

Grounding the science of inner experience in the apprehension of phenomena

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Background

Russ Hurlburt: When the editor of the *American Journal of Psychology* suggested a cross-review of my book *Investigating Pristine Inner Experience: Moments of Truth* (hereafter IPIE) and Liu and Perry's *Consciousness and the Self: New Essays* (hereafter CatS), I was ambivalent.

Certainly I would like to contribute to a critical comparison of those two books because (obviously) I think the subject matter is important.

On the other hand, it didn't seem fair to suggest that I, of all people, review CatS because I have repeatedly and publicly (some might say stridently) called for studies of consciousness that ground themselves in carefully collected observations of experience, and the essays in CatS were likely (I had not yet seen CatS) to fall short of that (important by my lights but not universally accepted) standard.

So I suggested to the editors that I might write a "review" that highlights the differences (if any) between the manners in which CatS and IPIE ground themselves in observations of phenomena, hopefully to contribute to science's grappling with this issue. That would be a

natural sequel to discussions in IPIE and elsewhere, particularly in Hurlburt & Schwitzgebel (2007) and the collection of articles in the special issue of *Journal of Consciousness Studies* (2011, 18(1)).

I suggested that if the *AJP* editor was inclined to support this plan, they should give Liu and Perry the right to veto it or to write a rejoinder to my “review.”

I further suggested that I be allowed to enlist a coauthor. I have often found it desirable to refine or amend ideas through collaboration with colleagues who are not (or at least not necessarily) like-minded (e.g., my collaborations with Schwitzgebel). The editors accepted that condition as well, so I recruited Susan Stuart, a philosopher with whom I had discussed some related issues, who was knowledgeable about IPIE, but who was not (or at least not necessarily) a partisan in the grounding-in-experience issue. This review is the result.

CatS is an edited collection, so it is not necessary that the individual contributors share the same point of view, and it is clear that they differ on several important matters--otherwise the individual essays would be of little significance. However, they all share a central concern, that of understanding the nature of conscious experience. Stuart and I found that there were indeed important differences between the CatS and IPIE groundings in observations of phenomena: the contributors to CatS do not cite a single example of actually occurring inner experience whereas IPIE provides over a hundred examples of concretely-existing-at-some-moment, carefully examined inner experience. This “review” explores that difference.

Review

Some might claim that there are indeed examples of experience in CatS and that we’re attacking a straw man; others might claim that considering actual experience is unnecessary to the

understanding-consciousness enterprise, that a lively theoretical imagination and its analysis are sufficient, so it might be constructive to examine a few excerpts from CatS.

Example 1

Rosenthal writes:

Consider John Perry's well-known example, in which I see a trail of sugar apparently spilling from somebody's grocery cart and, not realizing that it is spilling from my cart, think that the person spilling sugar, whoever it is, is making a mess. (Rosenthal, CatS, p. 28)

We hold that this is probably not a description of an actually occurring thought, much less a description of Perry's actually occurring experiences during that episode. This may be easier to grasp if we consult Perry's original example:

I once followed a trail of sugar on a supermarket floor, pushing my cart down the aisle on one side of a tall counter and back the aisle on the other, seeking the shopper with the torn sack to tell him he was making a mess. With each trip around the counter, the trail became thicker. But I seemed unable to catch up. Finally it dawned on me. I was the shopper I was trying to catch. (Perry, 1979, p. 3)

Perry's several trips around the counter must have unfolded over a minute or so, during which time there was doubtless a series of thoughts and/or experiences, some related, some not at all related to the sugar. We, of course, have no direct access to Perry's thoughts or experience, but the stream of his actual experiences during that event was more likely to have been something like this: That's a gritty sound; sugar--yuk; where's that sugar coming from? Maybe it's that pretty girl I just passed; I'll follow her trail; this is a mess; people should be more careful; what should I tell the Nous editors? Where'd she go? Damn. Seems like it's thicker than before--that's weird. I don't like their suggestions. To hell with them. It is thicker! No, that's not

possible. Ah--ketchup! I almost forgot it--good thing I came back this way. There's two trails now. I'm sure there weren't two trails before. Oh! The sugar's mine.

