1. Introduction

In the *Phenomenology of Perception*, first published in 1945, Merleau-Ponty describes a patient named Schneider, whose visual pathology stems from a traumatic injury to the brain incurred during trench warfare in the First World War. Schneider’s case of morbid motility, according to Merleau-Ponty, “clearly shows the fundamental relations between the body and space.”¹ The following somewhat lengthy passage occurs near the beginning of Merleau-Ponty’s discussion of Schneider:

In the ... patient ... one notices a dissociation of the act of pointing from reactions of taking or grasping: the same subject who is unable to point to order to a part of his body, quickly moves his hand to the point where a mosquito is stinging him. ... [A]sked to point to some part of his body, his nose for example, [he] can only manage to do so if he is allowed to take hold of it. If the patient is set the task of interrupting the movement before its completion ... the action becomes impossible. It must therefore be concluded that ‘grasping’... is different from ‘pointing.’ From the outset the grasping movement is magically at its completion; it can begin only by anticipating its end, since to disallow taking hold is sufficient to inhibit the action. And it has to be admitted that [even in the case of a normal subject] a point on my body can be present to me as one to be taken hold of without being given in this anticipated grasp as a point to be indicated. But how

¹ *Phenomenology of Perception*, p. 103.
is this possible? If I know where my nose is when it is a question of holding it, how can I not know where it is when it is a matter of pointing to it?

“It is without a doubt because,” Merleau-Ponty concludes, “knowledge of a place can be understood in a number of ways.”

The general point of Merleau-Ponty’s discussion is that the understanding of space that informs my skillful, unreflective bodily activity – activity such as unreflectively grasping the doorknob in order to go through the door, or skillfully typing at the keyboard - is not the same as, nor can it be explained in terms of, the understanding of space that informs my reflective, cognitive or intellectual acts – acts such as pointing at the doorknob in order to identify it. As Merleau-Ponty says, in skillful, unreflective bodily activity

my body appears to me as an attitude directed towards a certain existing or possible task. And indeed its spatiality is not ... a spatiality of position, but a spatiality of situation.

To give a name to intentional activities that essentially involve our bodily, situational understanding of space and spatial features, Merleau-Ponty coins the phrase “motor intentionality.” Grasping is the canonical motor-intentional activity.

As recently as 1992, perceptual psychologists were loathe to distinguish between the kind of spatial information available to the visual system for visuo-motor activities such as grasping and the kind available for perceptual judgements about location implicit in acts of pointing. In a forward thinking paper of the day one psychologist wrote:

---

2 Phenomenology of Perception, pp. 103-4, translation modified.
3 PP, p. 100.
We often do not differentiate between grasping and pointing when we generalize about how vision is used when generating limb movements. It is possible, that how individuals use vision may vary as a function of whether they are generating pointing or grasping movements, and that some principles of how vision is used during reaching and pointing is (sic) not generalizable to grasping.⁴

This was a maverick view in 1992. Since that time, however, the important work of neuroscientists A. David Milner and Melvyn Goodale has opened the way for acceptance of this basic Merleau-Pontean distinction – the distinction between essentially bodily understandings of space and spatial features, on the one hand, and essentially cognitive or reflective understandings of these on the other. Much of Milner and Goodale’s work comes from an analysis of D.F., a patient who suffered carbon monoxide poisoning that resulted in a visual pathology strikingly similar to Schneider’s. Milner and Goodale describe her situation as follows:

D.F.’s ability to recognize or discriminate between even simple geometric forms is grossly impaired. ... [Her] pattern of visual deficits [however] ... is largely restricted to deficits in form perception. D.F. ... recovered, within weeks, the ability to reach out and grasp everyday objects with remarkable accuracy. We have discovered recently that she is very good at catching a ball or even a short wooden stick thrown towards her. ... She negotiates obstacles in her path with ease .... These various skills suggest that although D.F. is poor at perceptual report of object qualities such as size and orientation, she is much better at using those same qualities to guide her actions.⁵

In particular, Milner and Goodale report, D.F. is capable of responding differentially to spatial features of an object like its size, shape, and orientation even in cases in which she is incapable

⁵The Visual Brain in Action, pp. 126-128.
of visually identifying those very features. One test of this involved the identification of the orientation of a slot. Quoting again from Milner and Goodale:

