

The Epistemic Role of Consciousness from a Practical Point of View

Introduction

This paper concerns the way that phenomenal consciousness helps us to know things about the world. Most discussions of how consciousness contributes to our store of knowledge focus on propositional knowledge. In this paper, I recast the problem in terms of practical knowledge by reconstructing some neglected strands of argument in William James's analyses of bodily affect and habitual action in *The Principles of Psychology* (1890/1950). In §1, I set up the problem of thinking about consciousness and action by looking at what John Campbell (2002; 2004; 2011) and others (Smithies 2011; Roessler 2009) have said about the epistemic role of consciousness. Then, in §2, I reconstruct and interpret the views of William James in his *Principles of Psychology* as well as Merleau-Ponty's phenomenological writings on perception (1945/2012). In §3, I offer further conceptual analysis and phenomenological arguments in favor of my view that phenomenal consciousness provides us with practical knowledge of how to act. I then consider some empirical evidence that supports this view before concluding.

1 Two Paths from Perception to Action

Although James's influence on contemporary scientific and philosophical discussions about the mind is well acknowledged, most of this recognition is focused on his work on emotion, attention, and for his coining of the notion of a 'stream of consciousness'. However, James is also very much an embodied mind theorist. William James's views of embodiment and consciousness bear on a number of views prevalent in current discussions in contemporary philosophy of mind. I consider two here, the question of phenomenal overflow (Block 1995; 2007) and more importantly and focally, the epistemic role of consciousness. The phenomenal overflow thesis claims that the phenomenal character of our experiences – that aspect of experience that makes it the case that there is something it is like for an organism to have it (Nagel 1974) - can and often does eclipse our capacities for cognitive access (Block 1995; 2007). If we have experiences, and their contents are not taken up into the architecture of cognitive processing – like intentional action, speech, and inference -- then a worry arises that those experiences have nothing to do. In an important commentary on Block's (2007) article on this

question, Andy Clark and Julian Kiverstein object that, "...any putative conscious experience should be the experience of *an agent*. The thought here is that we cannot make sense of the image of free-floating experiences of isolated islets of experience that are not even potentially available as fodder for creatures' rational choices and considered actions" (Clark and Kiverstein 2007; 502). In the absence of any integration into an agent's rational capacities, phenomenal characters become nomological danglers (Smart 1959) and thus start to cry out for reduction or elimination.

It is possible to avoid this worry while paying heed to the plausibility of the overflow thesis.¹ If we understand that there are in fact two kinds of access rather than just one, then we can understand how 'floating experiences' in the absence of cognitive access might still be understood as states of a subject who can react to its environment in virtue of having them. Such overflowing experiences inhere in a subject whose capacities for action are largely determined by phylogenetic habit formation rather than rational deliberation. I call this more primitive form of access 'affective access'. In this paper, I develop this account of affective access that will illuminate the way in which experience feeds our practical knowledge with content that facilitates instinctive reactions to our meaningful world. The second discussion concerns the epistemic role of consciousness for propositional knowledge. In articulating my view of affective access, I will show that we gain practical knowledge of how to act in the world in virtue of being phenomenally conscious of it. Our store of practical knowledge is increased by our experience, not just our knowledge of facts.

1.1 The Epistemic Role of Consciousness

We regard perception as a distinctive avenue for acquiring knowledge about the world. That one has seen something is good (though defeasible) evidence that such a thing is as it seems to be when one saw it (Roessler 2009). Slightly more precisely and strongly, it is plausible that being phenomenally conscious of an object is a necessary condition for being able to demonstrably refer to that object. If I haven't experienced the object as seeming a certain way to me then I am not in a position to refer to it

¹ For reasons of space I offer no systematic arguments here in favor of the overflow thesis. I only note the *prima facie* plausibility of the claim that we have experiences that we don't habitually attend to. For a novel argument in favor of phenomenal overflow, see Smith (2019)

as *that* object (Campbell 2002). Furthermore, some philosophers claim that it is also necessary that one attend to the object while being phenomenally conscious of it (Smithies 2011). Here's an example: imagine we are standing in a crowded room and you say, "Look at how attractive that person is over there." You point to the far end of the room and I take in a scene of many people, well-dressed, and looking rather marvelous. "Which one?" I reply, "They are all attractive." You reply: "*That* one there," and pointing at someone in a three-piece grey pinstripe suit, you say, "the one with the pinstripe suit." "OH! *That* one, sure, yes, very attractive, indeed." What it took for me to have my 'AHA!' moment here was to have an attentionally foregrounded phenomenally conscious experience of the well-suited party-goer. Only then was I able to co-refer with you to them using the demonstrative 'that' (Campbell 2002). The motivation for this view is that it is plausible that I am phenomenally conscious of many aspects of what is happening around me while I am talking with you in the room but that I don't gain the capacity to think clearly about *that* person or object until I manage to foreground it in my experience with my attention.

