

Book Reviews

Max Velmans

Understanding Consciousness

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Velmans pulls together, in a cogent and charming way, much of what he has written in *JCS* and elsewhere. Part I deals with various mind-body theories; Part II is a new analysis: how to marry science with experience; and Part III is a new synthesis: Reflexive Monism. Velmans re-argues his basic propositions in each ‘part’ of the book — with helpful redundancy as well as constant development of his model. I read this book from beginning-to-end, word-for-word, and even flipped back in turn to each of his 236 fascinating endnotes. Despite my compulsive review-preparatory reading style, I will go straight for the Part III mother-load of his portrayal of Reflexive Monism, and bring in earlier material as helpful. I will raise my own questions and advice for Edition Three along the way and in my last section. My portrayal of his model will use much of his own words, without resorting often to distracting quotation marks. Words in italics represent Velmans’ usage.

Velman’s Model: Reflexive Monism (RM)

What consciousness is

Consciousness refers to experience itself and thus to one of two potential *states of mind*: conscious versus not conscious. Phenomena we experience *constitute* what seems to us to be the everyday world, rather than being some mysterious duplicate of the everyday world we experience. Some of these contents of consciousness, such as ‘inner’

thoughts, images, and feelings-of-knowing, seem to have no clear location or extension in space. In contrast, perceptual systems are *reflexive*, creating a phenomenal world around us wherein an entity in the world (such as a perceived cat) is *experienced* to be an ‘entity in the world’ out in front of us, rather than experienced to be an ‘entity in the brain’.

The tactile system projects our experiences of touch, heat, and pain out to where our body parts and the objects-in-themselves are: ‘The pain one experiences is in the finger. If one had to point at the pain one should point at where one feels the pain (where the pin went in). Any reader in doubt on this issue might like to try it’ (p. 127). We do not know how the nervous system creates these projections, but studies in phantom limbs, virtual reality projection, and perceptual illusions — which represent various types of mis-representational projections — prove instructive. Phantom limbs show how deeply conservative normal body-part projection is — ‘that blamed pain is there where my arm used to be! What do you mean it is all in my head?’ In contrast, virtual-reality-projection experience shows how quickly and convincingly new entities can be created in our projected phenomenal world. In less startling ways, illusions that manipulate the sense of distance of seen objects, show how the nuances of our perceived world change with changes in the interplay among various sensory inputs.

Through such reflexive projection, the contents of consciousness define and fill three dimensional space, which is nothing other than the everyday world-as-experienced. But RM is not ‘idealism’ — wherein, if things are not experienced they do not exist — because the objects-we-experience bear an approximate relation to things-in-themselves, as perceived on an intermediate scale by our perceptual systems. Velmans uses Kant’s terms of the world-as-perceived and the world-in-itself, but rejects Kant’s claim that we cannot ‘know’ the latter.

Here is my own ‘take’ on our phenomenal world being embedded in an objective world-in-itself: I can feel the keys to my laptop as I type these words. The *feel* seems to be where the keys also *look* and *sound* to be, because my visual, tactile, and auditory systems coordinate projection. But beyond my fingertips is a world-in-itself. If I had no tactile perception, I could not feel the keys, but my fingers would not just float through the keys as if my fingers and the laptop were ghosts. My fingers and the keys would still be as solid, whether I perceived them or not. My perceptual systems allow me to project my body-as-perceived and objects-as-perceived to fit nicely with the objects themselves.

What consciousness does

The most important thing that ‘having some brain states with conscious content’ does is to create the phenomenal world, making it possible to have *first-person experience* and perspectives. Velmans waxes poetic on this point:

The creation of an experienced, phenomenal world brings a conscious ‘light’ into an otherwise ‘dark’ universe ... there is one universe (the thing-itself) with relatively differentiated parts in the forms of conscious being like ourselves, each with a unique, conscious view of the larger universe of which it is a part. In so far as we are parts of the universe that, in turn, experience the larger universe, we participate in a reflexive process whereby the universe experiences itself (p. 298).

Things-*as-perceived* are representations of things-*in-themselves*! Indeed, any assumed patterns and regularities in things-*in-themselves* are only accessed via observing and manipulating things-*as-perceived*. Thus we have no window to the third-person study of science except via such first-person experience. While much of modern science is concerned with mathematical abstractions that seem to bear little or no relation to what we can experience; we can entertain those mathematical abstractions, themselves, only through first-person experiences. Thus, any approach to ‘consciousness science’ that tries to ‘reduce’ or ‘eliminate’ the first-person-conscious-perspective to the scientific third-person-perspective, cuts off the limb on which it stands!

Velmans ends the book with some fascinating speculations about the ‘distribution’ of consciousness, finding panpsychist-continuity (that all forms of matter have an associated form of consciousness) more elegant than ideas that conscious-experience *emerged* with the evolution of a certain level of life-form; and pointing to the mysterious nature of matter itself – could consciousness have even *emerged* within Descartes’ or Newton’s building-block ‘matter’.

Profound and Problematic Aspects of Velmans’ Model

Velmans’ portrayal of how conscious experience creates first- and third-person perspectives is as convincing an account as I have read. Because of conscious experience — and only because of it — we participate in a reflexive process whereby the universe experiences itself!

However, Velmans is prepared to say that ‘consciousness’ does all of this, but no more: ‘that, and that alone is its function’ (p 323). Velmans cites much research that shows that non-conscious and pre-conscious processing prepares for all conscious processing in perception, language-learning, and so on. Velmans’ final reason to reject

any claim that consciousness contributes *anything* to perception and action is Ben Libet's 1985 finding that even a *conscious decision* (as to when to move which finger in an experiment) follows a 350 ms *pre-conscious-will* readiness-potential. Aha: even voluntary action involves pre-conscious steps from which conscious experience arises.