[We] used a vertically mounted disc in which a [rectangular] slot ... was cut: on different test trials, the slot was randomly set at 0, 45, 90, or 135°. We found that D.F.’s attempts to make a perceptual report of the orientation of the slot showed little relationship to its actual orientation, and this was true whether her reports were made verbally or by manually setting a comparison slot. [Further examination revealed a large variety of other reporting methods for which her performance was equally bad.] Remarkably, however, when she was asked to insert her hand or a hand-held card into the slot from a starting position an arm’s length away, she showed no particular difficulty, moving her hand (or the card) towards the slot in the correct orientation and inserting it quite accurately. Video recordings showed that her hand began to rotate in the appropriate direction as soon as it left the start position. [One is reminded here, by the way, of Merleau-Ponty’s claim that “from the outset the grasping action is magically at its completion.”] In short, although she could not report the orientation of the slot, she could ‘post’ her hand or a card into it without difficulty.⁶ [See figure 1 for results.]

Milner and Goodale go on to suggest a neurophysiological basis for the dissociation between perceptual-report tasks and visuo-motor ones. They claim that there are two different streams of visual information flow in the brain, one of which is geared to perceptual judgement, the other of which is geared directly to action. D.F.’s case is one of the principle pieces of evidence that there is not one common understanding of orientation on the basis of which both judgement and action occur, but rather two different ways of understanding spatial qualities like orientation. Indeed, D.F.’s understanding of the orientation of the slot, unlike the more familiar cognitive understanding, is essentially in terms of her bodily capacities and dispositions to act

⁶ VBA, p. 128.
with respect to it. In the terminology of Merleau-Ponty, she has a motor intentional understanding of orientation. In this paper I would like to explore some of the distinctive features of motor intentional activity, and in particular to say something about its logical form.

2. The logical form of motor intentional activity

The central claim of my paper is this: that the logical form of motor intentional activity is structurally distinct from the logical form of intentional states as traditionally conceived. I will defend this claim by looking closely at DF’s visual deficiency. Broadly speaking, her case raises a problem for traditional accounts of intentionality because they commonly assume that mental states such as belief, desire, and perception, share their essential intentional features with the linguistic act by means of which they are reported. On this traditional view, if we want to understand the intentionality of sensation or perception, to use Anscombe’s famous example, we can do no better than to look at the grammar of the perceptual-report verb. Because in DF’s case there is a stark dissociation between her capacity to report on what she experiences the visual features of an object to be and her capacity to engage in motor intentional activity with respect to them, this standard assumption is difficult to sustain. But it is precisely this assumption that has motivated our intuitions about the logical form of intentional states.

Perhaps the most basic logical distinction that is standardly made in the characterization of intentional states is the content/attitude distinction. There is a difference, we naturally say, between the propositional content expressed by the utterance, “John is in the bedroom,” and the attitude that Mary has towards that proposition when she believes it to be true. The content in question is [that John is in the bedroom], the attitude Mary has toward that content is belief. In motor intentional activity, however (as I will argue), it is impossible to distinguish the content of the activity from the attitude directed toward it. Because the content/attitude distinction has been so central to our understanding of intentionality until now, the claim that motor intentional

---

activity fails to admit such a distinction, if correct, will serve to differentiate it in a relatively formal and complete way.

To see how this works, let’s start with some traditional observations about the content of intentional states. The content of an intentional state, on the standard kind of neo-Fregean view I’ll be considering, is specified by its conditions of satisfaction – the conditions the world would have to meet in order for the state to be satisfied. Since these conditions characterize the subject’s understanding of the world, one common way to specify them is in terms of a proposition consisting of concepts possessed by the subject enjoying the state. If Sally believes that the slot is oriented at 45°, for instance, then Sally has the attitude of belief towards a proposition consisting of the concepts [slot] and [oriented at 45°]. And in the most basic cases, according to this traditional view, these are concepts that Sally possesses. What the conditions are for possessing these concepts is a famously difficult problem that I will not attempt to address here. At a minimum, perhaps, we can say that Sally must be capable of entertaining at least some other thoughts involving these concepts – thoughts about slots that are not oriented at 45°, for instance, and thoughts about things other than slots that are so oriented. But whatever the full conditions on concept-possession are, the main idea so far is that propositional contents are individuated at least in part by the concepts that constitute them. And in the case in question, the proposition consisting of the concepts [slot] and [oriented at 45°] is a representation of the way the world is toward which Sally has the attitude of belief.

