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Meetings (10.30am - 3rd Sunday)
81 Greville Street , Chatswood
Next Meetings – 19 January 2003
16 February 2003

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Editors Note,

This is another single issue edition and is dedicated to the second of two papers I found particularly impressive at the one day seminar *Consciousness and Spirituality: Psychological Perspectives* held at the University of Western Sydney, Bankstown Campus on 13th September, 2001. This is the paper I referred to in my introduction to the paper by Neville Symington in Nowletter 85.

When I first heard the paper I thought it a very fine analysis of the range of views about consciousness. Since then we have had several exchanges on consciousness in the Nowletter involving differing points of view for which the paper provides a useful framework.

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http://www.uws.edu.au/marcs/personal_pages/petocz.htm.

In March 2001 Agnes was invited to give the keynote address at the gave the Annual Meeting of the Danish Psychological Association which was entitled *The meaning of science and the science of meaning: implications for psychological practice*.

I have again held over some articles received in December for which I thank the contributors concerned. I'll make sure they appear in the February issue.

The annual, NSW Krishnamurti Gathering will be held at Katoomba from 21-23 February. Details from Geoff & Shirley Miller ring 07 5533 5178 shirley@krishnamurtiaustralia.org or Terry O'Brien 02 9949 8379 terry@krishnamurtiaustralia.org

The Nowletter appears between 10 and 12 times every year and is a vehicle for news and views about awakening to what is really going on. Contributions from readers are considered the most valuable content so please think about letting me have your thoughts, experiences, discoveries and any responses to what you read here.

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Is psychology in danger of losing consciousness?

Agnes Petocz - University of Western Sydney, Australia

**Paper presented at the one-day conference on:
Consciousness and Spirituality: Psychological Perspectives
 University of Western Sydney, Bankstown Campus
 13th September, 2001**

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Abstract

The problem of consciousness has been described as “the last great puzzle and the greatest theoretical challenge of our time” (Metzinger 1995). Some argue that we must accept consciousness as a fundamental but inexplicable mystery. Others embrace it as a scientifically challenging but workable problem. Still others insist that it should be jettisoned completely from psychology. However, debates about consciousness tend to be conducted at cross-purposes, with no prior attempt to separate the real problems from the pseudo problems. When the crucial preliminary task is undertaken, psychology will no longer lose its way, and so will be in no danger of losing consciousness either.

The focus of today’s conference is quite unusual. Its wider context is broadly referred to as the “science/religion” dialogue, but specifically identified as the dialogue between religion or theology and the *natural* sciences? We psychologists have been asking: what about the *human* sciences? In the contemporary science/religion dialogue, theology and philosophy rub shoulders with physics, biology, genetics, even computer science – but psychology is remarkably, though perhaps suggestively, not invited to the party. It is remarkable because it should be obvious, as is highlighted by our topic – consciousness and spirituality – that psychology must be, if not the lynchpin, then at least a key player in the wider debate. It is suggestive, because it immediately arouses suspicion: is psychology’s exclusion from the debate really to be attributed to its lowly status among the more respectable sciences? Or is it that psychology threatens to offer something to the debate that may radically shift its conceptual and empirical parameters? I believe it is the latter, and that consciousness is a case in point.

Psychology typically represents itself, and strives to be, a science. However, it also typically misunderstands and misrepresents what it is to be scientific (Petocz 1999, Bickhard 1992). Contrary to the views of many so-called “scientific” psychologists, the essence of the scientific approach is not one *particular* method, it is not measurement, it is not the exclusive acceptance of only what is directly observable, it is not experimentation. The essence of the scientific attitude is *critical inquiry* – by which is meant inquiry which seeks to test claims by acknowledging human fallibility, and constantly implementing the best available error-detection mechanisms: if we are mistaken, as we so often are, we must have publicly accessible ways of checking for this; we must do our utmost to rule out the possibility that we are wrong (Cohen & Nagel 1934; Michell 1999, 2000). This is not to advocate the debilitating kind of institutionalised, global skepticism which has prejudicially closed doors on psychological inquiry during much of the last century. It is rather to promote the kind of healthy skepticism associated with good science, which alone can reach beyond dogmatism to more enlightened forms of understanding.