I think that this picture is basically correct and I won't spend any time here defending it. However, this account, as it stands, doesn't help us as much as we need it to. This is because the focus here is on the way that phenomenal consciousness in visual perception interfaces with our cognitive capacities, what Tyler Burge (2010) calls the 'upper border' of perception. The upper-border is where the content of perception feeds into our capacity for forming propositional attitudes like beliefs and judgments. The so-called 'lower border' is the one where perception provides contentful input for skillful action. By perceiving something, I gain information about it which in turn empowers me to act on it in various ways. This is the more interesting border of perception because it is far more phylogenetically basic. Many organisms exercise the capacity to act in virtue of perceiving the world, but not many are able to demonstrably refer to the world in virtue of perceiving it. Therefore, even if phenomenal consciousness is necessary for demonstrative reference, this fact does not take us far enough. What we need is an account of what consciousness does, more generally, not just what it does for organisms who have a sophisticated ability to demonstratively refer to particulars in virtue of perceiving them as seeming a certain way. Thus, the question we must address is whether or not it is

plausible that the kind of perception that provides content for the organism to act on is phenomenally conscious or not.

Another way of putting this problem is by distinguishing between two forms of knowledge. Call the first kind 'knowing that' and the second 'knowing how'. Many creatures have experiences of knowing how to do something practical like how to flee when they are being pursued by a predator. Far fewer creatures have knowledge of the fact that a predator is chasing them. To have knowledge of the latter sort would require the ability to entertain propositional attitudes and to be able to utilize concepts in a compositional way (Hurely 1997; Evans 1982). Hence, in what follows, in explaining the epistemic role of consciousness in a phylogenetically inclusive way, I will be referring to the knowledge that phenomenally conscious experience affords in terms of knowing how and not knowing that.

1.2 How-to-do-it vs. What-it-is

A straightforward way of bringing phenomenal consciousness into a more phylogenetically basic picture regarding how perception and action interact is to claim that it is in virtue of perceiving the world consciously that an organism gains practical knowledge of its surroundings and can act on the basis of this knowledge in response to what it perceives. This knowledge need not be propositional. We don't need to know *facts* about the world to act on it; we only need to know what is required of us and how to respond. By being conscious of the world I know *what* it is like to see the world from my point of view, and then I can figure out *how* to react to it.

John Campbell (2004) calls this view the 'how-to-do-it' view of experience and he thinks it is false. Instead, he argues that something called the 'what-it-is' conception is better suited for the job of explaining the epistemological import of conscious experience. I will defend a version of the how-to-do-it conception of how consciousness connects to action by reconstructing William James's view. Properly understood, there is not as much distance between the how-to-do-it view and the what-it-is view that Campbell proposes to replace it with.

According to Campbell, the problem with the how-to-do-it view of consciousness is that there seems to be a lot of examples of, "...people finding out about their surroundings on the basis of

perception, and moving and acting successfully in their environments, without the benefit of experience of their surroundings” (Campbell 2004). The main example here is blindsight.² Patients with this disorder often claim not to be able to see anything in parts of their visual field but still manage to perform well above chance at all kinds of practical tasks that demand that they make use of visual information from that part of the field they claim to have no experience of. Campbell therefore, proposes that, “...we should think of the role of experience of objects as being to define the targets of brain processing” (ibid). On this view, what experience provides that a blindsighter lacks is a way of targeting certain aspects of the environment which can then trigger the kind of brain processing that allows for practical action, practical action that is supposedly shared by the non-phenomenally conscious blindsighted patient. This way of framing things is meant to explain how a blindsighter could have procedural knowledge of their surroundings; such knowledge does not require phenomenal consciousness. What a blindsighter lacks is phenomenal awareness of what things are. This is why they report having no visual phenomenology when asked to describe objects in their blind field. On this view, what the blindsighter retains is a non-phenomenal practical know-how of what it takes to get around in their environment. If this is right, then the ‘how-to-do-it’ view looks problematic because know-how can obtain in the absence of phenomenal consciousness.

Let’s consider a positive example of how experience facilitates the targeting of objects for subsequent neural processing, one that both views under examination here could endorse. Consider a baseball player in the outfield. When a batter hits the ball to their section of the field, it is their conscious attention to the ball, as it flies through the air, that primes them to respond by catching it.³ On the ‘what it is’ view, conscious attention to the fly-ball selects the object on the basis of a visible property of it and this then causes subsequent un-phenomenally-conscious sensorimotor processing that facilitates the actions necessary on the part of the fielder to catch the ball.⁴ The problem here is

² For a thorough review of the empirical studies that motivate these kinds of views, see Goodale and Milner (2005).

³ Notice that if a blindsighter were in the position of the sighted outfielder, they would stand a good chance of enduring a serious head injury. What the blindsighter lacks in such a case is an ability to deal with novel stimuli entering their field of perception and the capacity to react to those stimuli as they become a more proximal threat to their stability or success.

⁴ Campbell (2011) makes an important claim that there is a difference between selecting on object on the basis of a perceivable property and having access to that property as a property of that object. He thinks that experience enters

that when you start to consider the role that bodily feeling plays in facilitating skillful action in these scenarios, the barrier between these two views starts to erode (Colombetti 2014).

