On Representation

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> One's own body is in the world just as the heart is in the organism: it continuously breathes life into the visible spectacle, animates it and nourishes it from within, and forms a system with it. (Maurice Merleau-Ponty, *Phenomenology of Perception*, 1945 p. 209)

Introduction

Philosophers, cognitive scientists, and artificial intelligence theorists frequently employ *representationalism* to explain or quantify perception, cognition, and consciousness. I take representationalism to be at least the thesis that perceptions and intentionality fundamentally *represent* or *refer to* the world "in the head" like a map of Iceland represents or refers to the landmass between Greenland and Norway. If perception and intentionality *are* representation, then experiences like seeing a firework, hearing a symphony, and loving a person merely *represent* fireworks, symphonies, and other people. However, experience gives little motive for talking this way about perception and intentionality. Experiences of things like fireworks, symphonies, and other people are *presentations* of those things *in the world* embedded in a perceptual *situation* that outruns representational analysis. By contrast, experiences of things like maps or pictures are *of* representations, and they have a distinct phenomenology from the lived experiences one has when

encountering the things they represent in the world. In this paper I'll consider representationalism, argue that non-representational, embodied accounts of perceptual consciousness capture fundamental structures of experience that representationalism misses, such as Merleau-Ponty's *intentional arc* and Dreyfus's *skillful coping*, and suggest that embodied cognitive science, or at least an approach that views embededness in the world as fundamental, is better suited for understanding the context and skillful intelligence that structures experience.

Representation and Perception

Representationalist accounts of perception that depend on idealism, sensory impressions, sense data, or the application of conceptual schemas to explain intentionality fail to accurately capture the phenomenology of perception. The idealist harbors a radical primacy about the nature of the perceived world in which ideas necessarily mediate any experience of the world. For the sense data theorist, seeing a red square entails perceiving a sense datum caused by an object in the world that is schematized by mental concepts or language to constitute the perceptual consciousness of a red square. In both cases, perception is a necessarily *triadic* relation between a perceiver, the world, and a mediating entity—the representation. If perception is structured this way, it follows that the perceiver has no actual contact with the perceived world, and that experiences are of representations in the head rather than *of the world* itself. This is suspect *prima facie*, for the world "out there" is a primary constraint on any perceptual experience one could possibly have. Maurice Merleau-Ponty calls this type of thinking *intellectualist*, and it is his main target in developing his embodied existential phenomenology in *Phenomenology of Perception* (1945).

Representationalism is phenomenologically tenuous because the representation is "a philosophically motivated mediator that is not supported by the phenomenological data." (Wrathall

and Kelly 1996) Perception does not reveal the world as a representation of something else, like a map or a diagram, but rather as a *situation*—a landscape of the perceptible auditory, visual, or other stimuli and solicitations for action, or *affordances*. (Merleau-Ponty 1945 and 1964, Gibson 1979) Our experience of the world solicits us *to act*—a door affords opening, a guitar playing, a pen writing, and so on. There are also phenomenological differences between the perception of a thing and a perception of a representation of the same thing—the former affords one type of action and the latter another in two distinct experiences. Representationalism cannot resolve this difference without appealing to higher order aspects or properties of representations that, theoretically, describe aspects of representations, not aspects of perception. The representationalist could reply that the perceptual difference comes from discernible differences between representations and ascribe properties like shape, color, size etc. to *experiences*—but experiences aren't colored or shaped. They are *of* colors, shapes, and other properties of things *in the world* whose appearance is structured by embodiment, that establishes viewing angle and point of view, and contextual factors like lighting. By placing the world inside the head as representations to be perceived or processed, representationalism ignores the fundamental embededness in the world that shapes perceptual consciousness. Representationalism construes the environment as a representation rather than how it appears in perception as an extra-corporeal field of solicitations for action—a field of the "I can" as Merleau-Ponty (1945) describes it.

