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REPLY: A PHENOMENOLOGY WITH LEGS AND BRAINS

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We first want to express our thanks to the commentators for their close and critical readings of *The Phenomenological Mind*. We would like to treat their comments and challenging questions as a productive opportunity to clarify and to make our positions more precise. Before we address the specific points raised by our colleagues, we do want to say that the intersection between phenomenology and the cognitive sciences is a rich one, and growing richer as collaboration and research continues. Our book was meant to be an introduction to this area rather than a complete map of ongoing research. For that reason we were not able to cover every interesting issue, many of which are raised in the set of commentaries.

1. Phenomenology as a method

Regarding the scope of our book, one of the issues raised by Andrew Brook is to what extent the phenomenological approach we endorse and adopt is overly biased towards a Husserlian and Merleau-Pontyan understanding of phenomenology or whether it really captures something that is common to the phenomenological tradition. We certainly don't want to deny that phenomenology has in many ways developed as a heterogeneous movement with many branches. Indeed, it would be an exaggeration to claim that phenomenology is a philosophical system with a clearly delineated body of doctrines. At the same time, however, one should not overlook the overarching concerns and common themes that have united and continue to unite its proponents. It is no coincidence that there are people working on the link between phenomenology and cognitive science who have favored a more Heideggerian approach (Dreyfus 1992, Haugeland 1998, and Wheeler 2005). Although Heidegger might have viewed the relation between phenomenological and empirical science differently than say Merleau-Ponty, he is also known for his decade long interaction with psychiatrists as exemplified in his Zollikon seminars. In our book, we have also made use of Sartre, Gurwitsch, and Scheler, and we could certainly have cited Schutz, Levinas, and others.

Brook, Cole, Schwabe and Blanke, all in different ways, question the specificity of the phenomenological methodology. Brook argues that the traits we mention recur in other disciplines and traditions as well, thus lacking any phenomenological specificity. Moreover, some of them are faced with well-known problems which we do not address or solve. As an example, he mentions the question of whether arm-chair conceptual analysis can unearth deep a priori truths about the objects of investigation or whether they merely disclose distinctive features characterizing our mode of apprehension. There are three responses that can be made here. First, some phenomenological analyses do in fact unearth basic a priori truths. For example the phenomenological analysis of object perception reveals that visual perception has a "horizon structure," that is, although objects are presented one side or profile at a time, they are perceived in a holistic way as having more than one side. This insight has various implications. It suggests, for instance, that perception is only possible for a subject who is capable of self-movement – that the relation between perception and movement is not simply contingent (see, for example, Overgaard and Grünbaum 2007). Second, ultimately phenomenology would question – indeed this is part of its transcendental program – the possibility of making a clear-cut distinction between how things are and how they are apprehended by us. Finally, one can also point out that the phenomenological approach that we promote in our book is anything but "arm-chair," since what we are concerned to show is that phenomenology can get up and walk into the lab, and can even work the scanning machine. We've tried to show that phenomenology has both legs and brains.

Schwabe and Blanke, however, question whether neurophenomenology and frontloaded phenomenology really differ from existing scientific methodologies employed by cognitive scientists when they try to identify the neural correlates of experience. After all, isn't the point in each case to correlate subject's reports with measurements of brain activity? But if the phenomenological paradigms don't possess unique features why should they then be attractive to experimentalists? We don't fully understand this objection however. After all, on our view, one of the reasons phenomenology – be it in its neuro-phenomenological or frontloaded version – can make a contribution to the investigation of the involved cognitive mechanisms is that it offers conceptual tools and descriptive distinctions (say between reflective and pre-reflective consciousness, between *Leib* and *Körper*, or between primal impression,

retention and protention) that allow for a better grasp of the topic under investigation. As long as these conceptual tools and descriptive distinctions differ productively from those employed by people working in types of cognitive science not informed by phenomenology, there is something to be gained by making the phenomenological move.

Jonathan Cole wonders whether the purpose of the epoché and reduction is to allow us to gain a pure nontheoretical view of things, or whether it rather allows us to approach our object of investigation in a new and different theoretical light. Not surprisingly, he finds the latter option more plausible. Strictly speaking, however, the purpose of the phenomenological reduction is not to allow us to focus on the given (freed from theoretical prejudices), but rather to focus on givenness as such. Its role is to allow for transcendental philosophical clarification of the relation between appearance and reality. For the same reason, it should be clear that it is misleading to see the contribution of the phenomenological reduction as amounting to a meticulous description of the phenomena that can then serve as the basis for a subsequent explanatory account that employs inferences to best explanation regarding the underlying causal mechanisms. This is a misunderstanding of the properly philosophical nature of the phenomenological reduction.