But what is the content – the representation of the way the world is – that is manifest in D.F.’s motor intentional activity? There is clearly some intentional content manifest in the activity, for D.F.’s slot-posting capacity is more than a mere motor reflex. It is a way of taking account of the orientation of the slot that can succeed or fail, and D.F. herself is quite sensitive to this distinction. So the motor intentional activity manifests some representational content. But how are we to characterize the representation in question? The problem appears to be difficult because just as in Merleau-Ponty’s discussion of Schneider, it seems that D.F. knows what the orientation of the slot is when it’s a matter of posting the card through it, but not when it’s a
matter of making a judgment about it. And all our apparatus for specifying intentional contents, on the traditional view we’re considering, are tailored to the linguistic case. The problem becomes even clearer when we consider various attempts to specify the content in question.

To begin with, it seems clear that we cannot specify the content of the motor intentional activity using the concept [oriented at 45°]. For one thing, D.F. may not even possess such a concept. She is systematically incapable of reporting that things are oriented at 45° when they are, and this seems at least a pretty good first-order guide to whether she possesses the concept or not. It is possible, I suppose, that she possesses the concept by deference – the way some of us may possess the concept [arthritis] by deferring to experts in our community, despite the fact that we systematically misapply the term ourselves. She could defer either to somebody else, or even to her earlier self, before the brain injury occurred. But even if she does possess the concept by deference, she is certainly not making use of somebody else’s knowledge, or even knowledge that her earlier self had, when she posts the card through the oriented slot. For how could anyone else’s knowledge of orientation help her control the online task she’s engaged in now? So it seems clear that she is not in any way using the concept [oriented at 45°] in performing the motor intentional activity of posting the card through the slot that is, as a matter of fact, oriented at 45°. If there is a representational content that characterizes her motor-intentional understanding of the orientation of the slot, then, it must not be one containing the concept [oriented at 45°].

But the problem is much worse than this. For there seems to be no concept that D.F. possesses in virtue of which she is capable of performing the posting activity. It’s not merely that she can’t count to 45, for instance, and for that reason fails to apply the concept [oriented at 45°], but she applies some other extensionally equivalent concept. No, she also can’t draw the slope of the slot on a piece of paper or even rotate her hand into the correct orientation without at the same time moving it toward the slot. She seems, in other words, not to be able to represent the orientation of the slot at all except by means of posting the card through it. This begins to put some meat on the claim that motor intentional activities constitute essentially bodily understandings of their objects. For absent the actual bodily engagement in the motor intentional
activity, D.F. seems to have no way at all of representing the orientation of the slot. And it also points in the direction of the idea that in motor intentional activity there’s no content/attitude distinction. For if there’s no way of specifying the representation independent of the activity that manifests it, then it’s difficult to see how this kind of bodily representation of the world is one toward which we can have an attitude at all.

But perhaps we haven’t been trying hard enough. We’re looking for a way to specify the representation of orientation that’s manifest in D.F.‘s motor intentional activity. We want to know, in other words, what her understanding of the orientation of the slot is in virtue of which she can post the card through it. True, this representation may not be constituted by concepts, and therefore may not be specifiable by reference to them; but perhaps there’s some other way of specifying the representation. Now, I’ve been suggesting that the activity itself, the actual bodily engagement with the slot, is a way, albeit an essentially bodily way, of understanding the orientation. Aside from the general uneasiness about bodily representations that I just mentioned, why is it that we can’t think of this activity as a representation toward which she can have the attitude of belief? Why can’t she say, in other words, “I believe the slot is oriented this way [said while posting the card through the slot]”?  