Despite this Velmans believes that he salvages a sense in which conscious free will is *not* an illusion. Here is an extended quote:

If preconscious processes in my mind/brain rather than my consciously experienced wishes and decisions are in control of what I do, am I really in charge? And am I ethically and legally responsible for my acts? Yes I am. While my conscious experiences of self, of wishing, deciding and so on might only *represent* the underlying processes that are really responsible, I *am* these underlying processes as well as their manifestation in conscious experience. I (the agent) include the operations of my unconscious and preconscious mind embedded in the world, as well as my conscious wishes, decisions, and my conscious sense of self (p. 347).

But, is Velmans really salvaging a sense in which conscious free will is *not an illusion*? Is not an 'illusion' precisely something that appears to be one way in first-person experience, but is shown to be 'really' another way in third-person science? In this case: first-person experience assumes 'free will'; while third-person science denies it. Is not this precisely the epiphenomenalist argument (Wegner) about free will being an illusion?

But even this grand picture of 'I (the agent)' is to be taken only from the first-person perspective. This leads to Velmans' 'Causal Paradox', which he states a number of times: from a first-person perspective, consciousness appears to be necessary for most forms of complex or novel processing; but from a third-person perspective, consciousness does not appear to be necessary for any form of processing.

Velmans' portrayal of 'I (the agent)' states beautifully an intuition I have had in response to Libet's findings — but with my intuition we can go beyond Velmans' 'causal paradox'! It is not through the *first-person perspective*, but from third-person science, that cognitive psychology has found again and again that focal conscious attention is necessary for complex or novel forms of information processing. In addition, Velmans seems to make the mistake of 'consciousness purism': if conscious-processing cannot be seen in the *whole* event, and as *initiating* the event, then conscious-processing is *not crucial* to the event.

Most conscience science contrasts 'unconscious+conscious' processing with 'strictly unconscious' processing (Baars, Merikle) — rather than 'purely unconscious' with 'purely conscious'. Thus third-

person findings about the effects of ‘consciousness’ — that Velmans is (unconsciously!) willing to throw away — are back in play.

One does not even need to look at sophisticated ‘contrast analysis’ experiments to see this. Almost every psychological experiment utilizes conscious responses — even Skinner’s rats learning to push one lever to turn off shock and a different lever to deliver food! Indeed, Libet’s human subjects all achieved conscious understandings of their experiments and apparatus, and developed ‘prior intentions’ (Searle) to move one of their fingers at some unspecified time — well before their premotor cortices began creating the conscious wish to actually raise it.

On the grander scale, does it seem conceivable that my non/pre-conscious agentic-I would create almost non-stop first-person experiences throughout my wakeful moments *only* to shed a *light* on my otherwise-dark universe? Why does my agentic-I not just create amusing and frightening fantasies during wakefulness as ‘it’ does during REM sleep? Precisely because creating conscious representations of the ‘world out there’ has profound causal affects on my wakeful interaction with the world — even when viewed from a third-person scientific perspective. Those whose wakeful consciousness is stuck in dream-mode will not long survive without feeding and drinking tubes. If Velmans is in doubt on this issue, he might like to try it!

There is no ‘conscious substance’ that operates at will — initiating all *passions* and *actions of the soul* (Descartes). Instead there are almost non-stop conscious experiences of perception, imaging, thinking, memory-recall, planning, and acting — all embedded in neural functioning that is mostly non-conscious. Contrasting ‘nonconscious+conscious’ with ‘nonconscious alone’ perception and action, leads to robust consciousness science findings.

Velmans’ book goes a long way toward our ‘understanding consciousness’. It is well worth paying the big bucks to buy it — and then reading it carefully. Let me know if *you also* feel that he ‘gives away the store’ to the epiphenomenalists in order to ward off the eliminativists — by giving up any role of consciousness in causing behavior, but safeguarding the glorious role of conscious experience in flashing light into a dark universe and allowing the universe to become reflexively aware of itself!

Owen Flanagan*The Really Hard Problem: Meaning in a Material World*

Cambridge, MA & London: MIT Press, 2007, 288 pp.

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Owen Flanagan's latest book is a thoughtful reflection about questions of ethics, meaning, purpose and spirituality against the background of contemporary science.

Drawing on Wilfrid Sellars, Flanagan takes it that the task of philosophy is 'to understand how things in the broadest possible sense of the term hang together in the broadest possible sense of the term' (Sellars quoted by Flanagan, p. 5). Thus: how are we to think about ourselves and our possibilities for achieving desirable goals, given what we take to be true (because of science) about the world and the human condition, and what needs to be done about all this? How to live meaningful lives 'in this material world' — and how to account for the very existence of meaning — is for Flanagan the 'really hard problem', as opposed to the merely 'hard problem' of explaining consciousness (p. xi).

To put it crudely, the family of problems that Flanagan aims to tackle can be illustrated with this (admittedly extreme) example: What is the point of living if we are 'nothing but a pack of neurons', as the late Francis Crick (1995) once put it? And what can 'living well' amount to in this conception of the world? Though Flanagan does not endorse Crick's description of what is to be human (his stand in this sense is more nuanced), he recognises that we face the challenge of making sense of our own lives and of leading 'good lives' in a world that is fully material.