If a *representation* is, roughly, that which is brought under concepts by cognition to constitute experience, this suggests that perception is a fundamentally computational process. This is the classic position in cognitive science and artificial intelligence. If we analyze the experience of seeing a red square from this perspective, we'd say that the nervous system captures sensory input from the environment, represents that information, and processes it to produce the perceptual experience of a red square. Doing cognitive science then, is resolving the details of this processing. However, this

cannot account for the phenomenological differences between, for instance, seeing, desiring, and imagining the same object without appealing to conceptual or property-type differences between representations, when the crucial differences are phenomenal or intentional, or both. Representationalism misses the phenomenology of perception and aspects of intentionality it seeks to explain by reducing perception to information processing in the head, rather than viewing it as a relation between a perceiver and the world or an experience of affordances in the environment and ways one might interact or think about the world.

Language and Intentionality

Language is an attractor in the literature on intentionality, and some positions in the philosophy of mind take it for granted that intentionality *is* representation, and therefore that linguistic-conceptual schemas or metaphors like "mentalese" capture the structure of intentionality. In this thinking, intentional states are defined as "representative content in a psychological mode" (Searle 1983: p12), or contents are said to have a *mode of presentation* that characterizes the intentional state. I think there are some problems with this strategy. First, it explains the intentionality through language, concepts or metaphors thereof, suggesting that the mental is fundamentally linguistic or conceptual. (If that is too strong a rendering, there is at least an analogy at work in these theories, but it is unclear to me where the analogy ends and the explanation begins.) Proponents of this language metaphor or mentalese approach to intentionality may reply that intentionality is *derived* from non-linguistic, non-conceptual, or otherwise non-representational aspects of experience and not the converse (*ibid*: p5), yet this leaves non-representational aspects unexplained and unexplainable in linguistic-conceptual or representational terms without circularity. There is a sharp phenomenological difference between being in an intentional state and representing that intentional

state linguistically in speech or as a sentence or proposition that the representationalist misses because they bypass the phenomenology of perception and the embededness of the perceiver/thinker having the intentional state in the world. I'll clarify this point by example.

If we capture intentionality propositionally in the form *S(p)*, where *S* is the psychological mode and *p* is the representational content, we capture what an experience *refers to*, but not what s*tructures* it. For instance, if I see a blue convertible, my experience is formalized as *see(blue convertible)* and a representationalist account of intentionality is an analysis of the *conditions of satisfaction* for this proposition, i.e. the logical requirements that I am having a visual experience of a blue convertible *and* phenomenological requirements that these conditions are represented in the mind. (Searle 1983, Dreyfus 1996: fn. 5) If I imagine, desire, or remember the blue convertible, the linguistic conceptualist ascribes the differences in intentional states as differences in psychological mode or mode of presentation—roughly, *how I represent* the blue convertible in thought. However, seeing, desiring, imagining, and remembering the blue convertible all fundamentally entail perceptually salient differences in my bodily, sensorimotor, embedded relationship to it in the world that this analysis misses—seeing situates me at a certain angle and distance that my body can traverse, desiring solicits driving actions and could happen with or without the presence of the object, and imagining and remembering entail thinking of situations involving seeing, driving, or other experiences that also might not include the presence of the object. Linguistic-conceptual or other kinds of differences between the properties of representations do not capture the fundamental structuring of perception by being embedded in the world and embodied. Representationalism misses what Merleau-Ponty (1945) calls the *body schema*, or the "manner of expressing that my body is in and toward the world" (p. 103) and characterizes intentionality as determined by thought, rather than phenomenological differences in perception as determined by embodiment and a perceiver's relation to the world. Merleau-Ponty sees the kind of embededness we experience as *motricity*. As he

describes, "one's own body is the always implied third term of the figure–background structure, and each figure appears perspectivally against the double horizon of external space and bodily space." (*ibid.*)

Thus construed, perception is *of the world* and *structured* by the body's embededness in it, accounting for both the *source* of intentional objects and the *context* in which they appear without appeal to thought, judgment or language, or mentalese but to the pre-judgmental or "primordial" embodied and embedded *situation* that characterizes our being-in-the-world. Representationalism, on the other hand, must explain the structure of perception through aspects and relations of representations in *thought*, suggesting that thought plays a more fundamental role in structuring perceptual consciousness and experience than the constraints imposed on experience by embodiment and the world itself. The linguistic-conceptual approach to intentionality cannot account for how the world shows up in perception without appealing to concepts, language, thought, or judgment because it analyzes how intentionality *refers to* what it *represents*, rather than how it *presents* what it *discloses* through the body and its relation to the world to thought and judgment. The linguistic-conceptual approach, since it is representationalist, misses the phenomena of perceptual consciousness it attempts to explain, and so does not capture the fundamental aspects of perception and intentionality that an account of them aims for, which, in my view, suggests that we should be at least mildly suspicious of assenting to it, or using other representational schemes.