Having said that, it would seem that the title of my paper encapsulates a prejudice. Why identify the possible loss of consciousness in psychology as a “danger”? My question sounds like a biased humanistic response to Watson’s (1913) radical behaviourist insistence that consciousness should be jettisoned completely from psychology, a suggestion which was reiterated by Skinner throughout his life, and has recently been endorsed (albeit for radically conflicting reasons) by certain neuroscientifically-driven philosophers known as eliminative materialists. Well, there are more ways than one to lose consciousness, and, while I do not seriously believe that anyone can coherently sustain the thesis that humans are not organisms that can know or be aware of their environment and of themselves, I do take seriously the danger that we can, in our confused discussions of this topic, suffer a loss of consciousness analogous to what happens

in epileptic automatism (which is where you walk and talk but there's nobody home) or even akinetic mutism (which is where you neither walk nor talk, nor is there anybody home). My aim in this opening paper is to suggest some measures we might take in order to minimise the possibility of that happening.

The consciousness revolution

Consciousness has always been a central topic throughout the history of philosophy, but today we are in the middle of what is being called a "consciousness revolution" (closely related to another, the "affective revolution"). This has been prompted largely by empirical developments in the brain sciences, and it has forced philosophy to change direction and pay much closer attention to psychology than it usually does. Of course, we have had several post-behaviourist decades of cognitive science and even cognitive neuroscience, but, as Antonio Damasio (2000) commented recently "It is perhaps an exaggeration to say that neuroscience and cognitive science have proceeded as if Darwin never existed, but it certainly seemed so until the last decade ... Of late, the situation is changing remarkably" (p. 39). At last year's First International Neuro-Psychoanalysis Conference held in London, the neuroscientists claimed that it has only been in the last decade or so that neuroscience has finally inched far enough away from its myopic focus on an isolated cortex to be able to investigate fruitfully those big topics like consciousness and emotion which had for so long been banished to the "scientifically too hard" basket. Oliver Sacks called for "a neuroscience of the whole person, but also a science of personal meanings", and others appealed to the earlier "nonreductive neurology" of Luria, and claimed that there is a fast growing consensus that consciousness and emotion can be properly investigated only within an evolutionary perspective, which takes an organismic view of human mental functioning, and recognises the importance of homeostasis, bodily integration and organism/environment interaction. Against this background, consciousness has become the flavour of the decade. Books and articles, both technical and popular, are coming forth and multiplying – every philosopher has thrown in his or her two bob's worth. There is now a *Journal of Consciousness Studies*, an *Association for the Scientific Study of Consciousness*, and a steady stream of international conferences devoted specifically to topics like *Consciousness and the Brain* or *Consciousness and the Self*. In all of these the major focus is on what has become known as the "problem" of consciousness – according to Metzinger (1995), "the last great puzzle and the greatest theoretical challenge of our time".

The "problem" of consciousness

So, what *is* the problem of consciousness? Well, there are *many* problems associated with consciousness – minor things such as: What exactly is it? What are its functions? What causal role does it play, if any? Can it be studied? But the so-called problem of consciousness arises once it has been accepted that consciousness is the "mind" part of the mind/body or mind/brain relation. The problem then becomes what Chalmers (1996) refers to as the "hard problem", i.e., how the physical brain can give rise to, or be identified with, something seemingly so different, which has "a subjective, uniquely first-person side" (Flanagan in Honderich 1995, p. 152), and so "an irreducible subjective character" (Searle in Honderich 1995, p.153) – the notorious problem of *qualia*. Consciousness is at once obvious and deeply mysterious. The best way to get a feel for the problem is to consider some contemporary illustrations of it:

We have good reason to hold that experience is both caused and realized by neural processes in the brain. These processes are both physical in themselves, and the effects of encounters with the public, physical objects of experience. Yet experience itself seems constituted by phenomena which are neither public nor physical, but rather subjective, inner and private. Hence, consciousness seems inexplicable by reference to the brain, or indeed to any sort of physical account which we can envisage. (Hopkins 1999)