Given his own work, it is not surprising that Brook addresses the similarities between phenomenological analyses and Kantian transcendental philosophy. In fact, as we see it, he accentuates the similarities too much thereby overlooking some rather crucial methodological differences. The relation between Husserl and Kant is a difficult topic, and there is no way we can do justice to the complexities of the issues at stake in this short reply, but let us merely point out that Husserl's emphasis on intuition makes him far less inclined than Kant (on Brook's reading) to appeal to and employ inferences to best explanation. Indeed, for Husserl transcendental conditions of possibility must be experientially accessible – otherwise the very idea of a phenomenological transcendental philosophy would have to be abandoned. This is also why Brook's attempt to equate the phenomenological reduction with some kind of inference to best explanation is problematic. For further discussion see the classical article by Fink (1933), and the more recent books by Kern (1964) and Lohmar (1998).

For Brook the truly distinctive contribution that phenomenology can offer to cognitive science is to provide a meticulous description of the explanandum. Phenomenology is not in the business of offering accounts of the actual neural underpinnings of cognition. Nor does it allow us a better grasp of the procedural level, i.e. of the actual computations involved in cognition. Rather, what it does offer is a better and more careful way of describing the cognitive task we wish to explain. While this is certainly the case, we think that it does more than that. Not only does it address issues that are crucial for an understanding of the true complexity of consciousness and which are nevertheless frequently absent from the current debate, but it can also offer a theoretical and conceptual framework that might be more valuable than some of the models currently in vogue in cognitive science. To put it differently, phenomenology is also able to challenge standard interpretations of the empirical data and to offer alternative interpretations that can be further tested out empirically. We want to emphasize the interaction between phenomenology and, for example, the cognitive neurosciences; and the interaction can often add up to more than anything that phenomenology or cognitive neuroscience can do on its own. A good example of this can be seen in the interactionist approach to social cognition. But we will come back to this issue in a later section.

It is useful to consider Hutto's and Brook's comments side by side since they touch on many of the same issues, but occasionally take quite opposite stances. Whereas Brook considers the contribution of phenomenology to lie in a careful description of the explanandum, Hutto wonders whether this proposal might be too modest. Whereas Brook thinks that phenomenology can inform ongoing work in cognitive science, Hutto wonders whether a peaceful co-existence is really possible and sees phenomenology as radically challenging the dominant computational information processing approach. To put Hutto's worry differently: Doesn't mainstream cognitive science employ (metaphysical and epistemic) concepts and notions that are incompatible with central ideas in phenomenology? Doesn't phenomenology, for instance, offer a forceful critique of a view of cognition that sees it as a disembodied manipulation of representations of a mind-independent reality? If so, shouldn't we have done more to make the clash between phenomenology and (mainstream) cognitive science visible? As an illustration, consider the question of naturalism. It is certainly true that phenomenology doesn't just

let the concept of nature remain unexamined, quite on the contrary, since phenomenology explicitly resists the attempt by metaphysical realists to monopolize the concept of nature. For phenomenology, the real challenge is to rethink the very concept of nature and recognize that there might be other kinds of naturalism than the one that takes it for granted that nature is exhausted by what natural science – as it is currently conceived – is capable of revealing to us. However, this is admittedly an aspect that we didn't explore sufficiently in our book. (Cf. however Thompson 2007).

Here, rather than merely asking what phenomenology is, one also has to ask what cognitive science is. If we think of cognitive science as a discipline where computational models reign, or as where what Hutto calls the 'Mechano-Representationalist Approach' reigns then, as the work of Dreyfus has shown, phenomenology can play the part of a strong critic, and it will continue to do so as long as representationalist and computationalist theories hang on. But cognitive science has been changing, and, we think, maturing, as its focus moves more toward embodied cognition and dynamical models (see Gallagher and Varela 2003). On this newer view, phenomenology contributes to cognitive science as a partner or participating discipline. We think that in this environment *the* clash between phenomenology and the cognitive sciences is *passé*. At the same time, our view has never been that all parts of phenomenology are reducible to the agenda espoused by cognitive science, quite to the contrary in fact, since we in other writings have argued explicitly for the irreducible philosophical nature of some parts of phenomenology. But for obvious reasons, our main focus in *The Phenomenological Mind* has been on aspects where we see a possibility for a fruitful exchange.

