knowledge cannot be constituted by entitlements like this, not that they are impossible. In any case, why concede that the absence of prior justification is epistemically as bad as having positive grounds for doubt?

There is evidently more to say here, on both sides. Some of it should begin with the other contributions to this fascinating book. I regret that I have had no space to examine them all in detail; I have tried to give a picture, however selective, of the volume as a whole. The sections on perception, action, and knowledge are recommended reading for those who work on their respective topics, and their presentation together brings new clarity to difficult disputes.

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Describing Inner Experience? by Russell T. Hulburt and Eric Schwitzgebel. Cambridge MA: MIT Press, 2007. Pp. 326. H/b $34.00/£25.95.

This book addresses the question of whether we can accurately describe our own conscious experiences. One of its authors (Russell T. Hurlburt) thinks that we can, whereas the other one (Eric Schwitzgebel) thinks that we cannot. The accuracy of introspective reports is a matter of considerable dispute in recent philosophy and psychology. The first part of the book contains a chapter by Hurlburt and a chapter by Schwitzgebel where they summarize the most significant criticisms to the traditional method of introspection in psychology. They also highlight the methodological lessons that one should draw from those criticisms if one tries to come up with a new, more reliable method of describing inner experience. Hurlburt claims to have designed such a method: 'Descriptive experience sampling' (or 'DES').

The second part of the book contains an extremely detailed case study of one subject (who, for the sake of anonymity, Hurlburt and Schwitzgebel call 'Melanie'). Starting with the DES's methodology, but not entirely constrained by it, Melanie, Hurlburt, and Schwitzgebel explore Melanie's conscious experiences over the course of six days. Basically, they proceed as follows: Melanie is given a beeper that goes off randomly. She is instructed to take notes, at the time of each beep, on what her inner experiences were like immediately before the beep. She meets Hurlburt and Schwitzgebel and discusses those experiences with them regularly. This gives an opportunity to both proponent and sceptic of the DES method to ask Melanie for details of her experiences on the basis of her notes and her memory. The six central chapters of the book contain transcripts of these conversations. Finally, Schwitzgebel and Hurlburt reflect on these conversations in three chapters

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where they try to settle whether this case study shows that DES is a reliable method to describe inner experience.

There are many reasons to recommend this book. Melanie's reports cover a wide range of conscious experiences, such as experiences of inner speech, visual imagery, episodes of bodily awareness, and a variety of emotions. The interviewers make an impressive effort to clarify the exact nature of those experiences by drawing very fine distinctions in their questions and helping the subject to refine the description of her experiences accordingly. Reading these interviews, one can learn much about the different types of possible inner experiences that we could have as well as (to the extent that one trusts Melanie) the rich variety of experiences that one specific subject has actually had. And the interview format, in which the discussion flows quite seamlessly, makes this a particularly pleasant book to read.

A number of worries about the reliability of DES arise throughout Melanie's interviews with Hurlburt and Schwitzgebel. In my view, the two main reasons to distrust DES are the following. First of all, DES relies on memory heavily. After all, Melanie is expected to answer questions about specific details of her own experiences which, in most cases, she did not originally take notes about. This feature of the methodology employed introduces one clear source of potential error in Melanie's reports. Her memories of her own past conscious experiences may not be accurate for all we know. Why is this important? The whole project in the book is to ascertain whether our capacity to acquire knowledge of our own conscious experiences is reliable or not. Hurlburt's proposal is that, by using DES, it can be shown that such a capacity is reliable. But DES appeals to the subject's memories of her own past experiences, and Melanie's memory may or may not be reliable. If we cannot rule out the possibility that it is not reliable, then we can hardly take her reports as evidence that subjects can accurately describe her own conscious experiences. And DES does not offer us a way of ruling out that possibility, since a subject cannot simply assess the reliability of her own memory by introspection.

The second reason to distrust DES concerns what Hurlburt and Schwitzgebel refer to as the 'refrigerator light' mistake. The analogy is basically this: suppose you open the door of your fridge and you see that the light is on. If you do not know how a fridge works, you may infer from your observation that the light is always on inside the fridge. Similarly, when you focus your attention on a particular detail of your conscious experience, and your experience seems to you to be in a certain way, it may be tempting for you to conclude that your experience was that way all along. The worry is that making the effort to gain knowledge of some aspect of one's conscious experience may make a difference to that aspect of it. Try to visualize a block of apartments as clearly as you can. Now ask yourself: How many windows are there in that façade? It is likely that the very act of trying to tell will change the experience wherein you are visualizing the façade. That is

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a possibility, in any case, and it is a hard possibility to rule out if we limit ourselves to the resources of the DES method. For all we know, when we ask a subject who uses DES to produce details of what her experiences were like before each beep, this reconstruction could be happening without the subject realizing.

