cost of a panpsychism, and thereby 4) avoids any commitment to ontological emergence. In fact, Whitehead rejects ontological emergence. His use of the term *emergence* is rare and refers to issues of complexity, not to the emergence of anything ontologically new.

In contemporary work, I would recommend that of Seibt (2003, in press). She shows how to construct a conceptual foundation of process that avoids the basic Aristotelian derived notions of fundamental particularity, and how to build on that a general process model that accounts for a wide range, potentially all, of our ordinary conceptions of the world.

I would suggest that among the strongest explanations for a more serious consideration of process metaphysics in the last century is not only Darwin and subsequent pragmatic and process frameworks, but also the development of quantum theory and quantum field theory in the 20th century. As Darwin introduced process and change into notions of species that had previously been static, fundamental physics progressively peeled away properties of particles and particulars, leaving little remaining beyond various quantization phenomena. One of the basic trends in the history of science has been the replacement of substance notions with process models: combustion instead of phlogiston for fire, random kinetic motion instead of caloric for heat, various kinds of self-organizing self-maintaining organizations of process instead of vital fluid, and so on. Evolutionary theory and quantum field theory are two further major developments of process conceptions. This trend in the history of science has had strong influences in the development of metaphysical thought, though phenomena of mind – for example, representation – are a vestigial hold-out against these general moves to process (Bickhard, 2004, 2006, in press-a, 2008).

A Few Further Consequences of Process Metaphysics

A shift to a process metaphysics changes the explanatory default to that of change, introduces the possibility of organizational emergence, and thereby opens the possibility to an emergent explanation of mental phenomena. But such a shift also has many additional consequences for our most familiar metaphysical presuppositions.

Consider a rock: it has a clear boundary, at least three, in fact – a boundary at which there is a phase shift from solid to gas, a boundary at which the rock can be pushed, and a boundary at which the rock can be isolated – and these three boundaries are coextensive. Such examples and properties frame our usual conceptions of the world. But now consider a candle flame: it has a phase shift boundary, in fact, more than one, at which the colors of light emitted change; it has no boundary at which it can be pushed; and it has no boundary at which it can be isolated – it is a necessarily open process organization, and to isolate it is to eliminate it. The notion of boundary,

then, becomes much more problematic in a process view – what is the boundary of a vortex, a flame, and so on. And some phenomena do not have any natural boundary: in a field of clumps of crabgrass, how many individuals are there? Some of the clumps are still connected via runners while in other cases the runners have disappeared, and still others are in various intermediate states. Boundaries, and related notions of individuation, are *products* of process organizations, not inherent and necessary aspects of basic ontology. There can be more than one kind, or none at all, and in all cases their existence and nature is itself something to be explained, not assumed.

In similar manner, boundaries, principles of individuation, notions of supervenience, and multiple other ontological notions come into question within a process framework (Bickhard, 2006, 2008, in press-b). Just as substance and particle conceptions permeate our ontological intuitions, a shift to a process ontology involves many permeated changes in those conceptions.

Some Comments on Peirce

There are strong convergences between the process framework that I have argued for and Peirce's process metaphysics, and also between the model of representation that I base on an underlying process framework and Peirce's model of meaning (Rosenthal, 1983). More generally, the pragmatic movement has many aspects that are quite congenial to and convergent with the general model that I have been developing (Bickhard, 2004, 2006, in press-a, 2008).

There are, however, some differences. Rather than attempt to elaborate and argue these differences, which would require much more time and pages than are available here, I would like to just point to three issues concerning Peirce's work that suggest a less than complete convergence.

The first has to do with Peirce's process metaphysics in a broad sense. In particular, is there some way to extract Peirce's panpsychism from this metaphysics leaving a process framework that is more amenable to an emergentist model of mental phenomena such as representation? Second, Peirce's semiotics seems to address representational phenomena deriving from contact with the world: Is there a way to account within this framework for representation that is strictly counterfactual, hypothetical, modal, and other manners in which representation is not necessarily deployed with respect to environmental contact? And third, how can Peirce's model of semiotics account for phenomena of system-detectable representational error? Such system- or organism-detectable error is necessary to error guided behavior and to learning, but it is a criterion for models of representation that is rarely addressed in the literature (Bickhard, 2004, 2006, in press-a, 2008), and it is not clear to me how Peirce could satisfy it.²

Conclusion

The discussion of emergence, and the proposal that emergence can be understood within a process metaphysics, is a small part of a much larger web of issues. Queiroz and Merrell have introduced some further considerations about Peirce's process metaphysics and semiotic model, and I have taken the opportunity to elaborate yet a few further considerations that flow from investigating a basic process framework. I thank Queiroz and Merrell for introducing a crucially relevant consideration of one of the major process thinkers of the last century and a half. I think it worth commenting that we have barely touched upon the vast array of substance/particle metaphysical issues that ubiquitously permeate Western thought. Substance and particle thought has dominated and developed for over two millennia, while process thought has only become a more ongoing focus for less than two centuries: we have a long way to go.

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2. There would seem to be an intuitive way in which Peirce's model of meaning (Rosenthal, 1983) could support violations of "expectations" that would ground the detection of error — and this is roughly the manner in which the interactivist model accounts for system detectable error — but Peirce's technical definitions make it unclear how to model both aboutness and error-in-that-aboutness in the same framework. Furthermore, those definitions do not seem to be amenable to any basic changes that would introduce such a distinction. In any case, it is at least an interesting question how Peirce's model could address this issue.