

Knowing How to Possibly Act: Alva Noë's *Action in Perception*

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I. Introduction

Alva Noë is a modern-day empiricist. His book *Action in Perception* is chockablock with contemporary cognitive science; its preface and notes (not to mention general erudition) point to on-going collaboration with Evan Thompson, Kevin O'Regan, and Susan Hurley. Their research investigates the sensorimotor bases of consciousness, and *Action in Perception* is offered as its philosophical backdrop. As such, the book presents a series of ideas and interpretations that constitute what Noë calls the "enactive approach" to perception, many of which are explicitly phenomenological in orientation. So those on the lookout for imaginative philosophy of mind will find Noë's work particularly compelling. (Noë would prefer "already feeling about for imaginative philosophy of mind," because on his account paradigmatic perceptual activity is tactile rather than visual.) In this review I will not address the empirical details concerning Noë and his compatriots, but will instead focus on the way Noë's enactive approach should be situated vis-à-vis traditional phenomenology. *Action in Perception* is part of the grand project of a robustly scientific knowledge of human perceptual experience, but it is clearly also a philosophical theory, so I will address it philosophically. I address it as I take it to be: one of the best works in the philosophy of perception to appear in a very long time.

Noë presents a brief synopsis of his book at the end of Chapter One (pp. 33-4), and I would be remiss if I didn't trace the book's outline before attending to some of its details: *Action in Perception* opens by introducing the enactive approach to perception, first by considering work on various kinds of experiential blindness, and then by discussing several objections to Noë's favored interpretation of that work. The second chapter argues that perceptual content is not given "all at once," but must instead be the product of an animal's (especially the human animal's) "active inquiry and exploration." (p. 33). The third chapter is about the spatiality of this content, particularly its perspectival dimension (aspect) and its relation to the is/seems distinction in philosophy. The fourth chapter gives the enactive account of color vision, arguing that colors too (and not just visual figures) have rich "sensorimotor profiles." In the fifth chapter

Noë makes his advance upon the causal theory of perception, particularly insofar as he treats perceptual content as fundamentally perspectival. The sixth chapter intervenes in the current philosophical debate over whether perceptual content is conceptual. The book's seventh chapter is conclusion by way of discussion of the ways in which the enactive approach challenges the "internalist" paradigm in contemporary treatments of the bases of consciousness in the brain.

That account of *Action in Perception* is, of course, highly synoptic. I will not be able to comment on every virtue of Noë's book. Nor can I raise quibbles with each of its particular details. Instead, I will confine myself to two. First, Noë's enactive approach is heir to a tradition of thinking about perception that emphasizes embodiment. Treatments of perception as fundamentally embodied are not confined to either psychology or philosophy, but have important recent treatments in both disciplines. In psychology the idea has been championed, notably, by J.J. Gibson and the "ecological model." Noë acknowledges this influence, and also the recent work by Berthoz and Jeannerod (p. 17). In philosophy, theories of embodied perception are best associated with 20th Century Phenomenologists like Edmund Husserl, but especially with Maurice Merleau-Ponty. So my guiding light (er... "contour") in this review will be to draw out the ways in which Noë's approach is (or is not) an advance upon a roughly Husserlian position. The claim that perception is fundamentally embodied connects Noë directly to traditional phenomenology. Noë's claims that perceptions are actions, actions comprised by sensations and "sensorimotor knowledge," are akin to post-Husserlian phenomenology. By framing Noë's theses as advances upon Husserl we may tease apart a variety of claims that Noë himself treats in tandem: (1) that perception is fundamentally counterfactual, i.e. depends upon what would be perceived were a perceiver otherwise perceptually situated, (2) that perception requires, or is itself, an action, and (3) that perception depends upon possible action or activity. None of these should be confused for one another, or for Noë's further claim (4) that perception requires a kind of implicit understanding, or knowledge. Second, I will question the evidence for (if not wholly dispute) this final claim: Noë has not sufficiently established, in *Action in Perception*, that sensorimotor dependencies amount to a kind of know-how.