The problem with Campbell's view is that he concedes too much to the exceptional case, in this example, the blindsighter. For Campbell, conscious experience simply defines the target of your action but tells you nothing about how to act with respect to it; all that is done unconsciously. But this can't be right. Consider the baseball player once more. When they see the ball coming to their territory, the outfielder experiences a whole host of bodily affects that prime them to act. Their muscles tense up, their pulse quickens. These things are felt and help orient the fielder's attention so that when the moment is right, they can start to run to make sure they are under the ball as it starts to descend. The continued tracking of the ball while they move is happening in conjunction with the felt sense of agency and affect that comes with skillfully negotiating a familiar affordance landscape. This idea of an 'affordance landscape' refers to the way the world shows up for as a practical field for action (Gibson 1986; Chemero 2003; Walsh 2011). We are all familiar with the world in this way, whether it be in an ordinary context of negotiating lanes in a busy grocery store with a cart full of food or in more specialized situations like playing on a baseball field.

In *The Structure of Behavior*, Merleau-Ponty makes this exact point. Consider the following:

For the player in action the football field is not an 'object', that is, the ideal term which can give rise to a multiplicity of perspectival views and remain equivalent under its apparent transformations. It is pervaded with lines of force (the 'yard lines'; those which demarcate the penalty area) and articulated in sectors (for example, the 'openings' between the adversaries) which call for a certain mode of action and which initiate and guide the action as if the player were unaware of it. The field itself is not given to him, but present as the immanent term of his practical intentions; the player becomes one with it and feels the direction of the goal, for example just as immediately as the vertical and horizontal planes of his own body. It would not be sufficient to say that consciousness inhabits this milieu. At this moment consciousness is nothing other than the dialectic of milieu and action. Each maneuver undertaken by the player modifies the character of the field and establishes in it new lines of force in which the action in turn unfolds and is accomplished, again altering the phenomenal field.

(Merleau-Ponty 1942/1967, 168-9)

the discussion of providing knowledge of an object at the level of selection, not at the level of access. I follow him in this.

The phenomenal field seems a certain way because of the contextual demands the subject's reaction to what is happening. The baseball field *seems* a certain way to the fielder depending on whether they are preparing to take a fly-ball or whether their pitcher is consistently striking out their opponent's batters. The world shows up for us a shot through with norms that affect our ways of interacting with those parts of it that are salient for us. By contrast, embedded in Campbell's approach to the epistemic role of experience is the idea that what shows up for us when we attend to an object is the object as a categorical basis for any dispositional properties it might have (Campbell 2002; 2004). What this means is that we target the object as a kind of thing, but we don't consciously perceive it as affording us anything. All perceptions of what an object affords us is processed unconsciously. I disagree with Campbell about this and will argue against this view below.

1.3 The Normativity of Perception

Consider the following remark from *The Phenomenology of Perception* (1962/2012). There Merleau-Ponty writes, "The distance between me and the object is not a size that increases or decreases, but rather a tension that oscillates around a norm. The oblique orientation of the object in relation to me is not measured by the angle that it forms with the plane of my face, but rather experienced as a disequilibrium, as an unequal distribution of its influences upon me" (Merleau-Ponty 1962/2012; 316). The reason there is disequilibrium when an object is experienced obliquely is that perception of an object is normatively constrained for perceiving it in maximal relief. This norm is revealed to me in the way my body has an 'optimal attitude' it aims for in perceiving an object. As Sean Kelly puts it, "Every experience of size or shape is not just the perceptual representation of a property. Rather, the experience already involves a kind of normative self-referentiality: It is part of the very experience of the size of an object that I am drawn to improve the experience by changing my distance to the object." (Kelly 2007; 149). This notion of self-referentiality can be explained in terms of the embodied subject's sense of what it would take for them to move so as to change the object's profile and their perspective

on it such that a new movement-resultant perspective would be maximized so that the subject can see the object's size and shape.

Kelly's argument for this view is the following (2007; 150 ff): a subject is presented with a square in an angled way such that it has the appearance of a trapezoid. The subject is not fooled into thinking that the square is a trapezoid – she understands that what is presented is a square – she just sees that this square is presented such that the angle of relief makes it appear somewhat trapezoidal. Now, the square would certainly look squarer if it was seen face on rather than at a trapezoidal angle. The claim is that in order to see the square *as* a square, the subject must know that to look at it face on would give a *better* view of the square than to look at it at a trapezoidal angle. Kelly asks, "...can we imagine a subject who experiences her view of the *squareness* of the thing to be getting *better* when she turns the object in such a way that it projects a more and more trapezoidal image onto her retina? This seems impossible" (ibid). What would it take for the subject to know this? It would take her having a sense of how her body must move or of how the object must move relative to her current position such that the maximal relief of the square is revealed through a face-on perception of it. Crucially, the subject would have a sense of this as an embodied subject for whom the maximization of the perception is facilitated through the active movement of the body or a sense of where the body is as a *perceiver*, such that the movement of the object would maximize the perception for *her* (Mandrigin and Thompson 2015). Such knowledge is constitutive of perceiving the square as a square. "I would not *count* as seeing the object to be *square* if it were part of my experience that the shape before me was *better* seen by rotating it in what, objectively speaking, is the direction that projects increasingly trapezoidal images." (Kelly, 2007; 151).

This view amounts to the idea that perception of an object situates our perspective on it along a spectrum. At one end of the spectrum there is the object as viewed from an extremely oblique angle; at such an angle, shape constancy fails and our point of view on what the shape is becomes distorted. At the other end of the spectrum is a perfect head-on view of the shape. The norm that constrains perception of shape is that in seeing a shape from a somewhat off-centre point of view, we understand what it would take to avoid the extreme of constancy failure on one hand and to aim at a minimally

distorted point of view of the object on the other. I don't think that there is much distance between the 'what it is' view and the 'how to do it' view, because what it takes to select for something with perceptual attention already incorporates an organism's situation and reactive abilities with respect to that which is perceived.

