

Who is “We”? Some Observations on Sensorimotor Direct Realism

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> Upshot • Sensorimotor direct realism may describe how animals engage with their surroundings. But human beings are not typical animals. Their engagement can be metaphorical as well as direct, in which case the theory has less plausibility.

« 1 » In advocating sensorimotor direct realism, Michael Beaton adds the subtitle “How we enact our world” to his target article. A lot hangs on “we,” that is, just who is doing the enacting?

« 2 » In discussing the evolution of animal behaviour, Ernst Mayr (1974) distinguished “open” from “closed” evolutionary strategies, although the distinction is more a continuum rather than separate categories with clear boundaries. Simplifying, closed strategies are ones where the action repertoire of an animal is predominantly innate and adjusted to particular environmental conditions. Open strategies are ones where innate skills, while necessary, are not sufficient for full development, and where the animal is less dependent on particular environmental conditions. However, conditions need to be such that it is possible for the animal to acquire the complement of learned skills needed to attain competent adulthood. Closed strategies are characteristic of animals that inhabit relatively unchanging and predictable niches. Open ones, by contrast, are characteristic of long-lived social animals, often with extended periods of development and where habitation within a niche is more flexible and adventitious, requiring long- and short-term learning.

« 3 » Human beings are such an extreme example of an open strategy that they can hardly be said to lie on the open-closed continuum at all. Crucially, human perception-action skills include one that may in fact be a human monopoly, or if it is not, is only found elsewhere in the animal kingdom in a vestigial state. This is the capacity for what

may be called metaphorical perception and mimetic action.

« 4 » Animals predominantly engage with the world by seeing literally what it is that they are able to do in a given situation or with given objects. That is, they perceive the world “as is,” namely, as a dynamic field that provides opportunities to exercise their particular action repertoire. In terms of James Gibson’s theory of direct perception, they perceive affordances and events. Humans can do likewise, and when they are engaged in some activities, playing fast-moving sports might be a good example, they are doing nothing more than what an animal might do.

« 5 » However, and crucially, humans can also perceive and act towards the world metaphorically and mimetically, that is, seeing and acting “as if” rather than “as is.” This ability may mark a major milestone in the evolution of the human mind (e.g., Merlin 1993).

« 6 » For perception, seeing “as if” could mean an object being envisaged as other than it is or as it might be once changed after being acted on. For example, a rock might be perceived as a potential cutting-scraping tool once parts of it had been removed. This illustrates that rather than merely altering superficial features of objects and situations, humans are able to change the behavioural meanings of objects and situations radically, through metaphorical thought.

« 7 » For action, mimesis, acting “as if” something or someone, including the actor, were other than they are, opens the way to a significant new arena of communication not available to animals. To be human is in part to have acquired a repertoire of vocalisations, gestures, body movements mostly geared to language-like communication with other human beings involving shared attention to objects and situations, some of which may be distant in time and space.

« 8 » Broadly, this is the foundation of creative, symbolic action that supports human cultural life. Humans can treat an object or situation as other than it actually is, and can easily find novel uses for things. Crucially, animals cannot; indeed, when Martin Heidegger noted that “the animal is incapable of ever properly attending to something as such,” he meant that affordances related to an instinctive action repertoire are all that

animals can perceive (Heidegger 2008: 249). Perceiving an object as something detached from its usual behavioural meanings is a human monopoly.

« 9 » In the human case, an object can be examined, manipulated and modified and used creatively in ways that go far beyond the various examples of play and tool-use seen in the animal kingdom. The importance of creative play in childhood is recognised by educators as vital to cognitive and emotional development. The nurturing of metaphorical cognition is crucial since it opens the way for the child to inhabit the adult world where understanding is an active process of social construction that is, hence, significantly metaphorical and that needs to be understood hermeneutically (e.g., Berger & Luckmann 1966).

« 10 » It is this cultural arena that raises issues for Beaton’s discussion of sensorimotor direct realism. Animals, not inhabiting a cultural system of any significance, predominantly engage with the world via perceivable affordances, in James Gibson’s terms, or via the signifying parts of their *umwelt*, in Jakob von Uexküll’s (see, e.g., Brentari 2015). In this case, the variety of direct realism advocated by Beaton is plausible. Indeed, so much so that it would be otiose to suggest anything else.

« 11 » The human case is profoundly different. Modern human beings are products of the cultural evolution of the past two million years, albeit that the vehicle for the human condition shares a far longer heritage of biological evolution with animals in general and our close relatives such as the apes in particular. This heritage is signalled by the remarkable amount of overlap between the human genetic makeup and that of apes such as the bonobos.

« 12 » But, as Michael Tomasello (2001) points out, that overlap notwithstanding, the cognitive skills of humans and apes are profoundly different, and the difference comes from the externalised products of human cognitive activity that constitute culture.

