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FANTASIES AND FACTS: EPISTEMOLOGICAL AND METHODOLOGICAL PERSPECTIVES ON FIRST - AND THIRD - PERSON PERSPECTIVES

abstract

I review a number of approaches that attempt to deal with the gap that seems to exist between first-person and third-person accounts of consciousness, and some of the conceptual, epistemological, and methodological issues that surround this distinction. I argue, with reference to Carnap and Schrödinger, that one cannot simply reduce data from the first-person perspective to third-person data, without remainder, especially when the very subject matter of the science includes the first-person perspective.

keywords

Heterophenomenology; neurophenomenology; first-person; third-person; science; Carnap

In philosophical and scientific discussions of consciousness one often finds a distinction made between first-person and third-person perspectives. Indeed, traditional and contemporary definitions of the mind-body problem, the “hard” problem, or the problem of the explanatory gap have often been framed by this distinction. Scientific objectivity, it is said, requires a detached, third-person approach to observable phenomena, and we have such access to things in the environment, some of which are brains. Brain science depends on taking a third-person perspective. In contrast, we have direct knowledge of our own experience only in a first-person perspective, but this is thought to be too subjective to generate scientific data. Thus Daniel Dennett (2001) has remarked: “First-person science of consciousness is a discipline with no methods, no data, no results, no future, no promise. It will remain a fantasy”. If this is so, then the problem is clear. Seemingly there can be no science of consciousness per se since (1) consciousness is intrinsically first-person; and (2) any attempt to explain something that is first-person in third-person terms distorts or fails to capture what it tries to explain. Furthermore, (3) first-person phenomenology cannot be a science of consciousness, if in science there is only room for third-person data. I want to review here two aspects of this problem. The first is methodological, the second is epistemological.

- 1. Methodologies** One methodological proposal is to reduce the first-person perspective to third-person data and to integrate it with other third-person data from experimental science. This is a strategy that Dennett calls “heterophenomenology” (1991, 2001). Heterophenomenology itself, however, involves something of a fantasy, to use the term that Dennett applies to first-person science. The fantasy here is that science can leave the first-person perspective behind, or neutralize it without remainder. First-person data are supposedly averaged out in statistical summaries, and treated as third-person facts. According to this approach, a fact would be, not the first-person datum “The subject experiences X”, but the third-person datum “The subject reports that she experiences X”. This fact is then to be interpreted and analyzed using pre-established categories. Dennett suggests that it should be interpreted as a text or a piece of narrative. So, for example, one question would be, what do people usually mean when they say that they experience X. But it is just here

that one can see how this procedure is actually naïve, and ultimately non-scientific. In attempting to say something about consciousness (or specifically about the experience X), heterophenomenology fails to acknowledge that its interpretations of first-person reports must be based, in part¹, and ultimately, on either the scientist's own first-person experience (what he understands from his own experience to be the experience of X), or upon pre-established (and seemingly objective) categories that are, however, ultimately derived from folk psychology or from an obscure, anonymous, and certainly non-methodological phenomenology². The intentional stance required for the scientist's interpretation of the subject's report is not itself something that has come under scientific controls; it is thus infected, directly or indirectly, by the first-person perspective (see Gallagher 1997, 2003a).

A different methodological approach is to take the first-person perspective seriously and to seek out methodological controls that can apply to that data. One version of this approach is Francisco Varela's notion of "neurophenomenology". As it has been employed in recent experiments this involves training experimental subjects to develop their own report categories, and then using those categories as an analytic tool for the interpretation of data (see Lutz *et al.* 2002, and Lutz 2002). A related approach, "frontloaded phenomenology" involves using phenomenological insights that have already been worked out in a formal analysis of the sort found in the work of Edmund Husserl, Maurice Merleau-Ponty or other phenomenologists, as the basis for experimental design (Gallagher 2003a; Gallagher and Brøsted Sørensen 2006; Gallagher and Zahavi 2008).

Let me discuss just one example of this latter approach. The example is drawn from experiments that have already been performed (Blakemore and Decety 2001; Decety and Grèzes 1999; Jeannerod 1997; Ruby and Decety 2001; and other studies reviewed by Grèzes and Decety 2001). The phenomenological insight, however, would suggest a revised experimental design. This example also relies on the distinction between first-person and third-person perspectives (see Gallagher 2003b for further discussion).