That is, of course, one greatly oversimplified fantasy about Perry's experience as it might actually have presented itself to him between 3:37 and 3:38 pm as he did his grocery shopping. According to this fantasy, had Perry been wearing a DES beeper that happened to beep at 3:37:31, his pristine experience would have been about what to tell the *Nous* editors.

Our fantasy suggests that Perry's experience is quite meanderingly diverse, and that "the person spilling sugar, whoever it is, is making a mess" likely substantially oversimplifies Perry's actual experience.

Rosenthal might respond that he (and consciousness science in general) is not interested in Perry's experience between 3:37 and 3:38--he is interested in Perry's thinking, a state in which Perry found himself throughout his sugar search, so it makes sense to say that between 3:37 and 3:38 Perry was thinking that the person spilling the sugar, whoever it is, is making a mess. However, we fear that by declining to specify the actual experiential details of the occasion under consideration, Rosenthal is likely to fail to grasp in some substantial way the nature of the thought process--namely that it might be discursive and varied.

The reader might respond that our characterization of Perry's experience is a fantasy, and that we have no justification for drawing conclusions about Perry's thinking from our fantasy about Perry's experience. We wholeheartedly agree, and that is exactly the point; IPIE holds that consciousness science should be highly skeptical about accounts of consciousness (whether our own or Perry's or Rosenthal's) that are not grounded in careful descriptions of actual moments of experience (not fantasies thereabout) from a variety of individuals in a variety of situations. By contrast, Rosenthal and the other contributors to *CatS* seem to hold that it is possible, indeed

desirable or even necessary, to explore consciousness without encountering particular instances of immediate experience.

We (and IPIE) fear that without grounding in carefully apprehended moments of actual experience, Rosenthal invites his CatS readers to enter into an unnoticed collusion: to seem to agree that there was such and such a thought, to seem to agree about the structural and contentful characteristics of that thought, to seem to accept that such a thought would stay the same despite disparate experiences, to seem to accept that it is quite natural to have such a thought in such a condition, and therefore to seem to believe that the thought provides evidence about the nature of consciousness. However, we fear none of that is the case; it seems likely that Perry's thinking meanders substantially during the sugar episode, much as the (hypothetical) experience meanders.

By contrast, IPIE tries to cleave faithfully, again and again, to directly apprehended inner experience. It holds that fantasies about experience (including, perhaps especially, our own fantasies) are not to be trusted and should, instead, be resolutely avoided. Therefore IPIE provides, again and again, carefully apprehended bits of experience, and then, in an explicitly inductive process, tries to provide faithful characterizations of those bits.

Example 2

Our example in the previous section tried to make clear the main difference between the two approaches: that in their attempts to make headway in the understanding of people, IPIE relies on directly apprehended moments of experience; CatS does not. This difference has important ramifications. Let's take an example from Perry's CatS chapter to open up some of the ramifications of that distinction.

Perhaps [President] Clinton ran his office like this. Each morning a schedule was printed out for Clinton and his senior staff, a grid with the names on the left and the hours of the day across the top. At about 4 p.m. Clinton would glance at his copy to see where he was supposed to eat dinner. He looked for his name . . . in the same way he might have looked for someone else's name, if he wanted to find out where they would be in the early evening . . . In these sorts of cases . . . we find information about ourselves in the same way we find out information about others. (Perry, CatS, p. 92)