Interestingly enough, just like Brook, Hutto also refers to the issue of inference to best explanation, but rather than seeing this as an integral and natural part of phenomenological methodology, he stresses the contrast between such an approach and a purely descriptive one, and asks whether the use of the former is really compatible with a rigorous phenomenological approach.

Perhaps the best answer is to say that in our book we have been keen to advocate an open-ended pluralistic methodology rather than a very orthodox and rigorous phenomenological methodology. Strictly speaking, inference to best explanation and indirect arguments that proceed by way of eliminating competing positions is not

phenomenological in nature. But we have adopted the view that the more arguments we could garner in support of our view the better.

In his comments, Marc Slors points out that there is no reason to see analytical philosophy of mind as a competitor to a phenomenological approach, rather in his view they supplement each other. We agree. Although there are strains of analytical philosophy of mind that are indeed opposed to phenomenology, one shouldn't make the mistake of conceiving of analytical philosophy of mind as if it were a monolithic entity, and there are undoubtedly discussions in analytical philosophy of mind that in many ways can challenge, support, and enrich the phenomenological discussions.

Slors also, like many of the other commentators, touches on the issue of the division of labor between phenomenology and more explanatory accounts. Let us assume that one of the contributions of phenomenology is to offer a meticulous description of the explanandum. Would this entail that phenomenology has the last word regarding the explanandum? Slors argues that this is not necessarily the case, since phenomenological descriptions are revisable under the influence of available explanations. There is, in short, a dialectical relation between the descriptions we offer and the (theoretical) concepts we use, and the latter can influence the former. In other words – and again, this is a familiar hermeneutical point – one might question the purity of the phenomenological descriptions. Do they not inevitable contain an element of conceptual reconstruction? If there is a conflict between a phenomenological description and a theoretical assumption, we shouldn't necessarily in each and every case reject the theory. We might also in some cases have to reconsider the description; indeed, new theories might offer and encourage us to attempt new forms of description. So the relation between description and theory is dialectical. It goes both ways. It is not merely a question of descriptions constraining available theories. We would agree with all of this, and we don't see it in any way as conflicting with the view we have been advocating.

2. Self-consciousness and the first-person perspective

Hutto and Brook both share a worry about whether we have managed to live up to our methodological credo of shunning metaphysical and theoretical prejudices: have we

indeed managed to liberate ourselves from certain favored habits of thought? Even if we have aimed to set aside theoretical preconceptions that make us mis-describe the phenomena, have we not in some cases remained stuck on theoretical preconceptions of our own that fail to do justice to the phenomena? Before commenting on this issue, however, it might be worthwhile to briefly allude to a notion introduced by Fink, the notion of operative concepts. Basically the idea is as follows. It is impossible to simultaneously subject all concepts to a critical scrutiny. Whenever we critical reflect on some notions, other notions will remain in use. But this doesn't invalidate the ideal of critical scrutiny, rather it remains what it is, an ideal. To put it differently, we see no incompatibility between phenomenology and a basic insight of hermeneutics that stresses the finitude and fallibility of human cognition. Indeed, as Merleau-Ponty famously wrote in the preface to *Phenomenology of Perception*, phenomenology is a perpetual critical (self-)reflection. It should not take anything for granted, least of all itself. But as Merleau-Ponty points out in closing, the fact that phenomenology remains unfinished, the fact that it is always under way, is not a defect or flaw that should be mended, but rather one of its essential features (Merleau-Ponty 1945, xvi).

But back to the criticism. The example that Hutto and Brook both bring up concerns our focus on the first-person perspective, and our claim that a minimal form of self-consciousness is integral to all experiences. As Brook writes, he finds this view quite implausible. Why? Because as far as we know, no non-human animals have such consciousness of themselves, yet surely many of them must be regarded as being conscious.