However, there is another layer here worth considering. There are two ways in which experiences can furnish us with targets in virtue of which we come to know how to do things with respect to those objects. The one we have been focusing on involves the endogenous deployment of conscious attention to furnish ourselves with goals that then prime our intentional actions. It is all well and good to say that experience plays a role here in furnishing us with targets. However, the problem with this is that our understanding of the role experience plays in scenarios involving endogenous attention is at best indirect. Such understanding is indirect because experience in these scenarios is tied up too closely with intentional action, that is, with cognitive access (Block 1995; 2007). If we want to say something about the truly distinctive explanatory role of experience in our mental life, we must do so in a way that does not specify experience's contribution to our store of practical knowledge in terms of the functions of cognitive access. To do so invites the plausible objection that experience contributes nothing to our behavior and that all the work is being done by cognitive access.

The second way that we can talk of experience furnishing us with targets has to do with fluid reactions that are not explicitly intentional. For example, if you say to me 'HEY!' and then throw a ball to me, there stands a good chance that I will automatically try to catch it without forming an explicit intention to do so. If we claim that my experience of your verbal prime and my visual experience of your throwing the ball to me is the cause of my catching response, then it is open to the objector to say that a subject who lacks phenomenal consciousness but has cognitive access would be in a similar position as our subject (e.g. a super-blindsighter, perhaps) (Siewert 1997). Therefore, I will provide an explanation of how experience furnishes us with targets that trigger phylogenetically basic affective responses like approach and avoid behavior in ways that go beyond our capacities to process the contents of our experiences through the functions of cognitive access. In addition to cognitive access we also have the ability to deal with the world through our capacity for what I call 'affective access'.

That is, we have the ability to act in a fluid non-cognitive way in response to the world. We do this by reacting to affective primes in the body that arise as a result of perception.

2 William James on Affect, Embodiment and the Deep Structure of the Mind

Our experience of the world is not always something active that we achieve by deploying our attention endogenously. Often, the world just shows up for us, sometimes in explicitly frightening ways, like when we are startled by a car-owner opening their door suddenly as we are biking by them. However, between these more punctuated kinds of startling events, the world is always impacting us in subtle ways, creating micro-dynamic variations of embodied affect that arise and pass away in response to those perturbations (Barrett and Bar 2009; Lebrecht et al. 2012). In virtue of being constantly affectively perturbed by the world, we develop the ability to react in a fluid, instinctual way.

By ‘instinct’ I mean something both colloquial and technical. Colloquially speaking, an instinctive reaction is one that happens naturally, fluidly, in response to some affective prime within the framework of the body. Such actions happen without any self-conscious intention on the part of the acting subject. The technical definition builds from this and I will explain those details below when I get into the heart of William James’ views on these matters. For now, it is enough to say that understanding the way felt bodily affect motivates fluid action will provide us with an avenue for explaining the epistemic role of consciousness. This approach has the benefit of not begging the question against those who would rather focus such an explanation on the nature of cognitive access rather than phenomenal consciousness.

There are situations in which the experience of embodied affect is a necessary condition for action and that in the absence of such feelings, their accompanying actions would not be deployed. In this way, exogenously recruited perceptual attention furnishes us with affectively salient targets that trigger fluid behavioral responses that take the affective input as a necessary condition for their context sensitive execution. On this view, what experience provides is a kind of sensitivity to novel affectively salient stimuli and the entrainment and engagement of a habitual behavioral repertoire in response to those stimuli.

Let's look at a straightforward example. Consider the case of pain. When a child touches the heated element of a stove for the first time, that one experience is enough to condition all subsequent behavior. The felt bodily affect of pain in the extremity of the hand provides such visceral feedback, that the subject avoids exposing themselves to any such element in the future, or at least makes sure they have protection if context demands proximity to such a heat source. It is true that a pain asymbolic subject might expose themselves to the element and feel no pain, or at least nothing aversive that makes them recoil the way an ordinary subject might recoil. Nevertheless, upon inspecting the severe burns they will have acquired having not had the initial prime to remove their hand, they might form a similar intention to avoid such elements in the future. The subject who cannot feel pain knows to avoid open heat sources for a different reason than the normal subject. The asymbolia patient must be far more careful than the normal subject because they lack the aversive affective primes that motivate the instinctive withdrawal response. This is the tight causal connection that bodily affect provides between experience and action. In the absence of this bodily motivation, having learned about the damage the burns have done to me by vision (and perhaps smell), I form a conscious intention to avoid those things in the future, but my responsiveness to similar threats that I might encounter subsequently will be a matter of careful attention rather than instinctive response to my feelings.

Our capacity to feel what's going on inside our bodies has a direct impact on our capacity to fluidly respond to our environment. This idea is prefigured in the early chapters of William James's *magnum opus*, *The Principles of Psychology* (1890/1950). Consider the following remark from the opening chapter of the *Principles of Psychology*:

Mental phenomena are not only conditioned *a parte ante* by bodily processes; but they lead to them *a parte post*. That they lead to *acts* is of course the most familiar of truths, but I do not merely mean acts in the sense of voluntary and deliberate muscular performances. Mental states occasion also changes in the calibre of blood-vessels, or alternation in the heartbeats, or processes more subtle still, in glands and viscera. If these are taken into account, . . . it will be safe to lay down the general law that *no mental modification ever occurs which is not accompanied or followed by a bodily change*.

