

BOOK REVIEW: A PLETHORA OF PAPHROLOGIC PHILOSOPHERS

The Nature of Consciousness: Philosophical Debates.

N. Block, O. Flanagan and G. Guzeldere (eds.)

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Consciousness Lost and Found.

L. Weiskrantz

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Biased by over seventy years of acquired preconceptions, I will discuss mainly PHILOSOPHICAL DEBATES, with occasional references to CONSCIOUSNESS LOST AND FOUND. The bottom line is that the neuroscience oriented reader is more likely to benefit from LOST AND FOUND than from DEBATES. DEBATES is a profusely footnoted tome.[McGinn's chapter 33 has a text of 11 pages and three (repeat,three) pages of footnotes, Guzeldere's very helpful introduction has 45 pages of text and 22 pages of footnotes].

DEBATES provides an overview of what three dozen contemporary philosophers, writing in English, have to say about consciousness. Readers will be exposed to much meticulous (even lawyerly) argumentation and you may enjoy the self-confident manner in which these philosophers make their moves and countermoves. Consider Lycan, "I am not here addressing issues of qualia or phenomenal character, which I have resolved almost entirely satisfactorily elsewhere" (p. 756). Some readers may want to know what Lycan has so happily resolved. A quale (singular) is a "raw feel" or "immediate sensation" or "phenomenal experience" and for many modern philosophers it is the indispensable essence of consciousness. [according to the Oxford English Dictionary a " quale " (rhymes,almost with folly or good golly) means "the quality of a thing". See also Ramachandran and Hirstein,1997)] In the index to DEBATES there are more references (48) to qualia than to anything else including Cartesian materialism (21), epiphenomenalism (22), functionalism (40), mental states (22), and brain (5). You can get a feel for what the word "qualia" means from the contexts in which it appears. However, you may not bother if you believe Dan Dennett, who in Chapter 40 argues that there are no such things as qualia. Even if there are, Lycan says. "I think qualia problems and the nature of conscious awareness are mutually independent and indeed have little to do with each other" (p. 756). Lycan notwithstanding, Chapters 40-44 in this book on consciousness are

entirely devoted to the nature of qualia.

DEBATES has fifty chapters, most of them reprinted from earlier publications. There are ten sections, beginning with I. Stream of Consciousness. This starts with a nice selection from William James (1910) including his picture of awareness, not as a sharply edged spotlight but as a more or less bell-shaped curve for each conscious thought, followed not by an abrupt transition to the next thought but rather by an overlap of the three curves: now, just past, and just emerging. "The waxing and waning brain processes at every moment blend." The now-thought is surrounded by a halo of relationships called by James "the fringe," discussed in detail recently by Galin (1997). Then follows II. Methodology, which contains Patricia Churchland's rhetorical question entitling Chap. 7, "Can neurobiology teach us anything about consciousness?" She gives reasons why the answer is "yes". Surprisingly, however, "Not much," seems to be the answer from most of the other philosophers. Section III gives us three psychologists (Baars, Farah, Shallice), one neurologist (Bisiach) and two biologists (Crick and Koch). The 1990 essay by Crick and Koch (Chapter 10), once indispensable reading for those interested in the physiology of consciousness, has been succeeded by an article (Crick and Koch, 1998) in which they summarize their 1990 essay and review more recent developments. They reiterate their expectation that there will be one, or at most a few consciousness mechanisms; Farah and Bisiach strongly differ. Both Farah and Bisiach cover material (neglect, etc.) already known to neuropsychologists and conclude that consciousness is, in Bisiach's words, "Far from being unitary" and "rests entirely on a virtual mechanism distributed over brain circuits." Farah asserts, "There is currently no evidence for a dedicated awareness system distinct from the systems that perform specific perceptual or cognitive functions." By contrast, it seems to others, (Baars, 1993; Shallice, in DEBATES, Chap. 13; Schacter, 1989; Bogen, 1993, 1997a) that there is evidence for a dedicated awareness system. Time will tell. Meanwhile, since no brain mechanism, focal or global, for consciousness is yet widely accepted, there seems to remain considerable room for the sort of metaphysical debates which, before the double helix, dealt with the nature of life.

Before leaving behind the opinions of Bisiach [a virtual mechanism distributed over brain circuits] and Farah [no "system distinct from the systems that perform specific perceptual or cognitive functions"], I would suggest that these views as well as those of most philosophers seem to suppose that consciousness develops out of mentation rather than having an independent origin. The latter possibility is suggested by our awareness of nausea, sweetness, shortness-of-breath and other qualia requiring little if any cognition. In this view, consciousness is sufficiently basic or primitive that trying to understand consciousness by studying cognition is like trying to understand respiration by studying speech.