II. Enactive Approaches to Perception

The enactive approach to perception is not defined by way of a biconditional set off from its neighbors, the kind of sentence that advertises itself as definition on its face. Noë is a bit more egalitarian in his treatment of sentences. Honestly, I think it is a mark of Noë's elegance as a writer that the important idea makes its entrance in the opening sentences...

The main idea of this book is that perceiving is a way of acting. Perception is not something that happens to us, or in us. It is something we do. (p. 1)

We spontaneously crane our necks, peer, squint, reach for our glasses, or draw near to get a better look (or better to handle, sniff, lick or listen to what interests us). The central claim of what I call *the enactive approach* is that our ability to perceive not only depends on, but is constituted by, our possession of this sort of sensorimotor knowledge. (pp. 1-2)

...but is then allowed to reveal itself further as the plot thickens:

The basis of perception, on our enactive, sensorimotor approach, is implicit practical knowledge of the ways movement gives rise to changes in stimulation. (p. 8)

Mere sensation, mere stimulation, falls short of perceptual awareness. As stated earlier, for perceptual sensation to constitute experience—that is, for it to have genuine representational content—the perceiver must possess and make use of *sensorimotor knowledge*. To imagine a truly inert perceiver is to imagine someone without the sensorimotor knowledge needed to enact perceptual content. (p. 17)

The key technical term here is "sensorimotor knowledge." In *Action and Perception*, it is sensorimotor knowledge that is the essence of (if not alone sufficient for) perception. We get vivid exemplars, like those from the list on the first pages (pp. 1-2). But the official definition is that *sensorimotor knowledge* is knowledge of the way that movement gives rise to changes in stimulation. What Noë means by "stimulation" in this context is, of course, sensory stimulation, i.e. sensation. On Noë's account, *perception* is sensation and sensorimotor knowledge put together. In places Noë seems to suggest that sensorimotor knowledge alone is all that is required for perception, but careful readers will beware that misunderstanding. Noë's received view is that perception requires sensorimotor knowledge and the more or less rich array of occurrent sensory stimulation. In the language of philosophy: sensations are necessary, but not sufficient, for perception. Sensation and sensory motor knowledge together are sufficient for perception.

The basic idea is simple enough: perception is not merely having sensations; it is having sensations and knowing what to do with them. To perceive is not simply to sense something, but to be able to track patterns in the modulation of one's sensations as one moves, i.e. to use one's sensations insofar as they are causally indexed to one's situation in the perceptual environment. Our movements towards, away from, through, under, over, and around perceptual objects are supposed to be a constitutive part of our perception of them. On Noë's account the kind of movement necessary is not mere motion, i.e. mere spatial change; it is instead the movement of a perceiver caused by that perceiver, i.e. the actions perceptual creatures take in order to better perceive.¹ According to Noë, this is also a special sort of knowledge. Without the knowledge of how our sensations change as we move in order to perceive we would neither perceive, nor be able to perceive.² Noë's and his collaborators' empirical work seeks to explain how various abrogations of this kind of knowledge cause the various kinds of blindness and perceptual deficiency now widely discussed in the literatures of the cognitive sciences.

I am a huge fan of the work. However, the foregoing account is compatible with three

¹ Noë's view seems to be that perceivers must cause their own movements in these cases. In places, however, (eg. pp. 64, 86) he seems to back off of this claim, suggesting that relative movement between perceptual object(s) and perceivers is all that is necessary. The physical theory of relativity makes such claims equivalent qua motion. Nevertheless, there is a real difference between mere movements and actions. The difference is perhaps underappreciated by Noë, especially insofar as his theory must commit itself (Cf. p.13) to self-actuated motions, i.e. motions caused by a perceiver, if they are to be actions.