When speaking of a first-person perspective, we should however remain clear about the distinction between having or embodying such a perspective and being able to articulate it linguistically. Whereas the latter presupposes mastery of the first-person pronoun and entails the actual adoption of a position or perspective on oneself, the former is simply a question of the first-personal, subjective manifestation of one's own experiential life. It provides for an experiential grounding of the latter. To emphasize the importance of the first-person perspective is simply to insist that there is a distinctive way experiential episodes present themselves to the subject whose episodes they are. They are characterized by this givenness from the start, that is, long before the

subject acquires the conceptual and linguistic skills to classify the experiences as his or her own. This is the case for conscious non-human animals as well.

Brook suggests that things can appear to a person and that the person can pay attention to what they appear to be like without that person knowing to whom they are appearing. A similar worry is raised by Hutto who claims that a condition for knowing that one has a point of view is that one is able to contrast it with other points of views. Thus, both would claim that it is misleading to suggest that experiences are characterized by mineness or first-personal givenness from the very start, since one can operate with first- and third-person perspectives only when one has concepts available that are provided by second-personal social space.

When we refer to the mineness of experience, we are not referring to a specific and ever abiding content of experience, like yellow, or being salty or spongy. We are not referring to a specific *what*, but to the unique givenness or *how* of experience. We are referring to the first-personal presence of experience, to the fact that experiences feel like something for somebody. We are referring to the fact that experiences I am living through are given differently (but not necessarily better) to me than to anybody else. It could consequently be claimed that anybody who denies the for-me-ness or mineness of experiences simply fails to recognize an essential constitutive aspect of experience. It is consequently crucial not to misconceive of the ubiquitous pre-reflective self-awareness as if it were something distinct from phenomenal consciousness as such, something that could and should be found on top of and in addition to the ordinary phenomenal consciousness of sweet oranges or hot coffee. To put the point differently, on our view, every experience is characterized by what has recently been called *perspectival ownership* (Albahari 2006). For a subject to own something in a perspectival sense is for the experience in question to present itself in a distinctive manner to the subject whose experience it is. This implicit sense of ownership is sometimes accompanied by a sense of agency for my intentional movements, which is equally pre-reflective. These pre-reflective aspects of experience contribute to what we (and others) call the minimal self. We admit, however, that an analysis of the minimal self is something of an abstraction as long as it takes place in isolation from the temporal dimension. This is why we in Chapter 4 explicitly discuss the kind of temporality that characterizes both perception and action.

It might be objected that this is a very deflationist conception of what self-consciousness amounts to. To some extent we would agree, but not only do we think this use is warranted, it is also a use that has a long philosophical ancestry. The same basic approach was already defended by the major figures in phenomenology. All of them, and not just Husserl and Merleau-Ponty, considered a minimal form of self-consciousness to be an integral part of conscious experience. They all called attention to the constitutive link between experiential phenomena and first-personal givenness. This, of course, is why Sartre declared that self-consciousness constitutes the mode of being of intentional consciousness.

The kind of pre-reflective self-consciousness that we are discussing is non-objectifying, non-observational, and non-conceptual. Brook objects that even if something like non-objectifying self-consciousness were possible, it would be too weak and vague to allow for any further cognitive purchase. This strikes us as a misplaced worry. As Chalmers has recently remarked, having an experience is automatically to stand in an intimate epistemic relation to the experience; a relation more primitive than knowledge that might be called "acquaintance" (Chalmers 1996, 197). We would concur and so would the classical phenomenologists. In their view, pre-reflective self-consciousness doesn't constitute first-person knowledge. Sartre is quite clear about this – which is why he carefully distinguishes *conscience de soi* from *connaissance de soi*. In order to obtain knowledge about one's experiences something more than pre-reflective self-consciousness is needed. This is precisely why we find in the central works of the phenomenologists extensive and sophisticated analyses of the contribution of *reflection*. Qua thematic self-experience, reflection does not simply reproduce the lived experiences unaltered, rather the experiences reflected upon are transformed in the process, to various degrees and manners depending upon the type of reflection at work. This transformation is precisely what makes reflection cognitively valuable. But from the fact that pre-reflective self-consciousness isn't sufficient for first-person knowledge, one can obviously not conclude that it is therefore also unnecessary if such knowledge is to obtain.