After Section III, for the remaining 36 chapters it's harangues and polemics all the way. An example is Dennet's fusillade at Ned Block's big idea (distinguishing phenomenal consciousness from access consciousness). "I for one found it difficult to keep track of the tangle of objections and counter objections, exemptions, caveats and promissory notes and will be interested to see if other commentators can find their way into, and back out of, the maze Block has created." Further on, "Block has done my theory a fine service: nothing could make [my theory] easier to swallow than Block's involuntary

demonstration of the pitfalls one must encounter if one turns one's back on [my theory] and tries to take Block's purported distinction seriously" (p. 417). Block is capable of a similar tone: "Harman's primary argument is, as far as I can see, an appeal to-of all things-introspection . . . an error in philosophical method . . . this is no way to do philosophy" (p. 429). There is a familiar ring to these sallies and ripostes_ one hears them in court or in depositions as attorneys snap and bark at each other during the proceedings, following which they all go out for a friendly lunch together. Tyler Burge (in Chap. 24) supports Block's big idea (that we have two kinds of consciousness) but he does it in a style almost entirely introspective! Burge `fesses up in a fashion rarely found in philosophers: "I do not know how to defend this view But I find it compelling" (p. 429). Burge is also refreshingly frank when he says, "What is important for my purposes is not whether these empirical conjectures are correct but that the distinctions mark conceptual possibilities" (p. 433).

Conceptual analysis attains its most monarchical importance when Frank Jackson suggests that physical explanations of the mental must begin with an a priori account; this is another version of the view that one must first adopt a metaphysical position before any serious evaluation of data. [My favorite counter to this is from Sherrington (1947) where he refers to the greatest neuroanatomist (Ramon y Cajal) telling how adhering at one time or another to either dualism or materialism seemed to make no difference whatever in his practical life. See also, Bogen, 1998 for an argument that the metaphysical issue is orthogonal to the mind/brain issue] .

In Chapter 29, Jackson considers how (indeed, even whether) mental properties relate to the natural world. Thus, even though neuropsychology finds abundant evidence for mind having a physical (brain) basis, for Jackson and friends this can never be enough. They will insist that an a priori account be given before evidence can be considered. Like lawyers who have accepted a retainer, they know which side they are on and will not be cowed by any facts in the case.

One of the few philosophers in this tome to concern himself with physiology (in this case, of pain) is Michael Tye; but see how he does it! Tye considers one of Ned Block's pseudosyllogisms:

The pain is in my fingertip.

The fingertip is in my mouth.

Therefore, the pain is in my mouth.

Block claims that the nonsensical result of this supposed syllogism results from the word "is" being used differently in the first of these sentences. Tye explains why Block is wrong (to say the word "is" is being used differently for pain) using the next nine pages!! Tye is well aware that "pains in the upper left arm are often due to disturbances in the heart." And he says, "Pain experiences, if they are anywhere, are in the head." How then can he say the word "is" is being used the same way in each sentence? Perhaps more troublesome is his brief reference to the elimination of distress by a frontal leukotomy (or cingulotomy): "These reports, even if taken at face value, are compatible with the proposal in the text, for clearly such cases are abnormal." (his Footnote 6 on page 339) What boggles is not simply his doubts about a fact well known to any neurosurgeon with relevant experience- what is more troublesome is the implication that his explanation of the normal should not be affected by data from abnormal cases (which would include much of the data from neuropsychology). Since any adequate theory of the normal should explain

the abnormal, how can he not be concerned about abnormal cases?