² Noë claims both that sensorimotor knowledge is required for perception, and that sensorimotor knowledge is required in order to be able to perceive. Cf. pp. 1-2, p. 90. Readers should note, however, that perceiving and being able to perceive two are quite different things!

quite different treatments of perception. Noë does not cleanly separate the following three views in his book (and may not believe that they are distinct.) But we must distinguish them crisply. One view is that perception is dependent not merely on what is sensed in any given instance, but also on what would be sensed were the perceiver otherwise perceptually situated over and against the perceptual object(s). On this account perceptual content is not merely sensory content, but sensory content plus what sensory content would be were the same perceptual object(s) perceived from other possible perspectives. Perceptual content depends not only on the more or less rich array of occurrent sensations, but also on a number of subjunctive facts about what the sensations would be in a variety of possible perceptual orientations toward the object(s). Henceforth I will call this view "the Husserlian view," for reasons not taken up here.³

Another, quite distinct, theory of perception claims that perception requires the action or activity of the perceiver. To crane one's neck, for example, does not merely depend upon how a thing would look were one's head in a different position, it is also to actually do something, viz. move one's head about to get a better view. Noë's other exemplars of sensorimotor knowledge are to be understood similarly, *mutatis mutandis*. This second account of perception involves Noë's characteristic commitment to the treatment of perception as "enactive," i.e. as involving self-actuated movement in the exploration of a perceptual environment. While this second view might be consistent with the first, the two accounts are clearly not equivalent. The second view requires action in a way that the first does not.

A third treatment of perception combines elements of the first view with the central claim of the second. This third theory claims that perception, in addition to sensation, depends upon the truth of some subjunctive conditionals. But instead of counterfactual claims about what would be sensed were one oriented such-and-so, the third view appeals to counterfactual truths about what would be perceived were one to move this way or that. The third view is not equivalent to the first because its account of perceptual content requires (actual) sensation and possible movements (like possibly craning one's neck) whereas the first (Husserlian) view merely requires actual sensations and possible sensations. This third view is not equivalent to the second because on the third view perceptual content requires (actual) sensation and possible movement (like craning one's neck), but does not require the stronger claim that each instance of perceptual content requires the perceiver actually be moving. Henceforth, I will keep the second and third accounts of perception distinguished from one another, but will continue to refer to them both as Noë does, i.e. as the "enactive approach" to perception. I will call the second view Noë's "strong claim," and the third view Noë's "more nuanced account."

Noë does not distinguish the commitments of the three accounts of perception from one another. A representative quotation from *Action in Perception* is the following:

Finally, experience can acquire content in this way only if experience is active and dynamic in the way that the enactive approach proposes. You *don't* encounter the rectangularity in the P-shape alone. You encounter rectangularity in the variation in P-

³ The principal reason is its affinity with accounts of perception provided by Edmund Husserl. Cf. Husserl (1970), pp. 565-566. However, the view sketched here is not, technically, one of Husserl's full-blown accounts of perception. I do not mean to be staking any claims about Husserl's actual theories of perception in this review of Noë; I merely mean to invoke Husserl's name as a label for the kind of view sketched above.

shape as you move (or as objects move with respect to you). It is only by exploring (or by being able to explore) visual space that you encounter the circularity. It is in the possible changes in P-shape that the real shape is encountered. (p. 86)

The opening sentences of this passage give a clear expression of Noë's enactive approach, upon which perceptual content is gained only if experience is (presumably actually) "active and dynamic," i.e. gained through "the variation in P-shape as you move."⁴ But by the end of the quotation Noë has collapsed into the merely Husserlian view, i.e. the view that possible changes in P-shape are (presumably solely) responsible for actual perceptual content, i.e. "the real shape." On Noë's account, is it the action or the possible changes in the P-shape that are responsible for the perceptual content? Noë may answer, "both." But then he must squarely face the further question whether the possible changes in P-shape alone (when coupled with occurrent sensations) would be sufficient for perceptual content, i.e. when no action is being taken by the perceiver.