(James 1890/1950 Vol. I, 5)

First, note, that this is not behaviorism. James's point is not that our experience is nothing but changes in the body. His point is that our bodies are 'sensibly alive'. We are phenomenally embodied in a way that is far more thorough than we often recognize. Thus, subtle changes in the body have a phenomenal upshot. I now develop this point further by thinking about how the subtle feelings that animate the lived body orient us to be responsive to our lived worlds.

In the second chapter of the *Principles* titled "The Functions of the Brain," James suggests that different centers in the brain and even the spine may have glimmerings of consciousness tied to preferential responses to feeling in the body (James, 1890/1950 Vol. I, 65–66, 78). His motivations for this view come from considering the differential responses of decerebrated frogs to aversive stimulation. James points out that if the right knee of a headless frog is exposed to acid, then the right foot will respond by attempting to wipe off the offending chemical. However, if the right foot is then amputated, thus preventing the initial reaction to repeat, the left leg will attempt to remove the acid (James Vol. I 1890/1950, 9). Bracketing for the moment, the wanton cruelty of such a procedure, there are two ways one might draw out inferences on the basis of such evidence. One would be to say that there are glimmers of affective consciousness in the body of the frog's spinal column, even without the modulating influence of the brain, *or* one might say that the body is capable of a kind of non-conscious pseudo-affective reflex that has no experiential component to it at all.

Given the differential aversive response to the bodily stimulus, I am inclined towards the former hypothesis rather than the latter. James was too. The reasoning is straightforward. If the differential response to the acid was a mere non-conscious reflex, then one would expect the frog's right stump, post amputation, to continue trying, and failing, to scratch off the acid. However, since the subsequent engagement of the left leg seems to represent an aversive affective reaction to remove the threat by whatever means are available, this suggests that the *felt* disturbance of the acid on the skin is motivating a reaction that is sensitive to the threat *qua* threat, thus further suggesting that some sort of phylogenetically basic pain-aversive phenomenal bodily self-consciousness is playing a role in facilitating the reaction. Because of this evidence, James devoted serious consideration to the possibility that what such experiments reveal is not 'pseudoaffective reflexes' without any experience

of feeling, but rather a more primitive form of consciousness that remains present even in the absence of central nervous system functioning.⁵ Although James subsequently confines his discussion of consciousness to the ‘personal self of the individual’ and to the cortex (James, 1890/1950, 66), he indicates that he does so for “practical purposes” (ibid.) This is because James thinks that more primitive forms of consciousness and their physiological substrates remain outside the scope of introspection. However, the progress in affective neuroscience means that we do not have to confine our analysis of the relation between consciousness and brain function to the cortex alone.

We respond to the world in different ways. Some of our actions are highly intentional and explicitly goal-oriented. Some of them are reflex-like and automatic. As opposing as these kinds of actions are, it is important to note that they exist on a spectrum on which nothing is fixed. As James points out, “...actions originally prompted by conscious intelligence may grow so automatic by dint of habit as to be apparently unconsciously performed. Standing, walking, buttoning and unbuttoning, piano-playing, talking, even saying one’s prayers, may be done when the mind is absorbed in other things” (James 1890/1950 Vol. I, 5). Further, “...the animal’s reflex and voluntary performances shade into each other gradually, being connected by acts which may often occur automatically, but may also be modified by conscious intelligence” (ibid., 13). We have a vast repertoire of fluid action responses, but our conscious intentions are able to modify and intervene when and as necessary. But this raises the question as to how some responses become reflex-like and automatic and which do not.

James’s hypothesis for answering this last question is intriguing. Put in neurophysiological terms, James suggests that, “All nervous centres have then in the first instance one essential function, that of ‘intelligent’ action. They feel, prefer one thing to another, and have ‘ends’” (ibid. 79). However, as species grow and evolve they become more adapted to their milieu. As this process of adaptation becomes more successful, aspects of the organism’s behavioral repertoire become more habitual and less volitional. Thus, we see that there are two paths towards action, one that is more automatic and

⁵ James’s consideration of this possibility can be seen as anticipating contemporary discussions of “cortico-centric myopia” (Parvizi, 2009) in views of brain function as well as the possibility of “consciousness without a cerebral cortex” (Merker, 2007).

reflex-like, and one that remains volitional, explicitly self-conscious and in James's terms, 'intellectual':

Thus it may happen that those functions which can safely grow uniform and fatal become least accompanied by mind, and their organ, the spinal cord, becomes a more and more soulless machine; whilst on the contrary those functions which it benefits the animal to have adapted to delicate environing variations pass more and more to the hemispheres, whose anatomical structure and attendant consciousness grow more and more elaborate as zoological evolution proceeds (ibid).