Well, she can say this, I think, and I understand from Goodale that she’s learned to make use of this technique. Indeed, he says it’s made experiments very tricky recently. The problem is, if you ask her to report the orientation of the slot, she’ll begin to move her hand toward the slot as if she were going to push it through, and then at the last moment she’ll stop, saying “This is the orientation it’s in [rigidly holding her hand in its final position].” Now it’s true, in this instance, that she has a representation of orientation, and it is a representation that she can report. In this case, therefore, she has a representational content toward which she can have the attitude of belief. But the question is whether this is the representation of the orientation of the slot that constituted the understanding of it she had when she was posting the card through the slot. I suspect it’s not.
The difference, I think, is that when she stops the posting action, the thought she has then seems to be about whatever orientation her hand happens to be in. I strongly suspect, for instance, that if you changed the orientation of the slot after she’d stopped moving her hand, and didn’t let her begin the posting activity again, she would continue to say that the orientation of the slot is whatever orientation her hand ended up in. [I’ve since confirmed this prediction with Goodale.] What is revealed in the posting activity, however, is the actual orientation of the slot – it’s that orientation itself that the activity is sensitive to. So even if she can have an attitude toward the activity that manifests an understanding of the orientation, this is not the same as having an attitude toward the understanding of the orientation that the activity manifests.8

The situation is a bit like the one that Frege describes with respect to the concept horse. For Frege, any attempt to refer to the concept horse as a concept will necessarily fail, since referring to it at all turns it into an object. So too, it seems, any attempt to characterize as an independently specifiable representation the understanding of orientation that D.F. manifests in her posting activity will necessarily turn it into a different kind of understanding than the kind it was at the time of the performance. The understanding of orientation that the activity manifests, in other words, seems not to be the kind of thing toward which she can have an attitude at all.

3. Further clarifications

The result so far is that motor intentional activity does not admit of a distinction between the content of the activity and the attitude the subject has towards that content. The reason for this is that any attempt to specify the content as the kind of completed representational entity toward which one can have an attitude turns it into something other than what it was when the activity was manifesting it. Put this way, the argument I’ve been advocating may look self-defeating: after all, this kind of inexpressibility is at the heart of Hegel’s argument against the

---

sense-certainty view of experience, and the related argument that Sellars gives against the Myth of the Given.\textsuperscript{9} But in saying that motor intentional activity admits no content/attitude distinction I am definitely not assimilating the motor-intentional understanding of objects to a kind of pure given element in experience. By distinguishing my position from the straightforward empiricist position that Hegel and Sellars are arguing against, perhaps my view will become a bit clearer.

According to the view of experience that Hegel calls sense-certainty, our awareness of the world is at its richest and fullest when we simply open our receptive faculties to it and directly take in impressions without first subjecting them to the activity – especially the conceptual activity – of the mind. This view is akin to what Sellars calls the Myth of the Given, that is, the myth that there is a purely given element in experience that is direct and unmediated. Hegel and Sellars both argue against such an empiricist view of experience by challenging its advocate to say what the immediate, rich, direct experience of the particular consists in. Naturally, though, any attempt to characterize such an immediate impression will have to make use of the very concepts that the impression is said to lack. So the position seems to collapse. As Charles Taylor explains Hegel’s view:

[T]he main theme of this first chapter is a refutation of the claim of sensible certainty to be in immediate contact with sensible particulars, without the mediation of general terms … Hegel’s principle point here is the impossibility of bare knowledge of the particular.\textsuperscript{10}

And the crux of the argument against this kind of immediate knowledge is that:

Any attempt at effective awareness of the particular can only succeed by making use of descriptive, i.e. general terms. The purely particular is “unreachable.”\textsuperscript{11}

\textsuperscript{9} See Hegel’s \textit{Phenomenology of Spirit}, esp. §§90-110, and Charles Taylor’s helpful article “The opening arguments of the \textit{Phenomenology},” from which I take my interpretation of Hegel’s position. For Sellars, see “Empiricism and the philosophy of mind,” esp. parts I, VIII, and X.

\textsuperscript{10} “The opening arguments of the \textit{Phenomenology},” p. 163.

\textsuperscript{11} “The opening arguments of the \textit{Phenomenology},” p. 165.
Likewise, Sellars argues against purely given immediate impressions on the grounds that,

[W]e can never characterize “impressions” intrinsically, but only by what is logically a definite description, i.e. as the kind of entity which is common to such situations.\textsuperscript{12}

Now, if the content of motor intentional activity is inexpressible in just the same way that the given element in experience is, then perhaps the characterization I have given of motor intentional content is self-defeating in an analogous way. But as a matter of fact, I think it’s not. This will become clear once we isolate an assumption common to both Hegel and Sellars that gives their argument all its force.