« 13 » Much of the human *umwelt* is human-made. It might be more accurate to say that most of it is, since the parts of the *umwelt* about which developing humans most need to learn in order to become fully human are those that have been put there by other human beings, often for just that

purpose. By this is meant human creations such as symbol systems, the built environment and the practices that go with them. It is through assimilation of these during development that human infants become human adults. In assimilating the cultural world, cognitive skills, of both perception and action, are developed and deployed. These skills are unique to humans and make possible a form of conditional, flexible and creative perception and action not available to animals.

«14» Seen from this perspective, sensorimotor direct realism is perhaps less straightforward than it might be when considering the experiential world of animals. Engaging with the world metaphorically, that is, perceiving and acting “as if” rather than “as is,” adds a qualitatively new element to the situation. Perceiving is no longer direct, but via an intrinsic process of interpretation and cyclic re-adjustment (e.g., Neisser 1976). Moreover, whether the affordances of the human world are directly perceivable is a controversial case, as witness Gibson’s remarks about postboxes. Kurt Koffka (1935) advanced the notion of “demand characteristics,” that is, what objects invite or require observer-actors to do. Door handles demand turning, cups invite holding and drinking from, postboxes offer the posting of letters in and so on. Gibson accepted the idea of demand characteristics, but preferred to call them affordances. He also challenged Koffka’s assertion that demand characteristics depend on the needs of the perceiver. Thus, when someone wants to post a letter:

“For Koffka it was the phenomenal postbox that invited letter-mailing, not the physical postbox. But this duality is pernicious. I prefer to say that the real postbox (the only one) affords letter-mailing to a letter-writing human in a community with a postal system. This fact is perceived when the postbox is identified as such, and it is apprehended whether the postbox is in sight or out of sight.” (Gibson 1979: 138f)

«15» It is not productive to try to resolve this issue here. We can, however, take from it the point that for human beings, perceiving what can be done with a postbox or any other culturally created artefact requires interpretation and involves culturally conditioned needs and intentions.

«16» So if “we” enact our world, perhaps some qualification may be needed to specify the “we” being referred to. Both animals and humans may enact their worlds in order to perceive and engage with them. Only culturally shaped humans, however, have the ability to enact in ways that are creative and metaphorical; and those ways may be far from direct.

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The Epistemological Dance: Difference, Experience and Representation

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> **Upshot** • Accepting the biological origins and limits of what we know is a foundation stone of radical constructivist (RC) research. A corollary is that RC considers realism as allowing an impossible comparison between knowledge and reality. Recent works such as that presented in the target article have a more nuanced position in relation to “reality.” Points of similarity and difference between RC and direct realism are discussed in this commentary.

«1» Jean Piaget (1954) was introduced to the English-speaking psychological world at a time when Burrhus Frederic Skinner’s behaviourism was prominent in many psychology departments. At that time, psychology and philosophy were usually studied separately in universities and often the philosophical nuance evident in the target article was absent in psychological writings.

Skinner (1974: 12) maintained the future of psychology was in observable behaviour and that “mentalistic explanations allay curiosity and bring inquiry to a stop.” Alternatively, Piaget’s cognitive developmental psychology was presented as an interaction between children and their environments and focussed on developmental changes in the way mind organises experience (Kohlberg 1969). In Ernst von Glasersfeld’s (1984) analysis of the cognitive developmental “person-environment” interaction, knowledge was not about discovering “reality,” but about organising understanding. Of course, this meant “reality” has a radical status in radical constructivism (RC) that is dissonant with everyday use. This target article is welcome because it offers the opportunity to reflect on the relationship between knowledge and “reality” and to revisit the observable and the unobservable in psychological domains that contrast with the position taken in RC.

«2» Cognition and perception depend on noticing differences. As will be apparent in what follows, focussing on one part of a difference means that the other part is obscured or ignored. The author presents perception in sensorimotor experience as an active engagement with the world (§6). One of the remarkable things about watching children’s sensorimotor play is noticing their experience of novelty, their reflections and creativity. I would describe these experiences as noticing discrepancies between their experience of the world and their expectations. How does this work in Michael Beaton’s account? This seems to be a counter example to the position taken in the target article because noticing discrepancies is an internal event. The unproblematic apple is itself the result of hidden distinctions between oranges, pears and apricots (§15). So what Michael Beaton presents as a direct encounter with an apple requires a complex construction built up over time and dependent on sensori-motor learning that involves subtle differences, including specific ranges of shapes and colours. I am not in favour of DR for a variety of reasons I raise in this commentary, and I think Ernst von Glasersfeld would have completely rejected this idea. Unfortunately, as far as I am aware he never discussed McDowell.

«3» In RC, von Glasersfeld (1984) emphasised personal interpretation, as was the