Out at another tail end of the philosophic distribution is Chapter 28 by Georges Rey, who denies that there is any such thing as consciousness, in the sense that, "There would seem to be no actual thing or process that our past usages have been 'getting at'" (p. 473). He quotes William James to the effect that consciousness is not a thing, insisting instead that the word stands for a function. [this quote of James is in footnote 38(repeat 38) of the Rey article] Most readers of this review might agree with James's point, but not Rey who says, "When I say there may be no such thing, I mean no such thing whatsoever" (p. 479). Among his 132 references there are five neuro-refs (Eccles, Luria, Moruzzi, Penfield, and Pribram) which he mentions solely for the purpose of shrugging them off. The only neuro opinion Rey favors is an assertion by a philosopher, Jerry Fodor(1983). According to Fodor, input systems are highly modular, including that they are "encapsulated , i.e. not subject to "top down" or other outside influence(p66). By contrast, he wrote , "... In the case of central processors you get an approach to universal connectivity(p 119)[where] neural connectivity appears to go every which way and the form/function correspondence appears to be minimal"(p188). This is altogether outlandish! The first fact is that input systems are subject to a variety of descending controls, from cortex as well as from subcortical structures . The second fact is that central connections are far from universal and there have been shown a myriad of form/function correspondences. How could Fodor be so misinformed? Almost 20 years ago he and I shared the back seat of a limousine taking us from Logan airport to a conference in the Massachusetts woods. During the hour long ride , about 45 minutes consisted of Fodor's explaining that a scientific psychology has no need of brain any more than using software requires a knowledge of computer hardware. This struck me as similar to claiming that a scientific understanding of cars need not involve mechanical knowledge just because people can drive cars without knowing engines,etc. (And it may be a bit reminiscent of the old navy saying that the Navy Regs [regulations] were designed by geniuses to be used by simpletons). The point here is that Rey relies for his understanding of brain not on a neuroscientist but on another philosopher who, it turns out, is explicitly proud of not knowing about brain. Someone might say, " but that was over two decades ago". Sadly, many philosophers have not changed. In the spring of 1997, Owen Flanagan came to Caltech at the invitation of Christof Koch. At dinner he mentioned that on leaving Duke, he informed his philosophy colleagues that he might see some neurolab or neurocase material. They recoiled in horror. . He may have embellished the tale a bit but the message was clear-philosophers (those anyway) don't dirty their hands with data-it might interfere with their ability to evaluate other peoples' data. Is it really the sad truth that natural philosophy (what we now call science) has so far separated off from its origins that it has left behind only papyrologists--people who take paper in, put paper out, and while reading and writing assiduously, earnestly avoid the tangible? Do they consider direct contact with data to be of negative value? Are they, like some redneck in the play Tobacco Road, actually proud of their ignorance? . What seems to me another example of the extent to which many philosophers are disdainful of neuroanatomic detail is reflected in Lycan's assertion: "the central nervous system is as central as it gets" (p. 762).

Flanagan (1992, excerpted in chap. 19) can be rewarding because he explains how other philosophers are wrong and he does it in a readable style. Unfortunately, even Flanagan reveals a surprising neuroignorance. It seems that philosophers are still devoting time to whether or not consciousness is epiphenomenal. This is the idea that consciousness is like heart sounds. The sounds can tell us some of what is going on in our hearts (just as consciousness can tell us some of what is going on in our brains) but the sounds don't have any effect on the function of the heart. To explain epiphenomenality, Flanagan contrasts two pictures: in the first, a hot stimulus to the hand causes a feeling of pain which leads to withdrawal of the limb; he calls this "the standard view." In the second, the stimulus causes the pain and the withdrawal in parallel; he calls this (correctly) the epiphenomenalist view. The fact is: the second has been "the standard view" for over a century. The withdrawal is a spinal reflex and the pain is epiphenomenal for the behavior, though likely not for the memory of the occasion (Clark and Squire, 1998).

The reader will have by now recognized some of my preconceptions about consciousness:

1) there is such a thing. We routinely ascribe consciousness to some entities and not others and with fairly widespread agreement.

Moreover, we label levels of consciousness for both diagnostic and therapeutic purposes, again with fairly good agreement.

2) consciousness depends upon brains and is to be understood (so far as we can) in naturalistic terms. Weiskrantz in LOST AND FOUND thoroughly agrees with these two claims. However, there is a third preconception which he avoids.

3) whatever the mechanism producing consciousness, it exists in duplicate. In each hemisphere exists the machinery for consciousness. Of course, Weiskrantz knows that almost all cerebral anatomy exists in pairs; it is obvious in any frontal or horizontal section of the cerebrum. However, he gives this readily observable fact short shrift and he never connects it explicitly with the problem of consciousness.

Is the duality of anatomy like the runners of a sleigh, such that if one is damaged or removed the sleigh cannot go? or is the duality more like two harnessed horses, such that if one is removed, the remaining member of the pair can still pull the sleigh, not as fast or as far, but enough. The answer unquestionably is the latter.

Otherwise hemispherectomy would not have become a routine procedure in 18 of 25 epilepsy centers (Engel, 1993). Not only is the cerebral anatomy double, and not only is it unarguable that one hemisphere is enough for consciousness; beyond that, two hemispheres following callosotomy have been shown to be conscious simultaneously and independently. As Nagel (1971) said of the split-brain, "what the right hemisphere can do on its own is too elaborate, too intentionally directed, and too psychologically intelligible to be regarded merely as a collection of unconscious automatic responses" (p. 403). And, "if the patients did not deny awareness of what is being done [by their right hemispheres] no doubts about their consciousness would arise at all" (p. 404). This 1971 paper by Nagel is not included in DEBATES.