All introspective methods seem to be vulnerable to the concern about the refrigerator light mistake. However, this concern is particularly acute regarding DES due to its appeal to memory. Notice that we now have two opportunities for this kind of mistake to occur. Let us suppose that the subject claims to have been visualizing a block of apartments at a certain beep. Knowing that the beep means that she will be asked to describe her experience, the subject may try to count the windows in the façade, which could produce a different experience from the experience she was having at the time of the beep. Furthermore, suppose that we ask her, a few days later, about the colour of the blinds in some of those windows and let us imagine, for the sake of the argument, that this is not a detail which she focused on at the time of the beep. Relying on her memory, she may now tell us that some of the windows seemed to have red blinds on them. But the subject's memory experiences are as susceptible to the refrigerator light mistake as her past visualization experiences were. How do we know that our question has not elicited in her an episode of imagination that has replaced her memory of her past visualization experience? Once again, the DES method does not allow us to rule that out. The subject would not normally be able to tell, from introspection alone, if that was happening to her.

These concerns, among others, are raised by Schwitzgebel in the last part of the book. And Hurlburt has the opportunity to reply. These final chapters are less engaging than the interview material in the central part of the book but they get at the heart of the matter more straightforwardly. With regards to the worry about the unreliability of memory, Hurlburt points out that DES is designed to minimize the possibility of memory mistakes. Interview questions are deliberately phrased so as to avoid the kind of pressures on the subject that have been identified in the literature on eyewitness testimony as making a difference to the elicited reports. In addition to that, the time period between the beeps and the interviews has apparently been controlled so that memory loss in that period is not significant. With regards to the worry about the refrigerator light mistake, Hurlburt emphasizes, once again, that the interviews are carried out trying very hard not to pressure the subject into any particular response, which includes phrasing the questions in the most neutral style possible.

Hurlburt's efforts with respect to both concerns are laudable and, reading Melanie's interviews, it is certainly easy to appreciate both interviewers' high level of skill and open-mindedness in the process. At the end of the day, however, I suspect the reader will be more inclined towards Schwitzgebel's

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scepticism than Hurlburt's enthusiasm about DES. But this may not matter so much in the end. A great deal about the richness of our conscious experiences can be learnt from this book no matter which author we eventually side with. Do we need to have thoughts about our own emotions in order to experience them? Do we occasionally hear a whole string of words at once in our heads? Do we sometimes visualize the space that is 360 degrees around us? Read what Melanie has to say about these issues. Whether or not you are prepared to trust her testimony, all these questions are definitely worth asking. And if the sceptic about DES is wrong, you should even be able to arrive at some interesting answers by consulting your own experience while you are reading this book.

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The Meaning of the Body: Aesthetics of Human Understanding,

by Mark Johnson. Chicago & London: The University of Chicago Press, 2007. Pp. xvii + 308. H/b $32.00, £20.00.

In this clearly written and well-argued book, Mark Johnson presents a theory of embodied cognition and discusses the implications it has for theories of meaning, language, and aesthetics. His pragmatist foundations are on show when he writes that '[t]he so-called norms of logical inference are just the patterns of thinking that we have discovered as having served us well in our prior inquiries, relative to certain values, purposes, and types of situations' (p. 109). Johnson's particular contribution to theories of meaning and language is that he grounds 'inference', even at the most abstract level, in patterns of sensorimotor experience (p. 279). He rejects traditional analytical theories of language on the basis that their central concept of reference is grounded in an erroneous and unfounded distinction between transcendent universals and bodily particulars (pp. 89–91).

The book is divided into three parts. In Part I, Johnson draws upon John Dewey and William James to provide a naturalized account of cognition. He gives their views a contemporary relevance by updating them according to contemporary theories from cognitive science such as Don Tucker's work on cognition. Tucker found that the primitive core of the brain has massively interconnected structures, whereas the outer and more recently evolved shell is more sparsely interconnected. On this basis, Johnson reasons that there would be more functional differentiation and more modularity of brain areas in the cortical shell than in the limbic core.

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