Our capacity to fluidly respond to the world is not the work of an unconscious mechanism, it is that the phenomenological aspects of that process of worldly apprehension and response are 'ejective' (ibid. 65-6). Things become 'ejective' or outside the ordinary scope of our capacities for introspection and attention because our concern with the world is always developing and recruiting finite information processing resources. As we become more accomplished at some set of tasks, we develop interest and absorption in others. Being finite creatures, those things which do not require attention to be done well, go, more often than not, unattended. Nevertheless, for James, *...every one of the bodily changes, whatsoever it be, is FELT, acutely or obscurely, the moment it occurs* (James 1890/1950 Vol. II, 451, emphasis in the original). So, it is best to read this idea of the ejective sector of the mind as a function of the mind's attentional selection capacities and its knowledge of its own success in certain domains. The energy of intention, volition, and attention is only deployed for those things that require it. Those that do not, sink back into the habitual set of fluid actions that animate and constitute our everyday absorbed pre-reflective stream of embodied experience.

This distinction between paths of action can be understood in terms of kind of access that subjects have to the contents of their experiences. What I call 'affective access' is the kind of access to contents we have in virtue of being affectively perturbed by the world and reacting to that perturbation in a way that is directly primed or motivated by that felt affect. By contrast, cognitive access here is the kind of access to contents we have when we take up the content of our experience in an explicitly intentional way and use our capacities for deliberation to select for output pathways that utilize our abilities in way that correspond to our goals in light of the context by which those contents are delivered. However, as James rightly notes, these two kinds of intelligence are deeply connected in the

concrete context where we respond to our world. The outfielder remains an important example of this interconnection. Their capacity to catch the fly-ball relies both on deeply entrained habitual responses and careful attentional vigilance that selects a target whose proper apprehension releases the habitual response in a context sensitive way.

Before moving on, let me note two objections. First, isn't it the case that our fluid capacity to interface with the world is an unconscious ability? Surely the fluidly integrated blindsight patient lacks phenomenal awareness but would still count as having the kind of responsiveness I am trying to tie to affectively embodied experience? My response to this objection is to point out that there is something the blindsight patient lacks which the normally sighted person possesses, and there is something both share that is important as well. What the blindsight patient lacks is the ability to integrate novel and threatening stimuli into their reactive behavioral repertoire. This is why a blindsighter would struggle as a left-fielder. However, the blindsighter only really lacks the ability to spontaneously attend to novel stimuli in their visual field; they are phenomenally conscious in many other ways. Importantly, the blindsighter has a feeling body with which they maintain an orientation to their surroundings. Because of this, I remain unconvinced that the blindsight cases constitute a devastating objection to the so-called 'how-to-do-it' conception of experience.

Second, it might be claimed that I have not given sufficient reason to think of our capacity to react to affective primes as a form of access. Why not just think of this capacity as a perturbational process? After all, the notion of 'access' brings with it the idea that there are contents that are used by the system as a whole, hence the need for the theoretical architecture of a global workspace (Baars 1997; Shannahan and Baars 2007). To this I would respond that the organism is making use of contents when it responds in a fluid and automatic way to affective primes in the body caused by perception. But the means it deploys to carry out this usage are different from the sorts utilized by a system using cognitive access. The difference consists in the presence of an intention in the case of cognitive access and the absence of one in the case of affective access. Indeed, depending on how the neuroscience pans out, I would be happy to think of the physiological underpinnings of our capacities for affective access in terms of a global workspace. What matters at this juncture is that the utility of

continuing to use the notion of ‘access’ here is to emphasize that what both cognitive and affective access exemplify is that organisms like humans have different sorts of *capacities* for taking up with the content of their experience, ones that engage the cognitive resources of intention setting and ones that recruit deeply habitual response patterns that can be triggered in the absence of an explicit intention. However, it is important to note, that the two often work together, as in the case of the outfielder. Put in terms of the epistemological question we began with, it is in virtue of having embodied phenomenally conscious experiences of our world that we come to have practical knowledge of how we ought to act in light of the primes that our world gives to us through that experience.

3 Feeling, Habit, Instinct, Action

Our capacity to feel plays a role in guiding our actions, a role that we could not envision executing in the absence of that feeling. This is a strong claim. My argument in support of this claim will therefore be variegated. In this section I offer some conceptual analysis and phenomenological argument as well as some empirical evidence.

3.1 Conceptual Clarifications and Phenomenological Descriptions

First, I want to get a bit more precise about the way I have been using some of James’s terminology. By ‘instinct’ James means something like an innate tendency to act in a certain way based on a determinate pattern of sensory stimuli that is paradigmatic for the organism in some way. An example of this would be the so-called ‘fight or flight’ responses we have to certain kinds of threats. A reflex is an automatic reaction that is grounded in the physiological structure of the organism but isn’t necessarily indexed to some typical and expected paradigm scenario in the environment. A good example of this kind of response would be one’s leg shooting out in response to a doctor hitting one just below the knee-cap. Reflex reactions can arise across multiple contexts, they do not require specific configurations of the world to trigger them (James 1890/1950 Vol. II, 383-4). By contrast, instincts have an aim that is worldly. They are based on a long-standing expectation that the organism is likely to encounter the world as seeming a certain way. Thus, having a ready-made behavioral

response that can trigger in response to such an encounter has proven a solid strategy on the part of the organism at a phylogenetic level. For James, the key here is that experience is necessary to allow for the initial expression of instinct (ibid., 390). An instinctual response must be triggered by an experience for that instinct to become manifest in the organism's behavioral repertoire. By contrast, a habit is a determinate behavioral reaction that the organism uses a lot of the time (ibid., 402). For James, instincts that are not activated by experience are never expressed. Those that are, become habits.