The book opens then exploring the age-old question whether science and the scientific view of the world threaten the possibility of living meaningful lives. Its first aim is to assess this view and to respond to it. After clearing some philosophical ground through a discussion on consciousness, free will and the like, Flanagan goes on to argue that, rightly construed, the scientific image of the world is neither deflating nor disenchanting, but potentially useful as a means to imagine better ways of living well. The book closes with a reflection on spirituality and naturalism ('Spirituality Naturalized?'). In between, the author discusses things as varied as 'Buddhism and Science' (chapter 3) and normative questions within the mind sciences (chapter 4). The book then covers much of ground that one might

expect from a discussion around the 'science vs. religion' debate, but it does so demonstrating why it is necessary to go beyond it: the relation between science and religion/spirituality is only one possible area of struggle/dialogue in the contemporary cultural landscape. Other areas of this landscape (what Flanagan calls the 'Spheres of Meaning') include technology, politics, ethics and art. It is through participation in these spheres, the author argues, that people find meaning in life.

The crux of the argument lies in its discussion of how to approach problems of meaning and purpose in a naturalistic fashion. If the main message of the book could be summarised in a phrase, it would be this: 'we ought to seek to flourish with the truth by our side' (p. 108). In making sense of our lives and our place in the world we should not take refuge in images of the world which we know are fictitious or superstitious, but should seek to rely on accounts that to the best of our knowledge we can take to be truthful (hence the demand for paying heed to what science has to say).

Central to this aim is what the author calls 'eudaimonistic scientia', by which he means the 'empirical-normative inquiry into the nature, causes, and conditions of human flourishing' (p.1). Such a style of inquiry, he argues, is on a continuum with, if not always identical to, science and has long been practised — for its roots can be traced back at least to Aristotle and the historical Buddha — but nowadays stands to benefit from the insights from contemporary mind sciences. Flanagan argues that this kind of inquiry can help us in the difficult task of choosing how to live well. For, though there is not only one way of living meaningfully, some forms of living are more conducive to lasting fulfilment and virtue than others. How to tell apart the wheat from the chaff is the promise of 'eudaimonistics'. In this connection, the author goes to great lengths to show what methods can this style of inquiry employ (chapter 4), and to point at some areas where further research is needed: for example, to further map out and empirically test different conceptions of the good life (p. 167). He also leaves us with research questions and hypotheses ranging from the very abstract ('Is universal love too demanding an ideal?') to the very concrete: Are Americans who practice Vipassana meditation less prone to depression than the rest of the population while recurring to fewer 'positive illusions'? (p.181).

One of the many virtues of the book lies in bringing to life debates from both Western and Eastern philosophical and spiritual traditions (Plato, Aristotle, the Stoics, the Buddha, and Christ are all discussed here) so as to establish a dialogue with the literature on neuroscience, modern psychology, and social theory. Drawing on these different

strands of inquiry, Flanagan describes a philosophical psychology that aims at ‘epistemological responsibility’ while allowing construction of a path towards the good life and the good society. Here, together with other empirically-orientated philosophers such as Joshua Greene, Flanagan shares a moral and political project: to improve the human condition through advancing our understanding — through neuroscience, for example — of the way we reason morally and politically (p.143). Greene argues that many human wrongdoings stem not from wickedness but, on the contrary, from honest, yet flawed, attempts to do what is taken to be ‘common sense’, like serving one’s own group at the expense of another human societies. Getting to know what mechanisms are behind our tendency to act tribally or to embrace chauvinism might help us overcome such positions, thereby leading to more tolerant societies — or so the idea goes.

Though I found the book thought-provoking, I also found that some points could do with more discussion. First, I was left wondering whether Flanagan’s dichotomy between naturalist and super-naturalist conceptions of the world can accommodate the plurality of ontological views that exist in today’s philosophy. In particular, I wonder what would Flanagan make of the ‘anthropological paradigm’ which, from Kant onwards — and without embracing super-naturalism — ‘has aspired to limit the absorption of humanness into the discourse of natural science through the construction of a protected sphere of morality and culture where subjectivity can strip itself from the rules of scientific protocols’ (cf. Meloni, 2008). Second, Flanagan arguably does not do justice to the ontological assumptions of the social sciences and the humanities when he writes of Geist (as in *Geisteswissenschaften*) as meaning ‘spiritual fuel in the spooky sense’ (p.3). For Geist has a multiplicity of meanings — all the way from mind to the Holy Spirit (Inwood, 1992, pp.194, 274–77) — not all of which necessarily amount to endorsing some version of super-naturalism (consider Max Weber’s Spirit of Capitalism). Finally, at times the reader gets the impression that Flanagan is saying that all there is to Darwinian evolution is natural selection (for example in p. 45) — though he is surely aware that the picture is much more complex than this (Gould, 2007, pp. 222ff.)

In spite of this, simply by drawing attention to questions of meaning and purpose and by attempting to answer them, Flanagan has rendered us a very useful service — and one worth taking into account. If, as has been argued in the pages of this journal, mind sciences have been largely oblivious to ‘what makes us human’ (Whitehead, 2008, p. 15), then Flanagan’s book is a big step in the right direction. The spirit of

his inquiry suggests how the mind sciences and consciousness studies could be made more relevant to the questions that arguably matter most to people once they have satisfied their basic material needs (p. 54). The book can be taken as a multi-layered invitation for cross-disciplinary dialogue in a search for answers to such questions.

Regardless of whether the academic community will accept the family of questions discussed by Flanagan as ‘the really hard problem’, the book deserves serious attention from such community, broadly construed (mind scientists, social researchers, philosophers and beyond). The non-jargon, informal style of the book makes it suitable for the informed lay-man as well as for the specialist. Engaging with this book is bound to benefit anyone interested in searching for what is true, good and beautiful.