It might appear that this looking-to-see-where-to-eat is a description of (Clinton's) experience, but it is not. In particular, to claim, without warrant, that Clinton's looking is "the same" as that of some other senior staff member is to invite the reader into (we think) a pernicious collusion. Clinton has engaged in sexual activity with interns, and that may well be an important motivation for his looking at the dinner schedule. Clinton may well be looking to detect, for example, whether Hillary and Monica are likely to be at the same dinner. Senior staffer Smith, who has not engaged in sexual activity with interns, is also looking to see where Clinton is supposed to dine, but his looking is not "in the same way" as Clinton's. The ways of looking are, to be sure, similar in that both involve looking for names and locations. But to say that they are experientially the same (and if they are not experientially the same, they are not the same) is not likely to be true: Clinton would focus intently, feel his pulse quicken, check and double check, breathe a sigh of relief, and so on; Smith would glance and go. To describe Clinton's and Smith's experience in strictly information-gathering terms, as does Perry, is to ignore the individual motivations and the affective anticipatory nature of their respective inquiries.

But we must remember that our main interest is the distinction between CatS and IPIE. Like the other CatS writers, Perry does not apprehend inner experience with the fidelity that IPIE suggests is necessary for any fruitful attempt at understanding the nature of experience. IPIE would say that if you want to know about Clinton's and Smith's experience, you have to apprehend it carefully. It is likely that if beeps occurred during Clinton's schedule looking and during Smith's schedule looking (at parallel times, say, 4 seconds after approaching the schedule), their apprehended at-the-moment-of-the-beep experience would be very different. That is true regardless of the historical Monica; even if Clinton had not engaged in sexual activity with interns, there are many other genetic and historical/environmental/situational/affective influences which would together produce Clinton's actual pristine experience and make it different from that of Smith who has his own individual genetic/environmental/situational/affective history.

Perry uses this erroneously assumed sameness as evidence for what he calls the self-buffer. Whether the self-buffer actually exists is not our interest; our interest is in how CatS and IPIE differ in the apprehension of inner experience; we think, in accordance with the position set out in IPIE, that one shouldn't use as evidence something which has the status of mere (to say nothing of probably incorrect) assumption.

Perhaps you think the situations for Clinton-with-Monica-in-his-life is unusually different from Smith-without-Monica-in-his-life; that for most people, seeing one's own name is the same as seeing someone else's name. We don't think that is true. It certainly is not true in the hearing modality, as the cocktail party phenomenon demonstrates: you perk up when someone behind you mentions your name but not when that same person mentions someone else's name (unless

that other name has significance for you). Our histories affect us and behaviorally shape our enquiries. None of this is acknowledged in Perry's assumption of sameness.

Example 3

A third example involves O'Brien's distinction between the kind of "self-consciousness that characterizes our ability to think about ourselves in the first person" and "feeling self-conscious . . . as an object represented by others":

First, in central cases, ordinary self-consciousness seems to involve particular phenomenological and bodily features. There is a heightened awareness of one's skin, clothes etc.--an awareness of one's physical externalities. There is an externalized awareness of one's speech and other actions--an awareness about how our sayings and doings come across to others. There are sensational and physical reactions: prickles in the back of the neck and elsewhere, blushing, turning the head away from a gaze. These phenomenological and bodily features vary in nature and intensity. Nevertheless, they are the natural concomitants of the phenomenon of ordinary self-consciousness.

Second, and essentially, OSC [Ordinary Self-Consciousness] seems to involve a subject taking two perspectives on herself: an observer's perspective and a subject's perspective. It is my thinking about others' thinking about me . . . It is this simultaneous awareness that it is me, as I appear to others, that gives rise to the particular pleasure and pains of self-consciousness.

(O'Brien, CatS, p. 106-107)

Note that O'Brien's claims here are distinctly about pristine experience: she writes about how the skin feels, how our speech sounds, our prickles, our particular pleasures and pains. But there is no careful examination of pristine inner experience; in fact, there is no examination of

pristine experience whatsoever. Instead, O'Brien offers examples in the form of quotations from fiction (F. Scott Fitzgerald's *Amory*, George Eliot's *Maggie*) and more-or-less-related musings by Sartre and Nietzsche.