The assumption in question is that the only kind of contentful state is one whose content can be articulated conceptually or linguistically. Taylor is explicit in attributing this assumption to Hegel. Taylor writes,

The underlying principle [behind Hegel’s argument against sense-certainty] is … that if this [immediate impression of the particular] is really knowledge, [that is, if it is a genuinely contentful state] then one must be able to say what it is.\textsuperscript{13}

Likewise, Brandom, in his Study Guide to Sellars’ essay “Empiricism and the philosophy of mind,” articulates a similar assumption on Sellars’ behalf. For Brandom’s version of Sellars, nothing could count as a contentful intentional state unless it is a conceptually articulated proposition. Brandom writes:

\textsuperscript{12} “Empiricism and the philosophy of mind,” p. 86 in the Harvard volume edited by Brandom.
\textsuperscript{13} “The opening arguments…,” p. 162.
Only what is … conceptually articulated can serve as (or for that matter stand in need of) a justification and so ground or constitute knowledge. … Sellars understands … contentfulness … in terms of [a] role in what he calls “the game of giving and asking for reasons”. 14

These passages make clear, I believe, that the assumption that all contentful states are conceptually or linguistically articulable is central both to Hegel’s and to Sellars’ views. (Or at least it is central to Taylor’s and Brandom’s interpretations of Hegel’s and Sellars’ views.) What is equally clear, however, is how much work this assumption is doing in motivating the argument against the empiricist view. For without the assumption that all contentful states are articulable, the inexpressibility of an experiential state cannot count against it having an intentional content.

So what justifies the demand that all contentful states be conceptually or linguistically articulable? Perhaps one source for this idea can be found in Kant’s claim that a representation cannot count as my representation unless I’m capable of attaching the “I think” to it. 15 For the capacity to attach the “I think” to a representation just is the capacity to entertain its content explicitly in order to attribute it to oneself. According to Kant, I cannot lay claim to the representation that there’s a bowl of fruit in front of me unless I’m capable of a second-order thought about myself to the effect that I think there’s a bowl of fruit in front of me.

Kant’s condition has at least one nice feature: it is extremely useful as a way of distinguishing the kind of neural representations that brain scientists talk about from the kind of mental and psychological representations that we’re interested in when giving a theory of intentionality. For insofar as I cannot attribute to myself the representational state instantiated by some pattern of neural firings, those neural representations don’t, if we accept Kant’s condition, genuinely belong to me as an intentional entity (though of course they do belong to my brain). I think the distinction between neural representations and mental representations is worth

15 Critique of Pure Reason, §16?
salvaging, so I think that it counts somewhat in favor of Kant’s condition that it justifies that
distinction. But is it really true that the only representations that count as mine are those
representations that I can attribute explicitly to myself? D.F.’s case, I believe, shows that it is
not.

When D.F. posts the card through the oriented slot, it seems clear that the representation
of orientation that is manifest in her activity should count as her representation. After all, she’s
the person who takes responsibility for the activity; she’s the one who corrects her arm
movements when the world turns out to be different than expected; she’s the one who is
embarrassed when she fails to get it right. As I mentioned at the outset, D.F.’s motor intentional
activity is very different from a mere motor reflex, since it is a way of taking account of the
orientation of the slot that can succeed or fail, and D.F. herself is quite sensitive to this
distinction.