3. Social cognition

Brook claims that the issue of other minds is an issue little discussed in phenomenology. He points out that it is something Merleau-Ponty discussed in *Phenomenology of Perception* but that few other phenomenologists have paid much attention to it. This is, however, a rather puzzling claim. If there is one topic that literally all phenomenologists have discussed in great detail, it is precisely the question of social cognition. Apart from Merleau-Ponty's contribution, one could not only mention Sartre's analysis of the gaze, Heidegger's discussion of *Mitsein*, and Levinas' analysis of our epistemic vs. ethical encounter with the other, but also Husserl's ongoing wrestling with the phenomenology of intersubjectivity – his posthumously published manuscripts on this topic amounts to more than 1500 pages – as well as more specific works such as Edith Stein's *Zum Problem der Einfühlung*, Aron Gurwitsch's *Die mitmenschlichen Begegnungen in der Milieuwelt* and Max Scheler's classic *Wesen und Formen der Sympathie*. For further discussions of phenomenological theories of intersubjectivity, see Zahavi 1996, 2001, 2002.

Brook is of course right in insisting that there is more to the other than what meets the eye, and that any convincing account and solution of the problem of other minds must go beyond the immediately given, and include such features as deception, privacy etc. Brook then asks how much phenomenology, understood as a close description of how things appear, can help with these issues; "not much" is his reply. But as the list of books just mentioned suggests, he might be underestimating the resourcefulness of phenomenology.

In *The Phenomenological Mind*, we offer a critique of simulation theory, including the concept of implicit simulation as construed by those who associate simulation with the mirror neuron system. Slors suggests that there might be data supporting a low-level form of simulation that we haven't considered and which might actually put some pressure on our seemingly unequivocal rejection of simulation theory. Cole also suggests that this critique may be off base, and he cites specific experiments by Bosbach and others that show that a deficit in proprioceptive sensory feedback leads to a deficit in mindreading, or specifically in judging the expectations of actors who are lifting different weights. The experiments were run with GL and IW, subjects who lack proprioception and tactile sensation beneath the chin line and neck line, respectively.

According to Bosbach et al. (2005), “peripheral sensation from one’s own body may contribute to inferences about certain mental states of other people derived from observing their actions” (p. 1295). Putting it just this way, of course, suggests a two stage process. Perception first, and then simulation-guided inferences in regard to the “hidden state,” i.e., the expectation of the actor (p. 1296). It also suggests, as is appropriate in the particular experimental context used, that the subject is simply observing the action and then being asked to judge something, specifically whether the observed actor was given the correct information about the weight of the object lifted. Both GL and IW were shown to be worse than normal controls in judging the expectations of the actors lifting the weights.

First, we note that both GL and IW are different from controls not only in the lack of peripheral feedback, but also in the fact that precisely for this reason they do things differently in regard to motor control for their own actions. Without proprioception, GL and IW have to consciously attend to how they are moving their bodies. IW, in contrast to GL, is not in a wheelchair, and when he lifts a particular weight, for example, he has to consider how his balance might be thrown off, something for which he needs to compensate. It’s not clear to what extent this attentive practice confounds, in a positive or negative way, his ability to explicitly judge the expectations of others for such a task. IW was shown to be, in fact, normal with regard to judging expectation for the lifting of larger items, although, as the experimenters noted, he is not capable of lifting such items himself. Indeed, as they suggest, there may be more perceptual cues that he can use than in the lifting of small items. The question is whether this experiment shows that such explicit judging is based upon an implicit simulation rather than perceptual processes alone. In our book (also see Gallagher 2007a&b) we argue that, ordinarily, perception itself is sufficient to pick up on what others expect in specific contexts. ‘Ordinarily’ means specifically in those situations that involve second-person interactions within pragmatic or social contexts – that is, in our normal everyday intersubjective situations. Such situations differ from those situations where we are asked to make an explicit judgment based on attentive observations of others. In those cases it may be possible that we do resort to explicit forms of theory or simulation. If that is what the subjects in this experiment did, and it is not clear from the study precisely what strategy they did use to make these judgments,

then the fact that GL and IW are different from controls may simply reflect differences in their explicit simulations due to differences in how they themselves go about lifting objects. The experimenters provided very specific measures to demonstrate precisely how different IW was from normal in regard to the duration of the lifting phase of the movement divided by the sum of the duration of the reaching phase and the grasping phase (L/RG). Wrong expectations are normally marked by larger L/RG, but in IW there is an inverse relation between L/RG and weight expectation.