The slide between these distinct accounts of perception can be seen even in Noë's parenthetical comments, e.g. "It is only by exploring (or by being able to explore)..." Would being able to explore (along with sensation) be sufficient for perception? Or must one, in each case, actually do some exploring (as the stronger view claims) in order to perceive? What if I had explored previously and am now able to remember what the perceptual object(s) would look like were it/they seen from the alternative perspectives? What if I merely imagined or expected what it/they would look like? Must I actually be moving to take a look? Noë's answer to this last question is in places clear and unequivocal. Sometimes it is, "yes." In various parts of *Action in Perception* he claims that we must actually be moving to perceive.⁵ But as I have claimed above (and now hope to emphasize), Noë does not crisply distinguish the commitments of this answer from the more modally nuanced variant of his view. He frequently writes, "as one moves (or would move)" (p. 228.), despite the fact that the parenthetical comment is not presenting the same theory. It does not merely reformulate a univocal account of perception, but instead refers to a substantively different view.⁶ Noë is not shy about committing himself to the stronger formulation, i.e. the claim that actual actions are required for perception to transpire (or be possible).⁷ But that is not his more nuanced view.

Principal among the objections to the strong claim, an objection that Noë himself raises

⁴ Noë introduces "P-properties" as closely akin to Gibson's treatment of the "ambient optic array." (See again, p. 86.) *P-properties* are properties of perceptual objects accessible to perceivers with relevantly receptive sensoria in an appropriate (paradigmatically spatial) orientation toward them. P-properties are supposed to be responsible for the way that perceptual objects appear when perceived from particular positions. Noë claims that they are (i) relational properties, and (ii) objective properties of the perceptual objects and/or states-of-affairs themselves.

⁵ See pp. 96-100, 164, 166-67, 215-16, etc.

⁶ E.g., p. 105.

⁷ Here I am doing the thing with the parenthetical myself! What is required for perception to be possible and what is required for perception to transpire are not the same. In my defense: Noë does make both claims. Cf. note #2.

almost immediately in Chapter One (p. 12), is that it seems possible to perceive while resting completely still. Noë calls this "the objection of the inert perceiver,"⁸ and returns to it at various breaks in the action of his story, promising that, "There are . . . deeper and more compelling reasons to be skeptical of the very idea that there could be a truly passive, inert perceiver," and that, "One of the main aims of this book is to demonstrate this" (p. 13).

The possibility of a passive (let alone "inert") perceiver is not a challenge for the Husserlian view, insofar as that view treats perception as dependent upon nothing but sensations and counterfactual truths about sensation. The passive perceiver does not raise any challenge to a Husserlian view because neither actual nor possible actions are required on that account. Noë, however, commits himself not merely to the Husserlian view but also the fully enactive approach. And insofar as he does, there are two main tactics he adopts in order to respond to the challenge of "the inert perceiver." One tactic is simply to deny that there are, in fact, true cases of (either) passive or inert perception. Another tactic is to provide the more nuanced account of perception, which is wholly compatible with the manifest cases of passive and inert perception. This latter account is precisely the modal variant of the view that I introduced above as "the third" or "more nuanced" view. And in fact, *Action in Perception* employs both of these two tactics (what I will now call "holding ground" and "giving ground") to lesser and greater degrees of success.

Noë's first blush response to the objection of the inert perceiver is to discuss cases of paralysis and quadriplegia (p. 12). He argues both that quadriplegics are active and mobile denying their complete passivity and immobility, and that, "Even the paralyzed, whose range of movement is restricted, understand, implicitly and practically, the significance of movement for stimulation" (p. 12). The former move is clearly an instance of holding ground. The latter is either holding ground or giving ground, depending upon whether his emphasis is on the range of movement or activity as merely "restricted," or instead is on the fact that an understanding (implicitly and practically) of "the significance of movement for stimulation" does not require any actual movement or activity.

Noë's second immediate response to the objection of the "inert perceiver" is to point out that a "thoroughgoing paralysis – for example of the eyes themselves – would cause blindness." (p.13) This is clearly holding ground rather than giving ground. Here Noë claims that "some minimal amount of eye and body movement is necessary for perceptual sensation" (p. 13). The problem, however, is that these minimal amounts of bodily movement, e.g. eye saccades, are relevantly unlike the sorts of movements heralded as sensorimotor knowledge in the rest of the book. Eye saccades are relevantly unlike: craning, peering, squinting, handling, sniffing, licking, listening, etc. The perceptual activities that Noë is centrally concerned with are actions robustly understood, i.e. self-actuated bodily movements. But not all eye saccades are volitional, many are reflexive. So Noë's second blush response to the objection of the "inert perceiver" is inadequate, at least insofar as the "minimal amounts of eye and body movement" are not volitional. That the movements requisite for perception be self-actuated (i.e. actions, i.e.