The appeal to literature is unexceptional in the consciousness science business; there's even a serious theoretical position proposed by David Lodge (2002) that novelists and poets are 'more gifted' [O'Brien's phrase] than most to speak and write about experience; but this provides yet another perspective on the distinctions between CatS and IPIE. IPIE makes it abundantly clear that appealing to literature is not adequate. It is not safe to assume that Fitzgerald or Eliot were faithful apprehenders of experience; even if they were, it is not safe to assume that in any particular passage they intended to present pure, natural, ordinary self-consciousness; and even if they did, it is not safe to assume that they are describing universal phenomena rather than the idiosyncratic experiences of their particular characters. It seems likely that Fitzgerald was presenting some admixture of what he thought might be Amory's particular idiosyncratic reactions to a particular distinct situation along with whatever might be desirable to advance the plot or character development. The same is true for Eliot. And Sartre and Nietzsche, to the extent they are talking about the same phenomenon (and we will never know if they are), do so analytically, without, as far as we can tell, carefully examining a single person's experience, unless you include their own introspection (about the accuracy of which IPIE and Hurlburt & Schwitzgebel (2007, 2011b) are skeptical). One might respond by saying that Nietzsche, Sartre, Eliot, and Fitzgerald were not concerned with examining moments of pristine experience, that they were reaching more deeply, that they intended to speak, in some sense, of universals in human nature, characteristics we can all recognize. Yet to move from a singular introspective experience to a universal claim about the nature of human experience is

unwarranted. And that is exactly the point: Nietzsche, Sartre, Eliot, and Fitzgerald's metaphors, conjectures, and narrations are far removed from the descriptions of lived, pristine experience that IPIE holds are required.

There has not been a Descriptive Experience Sampling (DES) study aimed specifically at OSC, but DES might contribute to the understanding of OSC in two ways. First, O'Brien holds as central to OSC that self-conscious people characteristically have a heightened awareness of their skin, clothes etc.--an awareness of their physical externalities. However, DES shows that many non-self-conscious people frequently have such awarenesses, which DES calls 'sensory awareness' (IPIE Chapter 16). Heavey and Hurlburt (2008) reported that some people at nearly every DES beep convincingly report sensory awareness. Those people are typically not, as far as it is possible to tell, particularly self-conscious. Hence DES would suggest that heightened self-sensory-awareness is not a sufficient feature of OSC.

Second, O'Brien holds that OSC centrally involves two simultaneous perspectives, one of which is the "awareness ...[of] me, as I appear to others." DES might be able to shed light on that, because, although it was not emphasized in Hurlburt & Schwitzgebel (2007), Hurlburt suspects that "Melanie," a DES participant in that book, did have frequent high levels of OSC as O'Brien would define it (there is no way of knowing for sure, because O'Brien does not specify how one decides whether OSC is present). Hurlburt and Schwitzgebel (2007) described many samples where Melanie had two simultaneous perspectives, as O'Brien deems "essential" to OSC, but at no time did those perspectives involve the as-I-appear-to-others phenomenon that O'Brien also holds is essential to OSC. Melanie's second perspectives were often "me, as I appear to me" rather than "me as I appear to others." For example:

3.2. Melanie was walking to her car. She was dimly aware, at the moment of the beep, that she was walking toward the car. She had an indistinct visual experience of the car, its big black shape but not its details. At the center of her experience was a feeling of “fogginess” and worry. She described the feeling of fogginess as involving being unable to think with her accustomed speed and as feeling “out of synch.” In addition, Melanie was in the act of observing this fogginess. Her worry was felt as being behind the eyes, involving a heaviness around the brow line. (Hurlburt & Schwitzgebel, 2007, p. 307)

Melanie has two perspectives here: (1) foggily seeing the car; and (2) explicitly observing the fogginess of the seeing. But the second perspective does not involve an other. It is not her thinking about others’ thinking about her, as O’Brien would suggest; it is Melanie thinking about Melanie’s own thinking.