Embodiment and Skillful Intelligence

The position endorsing embodied perceptual consciousness or embedded intentionality I have been taking here to argue against representational or linguistic-conceptual accounts of perception and intentionality takes the relations between the perceiver/thinker, the body, and the

world as primary are at direct odds with representationalism because they do not need representations to do explanatory work in accounting perceptual consciousness and intentionality. If the fundamental structures of perceptual consciousness can be understood through the body of the perceiver and motricity or more generally by the embededness of the thinker in the world (Stalnaker 1993) without appeal to representations, this suggests that both representationalism and linguistic conceptualism or other language of thought accounts of intentionality miss something fundamental about the structural phenomenology of perception and the nature of the intentional relation that makes the world show up in experience the way it does. This suggests, in my view, that these theories are weak foundations for work on perceptual consciousness, rationality, and action.

Merleau-Ponty asserts that, "consciousness projects itself into a physical world and has a body," and that, "these clarifications allow us to understand motricity as original intentionality. Consciousness is not an 'I think,' but rather an 'I can.'" (1945, p. 139) Merleau-Ponty's denial of consciousness as a Cartesian/Kantian "I think" that accompanies representations or propositions in a subject-object relation, and endorsement of it as an 'I can' solicited for action by the world is essential to his positive account of non-representational motor intentionality. If perceptual consciousness and intentionality are fundamentally embodied and embedded in the world and we can account for them through motricity and the structure of action without appealing to representations, then isn't necessary to account for intentionality. Merleau-Ponty does this by appealing to the *intentional arc*—the non-representational "underpinning of consciousness that creates its unity" by situating perceptual consciousness and intentionality in an embedded in a cognitive *milieu* directed toward seeking *equilibrium* with the world and thought:

> [T]he life of consciousness—epistemic life, the life of desire, or perceptual life—is underpinned by an "intentional arc" that projects around us our past, our future, our human

> milieu, our physical situation, our ideological situation, and our moral situation, or rather, that ensures that we are situated within all of these relationships. (1945, p. 137)
>
> …As a system of motor powers or perceptual powers, our body is not an object for an "I think": it is a totality of lived significations that moves toward its equilibrium. (*ibid*, p. 155)

For Merleau-Ponty, embodied perceptual consciousness is characterized by a "tension that operates around a norm" that motivates action to maintain this norm, or *equilibrium*, if a situation of perceived disequilibrium arises. (1945, p316) Dreyfus (1996) argues that Merleau-Ponty's notion of the *intentional arc* embodies the connection between intention and action, and that "one's body is simply solicited by the situation to get into equilibrium with it." Dreyfus cites *flow* as a form of "skillful coping" that exemplifies seeking optimal equilibrium because, once in it, one's activity is completely *geared into* the situation and not mediated by representations. Flow, Dreyfus qualifies, is something achieved by the acquisition of skill through phases that require progressively less reliance on representations. To illustrate, he gives the example of a tennis swing: The amateur tennis player may be told to turn the racquet perpendicular to the court and achieve this gestalt with the ideal representation in mind, but the *expert* simply reacts to the situation to optimize her swing "in a far more subtle and appropriate way" through embodied *experience* rather than by rule following, and has no need for a mediating representation of the optimal gestalt of racquet, court, and ball.