Second, they videotaped IW himself lifting small items, and then asked him and controls to view the videos and make judgments about IW's expectations in regard to weight. They showed that IW was "no more accurate when he judged his own weight expectations; visual familiarity with his own movement patterns did not improve his ability to infer expectation" (p. 1297), and controls were at chance. The reason was attributed to the difference in L/RG in IW. Now it is not clear whether the experimenters are suggesting that observers somehow calculate L/RG within some kind of simulation, or, as we think more likely, that L/RG gets expressed in the movement in such a way that it can be picked up in the perception of that movement as a noticeable difference.

Finally, in regard to this experiment, on our view, one must also consider the idea, noted not only by Husserl, but by contemporary science as well, that perception is always intermodal; that vision, for example, is never purely vision. Husserl and Merleau-Ponty, as well as recent theorists of enactive perception, have emphasized the role of kinaesthesia in visual perception; the visual perception of objects, and the visual perception of other people involves more than the visual modality since such perceptions also elicit a resonance effect in our motor systems. Indeed, this is confirmed by the research on mirror neurons. We take such resonance processes to be part of the perceptual process, and not an extra stage to be labeled "implicit simulation." Accordingly, if, as in GL and IW, certain aspects of proprioception and kinaesthesia are missing from the perceptual formula, then it seems possible to say that their perception of the actions of others are sufficiently different that they are not able to see certain action-related expectations. In this case, the experimental results would be due to a difference in perception rather than to a failure of simulation.

We haven't space to go into a more extended discussion of simulation theory in this reply, but Zahavi (2008) explicitly discusses some of the material relating to the understanding of facial expressions that Slors mentions, and a more detailed critique can be found in Gallagher (2007a&b), where one can find a discussion of the strategy of reducing implicit simulation to a simple matching process, as found in Goldman (2006) and Goldman and Sripada (2005).

Cole also questions our focus on expressive behavior. Like Brook he emphasizes our ability to hide and fake our emotions. But we continue to think that this objection is based on a misinterpretation of our position. Our view has never been that the mind of the other is characterized by absolute transparency and visibility. Our view has been that some aspects or the minded life of others are visible in their situated expressive behavior, and that any doubts or uncertainties we might have regarding the precise content of others' mental states take place on the background of a more fundamental certainty regarding the presence of mindedness.

4. Pathologies

Cole's call for a Machiavellian phenomenology, or what we might call a suspicious phenomenology, is certainly a program that could be pursued. We can only agree with Cole's comment that it would have been good to include discussions of more empirical and psychophysical research, and that cases like spinal cord injury, stroke, or locked-in syndrome provide ample material for careful phenomenological descriptions. As for the Schneider problem, we note that we did not refer to Schneider in the book, and at least in part because of our uncertainty about the extent of Schneider's brain damage. We do mention Cole's own important work on IW whose peripheral nerve damage is much better defined, thanks to Cole himself. The discussion of such clinical cases is not new, and it is something that has been pursued by classical phenomenologists as well.

Apropos locked-in syndrome, Cole is of course right in saying that the syndrome makes it clear that people can manage to lead worthwhile lives even in the absence of movement. Does this invalidate the claim regarding the importance of an embodied interactive exploration of the environment? Hardly, since we should never forget that

none of the cases deal with congenital cases of locked-in syndrome; rather the people in question have all in the past enjoyed an active life.

According to Schwabe and Blanke, we favor proprioceptive brain mechanisms in our attempt to explain how something like a first-person perspective can emerge. In their view, however, this explanation is too restricted, and they insist on the multisensory and sensorimotor origins of an embodied perspective. Schwabe and Blanke are quite right to point to the importance of tactile and vestibular cues, as well as vision, but rather than seeing us as being engaged in offering an explanation of the first-person perspective, i.e., as offering an account of the causal mechanisms responsible for a first-person perspective, it really would be more accurate to say that our focus was on describing the first-person perspective, and that we found proprioception to be a useful exemplification. Thus, since we at no point claimed our account to be exhaustive, we see Schwabe and Blanke's reference as a welcome addition, rather than as contradicting our own approach. Likewise, in regard to their point about the perspectival nature of proprioception, especially in regard to the neck and lower limbs, we agree that proprioception helps us to orient ourselves to the world egocentrically, and in that regard is functionally integrated with the other senses. Our point about the non-perspectival nature of proprioception is rather about the body's self-relation. To put it simply, whether we are standing upright, or "standing" on our head, our feet are always at the ends of our legs; our head is always on the other end of our body. The body itself is mapped out experientially in this non-perspectival proprioceptive way, and precisely for that reason, that is, precisely because perception is anchored in a non-perspectival frame of embodied self-reference, perception opens onto a perspectival (egocentric) order. Perception organizes spatial distributions around an egocentric frame of reference that is implicitly indexed to the perceiving body, and things appear near or far, to the left or to the right, and so forth, only in relation to the body. If one accepts the premise that sense perception of the world is egocentrically organized by an implicit reference to our bodily position, then implicit reference itself, or the *origo* of the egocentric reference frame, cannot be based on an egocentric perspective without the threat of infinite regress (see Gallagher 2003).