Much of the meandering inconclusiveness of discussions on consciousness results from so many different usages of the word.

However, almost all usages have in common the idea of subjectivity.

Hence, I

believe:

4) Explaining subjectivity should have priority. Finding a physiologic basis for subjectivity is hard enough (cf. Dave Chalmers in Chap. 22) without trying to explain all the other different stuff that people mean or might mean when they say "consciousness."

5) Mammalian brains have considerable power for generalized computation but special functions (e.g., subjectivity) commonly require specialized structures. Such an hypothesized structure has been facetiously

termed a "subjectivity pump" by Marcel Kinsbourne (1995). Well, that's exactly what some of us are looking for. And the mechanism for subjectivity is double, as shown by the duality of the anatomy, the success of hemispherectomy and the split brain results (in cats and monkeys as well as humans).

One of the few philosophers to thoroughly consider the split-brain data was Nagel (1971). He emphasized a crucial consideration: "It may be impossible for us to abandon certain ways of conceiving and representing ourselves, no matter how little support they get from scientific research. This, I suspect, is true of the idea of the unity of a person." Having described the split-brain phenomena he continued: "It is possible that the ordinary, simple idea of a single person will come to seem quaint some day . . . but it is also possible that we shall be unable to abandon the idea no matter what we discover" (p. 411). Furthermore, "If the idea of a single mind applies to anyone it applies to ordinary individuals with intact brains, and if it does not apply to them it ought to be scrapped, in which case there's no point in asking whether those with split-brains have one mind or two" (p. 409). In fact, the idea of a single mind applies exactly to an individual who has had a hemispherectomy (Bogen, 1977, 1997a). But Nagel was oblivious to consciousness after hemispherectomy, and in this he has all of the authors in both of these books for company.

One can ask, "Will reading this book increase my understanding of consciousness?" LOST AND FOUND is essential reading for those concerned with blindsight. However it can not yet answer a basic question: why do we need striate cortex to be conscious of what we are seeing? Is it because striate cortex gets back the visual information from all of the cortical areas that process visual information? Or does it send along to the other areas some special code which does not accompany the visual information that reaches extra-striate cortex directly from LGN or pulvinar? Or does striate cortex send back to some subcortical region something that is crucial for subjectivity? This is the alternative which I favor and it appears to be the alternative favored in LOST AND FOUND in which Weiskrantz ascribes the availability to consciousness of visual information to a VORB. By VORB, he means "visual oil refinery bypass." This refers to pathways that bypass the well known block diagram of visual hierarchy proposed by Felleman and van Essen (1991), which in LOST AND FOUND is called (after Cowey) the "visual oil refinery."

In Part II of Henry VI, Dick says, "First, . . . kill all the lawyers." Why not dispose of lawyers? Because the rule of long

evolved law stands between us and reversion to the inquisition, trial by combat and the dunking of witches, who were proved innocent only if they drowned. Well then, from what primitive practices are we protected by philosophers? A likely answer: unexamined beliefs. We benefit from their exposure of unrecognized assumptions and undisciplined argument. However, to be truly helpful, they've got to know the territory. Judging by DEBATES, what many philosophers currently have to say leads less to a clarification of consciousness than to its elaborate obfuscation. A bit more gentle opinion was expressed by Crick and Koch (1998). "...while philosophers have, in the past, raised interesting questions and pointed to possible conceptual confusions, they have a very poor record, historically, at arriving at valid scientific answers" (p103). One frustrated scientist's opinion was less generous. In his chapter in what remains one of the best books ever about consciousness, A.E.Fessard wrote, "...we doubt that epistemological discussions and metaphysical hypotheses, which in this field cannot be easily avoided, can ever be of real utility. By their subtleties and intricacies of points of view, by the fallacy of certain analogies, the mixture of facts with respectable but unverifiable beliefs, they have obscured, more often than clarified, the naive notion every normal man has of his own consciousness."(p201.

Perhaps the last word in this review should be left to a professional philosopher: Because I believe consciousness requires brain, it seems to me that before people go on about consciousness, they should know something about brain. I asked my cousin Jim Bogen, a Philosophy Professor, "If someone wants to philosophize about quantum mechanics, shouldn't he know how to do QM first?". "The good ones do", Jim replied. "Well then, if someone wants to philosophize about consciousness--- He interrupted, "They should be conscious".

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