You can look into your mind until you bust, and you will not discover neurons and synapses and all the rest; and you can stare at someone's brain from dawn till dusk and you will not perceive the consciousness that is so apparent to the person whose brain you are so rudely eyeballing. You may indeed perceive the physical *correlates* of a conscious state, as with a PET scan of what is going on inside the brain of someone whose consciousness is in a particular kind of state ... But what we see in the PET scan is nothing like what it feels like for the person whose brain we are scanning ... hi-tech instruments like PET scans only give us the physical basis of consciousness, not consciousness as it exists for the person whose consciousness it is. (McGinn 1999, p. 47)

So the question becomes:

How can technicolour phenomenology arise from soggy grey matter? Somehow, we feel, the water of the physical brain is turned into the wine of consciousness, but we draw a total blank on the nature of this conversion. (McGinn in Hopkins 1999, p. 2)

Not surprisingly, then:

Many psychologists, neuroscientists, and philosophers believe that the transmogrification of brain processes into subjective experience may be inexplicable on the basis of first principles. (Panksepp 1998, p. 305)

Now, the single point of agreement amongst all those concerned with tackling this issue is that there is *no* agreement. Instead, what we are faced with is a vast range of positions along a scale which ranges from reductionist dismissal of the very phenomenon of consciousness to a variety of dualist and idealist world views. To provide a kind of conceptual map of this scale, I have selected six positions along it, each representing a different response to the problem of consciousness (see Figure 1). I've positioned this scale on the vertical axis because it appears to me and to many others that the bottom position is in a sense more "grounded" (in the default scientific position of materialism) than the top position, although this is, of course, open to debate.

Approaches to the problem of consciousness: steps along the scale

(1) At the bottom, most grounded, end, is the claim that consciousness itself, along with mind and mental states, is either completely redundant or non-existent. Since, effectively, there is no mind, and no consciousness, then there is no problem at all. We have fooled ourselves into thinking that consciousness exists or matters, and so we have manufactured a "problem", but the whole thing is just one gigantic illusion. If your feet are this firmly on the ground, you would be hobnobbing with the radical behaviourists, amongst whom Skinner has been the most articulate and persistent, and the eliminative materialists (such as the Churchlands), who argue that once we know enough neurophysiology, we shall be able to abandon all "folk psychological" terms like believing, desiring, knowing, etc.

(2) You may, however, feel that in this position one's feet are *not* firmly on the ground at all, but actually have sunk so far *underground* as to cause death by suffocation. In that case you may choose one step higher. Here, you are still a materialist, but you insist that consciousness and mental processes are real phenomena. However, you also believe that there is no *real problem* of consciousness; instead, the *appearance* of a problem – the "intuition of difference" between the mental and the physical - is just the inevitable result of the way our brains are wired up. This position is not very exciting or glamorous, and it's only been fairly recently articulated, but you would meet Jim Hopkins and Zoltan Torey here (so you just might be getting quality rather than quantity).

(3) But if you want more companions, you could go up to step three. This position is still grounded in materialism, and it still accepts the reality of consciousness. However, here you believe that the problem is not a pseudo-problem but a very real one. Yet you also believe that it is a scientifically workable one, and that we shall eventually solve it when we know more about the brain. Here you will find many supporters, especially neuroscientists, (e.g. Dennett, Panksepp, Damasio), and this is the location for some versions of non-reductive physicalism which focus on emergent properties, as long as these properties can still be accommodated within the spatio-temporal constraints of scientific materialism.

(4) The next step up brings you to the so-called "mysterian" position (outlined, for example, in Colin McGinn's (1999) recent book *The Mysterious Flame*). Consciousness exists, the problem of consciousness is a mystery, and, although it is a basic biological reality, it is a mystery which human intelligence will never unravel, because it depends on a unique but unknowable natural property of the brain which we are not designed to access, and so we face cognitive closure with respect to it. As McGinn puts it: 'It is the purest dogmatism to believe that the human mind, at this particular stage of evolutionary history, has reached the pinnacle of cognitive capacity ... So if we encounter an area of inquiry in which we seem systematically unable to make any real progress, we should at least consider the possibility that we are running up against our cognitive limits' (1999, p. 45).