Whether heautoscopy offers clinical evidence for the claim that the perspectival origin of human experience is less unitary than normally conceived is an intriguing

question. Its eventual clarification demands not only a careful description of the phenomenon in question (whether we are dealing with several simultaneous or rather several rapidly changing zero-points is for instance not insignificant), but also more general reflections on what conclusions we should draw from pathological or extraordinary cases. Are these cases mere anomalies? Are they the exceptions that prove the rule? Should they, rather, force us to abandon our habitual classification of behavior and experience with the realization that the normality that has been our point of departure has no priority, but is merely one variation among many? Does pathology reveal some hidden fundamental feature of normal experience or does it, rather, reflect or manifest an abnormal mode or a compensatory attempt to deal with dysfunction (cf. Marcel 2003, 56)? Whatever the precise answer to these questions turns out to be, it does seem problematic to simply draw unqualified conclusions about normal cases on the basis of pathology.

Although the report by Ehrsson (2007) does provide a fascinating challenge, since it suggests that it is possible to shift the first-person perspective, there is no multiplication of first-person perspective, and the phenomenological distinction between *Körper* and *Leib* seems directly relevant for the interpretation of this experiment. That is, the first-person perspective follows the lived body. In Lenggenhager et al. (2007), it is clear that there is in fact no shift or dissociation or multiplication in the visuo-spatial perspectival origin (and this is stated by the experimenters). Even if the proprioceptive location of my passive tactile experience shifts to the perceived (virtual) body which appears in front of me (just as it does in the rubber hand illusion), my visual perspective stays with the perceiving body. It would be interesting to explore the phenomenology of active movement within Blanke's experimental paradigm, modeled on the experiment by Tsakiris and Haggard (2005) where, using a virtual hand that could be actively moved vs. passively moved, they showed that the active body is experienced in a more coherent and unified way than the passive body.

Schwabe and Blanke ask what phenomenology has to say about unconscious processes. When it comes to the cognitive unconscious understood as the various sub-personal processes, phenomenology has rather little to say, but part of the contribution that phenomenology has made is to call attention to the fact that consciousness comes in

many degrees ranging from fully attentive to very peripheral forms and that some of the latter have some affinity with more traditional understandings of the unconscious. (For some preliminary reflections on how Husserl would approach the question of the unconscious, see the appendix “Self-consciousness and the unconscious” in Zahavi 1999).

5. Intentionality

Rather than commenting on various aspect of our book, Tanesini’s comments focus in detail on what she takes to be an internal tension or contradiction in chapter 6, which she considers to be less successful and convincing than the others. Given this focus, her discussion also calls for more extensive comments. Let us admit right away that our presentation of Husserl’s theory of intentionality was rather brief and that far more could have been said about his later fully developed theory. We also concede that much more could have been said about how phenomenological accounts relate to disjunctivist accounts of perceptions, illusions and hallucinations. However, our main ambition in the chapter was to show that

(a) phenomenological accounts of intentionality are accounts that specifically seek to examine intentionality from the first-person perspective (rather than by appeal to various non-intentional mechanisms), and that

(b) the phenomenological accounts of the mind-world relations are not easily captured and categorized as being either internalist or externalist in nature.

Given these aims, it didn’t seem absolutely pertinent to engage in an extensive discussion of how to account for our ability to be directed at non-existing objects, although this topic is of course standard fare in any more exhaustive account of intentionality. In any case, in the following we cannot accomplish what Tanesini would have liked the chapter to contain, it would lead too far, but let us at least try to raise some doubts about whether our account is ultimately as contradictory as she claims it is.

The basic problem concerns the conjunction of the following claims.