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Gary Hatfield

Perception and Cognition: Essays in the Philosophy of Psychology
Oxford: Oxford University Press, 2009, 503 pp., £25
ISBN 978-0199228218 (pbk)

Reviewed by Max Velmans

The 16 chapters of *Perception and Cognition* are based on a collection of papers and chapters published by Hatfield over the last 30 years, now updated and integrated into a book. Trained both in philosophy and experimental psychology (mainly vision research) Hatfield is equally at home in both disciplines and brings an unusually well-grounded approach to the many foundational issues discussed. Much of the book focuses on the deceptively simple question ‘How do we see?’ As he notes:

This question has fascinated and perplexed philosophers and scientists for millennia. In visual perception, mind and world meet, when light

reflected from objects enters the eyes and stimulates the nerves leading to activity in the brain near the back to the head. This neural activity yields conscious experiences of a world in three dimensions, clothed in colors, and immediately recognised as (say) ground, sky, grass, trees, and friends. The visual brain also produces nonconscious representations that interact with other brain systems for perception and cognition and that help to regulate our visually guided actions. But how does all of this really work? The answers concern the physiology, psychology, and philosophy of visual perception and cognition.

Given his background, Hatfield is particularly strong on issues that lie at the boundaries of philosophy and psychology, and, although his main focus is on visual perception, he also has many interesting things to say about the history, scientific status, and explanatory autonomy of psychology itself.

Part I of the book focuses on theoretical problems underlying visual perception and cognition, particularly in space perception and object perception. For example, to what extent are perceptual representations of objects in space driven by the information in the light, or cognitively driven, and to what extent are visual experiences themselves cognitively penetrated? How do visual representations function, and why do things look as they do? Hatfield demonstrates that the second question is not the same as the first — and his analysis is at once scientific and non-reductionist. Visual phenomenology, behaviour and neurophysiological data all provide useful evidence about visual perception, but his analysis of the history of vision research shows that in the interplay of neurophysiological and psychological research, psychological theories usually lead the way. In contrast to many philosophers who try to reduce phenomenal experiences to information content or to an unmediated awareness of actual physical properties in the world ('naive realism') Hatfield views perception as mediated awareness of the world, in which the mediating experiences play an important role. Like the world that they represent, such experiences are part of nature. Whatever their ontology turns out to be, they provide vital, albeit incomplete data about the physical world itself. Such a 'critical realism', sometimes called 'indirect realism', is far more commonly adopted in science than the naive realism which currently enjoys a frisson of popularity in philosophy (although Hatfield, a little confusingly, calls his position 'critical direct realism' to more clearly contrast it with the competing theories that he addresses). Hatfield also gives a particularly useful analysis of how representational theories of perception within psychology differ from those that have recently become popular in philosophy. Psychological models that

subscribe to 'inner representations' of objects can for example be associationist (as in parallel distributed processing) rather than Fodorian formal symbol systems operated on by computational rules. Hatfield argues persuasively for the role of such non-cognitive representations in mediating perception. His further analysis of the role of representations in perceptual and cognitive content, task analysis, and psychological functioning is detailed, and his subsequent analysis of the role of unconscious inference in perception, the role of environmental constraints, the operation of perceptual constancies, and the ability to see objects *as* objects is wide-ranging and scholarly.

Part II of the book focuses on colour perception and qualia, and engages a debate about the status of sensory qualities that has been a topic for philosophy since the ancient Greeks, often influenced by empirical findings, as in the work of Aristotle, Ibn al-Haytham (Alhazen), Galileo, Descartes, Boyle, Locke and Newton. His critical historical overview of vision theories from ancient to contemporary times, and his critical analyses of contemporary attempts to view the function of colour vision as that of extracting spectral reflectance properties of object surfaces from light arriving at the retinas (or even to reduce colour experiences to spectral reflectances) are instructive. He points out for example that metamers (very different reflectance patterns that nevertheless produce the same qualitative colour experience) pose a particular problem for such theories. For this and many other reasons, he argues that colour is best understood as a relational property that surfaces and light sources have of causing experiences with various phenomenal characteristics in perceivers and that, rather than extracting reflectance patterns, the function of colour vision is best understood in evolutionary terms — to identify edible food sources and so on. Viewing colour as a *relational* property also requires one to think in a more nuanced way about whether colour is 'objective' or 'subjective' and Hatfield opens up some of the options in an interesting way.

Part II then goes on to questions that are fundamental to consciousness studies, the mind–body problem, and the reality status of phenomenal experiences and qualia. Once again, his critical historical review of psychological and philosophical theorising on these issues from Hemholtz to current times is instructive, and sometimes poignant. As he notes, the 20th century tendency towards physicalism in philosophy, for example in the works of Carnap, Hempel and Quine, and its development in the work of Place, Smart, Armstrong, Churchland, Dretske, Tye and Dennett was motivated by a sense of the epistemic solidity of physics. Ironically, this reductive form of