(5) Step five takes an obvious, but brave, step. If McGinn is right about the mysterian thesis, then why should we blindly insist on a *natural* property of the brain? Why not conclude, even when we talk of emergence, with some form of matter/spirit dualism - whether this be epiphenomenalism, parallelism, interactionism, or even the kind of cosmic principle which may operate in panpsychism? This position is the most heavily populated of them all, and you will find supporters from all walks of life – philosophers, psychologists, biologists, neuroscientists, physicists (Fechner, Schiller, Whitehead, Penfield, Eccles, Sperry, Chalmers, Teilhard de Chardin 1959).

(6) But if you feel it's a bit crowded here, you might choose to go right to the top, where the air is rarefied indeed; here you will find pure idealism (as represented by the philosopher Berkeley and his followers). This position, in one sense, is as far from the bottom as you can get, because it involves a consistent denial of any materialism; everything is

mental, everything is consciousness. In another sense, however, there is a kinship with the lowest steps, because here, too, there is no ‘problem’ of consciousness.

This brief picture is simplistic and non-exhaustive, and has left much out. For instance, if you’re wondering where quantum physics fits in, it is an all-purpose, one-size fits all tool, and may appear at any step along the scale. Note also that it is not the case that all hard-nosed scientists are at the bottom end, and all spiritually-minded philosophers are at the top end, even if there is more than a strong trend in these directions. That’s why religion or spirituality have not been attached to any particular stage, because they, too, *can* be applied anywhere, depending on how you interpret the terms. It is true that they are over represented at the top of the scale. According to Stove (1991), ‘idealism has always satisfied the *minimum* demand of religion’, which ‘is not, of course, the existence of God, but the congeniality of the universe’ (p. 95). The aim of presenting this scale is to allow us to see at a glance, on a kind of conceptual map, the main landmarks in a terrain which houses many different possible views on the problem of consciousness.

This terrain, however, is a conceptual minefield, and discussions about consciousness are often plagued with cross-purpose talk, confusions and self-induced obscurities. To pick over the minefield carefully and systematically would take a long time. What I would like to offer here is just four points which I think are often ignored, but which we should keep constantly in mind when we enter the debates about consciousness and spirituality. In fact, the reason my paper is not addressed to spirituality *per se* is that it seems to me the latter is (at least partially if not wholly) parasitic on the former; we suffer from a self-imposed handicap if we try to discuss spirituality while we are still hopelessly unclear and confused about consciousness. These four points are: (1) a tension in human nature: the need to know and the need for mystery; (2) Things versus relations: the fallacies of intrinsic relations and of reification; (3) Necessary conditions versus necessary and sufficient conditions; (4) Language and the possibility of discourse.

Human nature – the need to know and the need for mystery

I begin with a basic dichotomy in human nature which many have drawn attention to. We humans are characterised by two, sometimes conflicting needs, which we might call “cognitive” needs, but they are not disconnected from our emotions: the need to know, and the need for mystery. Our basic need to know makes perfect evolutionary sense, and it is associated with the empiricist, materialist scientific quest; we seek to discover, to explain, to understand, and we are typically impatient and frustrated when we fail in this quest. In this respect, knowledge is security, knowledge is control, knowledge is power. It is what Freud called the “reality principle”; an accurate perception of the way the world is allows us to negotiate it more effectively, and to satisfy our specific needs more successfully. On the other hand, we also seem to have a deep need for mystery, and although this does not, *prima facie*, make as much evolutionary sense (although, as it turns out, it *does* make sense), it seems to be as innate and trenchant as our need to know. We love a mystery, and we often feel disappointed and let down when the mystery is revealed or solved. Our reaction is often a kind of anti-reductionism, encapsulated in the complaint that ‘to explain is to explain away’.