1. First of all, we write that intentional objects are ordinary objects. Rather than saying ordinary objects, it might have been better to say intended objects. The point we wanted to make was not that ordinary spatio-temporal objects are the only kind of

objects we can intend, rather the point we wanted to make was simply that the intentional object is identical with the intended object and not something different from the latter (which is what Twardowski claimed). By making that claim we obviously wanted to distance ourselves from various mediator theories – those that take our intentional relation to spatio-temporal objects such as stones and lamps to be mediated by a relation to some other entities called intentional objects – as well as from theories which argued that when we intend objects that do not really exist, such as the elixir of life or the perpetual motion machine, we are nevertheless standing in a relation to some object which possesses some kind of existence – otherwise we couldn't be directed at them.

2. We also maintain that intentionality is a dyadic relation between an intentional state and an intentional object. On the phenomenological account, intentionality doesn't require an intermediary entity.

3. Finally, we argue that the existence of a mental state is not contingent on the existence of its intentional object.

The problem with the conjunction of these different claims is that it is hard to see how intentionality can involve a relation to an object if that object does not exist.

When we say that intentionality is not an ordinary (causal) relation, but a special kind of relation – and perhaps it would also have been better to avoid the term 'relation' altogether, rather than merely having put it in inverted commas – that can persist even when the objects do not exist, we obviously want to insist that even intentions that are directed at non-existing objects remain intentions, remain characterized by a directedness. Even if the referent of an intentional state doesn't exist, the intentional state has a reference. Not in the sense that some other object with a mysterious form of existence steps in instead, but merely in the sense that the intentional state keeps referring, keeps being about something; it retains – to use a different terminology – certain conditions of satisfaction that could be fulfilled if the object had existed, but which in the present state of affairs remain unfulfilled. This view is indeed incompatible with the disjunctivist view that intentionality is an ordinary relation to ordinary objects in the world, and which consequently holds that the existence of an intentional state necessitates the existence of its intentional object. Of course one could then say, so be it. The problem, however, is that we say other things that seem to suggest a penchant for

some form of disjunctivism. This is so, not only in our chapter on perception, but also when we, expounding on Husserl's position, write that acts of consciousness and objects of consciousness are essentially interdependent and that the relation between them is an internal rather than an external one. How can we say that and at the same time insist that the existence of a mental state is not contingent on the existence of its intentional object?

Two points of clarification are called for.

1. First, the claim regarding the interdependency of acts and objects wasn't meant to imply that their existences are interrelated, so that one can exist only if the other exists, and vice versa. Rather the point was merely a) that it is impossible to understand intentional states if we ignore what they are about. We cannot understand what it means to hallucinate a pink elephant if we don't know anything about pink elephants, and we cannot specify the difference between perceiving a sunflower and a red apple, if we don't know anything about sunflowers and red apples. Furthermore, b) we cannot philosophically comprehend what it means for something to be a perceived object, a remembered event, a judged state of affairs, if we ignore the intentional states that reveal these objects to us. Although such ignorance is very much part of daily life, the task of phenomenology was from the beginning to break with the naivety of daily life and call attention to and investigate the correlation between *cogito* and *cogitatum*, between act and object. As Husserl puts it at one point, to effect the reduction is to liberate the world from a hidden abstraction, and to reveal it in its concretion as a constituted network of meaning (Husserl 2002, 225).

2. Secondly, although what we have said about the interdependency of acts and objects holds generally, this doesn't exclude that there might be particular types of intentional states that in fact cannot exist unless their objects exist, as well as vice versa. Perceptions might be a case in point. Perceptions do entail the existence of their objects. If you perceive a red tomato and it turns out that the tomato doesn't really exist, then you didn't really perceive it. To put it differently, for an object to be perceptually given is for the object to be given in its bodily presence, or, as Husserl says, in propria *persona*.

6. Conclusion

The goal we set ourselves in writing *The Phenomenological Mind* was to provide an accessible and up-to-date overview of how phenomenology might contribute to the ongoing scientific exploration of consciousness. Though our book is intended as an introduction, and although it obviously doesn't provide an exhaustive account, the comments we have received seem to confirm that we succeeded in meeting this goal. Phenomenological interventions in cognitive science and philosophy of mind are ongoing, and they can be made more precise and incisive by the kinds of clarifications that our commentators have asked for.

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