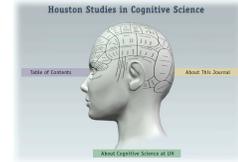


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Representation and Deliberate Action

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Dreyfus enlists the aid of Merleau-Ponty in his critique of representationalist theories of cognition. Such theories posit a representational element at some level of cognitive activity. The nature of the representation and how we think of it will depend upon the level at which one claims to find it. If we consider the case of perception, at one extreme it might be claimed that the representation is a conscious one, that is, that the perceiving subject is conscious of a representation, a *Vorstellung* in the Kantian sense. In this case, it would clearly come between the perceiving subject and the world and in that sense interfere with a direct perception of the world. This sort of representational theory would be equivalent to idealism, and for good phenomenological reasons it is rejected by Merleau-Ponty and Dreyfus. At the other extreme, it is possible to find cognitive scientists talking about representations at the level of brain activity. Neural representations, either firing patterns or the actual "hard wiring" of neuronal connections (as, for example, neural maps in the somatosensory and motor areas responsible for the experience of the subject's own body), in some way enable perception. At this level of description there are various debates about how these mechanisms can be called representational. If the concept of representation involves reference to the perceptual field, in what sense does a neuronal pattern refer? There are also the familiar debates about how such mechanisms actually function, as well as the difficult problem of how such functions actually translate into personal level experience. Before these debates get off the ground, however, Dreyfus wants to steal the ammunition. He denies that there are representations at the level of brain processes.

As in any profound philosophical or interdisciplinary debate, there are semantic and discursive difficulties. What precisely do we mean by 'representation'? Are representations logical symbols which are computationally manipulated? Are they images

that we entertain in our minds? If representations carry content, what precisely do we mean by 'content'? If images refer, what does 'reference' mean? Is it legitimate to use a vocabulary developed at one level of description (e.g., the personal level) on a completely different level of description (e.g., the subpersonal level)? I suspect that without resolving these difficulties various theorists will strongly disagree with Dreyfus' non-representational account. At the same time, it may be possible to define 'representation' in a way that is perfectly acceptable to Dreyfus. For example, there is some sense of 'representation' that could easily involve embodied capacities. I see a chair and I could say, without objection, that this chair represents the possibility for sitting. This would be different, however, from saying that I (or my body) represent(s) the chair as a possibility for sitting, which might express the Gibsonian notion of affordances, or that there is a representation of the chair encoded in a set of neuronal firing patterns. For a critique to be convincing, or for a debate to be clear, one needs to clearly identify the target, in this case, the concept of representation.

What does it mean for a perceiving subject to represent the environment? With this question another problem immediately becomes apparent, namely, we need to define 'perceiving subject'. Is this question equivalent to either of the following two: What does it mean for a mind to represent the environment? What does it mean for a brain to represent the environment? Merleau-Ponty responds that the perceiving subject is neither a mind nor a brain, but an embodied subject within an environment, and that perception is a process that occurs within this holistic relationship between body and environment. In his analysis he allows that phenomenological description is not identical to natural explanation. Thus, for example, in his critique of sensation theory, he rightly dismisses the notion of sensation as a pure impression or a discrete entity within perceptual experience, considering it at best an explanatory construct, or the result of "the experience error" in which we mistake an objective quality of the world as an element of consciousness. Yet he distinguishes this phenomenological question about sensation from explanatory questions that might be raised by a physiologist, for example. Is there some neuronal event that causes in us the experience (sensation) of redness as we see a red object? Here, appealing to empirical evidence, he argues against a mechanistic, isomorphic, point-by-point correlation between stimulus and neuronal event. He is very clear, however, that he does not dismiss or "refute" a causal neurophysiological account (1962, p. 7n1). Yet, for Merleau-Ponty, a causal account of certain brain processes simply does not add up to an account of the perceiving subject.

What Merleau-Ponty has said about sensations we can say about representations. Discussions of representational states often involve the idea that a perceiving or acting subject represents a state of affairs in the environment. It may be, for example, that a subject represents the environment as containing food. In such cases the representations seem to be conscious ones. It is clear that both Merleau-Ponty and Dreyfus reject the notion of conscious representation in the case of perception. In perception a conscious representation would have to be something like an image, an idea, a *Vorstellung*, that stands between the perceiver and the perceived. As such, it would simply get in the way of perception. The perceiver would be conscious of the representation of the world rather than of the world itself. If we look for representations at the phenomenal level of

consciousness, we simply cannot find them. I perceive the book on my desk, I don't perceive a representation of the book on my desk. At this level of discourse, the concept of representation is an outdated and misleading theoretical construct.