⁸ Even the way Noë names the objection is telling. He introduces it as the objection of the, "entirely inactive, ...*inert* perceiver," (p. 12) as if those two objections were the same. But they are not. The former targets his claim that perception requires self-actuated movement (i.e. action) particularly; the latter is broader, it targets his claim that perception involves movement generally. I do not think that *Action in Perception* distinguishes these objections from one another. Cf., note #2, note #7.

volitional) is a claim that Noë himself endorses in the very next paragraph of his text (p. 13).

Noë claims that one of the main aims of his book is to settle the objection of "the inert perceiver." But his pronouncements on this simple, yet central, objection (raised by himself in the opening pages) remain unsettled, insofar as his two tactics take him to quite different places. Ultimately, I think, Noë should embrace the more nuanced, modal account as his best view.⁹

Note that there is nothing in this account to rule out the capacity of people who are behaviorally limited from having experiences of spatial looks. To experience a thing as being on the left is to experience it as occupying a relation to one defined by possibilities of movement. This is compatible with its being the case that someone who is incapable of movement could have perceptual experience as of something on the left. What is ruled out is the possibility of someone who lacked all sensorimotor comprehension having experiences with spatial content (or, for that matter, any content). (pp. 90-91)

The relevant experience is supposed to be "defined by possibilities of movement," but the experience is also supposed to be shared with those "incapable of movement." Here, then, is the definitive instance of giving ground. Noë's claim in this passage is that perceptual content is defined by movement, even though some perceivers cannot possibly (physically) perform the movement. If nothing else, we should read him as relinquishing here the strong claim that every perceptual experience requires an actual action. This is Noë's more nuanced view taking the day: every perception requires a possible action, i.e. "occupying a relation defined by possibilities of movement", even if that action is not physically possible for all perceivers.

The upshot, however, is that Noë's book is somewhat mistitled. It should have been called *Possible Action in Perception*, because Noë's ultimate account is not that every perception contains an (actual) action. When pressed, the results of which are passages like the one quoted above, Noë must give up the claim that actual actions are necessary. He could have claimed that what is necessary is some range of sensation correlated with other possible sensations. That would have been a Husserlian view. But Noë's enactive approach is not merely a Husserlian view, insofar as he claims that (actual or possible) actions are necessary for perception. On the more nuanced formulation, Noë's view is that perception requires possible actions, i.e. sensorimotor knowledge.

III. Sensorimotor Dependencies as (Implicitly Understood) Knowledge

According to Noë, sensorimotor knowledge is, in addition to being a possible action or activity, also an implicit understanding. What we know (or understand) implicitly, is how to move in order to perceive. Noë presents this account in a variety of contexts. Here is a somewhat random sampling from *Action in Perception*:

(A) What informs you of the shape of what you feel or hold is not the intrinsic character

⁹ For evidence that he endorses the more nuanced view see pp. 90-91, 105.

of your sensations, but rather your implicit understanding of the organization or structure of your sensations. (p. 15)

- (B) Yet even the subconscious changes (subconscious because subpersonal) may matter to me and impinge on my awareness. As a perceiver I understand, implicitly, how to modulate them. For example, when I cup my ears to hear something better, I modulate receptor-level events to which I have no direct access. But I cup my ears precisely in order to do this, that is, to increase the intensity of stimulation in my ears. (p. 31)
- (C) We see its circularity *in* the fact that it looks elliptical from here. We can do this because we understand, implicitly, that circularity is given in the way *how things look with respect to shape* varies as a result of movement. (p. 84)
- (D) Only someone who understands, implicitly, that turning the eyes to the left brings an item on the left into view, can be said to experience something as *on the left*. Someone with this knowledge can enjoy the corresponding experiences. (p. 90)