The functional role of an experience-encoded behavioral habit is the following: “...*habit simplifies the movements required to achieve a given result, makes them accurate and diminishes fatigue*” (James 1890/1950 Vol. I, 112; emphasis in original). This kind of pragmatic attitude towards the functional role of habit is born of thinking about different ways that actions might be initiated by a subject. James differentiates between at least three other sorts of mental processes that might be action-guiding: ideas, perceptions, and volitions (ibid. Vol. I, 115). However, in habitual action, all that is necessary to initiate the act is feeling a bodily sensation, as in the case of the way the body recoils from pain. However, why think these motivating sensations are always phenomenal to some degree? The answer: our attention is immediately drawn to them when they go awry. We are pre-reflectively aware of things being as they *ought* to be, and we become attentionally focused if and when the balance is tipped in a way that precludes completion of the habitual action. Consider the bodily feelings that accompany walking. When I stumble, I attend to my stubbed toe, otherwise, I carry on with whatever is explicitly (rather than implicitly) on my mind.

Regardless of whether the bodily sensations we are living through pre-reflectively make it to the level of becoming objects of explicit attention or not, such feelings play an irreducible role in keeping the organism poised and responsive to the world. In James's words:

Every impression which impinges on the incoming nerves produces some discharge down the outgoing ones, whether we be aware of it or not. Using sweeping terms and ignoring exceptions, *we might say that every possible feeling produces a movement, and that the movement is a movement of the entire organism, and of each and all its parts.* What happens patently when an explosion or a flash of lightning startles us, or when we are tickled, happens latently with every sensation which we receive. The only reason why

we do not feel the startle or tickle in the case of insignificant sensations is partly its very small amount, partly our obtuseness.

(James 1890/1950 Vol II, 372)

Our capacity to feel in the body is always present and all our experience is manifest there to some degree or another. It is in virtue of our being so perturbed that we form habit-like *and* volitional responses. It is felt affect that plays the role of gatekeeper in encoding the contents of our experiences ‘upwards’ to the explicitly intentional functions of cognitive access or ‘downward’ to the habit-like functions of affective access.

Without this subtle and pervasive affective sensitivity to the world, without this affectively embodied perspective, it is not clear how our various strategies for dealing with the world would be developed in the first place. Certainly, we can develop subconscious habits that help us carry on in the world, but without the affective frame of the first-personal embodied perspective, we would have no way of integrating and setting up those responses. The journey to subconscious automatic reflex is one that starts with conscious experience. Affectively perturbed embodied consciousness is the window onto the world that allows us to forget what we can forget and remember what we need to remember in order for us to survive, as individuals, and as a species. Even those very successful responses are never *fully* unconscious in the phenomenal sense. As James points out, “...*the changes* [of feeling in the body] *are so indefinitely numerous and subtle that the entire organism may be called a sounding-board*, which every change of consciousness, however slight, may make reverberate (ibid, 450). Our capacity to feel plays an irreducible role in the integration of the content of experience and the establishing of how that content will be taken up by our different capacities for access. Further, it is by accessing the contents of our experiences, in particular through affective access, that we come to have practical knowledge of what our world demands of us through action. It is important to note that at this point, my argument is relying on a reconstruction of James’s view and its phenomenological plausibility. I therefore turn now to some empirical evidence that lends support to the view I have been developing.

3.2 Empirical Evidence for the Neo-Jamesian View

In order to show more definitively that our having feelings of various sorts play a deeply causal role in our capacities for habit formation, we need to think about answering the following question: “If [adaptive] behavior is all that matters [for evolutionary flourishing], why are we all not just Cartesian beast machines, simply performing the behavior required to get our genes into the next generation without any accompanying pageant being played out in the phenomenal theater of the conscious mind?” (Dickinson and Balleine 2010, 74). Bracketing for the moment the unnecessary commitment to an internal theater of phenomenal goings on, the question still stands as an important one. Our capacity to feel with our bodies gives us behavioral skills we would not otherwise have by providing us with first-personal motivations to respond and react to the challenges of our environment.

To see that this is so, consider the following narrative and its accompanying experimental protocol from the above cited article (Dickinson and Balleine 2010). Anthony feels thirsty and finds a fruit stand and eats his first piece of watermelon. His thirst is quenched and a novel flavor is added to his gustatory repertoire. Later that same day, Anthony over indulges in red wine and becomes nauseated. The following day he feels thirsty again and decides to return to the fruit stand for more watermelon. Upon seeing the watermelon on the stand, instead of an increased anticipation for his soon-to-be quenched thirst, he feels nauseated and decides not to eat the water melon. Indeed, “...that was the last time that [Anthony] knowingly tasted watermelon — it was now disgusting” (ibid., 75). What happened here was that the subsequent nausea of Anthony’s drunkenness became mistakenly associated with the residual memory of the novel flavor of the watermelon, hence conditioning his subsequent perceptual evaluation of it as seeming disgusting. But if that is right, then how did Anthony simultaneously develop a tacit aversion to watermelon and an explicit rational desire to eat it when he became thirsty again the following day?

