

## **Abstract**

### **Pragmatic Evolutions of the Kantian: From the Mental to the Bodily**

My aims in this paper are threefold: to show, first, that James and Dewey expanded the Kantian project; second, that the pragmatic evolution of the *a priori* is an evolution from the mental to the bodily; and, third, that this evolution has applied merits.

An initial point to note is that British empiricists provoked both Kant and James. For Kant it was Hume; for James it was Spencer. Unlike many of his contemporaries, Kant respected Hume enough to recognize that his sceptical conclusions could not be dismissed out of hand, and he endeavoured to effect reconciliation between empiricism and rationalism. In this regard Kant may be compared to James. By assimilating the Darwinian notion of indirect adaptation—the idea that organisms can be adapted to the environment without being directly moulded by it—James was able to agree with empiricists that beliefs are justified by experience, and yet also agree with rationalists that legitimate beliefs can arise independently of experience. Indeed, in spite of scathing attacks on Kant, he explicitly claimed to be siding with *a priorists*, albeit with a difference because he argued that interests, as opposed to logic *per se*, are primary shapers of experience.

Given the conceptual and neurophysiological overlap between interests and emotions and that the latter have a visceral component, this reflects a shift from the mental to the bodily—and one that has been developed in the contemporary scene by scholars such as Damasio. Darwinian theory, which was in the air in the late 1800s and

early 1900s, further emphasizes the body by providing a link between motoricity and mind; it does so by stressing adaptation, something related to the body but also intelligence; and when it comes to the world-changing nature of cognition, Dewey's shift to the body was even more emphatic than James's. Challenging British empiricists, who regarded perception as a result of environmental stimuli impacting us, Dewey argued it is both a product of what we do to the environment and what it does to us, which meant an outcome of how it acts on us in consequence of actions we perform on it. While commending rationalists for recognizing that we actively mould things, he complained that they overemphasized the mental side of all this. They failed to appreciate that "[e]xperience carries principles of connection and organization within itself" by virtue of arising out of "adaptive courses of action, habits, active functions, connections of doing and undergoing" and "sensori-motor co-ordinations." Indeed, wrote Dewey, "[s]ome degree of organization is indispensable to even ... an amoeba." It must interact with its environment, else perish; yet it cannot do so any way whatever. Its powers of locomotion, its capacity to move materials in and out of itself, its shape and size all limit its possibilities of action. So too do the materials it encounters. Consequently its activity has "organization," "continuity in time" and "reference to its surroundings."

Dewey's views obviously mesh with recent cutting edge ideas about perception and cognition, whether in the form of J. J. Gibson's theory of affordances or more recent enactive accounts. Insofar as they parallel enactive accounts, they mark an evolution of Kantian philosophy from the mental to the bodily realm—or perhaps more accurately, an explanation of mental life in terms of the bodily. These views also have practical implications in fields such as AI and robotics, and I will focus on this. Herbert Simon

offers a well-known example in which the complexity of an ant's movement is a function of the complexity of the surface over which it strides. Dewey and Simon's observations about the ameba and ant connect to recent work by John Long, who in a 2011 book recounted experiments involving simple light seeking robots he called Tadros. Long varied the robots' tail stiffness, allowing them to compete in a kind of evolutionary game. He reported that they developed "better feeding behavior than their parents had—in a real sense, they got smarter. But ... they did so by evolving their bodies, not their brains." Without claiming that his robots are going to win Nobel Prizes, Long insisted "that Tadros—by virtue of being goal directed, autonomous, and physically embodied—have intelligence"; and Long, in line with Noë, who argued that "[m]eaningful thought arises only when the whole animal is dynamically engaged with the environment," predicted further that if AI is ever to achieve human-like intelligence, "the AI has to be an embodied robot, and human-level intelligence is only achievable with a body and a brain." This is because in embodied situations and thus human ones, as Pfeifer and colleagues have argued, "part of the 'processing' is done by the dynamics of the agent-environment interaction, and only sparse neural control"—or the electronic CPU analogue—"needs to be exerted when the self-regulating and stabilizing properties of the natural dynamics can be exploited."

Though Long, who is not a philosopher, does not show significant awareness of Kant, James or Dewey, his work displays practical insights generated by all three. His work also illustrates how Kantian philosophy can be rendered bodily, and by this means, go further in explaining the nature of intelligence. Damasio and like-minded scholars do something comparable by connecting the visceral to the rational. I will conclude by

expanding on applied merits of pragmatic variants of Kantianism in such contexts,  
discussing how everything from rationality to enactivism to affordance theory to AI can  
be developed more richly through an understanding of pragmatic evolutions of the  
Kantian from the mental to the bodily.