physicalism was not shared by that brilliant group of physicists responsible for many of its 20th century advances. Philosophically reflective physicists such as Planck, Schrödinger, Bohr and Heisenberg did not believe that mind and conscious experience should either be reduced or be excluded from an account of nature (and the same may be said of Einstein, Pauli and Bohm). Although Hatfield does not develop a full critique of physicalism, he points to some of the flawed assumptions about conscious phenomenology that have often motivated its reductionist project. It is commonly assumed for example that phenomenal experiences are 'inner', 'subjective', and accessible only by a supposed 'inner sense' which places them beyond science, in contrast with the 'outer' experience of objects themselves. To overcome this impasse, reductionists often attempt to demonstrate conscious 'qualia' to be nothing more than brain states or functions or (in other versions) properties of the external physical world itself. However that was not the way these contrasts were intended to be understood by those psychologists who originally studied 'inner experiences'. For example, in the words of Wundt 'the expressions outer and inner experience do not indicate different objects, but different points of view from which we take up the consideration and scientific treatment of a unitary experience (1901/1902, pp. 2–3). Thus, in describing a table, we can either focus on the object itself or on how we experience that object, but either way the experience remains phenomenally 'outer' and does not seem to be located internally (a similar analysis was offered by Mach, James, and Russell). This provides a different point of departure for conceptualising what lies within or beyond science (see also extensive discussion in Velmans, 2007; 2009, chapters 6–9). Hatfield then concludes Part II with a chapter on the 'Reality of Qualia'. As he puts it, 'qualia realism gives the best account of what it is to see colored objects, which implies that it is part of the best philosophical account of what color is', and he then defends this view by considering the physics, biology and psychobiology of colour along with a detailed critical review of current competing philosophical analyses of these areas of research.

Part III of the book focuses on the history and philosophy of perceptual and cognitive psychology, and provides a revisionist account of its early roots. He traces the origins of psychology (*psyche-logos*) back to Aristotle's treatise *De Anima*, and the major theoretical options guiding 20th century vision theory to the writings of Ptolemy, Alhazen, Descartes, and Berkeley — for example the two-stage theory of visual perception in which the immediate representation of a visual stimulus forms a two-dimensional sensory core, subsequently

followed by a perception of a three-dimensional world. The history of theories of attention and memory is also considerably older than usually thought. The term 'psychometrics' for example was coined by Christian Wolff in 1738 who also proposed a way of quantifying 'goodness of memory' from (a) the latency of a response to a memory demand (b) the number of tries it takes to retrieve an item from memory and (c) the number of acts it takes to fix an item in memory. In addition, Wolff (1740) formulated several generalisations concerning attention, for example an inverse relationship between the intensity of attention and the extent of cognitive material that can be brought under it (in modern terms: the limited capacity of focal attention) — and narrowing of attention, active directing of attention, involuntary shifts in attention and other properties have antecedents in antiquity, for example in the writings of Aristotle, Lucretius, and Augustine. Hatfield also goes on to reflect on the many other ways scientific psychology in general has far older roots in Western thought than the much celebrated founding of Wundt's laboratory in 1897. Hatfield then further develops his case for the autonomous status of psychology as a discipline (for example in its interactions with neurophysiology) and finally returns to the actual role of introspective evidence in psychological research and its relation to so-called 'objective' research. As he notes in his conclusion 'two observers can't directly compare their phenomenal experiences in such cases. But they can't directly compare how they perceive the table as an external object either'. We can nevertheless develop intersubjectively agreed descriptions in both domains. In short introspection is important and valuable without being incorrigible. 'It is not and need not be seen as an oracle whose pronouncements can, by their immediacy, lay psychological processes bare. It provides evidence, and that's all. But that should be plenty.'

I found so many resonances with my own work (on the relation of perceptual space to physical space, his qualia realism, his critical realist epistemology, his analysis of introspection, his phenomenal 'externalism', his non-reductionist analysis of science, and many related issues) that I was a little disappointed not to find any cross-referencing — and, given the centrality of many of the issues discussed to consciousness studies, readers of this journal may be a little surprised that of more than 700 cited references there is not one reference to any article published in the *Journal of Consciousness Studies*. Those familiar with the resurgence of 20th century selective attention research may also be surprised to find no mention of the seminal work of Colin Cherry or Donald Broadbent (whose theory of attention

arguably formed the very first information processing model in cognitive psychology). But these are just niggles. Inevitable omissions simply reflect the vastness of the field, and Hatfield's coverage of much of the mainstream literature and its historical antecedents is impressive.

Although there is inevitably a bit of repetition (given the essay format), the integration is largely seamless, and the depth and range of the topics covered is contemporary and highly relevant to current debates in consciousness studies. Indeed, the very depth and detail in which the subjects are discussed probably places the book beyond the normal reading range of the educated lay public or undergraduate students in their earlier years. However, for postgraduates, and researchers interested in the many foundational issues discussed, this book provides a rich and essential source of study.

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David Skrbina (ed.)

Mind that Abides: Panpsychism in the New Millennium
 Amsterdam/Philadelphia: John Benjamins, 2009, 401 pp.
 ISBN 978-9027252111 (hbk)

Reviewed by Greg Nixon

Is the great god Pan reborn? For a while there, it seemed every intellectual movement began with the prefix 'post', implying non-totality, but now there are indications that 'pan' (all) is returning to provide another answer to one of the most basic of ontological questions: What is the relationship of mind to matter? In this important book with 17 different authors, panpsychism is given its due.

From a previous widely-accepted dualism we have now mostly settled into the monistic worldview of what Skrbina calls *mechanistic physicalism* (p. 364), in which mind, if it exists at all, is somehow a derivative of the non-mental, deterministic physical universe of matter and energy. This book sets out to convince the reader that probably

the most ancient of worldviews has been right all along: mind is ubiquitous in the physical universe, and psyche is everywhere in everything. Just like that, the hard problem is solved and no one need wonder how awareness could arise in a non-aware world. The exact form and nature of this *pan-psyche*, however, remain in question.