Anthony was processing the content of his experience through two different forms of access. He was affectively accessing the content of his experience of the watermelon in an aversive way and generating an intentional action to consume the watermelon by processing his desire for it through the functions of cognitive access. It is Anthony’s capacity for affective experience that allowed these two

non-overlapping forms of access to finally interact in helping him to generate skillful behaviors in response to the world:

...what fused these two psychologies, thereby allowing them to interact in the control of his subsequent behavior, was his phenomenal experience on the second exposure to the melon. It was the experience of nausea and disgust, in conjunction with a perceptual-cognitive representation of the melon as the object of this powerful negative affect, that led to the loss of his desire. If he had not experienced nor cared about the feeling of disgust phenomenally — and, indeed, there was something it was like to experience that nausea — [Anthony] would probably still seek out watermelon on hot summer days.

(Dickinson and Balleine 2010, 75)

To verify the results of this self-observation, the experimenters repeated the protocol with rats in a laboratory. A group of rats were denied water to the point of manifesting obvious thirst behaviors. They were then taught to press down a lever which delivered a sugar-water solution (instead of watermelon). Immediately following the sugar water exposure session, the rats were made ill; not from drinking too much wine, but from, “...injecting a mild toxin that induces gastric malaise” (ibid). When the rats were offered a second opportunity to quench their thirst with the previously available sugar water, the rats still pressed the lever in the hopes that the sugar water would be delivered. However, in the second condition no water was given so as to test the goal directed behavior of the rats before seeing whether the actual sought after reward would be subsequently rejected once it was received. As soon as the rats were given the sugar water, their lever pressing behavior ceased. This shows, that like Anthony, the rats had an explicit goal to get the sugar water on the basis of their previous exposure, a goal that is rendered salient by the experimenters denying them what they wanted in the experiment. The aversion shown by the rats once they are given what they want further shows that they also had already developed a tacit aversion to what they explicitly wanted.

The authors dub their view the Hedonic Interface Theory (HIT). It states that:

...the function for [phenomenally] conscious hedonic and affective experience is to act as a motivational interface between the psychologies of the cognitive creature and the reflex machine. The function of this interface is to ground intentional desires, or in other words, cognitive representations of goal values in the biological response of the reflex machine to motivationally relevant variables, such as nutritional and fluid depletion, poisoning, hormonal states, body temperature, and so on. This grounding

occurs through the contiguous experience in phenomenal consciousness of the perception (or thought) of the target object or event (the melon) and the affect that it engenders (disgust) with the perception (or thought) it engenders... (ibid).

We have the capacity to experience latent feelings. They guide behavior in a tacit way unless otherwise over ridden by the intentional actions of cognitive access to occurrent perceptual content. The role that our phenomenally conscious experience plays is to affectively motivate the formation of rational desires that are taken up by the architecture of cognitive access *and* to condition our capacities for affective access so that we can become habitually fluent at dealing with the affordance landscape of our environmental milieu. Normally these two forms of access work together by having similar responses to the affectively encoded content that motivates their various forms of action. This makes it hard to dissociate them. However, this experiment shows us that in special circumstances, these two forms of access enable different responses to the same stimuli. This shows that they are in fact distinct.

Because of this constant conditioning process, the phenomenal character of our experience is always affective in some way. Our capacity to experience various forms of affect conditions the way in which we interpret the contents of those experiences, both explicitly through our capacity for cognitive access, and implicitly, through our capacity for affective access. Thus, for the rats, the sugar water has an initially pleasant sensory affect. Why? Because it sates their thirst. The feeling of being sated further motivates them to seek out the sugar water when next they become thirsty.

Conclusion

To conclude, let's return to the important distinction that we explored in the opening section of this paper. There, following Campbell (2004) I was critical of a distinction he makes between two different conceptions of the epistemic role of consciousness. The first was called the 'how-to-do-it' view, the second was the 'what-it-is' view. Briefly, the former claims that the role of experience is to help us know what to do in the face of a conscious perception. The second says that the role of consciousness is to select a target on the basis of attentionally captured sensory information which is then taken up by the unconscious information processing of the brain that encodes an appropriate sensorimotor response to the selected object.

I have argued that what it is for a subject to select a target in Campbell's (2004) sense already amounts to having an affectively motivated point of view on the object. Thus, the distinction between the 'what it is' view and the 'how-to-do-it' view looks less clear than it did at the outset. This is because one must already have a sense of how to do it before they can explicitly know what it is. The phenomenal character of perception is irreducibly normative along a number of dimensions, such that phenomenally conscious perceptual apprehension of a salient object already encodes that object as seeming a certain way to the subject relative to that subject's capacity to interact with it. This view is embodied in the work of William James. While his contributions to contemporary philosophical and scientific discourse on the mind has been well-noted, my reconstruction here emphasizes the novel insights that his thinking can offer us in addressing the question of the epistemic role of phenomenal consciousness in a theory of mind.

When we start to take the living body as a locus of experiential affect, we see that the translation from perceptual experience of an object in vision to a motor response is mediated at every level by bodily affects that prime, orient, and motivate any response that might be forthcoming. Therefore, the 'how-to-do-it' conception of conscious experience is a viable way of thinking about the epistemic role of consciousness, so long as one is heedful of the role played by bodily affect.

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