Sensorimotor knowledge is supposed to be knowledge. In this last passage we are encouraged to “enjoy” the experience of something as “*on the left*”, but admonished that this would not be possible had we not understood, implicitly, that turning the eyes to the left is what brings items on the left into view. This is the sort of knowledge that is supposed to be so implicit that we do not even recognize it as something we all already know, until it is pointed out to us, at which point we are liable to say, “duh,” or “Everyone knows that,” etc. Phenomenologists have claimed that there are a variety of underappreciated features of these sorts of “implicit understandings,” (a) that they seem obvious when pointed out, (b) that they appear to have been known all along (since when? on what grounds?), etc. But what is particularly important for an assessment of Noë’s work is an account of the content of what is putatively understood in the cases of sensorimotor knowledge. What, exactly, is known when Noë appeals to our implicit understanding? Looking back at the passages above, he seems to have in mind:

- (a) the organization or structure of sensations
- (b) how to modulate subconscious changes in receptor-level events (by moving)
- (c) how things look varies as a result of movement
- (d) that turning the eyes to the left brings items on the left into view

In these cases (b) and (c) are supposed to be theoretically equivalent, and (d) is supposed to be one of their instances. (a) is required for the Husserlian view, but readers should note that it makes no mention of (even possible) movement.

In each of these cases the knowledge in question is not supposed to be propositional, i.e. the kind of knowledge that can be written down in a book, but is instead supposed to be practical. Gilbert Ryle’s famous distinction between knowledge-how and knowledge-that is apropos.¹⁰

¹⁰ See Ryle (1984), chap. II. Ryle’s distinction has recently been challenged by Stanley and Williamson (2001), but Noë (2005) has clearly sided with the Ryleans, and so should we. Knowing how to juggle a soccer ball, for example, involves more than being able to describe kicking the ball in order to keep it from touching the ground. And that is not simply because there are a wide number of people who know that juggling the ball involves keeping

Noë is clear, throughout *Action in Perception*, that sensorimotor knowledge is know-how.¹¹ It is supposed to be like the knowledge one has when one knows how to play the trumpet, or knows how to juggle a soccer ball, as opposed to the sort of knowledge one possess when one knows that Salem is the capital of Oregon, or that for any positive integer there is between that integer and its double at least one prime.

Implicit understandings (in Noë's sense) are particularly suited to be one of these two types of knowledge, but not the other. They are clearly associated with *savoir faire*, i.e. knowledge-how, rather than knowledge-that. We are less frequently tempted to say that propositional knowledge is possessed implicitly. You either know the propositions or you don't. For example, it is not the case that you knew, but knew only "implicitly," that for any positive integer greater than 1 there is between that integer and its double at least one prime. You either knew that before you read the previous paragraph or you didn't.¹² The fact that know-how cannot be reduced to, or identified with, propositional knowledge (*pace* Stanley and Williamson) is one of the principal motivations for claiming that it can be possessed implicitly. This is because *implicitly* simply means without an explicit (i.e. propositionally structured) account. Only know-how can be possessed implicitly because having know-how does not entail forming propositions attitudes, let alone there being propositions that describe each movement in the series of actions that make up a performance. Many have argued that it would be wholly impossible to analyze performed knowledge in such a way, i.e. to break it into constituent parts, let alone articulate its putative propositions before or during a performance.¹³

As we have already seen, what we are supposed to implicitly understand when we possess sensorimotor knowledge is how to perform a specific sort of sensorimotor task, either (b) "how to modulate subconscious changes in receptor-level events (by moving)," (c) "how things