In the introductory chapter, Skrbina summarizes his earlier book on panpsychism in western philosophical thought, as well as mentioning more contemporary thinkers with panpsychist perspectives. He includes such recent luminaries as Teilhard de Chardin, Bateson, Nagel, Bohm, and, more controversially, Chalmers. He also mentions two books that stand out, each in its own way, as more coherent and stirring panpsychist statements than the current collection — Abram's (1996) wonderful paean to the earth, and Griffin's (1998) process panexperientialism. On the other hand, he overlooks Velmans (2000, reviewed in *JCS*, 7 [10]),¹ who has significantly similar views to Strawson.

Strawson's *realistic monism* or *real physicalism* is becoming the panpsychist standard position to judge by the number of citations it gets and the references to it in the other essays. Strawson's contribution is the first essay in 'Part I: Analysis and science', though there is little science in it. His position is basically that consciousness can neither be accounted for by any known physical theory, nor can it sensibly be said to supervene or emerge from non-conscious matter. By default, it therefore appears that physical entities must each have been intrinsically conscious all along: 'the existence of every real concrete thing involves experiential being even if it also involves non-experiential being' (p. 37). The mistake that has been made, he avers (citing Eddington), is that our measuring devices tell us about things externally but not what they are in themselves. He avoids any suggestion that his monism is itself holistically aware, as a pantheist might, but focuses instead on the intrinsic experience of each entity to itself. This may be the reason he insists that (quoting Frege) "experience is impossible without an experiencer," a subject of experience' (p. 53). This intrinsic internalizing may oppose the panrelationism (similar to what Skrbina proposes in the last chapter) and the panexperientialism of the process philosophers, each of which see experience created through interactions and thus more participatory than privately subjective. For Strawson, all objects, not just quantum particles, are also subjects of experience, i.e., conscious. Panexperientialists understand

[1] See also the review in this issue of *JCS* of the recently published second edition of Velmans (2000) — Ed.

experience *qua* experience to be taking place at all levels of being but experience that has become conscious of itself, i.e., conscious experience, as being much more rare. Both Skrbina and Strawson basically ignore unconscious experience, which surely is experience without an experiencer.

His tone-setting chapter brings up most of the questions with which theoretic panpsychism will continue to contend: the relational vs the internal, raw experience vs conscious experience, and experience with or without a subject of experience. The priority of space or time is a final question broached by process thinkers such as Solhdju: Do experiential processes in time create spatial objects or are already existing objects intrinsically possessed of inner subjectivity?

Goff is the only panpsychist sceptic represented in the collection. He argues that current panpsychism cannot get around the combination problem: How do little experiencers combine into big (or complex) experiencers? This seems to refer to the aforementioned subjects of experience and may be less of a problem if experience is conceived as participatory and pre-subjective. Goff further states that the emergence of mind is no more mysterious than the explainable emergence of life from non-life. The latter is scientific dogma, but most panpsychists would agree that lifelike qualities must pre-exist living manifestations just as experience pre-exists kingdom animalia; thus, neither life nor experience is a 'brute' emergence from its opposite. To make his point that in the future the emergence of consciousness will be no more remarkable than that of life, Goff states that, though currently we may conceive of an unconscious zombie, we cannot conceive of a non-living human duplicate. Is this so?

Globus is a near-panpsychist who posits that panpsychism cannot go *all the way down*: 'The decisive point is that there is a size threshold in quantum field theory below which collective dynamics cannot emerge and so there can be no qualia there' (p. 79). We're talking Planck scale here, but these assumptions mean qualia would still be an emergent from matter-energy. Coleman, like Strawson, is a panpsychist internalist who argues that entities must experience in themselves independent of their relations to other entities. Without 'reality's intrinsic building blocks ... [w]e face nothingness' (pp. 92–93). Interesting that some mystical traditions take *dynamic nothingness* as the ultimate source, similar to our conception of dynamic process when it is pushed into the insubstantial, as in quantum field theory or the postulated zero-point field. Perhaps the nothingness abhorred by Coleman is as rich in potency as the long sought quantum vacuum.

In a refreshing chapter because of its clarity and depth, Deiss looks to systems changing in time as the source of sensations, also an effective approach to the combination problem. Consciousness he sees as the *interpretation* of sensations (qualia), which requires memory and reason. Sensible, so to speak, but what then are sensations in themselves — perhaps unconscious experience? With his nod to a systems approach, sensations themselves could arise within entities *as the result of* external entanglements (i.e., relations), implying that experiencers emerge from experience, *contra* Strawson. Strawson claims there can be no experience without a subject of experience. However unconscious sensations which have their basis in external relations would seem to be an example of how experiences can occur without a subject of experience. Strawson fails to see this because he fails to distinguish conscious from unconscious experience.

Spät closes Part I with the appeal that panpsychism has moral corollaries such as vegetarianism and kindness to all objects, but I do not see this at all. It's always tough to get from an *is* to an *ought*, and for panpsychists vegetables feel too. Further, if the experience of tribal peoples within an animistic worldview (the precursor of panpsychism) is any indication, there is as much threat as communion from a natural world alive with minds, so we may find ourselves fighting as much as protecting such *others*.

'Part II: Process philosophy' could have used a basic statement of this position from, say, Griffin, so that an uninitiated reader could grasp its outlines. Whitehead's process cosmology still remains the most completely rendered form of panpsychism (cf. pantheism and panentheism), and the chapters here assume an understanding of process philosophy on the part of the reader that some may not have. Basile takes up the process mantle and speaks in favour of unconscious experience, defends relationality in time as ultimate (dynamic process over static physicalism) and notes how close to Whitehead's occasions of experience are to Strawson's concept of *sesmets* (subject-of-experience-that-is-a-single-mental-thing'). Each is an 'ultimate' or 'portion of energy-stuff' (Strawson, p. 60), though Strawson defends extended *isness* over process dynamism for which each 'single mental thing' exists only for a flash within a larger cosmic process. In this vein, Manzotti makes a strong statement for panrelationality as preceding internal 'subjective' experience: 'Qualities and relations are not a product of the internal activity of neural systems; they are processes taking place in the world' (p. 220).

