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BOOK REVIEWS

A Preconceptioned Perspective on a Plethora of Papyrologic Philosophers

The Nature of Consciousness: Philosophical Debates, N. Block, O. Flanagan, and G. Güzeldere (Eds.). 1997. Cambridge, MA: MIT Press. 843 pp., $29.95 (PB).

Consciousness Lost and Found, by L. Weiskrantz. 1997. New York: Oxford University Press. 294 pp., $25.00 (HB).

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Biased over 70 years of acquired preconceptions, I will discuss mainly *Philosophical Debates*, with occasional references to *Consciousness Lost and Found*. The bottom line is that neuropsychologists are more likely to benefit from *Lost and Found* than from *Debates*.

Debates is a profusely footnoted tome[1] which 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.[2] 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). Nevertheless, chapters 40 to 44 are *entirely* devoted to the nature of qualia.

Debates has fifty chapters, most of them reprinted from earlier publications. There are 10 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 chapter 7, "Can neurobiology teach us anything about consciousness?" She gives reasons why the answer is yes, but 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 & 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 con-

[1]McGinn's chapter 33 has a text of 11 pages and 3 pages of footnotes. And Güzeldere's very helpful introduction has 45 pages of text and 22 pages of footnotes.

[2]According to the *Oxford English Dictionary* a "quale" (rhymes, almost, with folly or good golly) means "the quality of a thing." The OED also has quale (pronounced like quail) which means torment or torture (see also Ramachandran and Hirstein, 1997).

sciousness 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*, chapter 13; Schacter, 1989; Bogen, 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.

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 chapter 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 monarchial 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.) 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 have 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 the facts of the case.

One of the few philosophers 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.

He then explains why Block is wrong (to say the word "in" is 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." But consider 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" (footnote 6 on p. 339). What boggles 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,[3] insisting instead that the word stands for a function. (Most readers of this review might agree with that.) However Rey 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 extent to which many philosophers consider neuropsychological detail is reflected in Lycan's assertion: "The central nervous system is as central as it gets" (p. 762).

Flanagan (1992, excerpted in chapter 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

[3]The quotation from James is in footnote 38 (repeat, 38) of Rey.

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 & 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 is produced by 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 know 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 be 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 chapter 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 a structure has been disparagingly called 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 consider the split-brain data thoroughly 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 the 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 that 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 cleverly elaborated obfuscation.

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Gate, Gate, Paragate . . . Where Have All the Flowers Gone?

Zen and the Brain. J. Austin. 1998. Cambridge, MA: MIT Press. 844 pp. $40.00.

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Readers! Throw away your Shallice, and run to the bookstore for Austin! This magisterial work, an un-Zen-like 844 pages, divided into 158 chapters, a smorgasbord of reminiscences, data, and observations on Buddhism and neuroscience, interspersed with exercises in Zen meditation. Austin preserves by inclusion rather than selection the skepticism and dialectic that are the essence of Zen teaching, laying out what there is in all its eclectic richness, from Perky to Pavlov, from alpha rhythms to syzygy. In its scholarship and detachment it is a welcome antidote to the assertive fatuity of so much contemporary theory, offering the thesis, even if tacitly, that a subjectivism inferred from symptoms, e.g., hallucination, imagery and altered states, is preferable to an externalist model of cognition inferred from deficits.

My only quarrel with the book is that the author, though conversant, impressively so, with the puzzles, traps, and intricacies of Zen logic, seems to believe that a dialogue is possible without a radical upheaval in the presuppositional bases of western science. We crave for east–west coexistence, but the painful truth is that when we move to the metaphysical core of Zen we leave contemporary psychology far behind. Austin is more comfortable with mantras than with metaphysics, with questions, *mondos*, and replies that lead to further questions, so he visits this topic rather briefly. The result is that the implications for neuroscience of the relational standpoint of Zen are unclear, I mean, Zen as metaphysics not as experience.

For example, what does it mean for our understanding of perception to say, with the Buddhists, that a thing is the set of its contrasts, or that the awareness of a blueness is a blue awareness, that is, that the object and the apprehension of the object comprise the same state, indeed, that the object-form determines the state of awareness? Here, there is no sharp distinction of perception and hallucination (Matilal, 1986). Austin is very much in this mode of thought, and his discussion of imagery can be read with great profit. But our neurophysiology is a science of objects and in-processing in the primary cortices. What is the neurophysiology of an idealist philosophy in which objects exteriorize the valuation and conceptual feeling of mental imagery?

For Austin, meditation is the primary contact. But there is a need to go beyond the experience, to a theory of