This aspect of her pathology clearly differentiates D.F.’s case from the more familiar case
of blind-sight. In blind-sight, the patient reports no visual experience of the stimulus at all, even
though in forced choice situations he turns out to “guess” (as the patient understands it) at a rate
that is significantly better than chance. The patient typically resists guessing, however, believing
himself to have no information at all about the stimulus, and refuses to take responsibility for the
view that the stimulus is one way or another. Blind sighters will typically say things like, “How
do you expect me to tell you whether it’s an X or an O – I just said I can’t see it! Well, if I have
to guess, I suppose I’ll say X. But really I have no idea.” This need to deny responsibility for
the representation, however, is not characteristic of D.F. at all. Unlike the blindsighters, D.F.
doesn’t resist the motor intentional task, even though she knows that she cannot make an
accurate judgment about the orientation. She is perfectly at home, in other words, in the realm of
motor intentional activity, and doesn’t need to be persuaded to post the card through the slot; she
merely needs to be requested to do so.
The problem with Kant’s condition, therefore, is that it fails to make the distinction between D.F.’s case and the case of the blind sighters. Neither of these subjects is capable of attaching the “I think” to the representation in question, but there are very different reasons for this in the two cases. D.F. cannot attribute to herself the motor intentional representation because any attempt to do so turns it into something else; the blind sighters, on the other hand, can entertain a normal representation of the stimulus – that it’s an X, for instance – but their condition does not allow them to attribute that representation to themselves. Although these are both cases in which the subject cannot attach the “I think” to the representation in question, therefore, it seems reasonable to suppose that in D.F.’s case, though not in the case of the blind sighters, the representation really is hers.

If this is right, then it points to the need for a condition on intentional content that is less restrictive than the one that Kant proposed. We can keep the idea that intentional states are contentful in the straightforward sense that they specify conditions of satisfaction. And it is also true that they are the subject’s representational states in virtue of a certain relation the subject has to them. But this relation must be more relaxed than Kant assumed: the subject need not be capable of articulating the content of the representation using concepts in his possession, nor even be capable of having any propositional attitude towards them at all. What must be true, however, is that the subject is capable of recognizing when the state is unsatisfied, and capable of understanding herself as the one responsible for that. In motor intentional activity these more basic capacities seem not to be built upon a prior capacity to attach the “I think” to the representation. For recognizing that my intentional state is unsatisfied is not always a matter of first attributing the state to myself explicitly and then checking to see if the world is that way. Rather, an activity is intentionally directed toward an object if, having failed to complete the activity, I can recognize that the conditions it specifies were conditions I was committed to, and I can recognize that the world fails to line up with those conditions. This recognition may be immediate and unreflective, as when the locked door stops me in my tracks, or the large painting compels me to step back and see it properly. It is immediate and unreflective in D.F.’s case as well. She knows when she has failed to post the card through the slot not because she discovers
that the world doesn’t match up with some independently specifiable representation of it, but simply because she sees immediately that she’ll have to try again. But even if the recognition is immediate and unreflective, it is still a substantive relation to the content. It is not, for instance, the kind of relation I can have to patterns of neural firing in my brain. By loosening Kant’s condition, therefore, we can maintain the distinction between the intentional and the neural, but we can also explain how motor intentional activity is genuinely contentful despite its inexpressibility.16

One final question remains for this clarificatory section. That’s the question how motor intentional content differs from the pure given element of experience that the empiricists favored. But with the full apparatus now in place the answer should be clear. For D.F. can know immediately when her motor intentional activity is unsatisfied, whereas the pure given element of experience is not the kind of thing that can intelligibly come apart from the way the world is at all. Recall that on the sense certainty view experience is at its richest and fullest when we simply open our receptive faculties to the world and directly take in impressions of it. On this view the only way to go wrong about the world is to conceptualize these impressions in the wrong way. But D.F.’s case shows that we can recognize that the world is different from the way we’d expected it to be without this expectation ever having been conceptually articulated. The problem with the empiricist view, then, is not that the empiricist can never say what the impression consists in, as Hegel and Sellars would have it, for this is only one way in which experiences can be the kind of representational entities that could go wrong. The real problem with the empiricist view is that impressions are not mine in any way at all. I cannot attribute them to myself, but I also cannot recognize when the world has failed to live up to them; and this is because impressions cannot intelligibly come apart from the way the world is in the first place.