The last chapters of this second part and the first several of those in 'Part III: Metaphysics and mind' read to me like academic philosophy

by and for academic philosophers. I slogged through them, understood the contents, but felt little reward at the end. For a topic as truly world-altering as awakening to panpsychism would be, these seemed to me inconsequential (though Harman's massive chapter is certainly witty). Solhdju's chapter, however, is another favourite. Learning from Fechner and James, she makes the important point that experience cannot necessarily be judged or understood by a rationalism or subjective position that exists external to it. Conceptual understanding requires the split of object from subject and Solhdju traces a meaning for experience that precedes the schism (precedes conscious experience). Furthermore, though each thing receives experience relationally, it affects the whole in dynamic reciprocity: 'Each novel thing that comes to be known thus takes part in the creative transformation of reality, which then serves as a plane for future experience *ad infinitum*' (p. 312). Needless to say, she identifies her position, with James, as panexperientialism. This is the one essay that seems to find a way to accept external panrelationism with inner (not 'subjective') experience by noting how they both interactively create the process of ongoing reality. Solhdju is also able to capture that animistic sense of 're-enchanted nature' (Griffin, 1998) or 'the spell of the sensuous' (Abram) that is missing in the analytic panpsychism-by-default approach. We access the unconscious aesthetically and intuitively, after all.

It is in the last chapter that Skrbina returns and attempts to answer the questions I've mentioned — in my view with limited success. His dependence on analytical philosophy may reveal its limitations here. Confusingly, Skrbina suggests new terms — *particeptikon* for reality, and *hylonoism* for panpsychism. To his credit, he emphasizes the magnitude of what is being proposed, but he also fails to see that becoming conscious of our own natural experience could be the source of the dualism he identifies as appearing along with mortal knowledge. He comes out for dual-aspect monism (a unified oneness in two aspects) within 'a holistic and interconnected cosmos' (p. 363). In this he appears to stand against Strawson's view of internally isolated experience. He deals quickly and impressively with the so-called combination problem by calling upon dynamical systems theory, which elegantly explains how subsystems can combine into more complex single systems and so on without depending on category shifts as in 'brute' emergence. A phase shift in systems theory is emergent and not deterministically predictable, but it does not involve the emergence of something totally unlike its source, as brute emergence apparently

does. The shifts, transformations, and *combinations* involved have their own probability mathematics within a single category.

He first avoids then finesses the important issue of conscious vs unconscious experience by declaring that ‘we might more profitably speak of a continuum of mental states’, including ‘least aware states all the way up to the loftiest introspective or meditative states’ (p. 367). In this way, he reduces the problem to one of mentality and avoids the seeming contradiction of unconscious experiencing. He lists six characteristics of mind, but it doesn’t take much insight to see he is referring to the conscious mind, which he has already admitted is only a very minor percentage of the full spectrum of awareness. He admits that there must be dynamical systems below each moment of qualitative consciousness that are not conscious: ‘On this view, conscious and unconscious mental activities are going on simultaneously, in parallel, at all times’ (p. 373).

But then, rather than this leading him to admit that our conscious experience arises from unconscious experience lower-down the complexity scale, he suggests instead that *all* experiencing entities or relationships are composed of the same parallel mental system: ‘For each object there exists a top-level structure that serves as the conscious peak of subjectivity’ (p. 379). I found this proposal for a humanlike mind *all the way down* as nothing short of incredible and, just as detractors have cried, unnecessarily anthropomorphic. Experience *simpliciter*, preceding the subject-object split, as outlined by Solhdju and indicated by Hameroff, does not have this limitation.

However, Skrbina’s overall image of panrelational holism and interconnectedness is somehow profoundly satisfying: ‘In a strange way, each of us is a world-soul’ (p. 378). If he gave more credit to creative experience in realms that we can only recognize from our perspective as unconscious, he would be close to the cutting edge of awareness — opening our culturally isolated minds to the subtle flux of their source in the *out there*. Overall a stimulating read, possibly profound, and highly recommended.

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Vaclav Havel's definition of postmodernity goes something like this: 'A time of transition distinguished by a mixing and blending of cultures and a plurality or parallelism of intellectual and spiritual worlds. It is a moment when cultures distant in time and space are discovered or rediscovered and new meaning is gradually born from the intersection of many different elements.' This is a paraphrase of a passage in a speech which Havel delivered in 1994 and which has subsequently been published in various forms and places (e.g. Havel, 1995; 1996).

The two books above are reviewed together here since they may exemplify the 'elements' from which Havel believes a postmodern synthesis might be made. Despite coming from very different intellectual traditions, both offer radical views on consciousness studies with some significant similarities. There are important differences too, but these are also productive. They represent both the rich mix of sources available to contemporary globalised academia and the problems that face anyone wishing to synthesise new meaning from them.

Both books appeared shortly before the seventh International Whitehead Conference on 'Process, Religion and Society' was held in Bangalore in February 2009. The conference organisers used the quotation below to introduce the meeting:

The philosophy of organism seems to approximate more to some strains of Indian or Chinese thought than to western Asiatic or European thought (Whitehead, 1979, p. 7).