If we look for representations in the brain, as determinate physiological processes or entities, anything that looks like a mechanistic, isomorphic, point-by-point correlation between environmental stimulus and neuronal event is difficult to find. The familiar arguments on this are cast in terms of context dependency and multiple realizability. In effect, my relationship with the world is so complexly contextualized on the semantic and action level that what might be considered a representation of a chair in the environment must be so open to potentially different interpretations or actions on my part, that the boundary of "the representation" must be indeterminate. To borrow an example cited by Merleau-Ponty, if red and green presented together result in the perception of gray, does the corresponding neuronal activity actually represent the objective stimuli? Or is the neuronal activity equivalent to the case in which the color gray is presented? Whether it is or not, it seems impossible to say that the representation of gray is one determinate thing. In some cases gray is a desirable color, in others it is a depressing color, and in these different cases the same objective color may look very different. This is not to deny that whatever is happening in the brain with respect to perception has some kind of reference to environmental conditions. But is it right to say that these neuronal events "represent" environmental conditions? Neurophysiological processes obey natural and biological laws, but, as Merleau-Ponty points out, they also obey psychological laws.

Traditionally, intentional explanations at the personal level have been contrasted to mechanistic explanations at the sub-personal level. Theorists, like Dreyfus, argue for non-representationalist conceptions of cognition on both levels. They reject conscious representations on phenomenological grounds. On the neurophysiological level they regard representation theory as mechanistic, and propose dynamical models to take its place. If what we perceive depends on context, and if it admits of ambiguity, then at the neurophysiological level, a dynamical explanation of perception seems more appropriate than one framed in terms of representations, which tend to be conceived as discrete and unambiguous, or to be composed of discrete and unambiguous elements.

Someone is sure to say that even if representations cannot be found at the level of phenomenal experience or at the level of brain processes, there are certainly intermediary levels between neuron and experience where representations can play a good explanatory role. If we ignore the fact that there is no agreement among philosophers and scientists that there are such intermediary levels, we end up with the concept of a nonconscious, but still mental representation. This is what we might call a "pre-noetic" realm where cognitive schemas, nonconscious beliefs, and stored memories have a shaping effect on our noetic activities, including perception. To talk of representations in this context, however, is surely to talk about theoretical constructs. Are they useful constructs, or are there alternative ways to describe the same processes? I need to state, without argument, my suspicion that the same problems that pertain to representation theory on the neurological level pertain here too.

Moreover, to refer to mental representations at this intermediate level seems to ignore or misconstrue the contribution made by the perceiving body. This can not be corrected simply by adding to mental representation certain representational factors concerning embodiment. In other words, we don't get the right explanation by adding or integrating representational elements pertaining to the body to already complex representations of the current environment, memory, practical interests, etc. Even if at some level of description certain bodily factors can be explained mechanistically, their prenoetic effect on perceptual processes cannot be captured in one-for-one or isomorphic correspondences. If a certain feeling of illness or pain can shape the way that I perceive my environment, or if a certain lack of strength or motor practice limits my movement, these constraints do not enter into the perceptual equation as a representation of illness or a representation of pain, weakness, or poor dexterity. They are not added to or mixed with existing representations of the environment. Rather, various physical states of the body, autonomic and emotional states, as well as postural and motor states, already shape the current contributions of the environment to perception. If representations are defined as mental content which have reference to the world, then the prenoetic effects of embodiment simply do not operate in a representational fashion; they are more than can be captured in a representation.

Much of what I have just said is in agreement with Dreyfus's main argument. Within the framework of this agreement, however, I want to raise three issues which are requests for, or perhaps suggestions toward clarifications.

First, it is not clear to me why an emotional involvement must accompany proficiency and expertise, or why there are higher degrees of involvement in expertise than in the novice stage. Dreyfus claims that as "the competent performer becomes more and more emotionally involved in his tasks, it becomes increasingly difficult to draw back and to adopt the detached rule-following stance of the beginner." He goes on to say that higher degrees of involvement are required for further advancement. This implies that the expert must have the highest degree of involvement, and that the cold rationality involved in simply following rules, as in the case of the novice, reflects very little emotional involvement. Yet I can imagine a novice being extremely involved in practice, following the rules, and being emotionally invested in just such learning. And I can imagine an expert being detached and coldly rational in his practice. Indeed, just such emotional detachment might be required for expert performance. Consider the example of a young medical student whose goal is to be a surgeon. Her enthusiasm (certainly a form of emotional involvement) for learning the rule-determined techniques might be absolutely essential for gaining the knowledge that will lead to expertise. The novice's involvement may include not only enthusiasm for gaining proficiency in technique, but may also be supported by some thought that her goal is to help people regain their health. In contrast, an expert surgeon may have lost that initial enthusiasm, and may even be bored with her practice (although we tend to hope this is not the case). And to do his job best she may need to push aside all emotional involvement with her patients and approach the task in a cold and calculative (even if not rule-governed) way. In such cases, then, we would want to say that emotional involvement is not required for higher proficiency.