But we can elaborate on this basic dichotomy in some interesting ways which are not often spelled out. Let us consider these two domains as overlapping circles. The overlap is fluid and constantly shifting. What we once thought we knew may turn out to be a mystery again, and what was once a mystery may become known. But it’s clear that there are different types of mysteries, at least two types in the overlapping area, and perhaps two types in the non-overlapping area. Both types in the overlapping area are mysteries which may turn out to be things we can come to know and explain. The history of science is full of these. However, with one kind (A), it really is a case of ‘to explain is to explain away’, in the sense that the wonder or awe we experienced originally is now dispelled. Many magic tricks are mysteries of this kind; the effect is completely ruined once we can see how it’s done. But there are other mysteries in this overlapping area (B) where to explain is *not* to explain away, because we are wired up in such a way that we cannot help being subject to the mysterious effect. Many visual illusions, such as the famous Müller-Lyer, are of this type. Here the maxim is not ‘to explain is to explain away’, but rather, ‘a miracle explained makes it no less miraculous’. Then there are some cases which may be one type or another depending on the individual person, the knower. For example, many people complain that to analyse a poem, a piece of music or a work of art, exposing in detail the various techniques employed by the artist to create a particular effect, is to “explain it away” and reduce the effect. For me personally this does not happen – the “mystery” (in this case the effect) remains and is often even enhanced.

In the non-overlapping area, there are those things (C) which we know we shall never know, but they are recognised to be ordinary, mundane facts – such as the exact number of clean winners that Lleyton Hewitt has hit throughout his professional career up to the end of the US Open. There are also (D) the controversial, non-mundane, ultimate mysteries, such as are represented by questions about God, the meaning of life, and so on. These are called controversial, because some would argue that such questions are actually meaningless or incoherent. According to Patricia Churchland (1997, in Torey 1999), ‘the mysteriousness of a problem is not a fact about the problem, it is an

epistemological fact about us” (p. 138) and “from the fact that we do not know something, nothing very interesting follows; we just don’t know” (p. 139). Whatever your views on that, it’s clear that the whole situation is much more complex than appears at first sight, and it is worth bearing this in mind when we look at consciousness. The question for consciousness is where to locate it on this diagram. Do we locate it as an ultimate mystery? Do we locate it as a mundane kind of mystery but one which we simply cannot solve? Or do we say it might *appear* to be a mystery, but is not at all a mystery in reality, though it may continue to seem so, in just the way that the Müller-Lyer illusion does not disappear despite our knowing exactly how it works?

Things versus relations: the fallacies of intrinsic relations and of reification

The second point which causes much confusion is a logical one, but it has widespread implications. We should bear in mind the difference between things and their relations, and we should be careful not to conflate the two. When William James (1906), in his famous essay ‘Does Consciousness Exist?’, comes to the conclusion that it does not, asserting ‘I believe that ‘consciousness’ ... is the name of a nonentity’, what he is rejecting is the notion of consciousness as an entity or thing. He goes on to argue that consciousness is essentially a *relation* between a subject that knows and an object that is known. This relationality (technically called the ‘intentionality’ of mental states) has long been acknowledged, from Aristotle, through the Mediaeval scholastics, to modern philosophers and contemporary neuroscientists (e.g. James 1912, G.E. Moore 1922, Anderson 1927, Maze 1983, Michell 1987, Damasio 2000). When we are aware, we are aware *of* something, when we see, we see *something*, when we believe, we believe *something*, a neural registration is always a registration *of* something. Therefore, when we talk of consciousness, we are talking about the relation *being conscious of* – which makes it clear that it involves both a subject and an object. Insofar as being conscious of or being aware of involves the brain’s relationship to its environment, or the relationship of one part of the brain to something in that part’s environment, whether internal or external, it is clear that any strict mind-brain identity theorist will have to answer the criticism that the brain’s relationships to objects in the environment involve those objects in the environment as much as they involve the brain; a thing (the brain) cannot have its relations intrinsic to it, just as the spatial relation between me and the lectern involves both me as the subject and the lectern as the object, and cannot be found internal to me – to claim so is to commit the logical fallacy of intrinsic relations. Similarly, to convert the relation *being conscious of* into an entity *consciousness*, is to reify a relation – to turn a relation into a thing – and this also is a logical fallacy. It is on this basis that eliminative materialism fails – Skinner was absolutely correct to insist (in contrast to the eliminative materialists) on a relational conception of behaviour as stimulus/response or environment/organism interaction. His mistake was to fail to see that this was a special kind of spatio-temporal causal relation in which the subject term, the organism, manifests a sensitivity to the full propositional structure of the object term, a state of affairs in the world (cf. Anderson 1927, Michell), such that ‘behaviour’ is not a matter of mere movements, but of movements inextricably guided by cognition (cf. Dretske 1986).