Now Whitehead is not known for having much to say about East. Indeed, his reputation in the West has been maintained by his more popular works such as *Science and the Modern World*, which principally deal with the history of Western ideas. His more specialised contributions, especially with Russell on the logical foundations of mathematics, or his organic philosophy as set out in *Process and Reality* are not the most accessible of works.

Nonetheless Whitehead has undergone something of a renaissance in the past few decades, partly through being championed by constructive postmodernists (e.g. Griffin, 1988; 1998). He continues to have a devoted following in theology and in some areas of the philosophy of science. His work also seems to appeal to the spiritual and intellectual tastes of India, China and Korea, where he is well regarded.

A Whitehead quote also heads up the introduction to Riffert and Sander's book: '... in a sense, knowledge shrinks as wisdom grows: for details are swallowed up in principles.' (Whitehead, 1929, p. 37).

Whitehead is also included in the introduction to Ramakrishna *et al.*, the other book under review here, as one of a list of Western philosophers that Indian students are required to read. However, this cannot be taken as a commendation. Their book is intended to help rejuvenate Indian psychological thinking and to resist Westernisation. Nonetheless, it shows that Whitehead is thought worth resisting, in contrast to most philosophy teaching in the West, where he is more likely to be ignored.

Even so, Whitehead illustrates what both books offer by way of resources to enrich consciousness studies. That is, both offer a radical metaphysical re-orientation. Despite difficulties with new conceptual vocabularies and with the transfer of ideas between very different cultural frameworks there is much in both of them that can be used by contemporary consciousness researchers to radically shift their point of view.

Ramakrishna *et al.* are very clear from the outset about their motives and hopes for their large and at times dense compilation. It is to celebrate the depth and subtlety of Indian psychological thought and to present it as a protean obstacle in the path of the Western Juggernaut of materialist-reduction. They dedicate the book to Gandhi and Mother Teresa, whose lives they feel 'exemplify the axioms of Indian psychology'. They also describe Indian psychology as a 'magical bridge' between the natural and the supernatural, the secular and the sacred.

This ambitious project is carried forward by thirty-one chapters written by scholars from India and America, in which a recurring theme is the need to move beyond the restrictive assumptions of Western, or Westernised, psychology. There is much here for anyone wishing to learn about Indian psychological thought, though what they will learn is that it cannot be sensibly separated from the wider intellectual and spiritual traditions of India. However, it is not an exercise in isolating Indian thought from Western influences. Most chapters have

up to date references to contemporary Western research and scholarship such as that by Libet, Damasio, Edelman, Searle, Deacon and Jaynes. While some chapters are specialised and deal with particular Indian traditions, such as Advaita Vedanta or sources such as the *Bhagavad Gita*, most broaden their discussions to explore links to Western philosophers like James and Freud.

What this book offers Western consciousness researchers is a reminder that in a cultural tradition in which consciousness has been a focus of inquiry for millennia, there is less separation of facts from values, of mental from physical and an emphasis on deriving ethical concerns from a sense of deep interconnection between spiritual, psychological and physical orders of existence.

Now this would not be too wide of the mark as a description of Riffert and Sander's book. Being a Festschrift for John B. Cobb, a leading Whitehead scholar, it offers papers that apply Whiteheadian concepts in philosophy, the natural and social sciences (although the distinction is not strongly made, in line with Whitehead's distaste for conventional academic boundaries), ethics, education and theology. There are substantive papers which suggest empirical consequences of adopting a Whiteheadian view. Cahill, for example, claims there is experimental evidence for what he calls a 'dynamical' view of space and time, where nature is taken as a series of occasions of experience. Here consciousness is treated as a primitive aspect of reality, being identified with the Whiteheadian notion of 'prehension'. The article perhaps illustrates why Whiteheadians tend to be outside the mainstream, since he scolds conventional physicists for being 'unaware' of this alternative view and he dismisses the success of the theory of general relativity as 'illusory'. While his views might be stimulating, they are not going to recommend themselves when presented like this.

By contrast, the chapter by Harré is an example of a philosopher who also advocates taking Whitehead seriously but does so by trying critically to apply his approach to specific issues in chemistry. In doing so he finds some productive areas where new directions might be explored as well as some clear limits. Likewise Brown's chapter is a Whitehead-inspired though original examination of consciousness and the self. Using a microgenetic framework, which is also to be found in other chapters, he offers an informed, testable view of how human observers maintain their awareness of themselves and how this depends on the categorisation of our experiences.

The above is only a very small sample from what are two large and diverse collections. However, they illustrate that these books provide a rich array of concepts, findings and techniques relevant to

consciousness studies. Although there will be limits to what can be understood at a first reading, it is clear that many of these resources radically challenge deep assumptions underlying Westernised studies of consciousness. The problem though, is how to recognise and respond to this challenge. The terminology in both books is highly specialised at times and it would require a lot of time and effort to get on terms with it. Realistically many, if not most, researchers on consciousness studies will decide it's not worth it, even though they may recognise that there is something of value here. It will be left to people working away from the mainstream to digest, synthesis and report back what can be made of these sources.

This is a worthwhile project, since these books complement and enrich the view of mental life offered by cognitive neuroscience. Sometimes this is because they seem to echo, or even to have anticipated, contemporary developments, such as the shift towards embodied and enactive approaches; sometimes it is because they approach consciousness from a fundamentally different direction to that found in most Westernised research.

These latter approaches, whether Whiteheadian or Indian, have in common an intuitive surmise. It is that at its most fundamental level, nature is mind-like. This framework for consciousness studies treats consciousness as intimately bound up with what Whitehead called the 'creative advance' of nature. Within it, it will be possible to find a more balanced synthesis of the Knowledge and Wisdom traditions of both East and West.

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