A number of brain areas (including the supplementary motor area, the dorsal

¹ In Dennett's most recent version of heterophenomenology, he explains that it is not just the verbal reports that constitute the data for heterophenomenological analysis, but behavioral and other objective (physiological) data. So some part of the interpretation of the verbal reports would likely be based on the other objective data.

² E. Schrödinger (1935), the famous physicist, writes: "Another person's sensory perceptions are something I can never experience myself. Still, I do not hesitate to interpret them by remembering what I call my own *similar* perceptions".

pre-motor cortex, the supramarginal gyrus, and the superior parietal lobe) are activated when a subject

- *Engages in intentional action*
- *Observes others engaging in such action*
- *Consciously simulates (or imagines) performing such action*
- *Or prepares to imitate such action*

Certain of the same brain areas are activated under all of these conditions. The experiments that have established these intriguing shared neuronal representations suggest that the overlapping activations of brain areas constitute an important part of how we come to understand others. We activate parts of our own motor and cognitive systems in a simulative way, and this neural reverberation may be a partial basis for insight into what the other person's experience is like.

Some of these same brain areas are activated under one or two of the conditions, but not under all of them. These non-overlapping areas are also of importance, however. Jeannerod (2001) proposed that the non-overlapping areas may account for our ability to distinguish our own activities from those of others, and thus may contribute to a sense of self-agency (also see Jeannerod *et al.* 2003; Ruby and Decety 2001).

The brain-imaging experiments that help to establish these facts are based on important operational definitions of first-person perspective and third-person perspective worked out in an influential paper by Barresi and Moore (1996).

First-person perspective: Subjects are asked to imagine themselves performing a given action, for example, reaching to grasp a glass.

Third-person perspective: Subjects are asked to imagine the experimenter performing the same action.

At this point, however, a closer phenomenological analysis suggests some qualifications that should have been, but were not considered in the experimental designs. Attending first to the definition of the first-person perspective, one can distinguish phenomenologically (that is, by appealing to one's own possible experiences) between

First-person/egocentric perspective: I am located here, and I imagine moving my hand to grasp the glass in front of me.

First-person/allocentric perspective: I imagine myself sitting over there, and I can visually imagine how that person, who happens to be me, would reach to pick up a glass that is nearby.

Likewise, for the third-person perspective, it is possible to distinguish between

Third-person/allocentric perspective: I imagine seeing her over there reaching for the glass.

Third-person/egocentric perspective: I imagine being over there in her place doing the action “from the inside”³.

Since there were no controls for these distinctions in the experiments, it seems likely that the original experimental results and their interpretations require some qualification. When subjects are asked to simulate (or imagine) an action from the first-person perspective (or third-person perspective) do we know whether they are taking an allocentric or egocentric perspective, and is neural activation the same or different across these different perspectives? Employing these phenomenological distinctions and answering this question may help to make the concept of neuronal simulation and the differentiation between self-agency and other-agency more precise.

These phenomenological distinctions are based on the possibility of an imaginative variation – that is, the fact that I can rehearse these various perspectives in my own experience (see Froese and Gallagher 2010). But this points to a further complication. The complication involves what we might call the primary first-person framework that structures all of a subject’s experience. That is, in all cases, even in the third-person allocentric framework, I am the one doing the imaginative enactment – third-person perspectives are still accomplished within the first-person framework of my own experience. One might say that there is something it is like to be imaginatively enacting an action from a third-person perspective. I never lose track of who is simulating and who is simulated? A more basic first-person framework seems to define the very possibility of taking a third-person point of view.

³Farrer and Frith (2002) claim that this is not possible: “it is not possible to represent the actions of others in the egocentric coordinates used for generating our own actions” (p. 601). It is not clear to me why this is impossible.

2. The epistemological issue

This point about a more basic first-person framework is an epistemological issue that can be taken back to our original problem about the possibility of doing a science of consciousness. Science is always accomplished by scientists who occupy, by necessity, their own first-person perspective. They take up a third-person perspective from within the perspective of the first-person.