My second comment involves Dreyfus' distinction between proficiency and expertise. One way he describes the difference between these two levels of practice is based on the distinction between ends and means. The proficient performer recognizes goals in an intuitive manner, but is still not able to intuitively recognize the means to such goals. She must follow a rule-based decision process to arrive at the proper means. In contrast, the expert "not only sees what needs to be achieved: thanks to a vast repertoire of situational discriminations he sees how to achieve his goal." My question pertains more to the relation between goal and means in the context of action than to Dreyfus' use of it to distinguish these two kinds of performers. Let me propose a different way of seeing the relation between ends and means, and then pursue the consequences for the distinction between proficiency and expertise.

One way to understand the relation between a particular end and the means one might adopt to attain it, is to take the end as something that determines the means. In this case, I explicitly identify the goal first, and then I start thinking about (or perhaps immediately see) how I will get there. A different way to understand the relation between end and means is to begin to see the end only through the means. In this case I don't begin with a specific end in mind, or there are several possible goals that I can strive for, yet, without knowing the goal I nonetheless may know that I can do something with what I have at my disposal. I know I have the means to do something but the precise outcome of my action will not be determined until I begin to act or manipulate the means. Or I may not know the outcome until the outcome is accomplished. I may surprise myself. In the first case we have something like mechanical technique; in the second case we have something closer to art and the possibility of creativity.

It seems possible that the distinction between proficiency and expertise could be drawn on the basis of these two different ways of understanding the relation between means and end. In contrast to Dreyfus' contention that proficiency involves an intuition of the goal but not the means, one might claim that the proficient practitioner does indeed know intuitively what means are required to reach a particular goal, but the intuition of the means remains determined by the set goal. Expertise, then, would involve innovation and the ability to discover and define new goals within action that is already underway. It is also possible, of course, that this creative ability would require further distinctions between mere expertise and higher levels of performance.

Finally, I think Dreyfus draws too much of a line between deliberate action and skillful coping, and by doing so, grants too much to Searle. He suggests that "unlike deliberate action, skillful coping turns out to have a world-to-mind direction of causation." Dreyfus wants to agree with Searle that deliberate action may involve representation, while he denies representation in the case of skillful coping. Skillful coping requires no deliberation (no representation), but is guided by direct perceptual processes that can be modeled on Freeman's dynamical model. I think it is clear that the body can be guided in its movements by deliberation as much as by the kind of perceptual information which creates the tight coordination that Dreyfus and Merleau-Ponty speak about. I would suggest, however, that even in the case of deliberate action, my action may be without

representation, at least in the following sense, that in deliberate action what I often deliberate about (represent) is not bodily movement.

In the case of deliberate action, my reflective deliberation may pertain to goals that are themselves means to some higher goal. For example, I may want to find and deliver a book to a friend with whom I am in conversation. My deliberation in this case may be entirely on the level of the conversational point--I may think that by showing my friend a particular text I might convince him about something. My act of getting up to find the book is, in such a case, a deliberate action, but my deliberation is not about how I should move my body to accomplish this goal, and perhaps it is not even about finding the book. The knowledge that the book is on a shelf in the next room need not be an explicit representation. I may simply start to move, out of habit, to the other room, all the time thinking about the conversational content. I could say (and thereby express my intention in a propositional form) to my conversational partner: "Wait a minute, I know just the text that can help us out here." But I can do this while getting up and moving toward the next room. My movements and my action are deliberate, even if I am not representing them. Perhaps, as Dreyfus puts it, "I can only deliberate on the background of continued coping." My body is coping, without representation, with the task of getting the book. But movement to get the book is something that we would nonetheless call a deliberate action. If, for example, you stopped me to ask what I was doing and why, I would have a very good answer, and I could say that I was deliberately getting the book. I think this is very much in agreement with Dreyfus' analysis, and, as a result, he has no need to draw such a sharp line between deliberate action and skillful coping.

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