The general notion behind Dreyfus's account of flow has to do with the bodily acquisition of a skill. For Merleau-Ponty, this bodily acquisition of skill manifests itself not only in learned skills such as swinging a tennis racquet, but also in very basic perceptual consciousness of one's environment as motor affordances, solicitations for action, and motricity. "These acquired worlds,

which give my experience its secondary sense," he states, "are themselves cut out of a primordial world that grounds the primary sense of my experience" (1945, p131), and gives an example of how perceptual consciousness is fundamentally structured by our sensorimotor, skillful bodily entanglement *with the world* and not by representations of the world held in the mind:

> [T]his contracted knowledge is not an inert mass at the foundation of our consciousness. For me, my apartment is not a series of strongly connected images. It only remains around me as my familiar domain if I still hold "in my hands" or "in my legs" its principal distances and directions, and only if a multitude of intentional threads run out toward it from my body. (1945, p. 131-132)

Embodiment and embededness, not representation, is thus fundamental to our existence and engagement with the world, and to intentionality. It is through the body that we perceive the world as we do and can skillfully cope with it through action, and this fundamental embodied perceptual consciousness structures experience prior to thought, language, or judgment. As new ways of coping with the world are learned and skills are assimilated into perception through the body, they modulate the way the world "shows up" change the perceptual field of the "I can" from which language, propositions, thoughts and judgments are derived. This "primordial" world of perceptual consciousness is non-representational because it is *embodied* and *embedded* in the world and plays a structural role in perception and intentionality. This theoretical approach does not *need* representations to account for perceptual consciousness and intentionality because it takes them as structured by the body, the world, and affordances for action.

Embedded Intentionality and Cognitive Science

If perceptual consciousness and intentionality are fundamentally embodied, embedded, and non-representational, then this has major implications for cognitive science, which has traditionally viewed the brain from a computational and cognitivist perspective. On this representationalist view, the brain is a symbol-manipulating machine—sensory input is transduced and mapped onto representations that are manipulated formally to solve a problem over some domain. Further, cognitivism localizes these manipulations into the sub-personal unconscious, separating them from perceptual consciousness, thus creating the classic 'explanatory gap' in mind science. (Thomson 2007: p. 5-6) Crucially, cognitivist models, and even the neural network connectionist models that followed them, study human cognition with disembodied computational schemas. Against this, and providing a cautionary warning for artificial intelligence and cognitive science, Dreyfus (1972) emphasizes the importance of the body's role in the structuring of perceptual consciousness, behavior, and human intelligence:

> In thinking that the body can be dispensed with, these thinkers again follow the tradition, which from Plato to Descartes has thought of the body as getting in the way of intelligence and reason, rather than being in any way indispensable for it. If the body turns out to be indispensable for intelligent behavior, then we shall have to ask whether the body can be simulated on a heuristically programmed digital computer. If not, then the project of artificial intelligence is doomed from the start. (1972: p. 147)

Dreyfus (1996) argues in favor of neural networks as a path forward for phenomenological cognitive science as they can accommodate many of the non-representational phenomenological and

structural aspects of perceptual consciousness that representationalism misses. He also argues for a consistency between the phenomena of the intentional arc, milieu, and agency discussed by Merleau-Ponty with network neuroscience that can abandon representationalism, particularly with reference to memory and skill acquisition:

> Neural networks provide a model of how the past can affect present perception and action without needing to store specific memories at all. It is precisely the advantage of simulated neural networks that past experience, rather than being stored as a memory, modifies the connection strengths between the simulated neurons (48)
>
> …Networks also enable us to explain skill acquisition without appeal to AI's symbols and rules…Once a network has encountered a particular situation from a particular perspective and has performed an appropriate action, the same or a similar situation, seen in the same way, will tend to produce the same or similar appropriate behavior. (50)

While neural networks can indeed capture the phenomenological aspects of cognition, Dreyfus is careful to caveat that there are many ways in which neural networks differ from embodied brains but thinks these differences can be overcome by further research. He argues that the basic aspects of perception structured by the human body must be accounted for in neural networks if they are to shed light on how human cognition works: "The moral is that the way brains acquire skills from input-output pairings can be simulated by neural-networks, but such nets will not be able to acquire our skills until they have been put into robots with a body structure like ours." (*ibid.*)

