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My Experience, Your Experience, and the World We Experience:

Turning 'The Hard Problem' Upside Down

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Abstract

Epistemologically, we prefer to start from what we directly experience. Instead of saying that conscious experience arises in brains, we would say that brains arise in conscious experience. Such an inversion of the "hard problem," is compatible with any scientific knowledge, and has some added virtues: It recognizes that the real mystery is not the familiar (namely, conscious experience) but the hypothetical (whether subatomic particles, wave functions, or the like). It avoids the puzzle of why only some (never characterized) physical processes should have conscious accompaniments. It also changes the emphasis in the question of whether more than one mind (or center of consciousness) may be associated with the same brain – as is suggested by such phenomena as "blind sight," "split-brains," and dreams in which someone else surprises us with a clever quip or double entendre. Possibly, much as configuration requires the existence of space, and motion requires the existence of time, consciousness requires the existence of a third, equally fundamental and pervasive "dimension" of reality.

1. The "Hard Problem" of Consciousness

We take the "hard problem" (Chalmers, 1995) to be the first-person problem of understanding how the subjective quality of experience (including, the seemingly nonphysical qualia of pains, colors, odors, etc.) can be explained as arising from a physical system described in terms of objective physical processes (whether at the level of neurons, atoms, subatomic particles, waves, strings, vacuum fluctuations, or whatever). No advance in understanding such physical processes has shown any promise of bridging the explanatory gap between physical description and subjective quality (Hut & Shepard, 1996).

Nor does does any such advance promise to explain how consciousness acts on the physical world. Yet, if (as proposed by epiphenomenalists and often assumed by physical scientists) conscious processes do not causally affect physical processes, then: Why does it seem that I can control my own physical actions (free will)? And how do some physical bodies come to perform those physical acts, of speaking or writing, that express the hard problem of consciousness? (See Shepard, 1993.)

2. Turning the "Hard Problem" upside down

Most approaches to the problem of consciousness (and of free will) build on an epistemologically weak foundation: They begin with the physical brain as described by physical science in terms of atoms, molecules, ions, electric fields, etc. Yet the independent existence of such a physcal system is an inference that one bases on regularities and correlations in the qualia that one directly experiences. The shakiness of the physicalist starting point is evident to those of us who experience vivid dreams populated with what we take to be independently existing physical objects – until we awake.

The never directly experienced atoms, molecules, and fields that (on the standard scientific view) constitute the material basis of any object, including a brain, are abstractions. They can only be referred to by words, diagrams, or equations that from the objective standpoint, are themselves but constellations of molecules or, from the subjective standpoint, but qualia in the scientist's own conscious experience. From the subjective standpoint, what the scientist means by "the physical world" can only be cashed out in terms of the scientist's expectations about what future experiences will ensue upon the performance of particular operations – as has even been argued, in various forms, by physicists, such Bohr, Heisenberg, and, particularly forcefully, by P. W. Bridgeman (1940).

Some of these expectations concern the behavior of those objects that we denominate "other persons." Thus (to put the example, most appropriately, in the first person), from the experience of reading of Galileo's discovery of the moons of Jupiter, I infer that if I were to build and look through a telescope in a particular direction, I would have visual experiences similar to those described by Galileo.

Although this does not eliminate the hard problem, it may soften it. At least, everything is now grounded in my own indubitable immediate experience, and not in an hypothesized "noumenal" world (to use Kant's term) of unexperienced atoms, particles, or waves. The problem of the existence of other minds is also softened in that by starting with subjective experience (my own) instead of with an independent "objective reality," I begin with something closer to other subjective experiences (such as yours).

Inverting the standard approach in this way does, however, call for some radical changes in the way we think and talk about mind and matter: We should not point to our surrounding environment to indicate the objective physical world and to our head to indicate the locus of our subjective experience. Everything we experience (whether "out there" or "in here") is, alike, a part of our experience. After all, the supposition that one's experience takes place somewhere else than in one's own head does not seem to have any implications whatever for that experience. We should also resist the temptation to invoke the complexity of the brain as somehow crucial for an explanation of the quality of conscious experience. There is, surely, nothing complex about a momentary flash of red or twinge of pain.