Necessary versus necessary and sufficient conditions

The third point which needs attention is related to this one. It is the distinction between what are merely *necessary* conditions for something – in this case consciousness, and what are the *necessary and sufficient* conditions for it. This point is frequently overlooked in discussions of consciousness. Most (though not all) theorists affirm that consciousness depends in some way on the brain, such that the brain is a necessary condition for the existence of consciousness. However, many then proceed as if this entails that they have also identified the necessary and sufficient conditions – that the brain *and only the brain* is involved in consciousness. Yet, as the logical analysis of things versus relations demonstrates, *x’s being aware of y* requires *y* just as much as it requires *x*; the brain’s environment is just as necessary for consciousness as is the brain, something which, once again, more recent neuroscience has been emphasising. Now, in his 1987 paper ‘Whatever happened to psychology as the science of behavior?’. Skinner warned that psychology’s love-affair with neuroscience would lead to a redundancy package: ‘Once you tell the world that another science will explain what your key terms really mean, you must forgive the world if it decides that the other science is doing the important work’ (p. 784). However, when the neuroscientist Panksepp wrote to Skinner insisting that we *must* look to inner causes to explain pre-existing behavioural variation and constraints on learning, and complaining that Skinner’s influential ‘black box’ tenets had simply encouraged ignorance in psychology, Skinner’s reply was this: ‘A behavioral account has two unavoidable gaps – between stimulus and response, and between reinforcement and a resulting change in behavior. Those gaps can be filled only with the instruments and techniques of neurology. A science of behavior need not wait until neurology has done so. A complete account is no doubt highly desirable, but the neurology is not what the behavior really is; the two sciences deal with separate subject matters. A third discipline may very well wish to deal with how the two can be brought together, but that is not my field’ (in Panksepp 1998, p. 12). It seems to me that this ‘third discipline’ is exactly what psychology *is* all about. Those who agree with Skinner that neuroscience is irrelevant are leaving out half the picture. Those who agree with the Churchlands that neuroscience is the *only* thing that is relevant are also leaving out half the picture. Real psychology,

the “third discipline”, brings together these two halves of the picture. Consciousness will only be properly understood if examined within the context of *both* the necessary *and* the sufficient conditions for its occurrence – this is why it needs to look at neurophysiological, behavioural, environmental and verbal data.

Language and the possibility of discourse

The fourth and final point which needs to be borne in mind as we approach the problem of consciousness, and one which, again, has produced a good deal of confusion, is the issue of language and the possibilities of discourse. Of course, language is a double edged sword – it can serve both to clarify and to confuse, and we often do not know which unless we appeal to considerations independent of language. We need to tread a fine line between the kind of linguistic analysis so popular among the medieval scholastics and revived earlier last century in the so-called “Analytic” or “English-Language” school of philosophy, and the blithe ignoring of the way we can become trapped in what Nietzsche referred to as “the prison-house of language”. Treating consciousness as a thing or entity just because we typically use a noun form is a good example – though the English word “consciousness” is less than 400 years old, and if Shakespeare, that master portrayer of psychological complexity, didn’t need it, why should we? On those grounds, Kathleen Wilkes has argued that we should get rid of the term; many languages (including my own native tongue Hungarian) manage to get by very well without a noun for consciousness, using instead the more accurate verb form ‘to be conscious of’. As Skinner (1987) put it: “Once you have formed the noun “ability” from the adjective “able”, you are in trouble. Aqua regia has the *ability* to dissolve gold; but chemists will not look for an ability, they will look for atomic and molecular processes” (p. 785). Similarly, I would argue, once you form the noun “consciousness” from the verb ‘being conscious of’; you are in trouble, for you are then tempted to look for consciousness instead of the neural states and processes which allow the relation to obtain.