For cognitive science to throw light on the mechanisms of human perceptual consciousness and intentionality, it, in my view, must consider re-grounding itself with embodied phenomenology or at least an embedded view of the relation between the thinker and the world. (Stalnaker 1993)

Some efforts to reframe self-consciousness as bodily and underscore the reciprocal dynamics between the perceiver and the environment have made their way into cognitive neuroscientific literature (Blanke, Frey and Grafton, in Gazzaniga and Mangun (2014), however the embodiment paradigm is far from becoming a scientific revolution. Evan Thompson (2007) skillfully relates biology, cognitive science, and phenomenology to endorse a shift in this direction based on Merleau-Pontian phenomenology and integrative cognitive scientific work by Varela et al. (1991) on human experience that employs dynamical systems and autopoietic models to capture phenomenological, neurophysiological, and cognitive aspects of human experience more accurately. If Merleau-Ponty and Dreyfus are right, there needs to be a paradigm shift away from representational and linguistic-conceptual approaches toward dynamic and embedded ones that can account for phenomena like the intentional arc, skillful flow, and the situation as they are experienced by thinker/perceivers. If this kind of a shift is too radical for the entrenchments of the discipline, some middle way is achievable, in my view, by adopting a more externalist view of information, knowledge, and consciousness that grounds experience in the causal relations between the thinker and the world. For cognitive science, the work (Stalnaker 1984, 1999, 2008), in my view, is right under their nose.

References

Blanke, Olaf (2014) *Bodily Self-Consciousness.* Ch. 74 in *The Cognitive Neurosciences* (5th ed.), Michael S. Gazzaniga and George R. Mangun (eds.) Cambridge, MA: MIT Press.

Dreyfus, Hubert L (1972) *What Computers Can't Do: A Critique of Artificial Reason.* New York: Harper and Rowe. Toronto: Fitzhenry and Whiteside Limited.

Dreyfus, Hubert L (1996) *The Current Relevance of Merleau-Ponty's Phenomenology of Embodiment.* The Electronic Journal of Analytic Philosophy (4). https://ejap.louisiana.edu/ejap/1996.spring/dreyfus.1996.spring.html

Frey S.H. and Grafton S.T. (2014) *Finding the Actor in Reciprocal Affordance.* Ch. 43 in *The Cognitive Neurosciences* (5th ed.), Michael S. Gazzaniga and George R. Mangun (eds.) Cambridge, MA: MIT Press.

Gibson, James J (1979) *The Ecological Approach to Visual Perception.* Psychology Press, 1986.

Merleau-Ponty, Maurice (1945) *Phénoménologie de la perception*. Paris: Gallimard; *Phenomenology of Perception*, Donald Landes (trans.), London: Routledge, 2012.

Merleau-Ponty, Maurice (1964) *L'Œil et l'esprit*. Paris: Gallimard; "Eye and Mind" in *The Merleau-Ponty Aesthetics Reader* (Ed. G. Johnson), Michael B. Smith (trans.), Northwestern University Press, 1993.

Searle, John (1983) *Intentionality: An Essay in the Philosophy of Mind.* Cambridge University Press.

Stalnaker, Robert (1984) *Inquiry.* Bradford Books, MIT Press. Cambridge, MA.

Stalnaker, Robert (1993) What is the representational theory of thinking? *Mind and Language* 8(3):423-430.

Stalnaker, Robert (1999) Mental Content and Linguistic Form. In *Context and Content,* p. 225-240. Oxford University Press. New York, NY.

Stalnaker, Robert (2008) *Our Knowledge of the Internal World.* Oxford University Press. New York, NY.

Thompson, Evan (2007) *Mind in Life.* Cambridge, MA: Belknap Press (Harvard University Press).

Varela, Francisco J., Thompson E., and Rosch E. (1991) *The Embodied Mind: Cognitive Science and Human Experience.* Cambridge, MA: MIT Press.

Wrathall M. and Kelly S.D. (1996) *Existential Phenomenology and Cognitive Science.* The Electronic Journal of Analytic Philosophy, 4. Spring 1996. https://ejap.louisiana.edu/ejap/1996.spring/wrathall.kelly.1996.spring.html