It is clear that this is not a new issue, and that it has been well debated before. Schrödinger and Carnap, for example, in the 1930s, took up this issue on opposite sides⁴. Schrödinger maintained that science depends on a “fundamental axiom” which is neither empirically testable nor simply a matter of convention. He formulates this axiom in a way that points to both the irreducibility of the first-person perspective and the unavoidability of the second-person (intersubjective) perspective in the practice of science, and he calls it “Hypothesis *P*”, where *P* stands for the personality of the scientists. Hypothesis *P* can be stated in this way: I am not the only one who has experiences (including thoughts, feelings, memories etc.); others also have them⁵. In doing science, however, scientists are required to ignore this axiom. One is required to conduct science as if there is only a third-person perspective.

The scientist subconsciously, almost inadvertently, simplifies the problem of understanding Nature by disregarding or cutting out of the picture to be constructed, himself, his own personality, the subject of cognizance. (Schrödinger 1967, p. 90)

Despite this methodological elimination of the first-and second-person, “science in its totality depends on Hypothesis *P*”. The scandal (although Schrödinger rightly says it is not a scandal, but simply the way it is) is that science is accomplished by human beings who live lives that are ultimately non-scientific. On Schrödinger’s view, Hypothesis *P* cannot be subjected to scientific investigation.

Carnap accepts some version of Hypothesis *P*. He concludes his 1936 response to Schrödinger in this way: “All the premises on which science depends, when they are not purely conventional in nature, rest on experience”. More importantly, however, Carnap believed that Hypothesis

⁴Michel Bitbol (1999) provides an excellent discussion of this debate. Also see Bitbol (2000).

⁵Carnap (1936) states it in this way: “Hypothesis *p*. I am not the only one who has sensations (and, as a result, thoughts, feelings, memories etc.); other people also have them”.

P, at least the version that is genuinely presupposed in scientific research, is subject to scientific examination. Specifically, he suggests, the fact that other persons have experiences is testable on the assumption that there are exact relational laws that link mental states and observable behaviors⁶.

As far as I can see, however, this still leaves in play the first-person experience on which we base our understanding of what these behaviours mean. This is not the place to consider whether the first-person or the second-person perspective has priority, or to discuss contemporary theory of mind approaches to such questions (see Gallagher and Zahavi 2008). The point that we want to make here, however, follows Carnap's idea that "all the premises on which science depends ... rest on experience", and still in some way experience itself is subject to scientific investigation. This epistemological claim, however, leads us back once again to the methodological issues of precisely how science can study first-person experience.

Both the epistemological and the methodological considerations suggest that there is no easy resolution to this problem, or at least, no solution that will gain easy consensus. But this debate is philosophically central to understanding the nature of science, especially when we are attempting a science of consciousness, which is the scientific investigation of experience. One cannot simply reduce data from the first-person perspective to third-person data, without remainder, since not only is there always an experiencing scientist and in many cases an experimental subject, but, when the science is the science of consciousness, the very subject matter of the science includes the first person perspective. In the case of the science of consciousness, this makes Hypothesis *P* an explicit fact that cannot be ignored. To ignore the first-person perspective that is implicit in all attempts to take the third-person perspective may be a perfectly acceptable, and even necessary way to do physics. But to try to ignore the first-person perspective or to fail to take it seriously in its own terms, when what is at stake is consciousness – that is, precisely first-person experience – and to be satisfied with the idea that one can reduce this to third-person data – is to be unscientific. Science cannot ignore the facts, and the facts of the matter in this case are facts of the first-person perspective.

⁶ As Bitbol (1999) points out Carnap borrows an argument from Neurath, based on the latter's "social behaviourism". For Carnap, it is legitimate to infer that someone possesses feelings, thoughts, memories and perceptions on the basis of a "determinate exterior behaviour".

To think that science can be exclusively a third-person procedure is itself something of an epistemological fantasy. To paraphrase Dennett, in a way that apparently would be unacceptable to him: a purely third-person science of consciousness is a discipline with inadequate methods that fail to capture the data of consciousness. By definition, it necessarily produces impoverished results. It is not good science, but simply the fantasy of a science.