it from touching the ground (and could describe it to varying degrees of precision), whereas there is a significantly smaller number who actually know how to do it. (Though this is a relevant difference.) The difficulty in providing a list of propositions that would substitute for any given piece of know-how is often cited as the difficulty of reducing the latter to the former. Ryle's *reductio* is yet another. But here is yet a third: Imagine that one could produce a list of propositions that was an exhaustive account, in maximally precise detail, of repeatedly kicking a ball in exactly the spot with exactly the force necessary to keep it in the air indefinitely. Even in that case, if one were to report the list of propositions to a person attempting to learn it would fall far short of teaching them how. It would fall far short because modeling a behavior, i.e. engaging in a didactic performance, is significantly more than a mere description. Even with the putatively complete list of propositions describing some know-how, one still only possesses a description of the kind of knowledge that is fundamentally activity, and for which the real trick will always be a performance. Describing know-how while others attempt to learn is rarely teaching, it is more often poking-fun. The greater the degree of precision in such description, the greater the poking-fun. Because there are things that can't be learned from books, therefore Ryle's duly celebrated distinction between knowing-how and knowing-that.

¹¹ See pp. 66, 117-120. In fact, Noë most frequently refers to know-how as "practical knowledge." But the contrast with "propositional knowledge" makes the distinction exactly Ryle's.

¹² There are perhaps clever people (more like Meno than myself) who could have figured it out with only a little prompting. But, *pace* Plato, that is not the same as knowing it already.

¹³ A philosophical champion of this sort of claim is Hubert Dreyfus. See, for example, Dreyfus, et. al. (1986). But it can also be found in Ryle, *loc. cit.*

look varies as a result of movement,” or (d) “that turning the eyes to the left brings items on the left into view.” Here the Husserlian view and the enactive approach again come apart. On the Husserlian view perceptual content is dependent upon how sensation would be effected by reorientation of the sense organs *gegenüber* the same perceptual object(s). But no knowledge is required for that perceptual content to transpire. No knowledge is required for (a) “the organization or structure of sensations.” The mere factual and counterfactual situation is sufficient. The act of perception itself may count as knowledge, or may itself be the justificatory ground for some further knowledge claim, but the perceiver requires no knowledge antecedent to the act of perception in order to perceive. On the Husserlian account, knowledge of the inter-modal organization of sensations and the counterfactual dependence of perceptual content upon it is not required for perceptual content. Perceptual content merely requires the basic facts of the specific inter-modal organization of sensations. On Noë’s enactive approach, on the other hand, we must additionally have (implicit) understanding of how one’s movement (better: possible movement) would effect changes in sensation, i.e. we must additionally have a bit of know-how in order to perceive.

But what grounds that claim? What is Noë’s justification for making it? The place in Noë’s book where he most explicitly addresses this question (of evidence for this, one of his most central claims) is in the context of his discussion of the “problem of perceptual presence.” In section 2.6 of *Action in Perception* Noë places a related objection into the mouth of Hubert Dreyfus. According to Noë, Dreyfus’ objection to Noë’s work is that Noë is “overintellectualizing the mind” (See pp. 65-66). Noë’s response to this objection is to argue that any solution to the problem of perceptual presence requires that sensorimotor knowledge be knowledge, i.e. knowledge of how perceptual content is dependent upon (possible) movements.

The solution to the problem of perceptual presence turns on admitting that perception is constituted not only by the perceiver’s mastery of patterns of sensorimotor dependence, but by the fact that the perceiver *knows* that his or her relation to the environment is mediated by such knowledge. The need for this further knowledge is clear: How can you experience a strictly unseen bit of an occluded surface as perceptually present? Your sense of its presence cannot be explained simply by reference to the fact that you receive stimulation from it. Because, when it is occluded, you do not. Nor is your perceptual sense of the presence of the occluded surface explained by the mere fact that your relation to that surface is mediated by patterns of sensorimotor dependence. All that can explain your sense now of the perceptual presence of what is really unperceived is your grasp, now, that your relation to the occluded surface is mediated by the relevant sensorimotor contingencies. It is this knowledge that makes the potential effects of your movement relevant to what you now experience. (pp. 65-66)

I am impressed by Noë’s account of the “problem of perceptual presence.” And I am ready to grant that the question about how perceptual content can be of whole objects rather than merely their visible surfaces is a legitimate puzzle for philosophy, and I applaud Noë for refusing to let it be swept under the rug. It is, in part, Noë’s insistence on doing justice to this sort of puzzle that makes him a *bona fide* phenomenologist. I also think that Noë is right to say that our perception of partially occluded objects cannot simply be explained by sensation or sensory stimulation, because (as he points out) the instances of perception under consideration are those where there

is no sensory stimulation from the occluded surfaces of the object(s). Yet still we perceive them whole.