4. Do normals have motor intentionality?

16 Add: There are certainly problems with this condition, and I can think of examples that show it both under-generates and over-generates cases. One issue I’d like to concentrate more on is how to revise the condition so that it doesn’t have this problem.
I have been using D.F.’s case to argue that there is a kind of intentionality – motor intentionality – that does not admit of the content/attitude distinction. In motor intentional activity the world is given to us directly in bodily terms, and no independently specifiable characterization of this motor intentional representation is possible. Supposing this is true for D.F., we might wonder whether it is true for ourselves as well. I suspect it is. Consider the understanding of the doorknob that you have when you unreflectively reach out to open the door. Is this understanding itself the kind of understanding toward which you can have an attitude? Or is it rather the case that in order to reflect upon the understanding manifest in the activity at all we necessarily change it into something different from what it was at the time the activity was being performed? It is more difficult to know in our case, since unlike D.F. we do possess concepts like orientation, size, shape, location, and so on, and it’s tempting to reconstruct the understanding manifest in our activity in terms of these. But is it in virtue of this kind of conceptual understanding of the object that we perform our unreflective, skillful activities? If Milner and Goodale are right in hypothesizing that there is an independent stream of visual information that is directly tied to action, then perhaps this kind of motor intentional understanding even for normal subjects is a kind that we cannot reflectively access as such. We may be able to reflect on the activity itself of course – I sometimes seem to be able to remember, for instance, reaching out to grasp the doorknob, even if I wasn’t aware of doing it when I actually performed the activity. But again, this seems to be reflecting on the activity, not on the understanding of the doorknob that’s manifest in it.

These armchair observations push us in an interesting direction, but it would better to have some actual empirical data to hang our theory on. One way to test whether normal subjects have a purely motor intentional understanding of the world is to look for situations in which the perceptual judgment the subject makes about the world diverges from the bodily activity he performs with respect to it. As it happens, there is emerging evidence that this is sometimes the case. A whole host of papers have appeared in the cognitive neuroscientific literature over the past three years that bear on this topic.17 The suggestion that emerges from these papers is that

---

17 Add references.
visuo-motor activity in normal subjects resists certain kinds of visual illusion to which perceptual judgment is susceptible. There is still a lot of active debate in the literature on this topic, and I don’t want to claim that the evidence is all in. But it’s worth reviewing the main issue.

The visual illusion most commonly used in these experiments is the so-called Tichener circle illusion. (See figure 2.) In this illusion two circles of equal diameter appear next to one another. One of the circles, however, is completely surrounded by a set of very small circles, while the other is completely surrounded by a set of very large circles. The illusion is that the two central circles, though they are actually of equal diameter, appear to be very different sizes: the one surrounded by small circles looks much bigger than the one surrounded by large circles. Interestingly, however, if you make the circles into actual disks and ask the subject to pick them up, the aperture of the grip formation coincides with the actual size of the disks instead of with the illusory size. There is a divergence, in other words, between the way the body in its activity understands the size of the disks and the way that size is visually experienced.

If these results hold up, then they will constitute good evidence for the idea that even in normal subjects there is a motor intentional understanding of the world, an understanding, in other words, that essentially discloses the world to us in direct bodily terms, but cannot be captured in the process of doing so. This kind of direct bodily disclosure of the world coheres nicely with Schneider’s report of his own motor intentional activity. For Schneider says,

I experience the movements as being a result of the situation, of the sequence of events themselves; myself and my movements are, so to speak, merely a link in the whole process and I am scarcely aware of any voluntary initiative.\(^{18}\)

Because motor-intentional activity is called forth by the situation in this way, and is therefore to some degree independent of the autonomous will of the subject, it does not have at its heart the kind of autonomous representational content that a subject could have an attitude toward. I

\(^{18}\) Phénoméne de la Perception, p. 105.
suspect that this is the point that Merleau-Ponty was trying to make in this final passage with which I’ll end. Merleau-Ponty writes:

[I]f I can, with my left hand, feel my right hand as it touches an object, the right hand as an object is not the right hand as it touches: the first is a system of bones, muscles and flesh brought down at a point of space, the second shoots through space like a rocket to reveal the external object in its place. In so far as it sees or touches the world, my body can therefore be neither seen nor touched. What prevents its ever being an object [like any other], ever being ‘completely constituted,’ is that it is that by which there are objects [for us]. [But] it is neither tangible nor visible in so far as it is that which sees and touches. … [Therefore] the body [must] no longer [be] conceived [strictly] as an object of the world, but as our means of communication with it, to the world no longer conceived as a collection of determinate objects, but as the horizon latent in all our experience and itself ever-present and anterior to every determining thought.\textsuperscript{19}

\textsuperscript{19} Ph\textit{enomenology of Perception}, p. 92.