We don’t presume that ours is an authoritative view of OSC, nor that Melanie has OSC, nor that if she has OSC she is typical of all those who so have. But that’s the point: We cannot find in O’Brien’s account any recognition of even a potential inadequacy of her method of exploring OSC. IPIE can be taken as saying that if one is interested in OSC, and one thinks that OSC has experiential components or essentialities, then one should investigate carefully the experience of a variety of individuals in a variety of situations. O’Brien does not do that, instead appealing to Fitzgerald, Eliot, Nietzsche, and Sartre. IPIE holds that to be inadequate.

Example 4

The distinction between CatS and IPIE is also clear in Prinz, who, like O’Brien and others, neither appeals to a careful apprehension of experience nor recognizes that it might be desirable so to do:

The notion of ownership has been contrasted in cognitive neuroscience with the notion of authorship. Ownership is the feeling associated with a mental state belonging to me. Authorship, also called “agency,” is the feeling associated with being the author of physical and mental acts. It is identified with a feeling of control. I experience some thoughts and actions as issuing from me. Like ownership, agency involves a kind of possession: the acts I control are mine. But it is an active form of possession, and this, one might think, introduces an entry point for the self. With passive perception, the world can pass by the senses without any sense of being a subject, but with active agency, the self seems to come in essentially. Perhaps the phenomenal I is an experience of oneself as the author....

[T]he leading theory of ownership could not explain how a bundle of experiences feel like they are mine. Authorship may provide the solution. If I experience two separate bundles of bodily perceptions, I can figure out which one is mine by figuring out which one I control. A sense of control can provide a greater sense of mineness than mere sensory integration because it brings in a motor element that provides for a robust sense of possession; my body is the one that obeys my intentions in predictable ways. (Prinz, CatS, pp. 141-142)

Might DES (or some other careful way of apprehending pristine experience) be able to help Prinz’s conjectures about agency? Prinz does not mention such a possibility, but here is an example of how DES might contribute. IPIE (Chapter 6; see also Hurlburt & Schwitzgebel, 2007, p. 110) claims that there is a clear experiential distinction between inner speaking and inner hearing (a distinction that is rarely made adequately elsewhere). The difference between the experience of inner speaking and of inner hearing, DES claims, is as distinct as the difference between the experience of speaking into a tape recorder and of hearing your voice played back. The inner speaking/inner hearing distinction is largely one of authorship: in inner speaking,

subjects recognize themselves as the author or the “driver” of the experienced words. In inner hearing, subjects feel themselves to be the “receiver” of the words.

But there is no distinction, as Prinz might expect, in the phenomenal “I” of inner speaking and inner hearing. In both kinds of phenomena, DES subjects recognize that they are in fact the creator of the words--inner hearing is not thought insertion or any other psychotic symptom. Innerly spoken words are mine; innerly heard words are just as much mine. I feel like I am driving my innerly spoken words and receiving my innerly heard words, but in both situations the words are equally mine. Thus it seems that Prinz is mistaken, and that DES or something like it might have helped him avoid that particular error.

There are no authoritative DES views on agency (but see Hurlburt & Raymond, 2011), so we happily accept that our conclusion about Prinz might be incorrect. But the point is that we cannot find in Prinz’s account any recognition of the desirability of carefully exploring the experience of agency. IPIE can be taken as saying that if one is interested in agency, and one thinks that agency has experiential components or essentialities, then one should investigate carefully the experience of a variety of individuals in a variety of situations. The alternative seems to be to rely upon a basis of rather unsatisfactory conjecture.

Investigating experience

There is of course no requirement that commentators themselves perform the investigations on which they comment. So at least part of the reason that the CatS contributions may not cite individual observations is that the CatS contributions may rest on the individual observations made by others. So, for example, Dretske relies at least in part on the observations of “psychologists”:

One way to proceed in a project of this sort is to look at how we learned we think. We all think before we ever discover what thinking is, before we were able to think we (and others) think. So at some point in time, during some phase of childhood, we learned that we (and others) think. How did we learn this? Who taught us? Parents? Did we take their word for it? Were we already aware of our own thoughts as we were of the television and dishwasher and merely had to learn (as we did with ordinary household items) what to call them?