Nevertheless, there is a serious lapse in the passage quoted above. It is revealed by asking what, exactly, is the content of what is known, i.e. supposedly required in order to solve the problem of perceptual presence. Noë's answer is that it is the knowledge of a perceiver, "that his or her relation to the environment is mediated..." But here Noë is sliding from the description of the requisite knowledge as know-how, to the description of it as a piece of knowledge-that. This is problematic precisely because Noë himself argues (pp. 118-119), that no knowledge of the form that-P is required in order to perceive. Noë himself, in the very next paragraph of his text, employs the distinction between practical and theoretical knowledge to defend himself against Dreyfus' charge that he is "over-intellectualizing" the mind. His response is that he is not over-intellectualizing the mind because all that he requires for perception is knowing-how.

If over-intellectualizing the mind merely means "relying upon knowledge-that," then Noë may have sufficiently answered the objection attributed to Dreyfus, despite the slip. It is dialectically fair for him, I think, to point out that his account merely invokes know-how (and then turn his attention to the challenge raised by Stanley and Williamson.) But we need not take up the question of whether know-how is "less intellectual" than knowledge-that in order to be dissatisfied with this a response to the broader question about justification for the claim that perception requires know-how. Noë has presented no argument here (in his response to Dreyfus) that a special sort of know-how is required. He has merely insinuated that without such know-how the problem of perceptual presence could not be solved. And that is simply not the case. The Husserlian account, to take one ready example, has a solution to the problem of perceptual presence: it claims that the occluded surfaces are "present" because they are what would be sensed were the perceiver otherwise situated *gegenüber* the same perceptual object(s). That will, of course, be open to familiar challenges: misperception, illusion, hallucination. But at the very least Noë's claim that the enactive approach offers the *only* solution to the problem of perceptual presence is hasty.

There is another place (Chapter Three) where Noë argues that the phenomena described as "sensorimotor knowledge" must be treated as knowledge. In Chapter Three he gives two reasons for thinking that perception requires know-how. One is that the sorts of skills in question play a foundational role for other sorts of "knowledge-involving cognitive capacities." (p. 117.) The second is that perceptual awareness and thought are continuous with one another rather than demarcated by a crisp boundary (p. 118.) So here there are some arguments. But neither of the two putative reasons actually supports the claim that we must have a special sort of know-how in order to perceive. The absence of such know-how is strictly consistent with perception in both cases. Let us grant that know-how plays a foundational role for more rarified sorts of cognitive capacities, and we may still deny that it is required for mundane perception. Let us grant that perceptual activity and thinking are continuous with one another rather than sharply demarcated, and we may still deny that perception requires know-how.

In the passage quoted above Noë claims that, "All that can explain your sense now of the perceptual presence . . . is your grasp, now, that your relation to the occluded surface is mediated by the relevant sensorimotor contingencies." I think that we should resist this claim, not merely because Noë hasn't yet offered reasons for thinking such "grasp" (i.e. know-how) is necessary,

and not merely because the claim that it is “all that can explain” perceptual presence is overweening, but also because particular cases of perception seem to confound it. Consider the history of a particular human being's perceptual activity. Whether she knew how her possible movement effects her new sensations was (at least) in one case irrelevant for her having the perceptual content. What she perceived was (at least in one case, and possibly in many more) something that happened to her in addition to something that she did. Movement through her perceptual environment may have been necessary for even that most significant perception, but it is compatible with her having had no knowledge (neither practical nor implicit) of how her movements would effect her new sensations. Her very first perceptions, whenever it was that they transpired, are the case in point. She could, when she was first learning to perceive, move through unfamiliar perceptual terrain and learn, that first time, how her patterns of sensation were correlated with her movement. We're all good empiricists here, aren't we? No antecedent knowledge of how her movements would contribute to the effect of her sensations was required.

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