REFERENCES

- Barresi, J. and Moore, C. (1996), *Intentional relations and social understanding*, "Behavioral and Brain Sciences", 19 (1), pp. 107-154.
- Bitbol, M. (1999), *L'alter-ego et les sciences de la nature, Autour d'un débat entre Schrödinger et Carnap*, "Philosophia Scientiae", 3 (cahier 2), pp. 203-213.
- Bitbol, M. (2000), *Physique et philosophie de l'esprit*, Flammarion, Paris.
- Blakemore, S.-J. and Decety, J. (2001), *From the perception of action to the understanding of intention*, "Nature Reviews: Neuroscience", 2, pp. 561-67
- Carnap, R. (1936), *Existe-t-il des prémisses de la science qui soient incontrôlables?*, "Scientia", LX, pp. 129-135.
- Decety, J. and Grèzes, J. (1999), *Neural mechanisms subserving the perception of human actions*, "Trends in Cognitive Sciences", 3 (5), pp. 172-78.
- Dennett, D. (2001), *The fantasy of first-person science*, Nicod Lectures. Private circulation.
- Dennett, D. (1991), *Consciousness Explained*, Little, Brown and Co., Boston.
- Farrer, C. and Frith, C.D. (2001), *Experiencing oneself vs. another person as being the cause of an action: the neural correlates of the experience of agency*, "NeuroImage", 15, pp. 596-603.
- Froese, T. and Gallagher, S. (2010), *Phenomenology and artificial life: Toward a technological supplementation of phenomenological methodology*, "Husserl Studies", 26 (2), p. 83.
- Gallagher, S. and Brøsted Sørensen, J. (2006), *Experimenting with phenomenology*, "Consciousness and Cognition", 15 (1), pp. 119-134.
- Gallagher, S. (2003a), *Phenomenology and experimental design*, "Journal of Consciousness Studies", 10 (9-10), pp. 85-99.
- Gallagher, S. (2003b), *Complexities in the first-person perspective: Comments on Zahavi's Self-Awareness and Alterity*, "Research in Phenomenology", 32, pp. 238-248.
- Gallagher, S. (1997), *Mutual enlightenment: Recent phenomenology in cognitive science*, "Journal of Consciousness Studies", 4 (3), pp. 195-214.
- Gallagher, S. and Zahavi, D. (2008), *The Phenomenological Mind*, Routledge, London.
- Grèzes, J. and Decety, J. (2001), *Functional anatomy of execution, mental simulation, and verb generation of actions: A meta-analysis*. "Human Brain Mapping", 12, pp. 1-19.
- Jeannerod, M. (2001), *Simulation of action as a unifying concept for motor cognition*, in "Cognitive Neuroscience: Perspectives on the Problem of Intention and Action", (Johnson, S.H., ed.), MIT Press Cambridge, MA.
- Jeannerod, M. (1997), *The Cognitive Neuroscience of Action*, Blackwell Publishers, Oxford.
- Jeannerod, M., Farrer, C., Franck, N., Fourneret, P., Posada, A., Daprati, E. and Georgieff, N. (in press - 2003) *Action recognition in normal and schizophrenic*

subjects, in *The self and schizophrenia* (Kircher, T. and David, A. eds.), Cambridge University Press, Cambridge.

Lutz, A. (2002), *Toward a neurophenomenology as an account of generative passages: A first empirical case study*, "Phenomenology and the Cognitive Sciences", 1, pp. 133-167.

Lutz, A., Lachaux, J.-P., Martinerie, J., and Varela, F. J. (2002), *Guiding the study of brain dynamics using first-person data: Synchrony patterns correlate with on-going conscious states during a simple visual task*, "Proceedings of the National Academy of Science USA", 99, pp. 1586-1591.

Ruby, P. and Decety, J. (2001), *Effect of subjective perspective taking during simulation of action: a PET investigation of agency*, "Nature Neuroscience", 4, (5), pp. 546-550.

Schrödinger, E. (1935), *Quelques remarques au sujet des bases de la connaissance scientifique*, "Scientia", LVII, pp. 181-191.

Schrödinger, E. (1967), *Mind and Matter*, Cambridge University Press, Cambridge.

Varela, F. (1996), *Neurophenomenology: A Methodological Remedy to the Hard Problem*, "Journal of Consciousness Studies", 3, pp. 330-350.