Imagine a normal three-year-old, Sarah, who thinks but has not yet learned she thinks. That one thinks is something (psychologists tell us) that one only comes to fully understand around the age of three or four years . . . She may use the word “think” (“know” or “hear”) in describing herself, but if she does, she does not yet fully understand that what she is giving expression to is a fact about herself, a subjective condition having a content (what she thinks) that may be false. She will, however, soon acquire this knowledge. (Dretske, *CatS*, pp. 155-156)

IPIE argues (pp. 391-392; see also Hurlburt & Schwitzgebel, 2007, p. 61) that when Sarah uses the word “think” to describe herself, she likely does not mean anything close to “know” or “hear,” but instead refers to anything that is ongoing out of sight of others (such as feelings, visual imagery, sensory awareness).

Dretske’s position that three-year-old Sarah thinks and soon will acquire the knowledge that she thinks doubtless follows from work of those like Flavell and colleagues who found that the majority of 5-year-olds deny thinking in situation where “having had thoughts . . . was not just likely, but virtually certain” (Flavell, Green, & Flavell, 2000, p. 108). Flavell and his colleagues interpret their findings in the way Dretske describes: that the 5-year-olds were thinking but didn’t have the ability to introspect. By contrast, IPIE argues (pp. 145-147, summarizing Hurlburt & Schwitzgebel, 2007, pp. 271-274) that it is entirely possible that

Flavell's 5-year-olds deny thinking because they were not thinking--that is, that the Flavell's "virtual certainty" was misplaced. In brief, the IPIE argument is that the Flavells failed adequately to bracket their presuppositions about the nature of thinking.

There is a profound and curious assumption in Dretske's (and the Flavells' and perhaps most other developmentalists') approach: that the chronology is that we think before we understand what thinking is, and then, at some future point, we learn that we (and others) think. But why must this be the case? And if it must, where and how is it demonstrated? It is certainly possible that the young child could think and have the implicit knowledge that others think without knowing that she herself is thinking or even, and this is a different point, and one with which Dretske agrees, that it is something called 'thinking' that is going on. These possibilities are sketched in IPIE Chapter 9; for more see, for example, Malloch & Trevarthen (2009) and Stuart (2012).¹

The heart of the difference between IPIE and CatS is the differing perspectives on the apprehension of inner experience. IPIE holds that inner experience is difficult to apprehend-- IPIE advances a hundred "constraints" that must be taken seriously if experience is to be apprehended in high fidelity. CatS (like the tradition in which it exists) does not take those constraints adequately seriously and hence it does not take seriously enough the bracketing of fundamental presuppositions (as in the Flavell and Dretske examples; see above and Hurlburt & Schwitzgebel, 2011a), it relies too heavily on armchair introspection (which IPIE criticizes extensively; see also Hurlburt & Schwitzgebel, 2007, 2011ab), and it assumes that imagined thought processes or 'thinkings' can stand in place of (*salva veritate*) the real thing. This is certainly not how phenomenological studies are usually conducted, which makes it additionally

problematic that the “main focus” of CatS is said to be “to investigate ... phenomenological routes to the self” (CatS p. 1).

We do not hold that DES or the specific constraints advanced in IPIE are the ultimate instruments or rules for the investigation of pristine experience (Hurlburt & Schwitzgebel, 2011b). We certainly welcome alternative methodological attempts, if they are undertaken with a sensible rationale and skillful execution. But merely referring to a method as “phenomenological” does not imply an adequate attention to the phenomenology in question.