The "given" from which we propose to start is not, however, pointillistic "sense data." In contrast with the British empiricists, and more in line with Edmund Husserl, William James, or James Gibson, we find that what is given in our experience is a three-dimensional arrangement of objects that evoke expectations about what further experiences will follow upon various actions we might take (Hut & Shepard, 1996). What is given is not confined to the concrete colors, shapes, sounds, tastes, odors, feels, etc. presented by any particular sensory modality. Rather, we are directly aware of relations, affordances, meanings – including the "abstract ideas" denied by Berkeley (such as the idea of a general triangle, which is neither acute nor obtuse, equilateral nor scalene).

Moreover, we do not exclude (as Berkely did) the possible existence of a noumenal world behind the phenomena we directly experience. But, as a practical matter we treat any notions about such a world as hypotheses that may be useful to the extent that they predict and explain the regularities in phenomenal experience.

3. What Conscious Experiences Are There Beyond One's Own?

Just as we may take certain kinds of experienced regularities – and also surprises – as manifestations of something behind the phenomena we experience, so too we may take certain other kinds of experienced regularities – and also surprises – as manifestations of other conscious minds. Speaking (again) in the first person, I may have the experience of another person presenting an extended argument that leads up to an unexpected conclusion. I may then convince myself of the validity of the conclusion by thinking through the argument (or, perhaps, by performing an actual experiment). Such confirmations seem to provide compelling evidence for the occurrence of mental understandings independent of my own.

Granted, such manifestations of independent intelligences do not in themselves definitively answer the "hard question" of whether such intelligences experience the same qualia I do or, indeed, any qualia at all. It would however seem a strange and inexplicable violation of symmetry if other intelligences that express the same arguments and feelings that I do differed so radically from me as to be without consciousness.

In dreams we may also believe in the independent existence both of the physical world and of other minds. Yet, on awakening, that physical world and the other minds apparently vanish. Their apparent evanescence does not, however, preclude a dependence of their manifestations in our consciousness on something beyond themselves. (In fact, the prevailing scientific view is that both the order and the surprises within the dream arise from ongoing activity of our own physical brains.) In short, there may be some justification – in waking and dreaming consciousness alike – for hypothesizing the existence of something behind what we experience as an explanation for both its predictable and its creative aspects.

Even if we start with experience, then, we still have the problem of where to draw a line between the physical systems in our experience that are thus accompanied by "their own" conscious experiences and those that are not. We even have the problem of distinguishing between those processes within the same physical system that are or are not conscious. If a particular neurophysiological activity is necessary and sufficient for a particular experience (in one's own case) or report of an experience (in another person), what distinguishes that activity from the electrochemically identical kind of activity that is usually supposed not to have such an experiential accompaniement?

Would it not be less arbitrary and more symmetrical to suppose that every so-called "physical" event has a corresponding conscious manifestation, just as every conscious manifestation has been supposed to have a corresponding physical event?

4. The Case of the Joke in a Dream

While we may take regularity and, hence, predictability as especially indicative of an independently existing physical world, we may take the novel and surprising as especially indicative of an independently functioning mind. Particularly suggestive in this connection are instances in which a dream leads up to an unexpected event or punch line that the dreamer considers in retrospect to have required premeditation, cleverness, or humor. Such examples (perhaps even more than the well known "split-brain" and "blind sight" phenomena) suggest that another mind, of which "I" am not conscious, is operating, so to speak, within "my" own brain. Could it be that all neural activities are accompanied by conscious experiences, but that only those with direct access to the speech centers of the brain are ordinarily considered to be conscious?

Quite independently, the two of us have kept dream journals for many years. These contain examples of the phenomenon in which we are surprised by a joke seemingly contrived by some agency outside our own consciousness. Here we present just three examples – two recorded by Shepard and one by Hut.

1. Shepard's dream of the early morning of February 12, 1972 (reported, also, in Shepard, 1990, pp. 34-35):

    > On a coffee table in front of me I notice a large-format hardcover book on eating out around the world. I pick up the book and it falls open to what appears to be the title page for a chapter: "Tips on Dining Out in Central Africa." With curiosity aroused, I turn the page. Across the following two-page spread, there is printed only the huge bold-faced admonition, "DON'T EAT THE FOOD!"