We have argued that the CatS contributors do not adequately attend to pristine experience. We have not demonstrated, nor do we know, whether a careful attending to experiential phenomena will contribute to the science of the self. We have implied above that a more careful examination of the phenomena of OSC might broaden the scientific view of OSC from a two-perspective view where one of the perspectives is “me, as I appear to others,” to a two-perspective view where one of the perspectives might be “me as I appear to me.” And we have argued above that DES or something like it might shed light on whether the phenomenal I is an experience of oneself as the author. Additionally, the IPIE description of the experience of guitarist Ricardo Cobo (Chapter 14) describes Cobo’s multiple simultaneous asynchronous streams, no one of which, nor the aggregate, seemed to have an ascendant claim on being or reflecting a self. That could be taken as evidence against a unitary self. Furthermore, the IPIE discussion of unsymbolized thinking (Chapter 15) could be taken as evidence that selfhood has little or nothing to do with language.

It is not our intention to presume about the significance, if any, of such examples for the understanding of the self. Our intention is to illustrate that carefully collected samples of experience might have some significance for the understanding of the self. But the first step is to

recognize that modern consciousness science for the most part turns a blind eye to such a possibility. We have intended our contrasting of IPIE and CatS to contribute to the advance of consciousness science by focusing on this important issue.

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Notes

1. Stuart (2010, 2012) maintains that thinking and knowing that others are thinking, without already knowing, in some explicit conceptual sense, that you are thinking and that others are thinking, is what is at the heart of, for example, the affective co-participatory sense-making relations between parent and pre-linguistic children, and between pairs (or more) of pre-linguistic children.

Stuart maintains (as do, for example, Bråten, 2009; De Jaegher & Di Paolo, 2007; Gendlin, 1992; Gomez, 2011; Hodges, 2007; Malloch & Trevarthen, 2009; Maturana, 1988; Steffensen, Thibault & Cowley, 2010; Stern, 2000, 2010; Thibault, 2011; Thompson, 2001; Trevarthen, 2012) that thinking is what we do when we try to make sense of our world. It is always intentional, it is sometimes reflective, and it always contains pre-reflective, pre-conceptual sensations and feels. So, when we reach out tentatively with our hands in a darkened room we are feeling our way, trying to make sense of our surroundings in community with those surroundings. The resistance we feel from the wall and the perturbation to our touch when we encounter the switch plate and then the switch, directs and guides our affective haptic inquiry; in that sense my perceived world participates in my sense-making activity within “a domain of dynamic reciprocal structural coupling” (Maturana 1988, n.p.).

This reciprocal sense-making activity is recursively consensual--felt together--when there are other agents involved. This affective co-regulation is what Stuart (2010, 2012) has termed ‘enkinaesthesia’, the reciprocally felt, affective enfolding which enables the balance and counter-balance, the attunement and co-ordination of whole-body action and interaction through mutual adaptation. Taking just one from a wealth of possible examples:

Malloch's theory of communicative musicality (Malloch 1999, Malloch & Trevarthen 2009)--derived from microanalysis of a proto-conversation between a six-week-old girl and her mother--details the expressive parameters that enable the infant, with the support of her mother's affectionate sensibility, to find intersubjective harmony of purpose. They compose a melodic story together by sharing the pulse, quality, and narrative of their expressive sounds and movements. Gratier has applied similar analysis to vocal dialogues between mothers and infants across cultures, with different states of sensitivity or security in intimacy. She shows how, in a thriving relationship, mother and infant discover a 'proto-habitus', or shared world of meanings, as conventions of expression invented in their play (Gratier & Trevarthen 2007, 2008; Gratier & Apter-Danon 2009; Trevarthen 2012, pp. 30-1).

This pre-reflective formation of a shared world of meanings through a consensual co-inquiry is possible because we are capable of thinking and knowing that others are thinking, without already conceiving of them or us as thinking. And, it is unnecessary that there be a point in the future at which we learn explicitly that others think, for it is already implicit in our natural plenivalent lived experience with them.

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