2. Shepard's dream of the early morning of January 17, 1979:

    > I am with my wife, who is consulting with her physician. My wife has expressed concern about how much her teaching job is cutting into her time with our children. Then, at the end of the consultation, she asks, "Do you think I should have a mammogram?".
    >
    > The doctor replies, "No, I don't think that's necessary," and then, with an impish smile slowly spreading across his face, he adds, "But, given the professional demands on your time, your kids could use a gramma, ma'm!"
    >
    > Doing a double take, I am greatly amused to realize that relative to "mammogram," "gramma, ma'm" is a phonetically perfect anagram.

3. Hut's dream of March 11, 1981 (a lucid dream, i.e., a dream in which Hut has become aware that he is dreaming):

    > I walked into a bar, where I found a group of people sitting, who looked at me when I entered, and immediately started singing in unison:
    >
    > "This is Piet's dream,
    > We are all here,
    > And that is why
    > We get free beer."

As we already noted, evidence that intelligent thought has gone on outside one's own consciousness may not in itself entail that such intelligent thought was conscious thought. But, to the extent that one takes the evidence for intelligent thought as evidence for an independent consciousness when the evidence comes from another person in one's waking experience, on what grounds should one reject such an inference to an independent consciousness when the evidence arises in one's dream? After all, if we assume (as most researchers do) that intelligent thought depends on neural activity, then the principal difference between the two cases may merely be whether that neural activity occurs in another person's brain (in the former case) or in one's own brain (in the latter case).

5. Another "Dimension" Coextensive with Those of Space and Time?

When we try to make sense of the relation between subjective consciousness and the organizational structure of the brain as an objective physical entity, we are baffled by the seemingly unbridgeable gap between the two. In our detailed understanding of the functioning of the human brain, great progress has been made since Descartes struggled with this problem, and we certainly understand the correlations between physical processes and reports of conscious experiences much better now. It is not clear, however, that this quantitative progress has translated into anything that can begin to bridge the gap.

It may be significant that we use spatial metaphors, in talking about our bafflement (e.g., "gap"), or about anything to do with deeply felt meaning: e.g., the "depth" of meaning, the "height" of experience. It seems that in any given situation, even after specifying the configuration of the material elements in a region around a point in space and time, we still have extra degrees of freedom. We can still 'move' to a different level of interpretation and appreciation. The whole notion of 'emergent properties' (another spatial metaphor, often presented as an 'explanation' but so far not more than a lable for an as yet ill-understood though ubiquitous phenomenon) rests on this freedom.

Our conjecture is that it would make sense to investigate the structure of reality by positing a third type of 'meta-dimension,' one that gives 'room for' consciousness, much as time gives 'room for' motion. We have illustrated this notion with an analogy (Hut & Shepard, 1996): start with space only, and try to explain the presence of time. Yes, time is everywhere, like space. But, no, time is not 'draped over' space, like a sauce or fluid or ether. Neither is it an epiphenomenon, a non-essential additive, or add-on. Rather, time and space are equiprimordial, not reducible to each other (although to some extent transformable into each other according to classical relativity theory). Similarly, perhaps all existence partakes in another, equally primordial (meta-) dimension, the 'presence' of which allows conscious experience to 'arise' – analogously with the way in which the presence of time allows motion to occur.

6. Conclusions (stated, as now seems most appropriate, in the first-person voice):

1. The only epistemologically justifiable starting point is what I experience. I adopt the notion of an enduring physical world behind what I experience to the degree that it explains and predicts regularities and correlations within my experience. Brains are part of what arises within my experience. I admit the existence of other minds (that is conscious experiences other than my own) to the extent that this helps me to understand why other bodies similar to my own behave in ways similar to the behavior that I consciously initiate.

2. Particularly compelling, among the kinds of evidence for other minds, are the instances in which I experience another person presenting a line of thought ending with a conclusion that surprises me but that I later accept as valid, ingenious, or humorous. Instances in which such evidence arises from individuals in my dream suggest that some other minds are associated with what I have called "my own" brain.

3. Possibly, reality includes, in addition to dimensions of space and time, a dimension that provides for consciousness in much the way that space provides for configuration and time provides for motion.

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