The possibility of discourse may be a linguistic issue or it may be a logical one. When Teilhard de Chardin claims that consciousness as spiritual energy is found in all constituents of the universe, and that the noosphere will become involuted in a Hyperpersonal Consciousness at a point called *Omega*, we certainly have a linguistic problem here – a problem of working out exactly what is being asserted. But on other occasions, the problem is a logical one – one of falling into self-contradiction, for example. Thus, we may argue, with James, that there is no such *thing* or *entity* as consciousness. But we cannot coherently argue that we are deluded to think we are conscious – for delusion is a form of false belief, and belief is a paradigmatic *mental* state of the kind that is supposedly being denied. In our brochure for this conference, Jim McKnight is described as being “deeply supportive of those who believe they are conscious”. I am one of these people, so I take it that Jim is deeply supportive of me. But there is a double contradiction here: firstly, the implication is that my belief that I am conscious is mistaken; if that belief *is* mistaken, then it follows that I cannot believe anything at all; but if I do not believe anything at all, then I can hardly have a mistaken belief, and so there is no need to be supportive of me. Secondly, what on earth can ‘being deeply supportive of’ me mean if it does not involve *being aware of* me and of my sadly mistaken belief? It is on this very basis that the claim that we are all zombies, deluded into believing that we are conscious is widely understood as a *joke*.

A related point is the use of the terms ‘subjective’ and ‘objective’ to create a mystery where there is none. Experience is, in one sense, necessarily subjective, which makes “objective experience” an oxymoron. Of course my experience is ‘private’ if by that is meant that I have it and you cannot – it is simply a logical point, analytically true, that I alone am the person who experiences my experiences. We must beware of being fooled by language into complaining that we cannot be the subjects of each other’s experiences in the way that we can take it in turns, say, to experience the thrill (or terror) of the roller coaster ride. In a similar way, we must beware of asking questions which are incoherent, for ‘it is not possible to solve interpenetrating and semantically circular questions about intangible entities that have no referents’ (Torey 1999, p. 165).

Approaching consciousness from a scientific psychological perspective

I would now like to pull together all these strands and ask: if we bear in mind these four points, together with the essence of the scientific attitude as being that of critical inquiry, and if we then consider our conceptual map, how far can we go on the question of consciousness? Essentially, I am adopting the same strategy as did William James when he examined the problem of the self: no matter what our personal beliefs, if we want to pursue empirical, scientific psychology we must look to what is empirically verifiable and testable, apply our best available error-detection mechanisms, and stop when we reach the limit. With one eye on Ockham’s razor (“things should not be multiplied beyond necessity”), and the other eye on Einstein’s rejoinder along the lines of ‘Science should be explained as simply as possible, but not *more simply*’), we would begin at the bottom of the scale, and only move further up if there were good reason to reject the step below.

The results of this strategy are as follows: the bottom step, encompassing radical behaviourism or eliminative materialism, is unacceptable, both because it is logically incoherent, and because empirical research supports the *relational* nature of consciousness. So we move up to the next step, and this is where we stop. There is no good reason to move any further.

Of course, the phenomenon of consciousness is one that admits of levels or degrees, and is much more complex than simply observing that it is a relation. Here are just two examples from contemporary neuroscientists, demonstrating that awareness can be unconscious or conscious, that consciousness is not the same as self-consciousness, that self-awareness is not the same as awareness of awareness, and so on (see Figure 2). This multi-level view is supported by the various breakdowns and dislocations of consciousness, which reveal that it is not a unitary all-or-none phenomenon – such as, for instance, the agnosias, or ‘blindsight’, where the seeing or registering occurs, but the subjective awareness of this, the knowing that one has seen, the feeling that one is seeing, is absent. But the complexity of the phenomenon is also what may account for the *appearance* of a problem. And at the second step on the scale, what is given serious attention is the possibility that the way something *seems* may not be the way it actually is. It *seems* to us that we are on a flat earth in a stationary world when really we are not; ‘so why should it not also seem to us that we are introspectively aware of non-physical qualia, when really we are not?’ (Hopkins 1999, p. 8).

This position has been presented in some detail by both Jim Hopkins (in his paper ‘Mind as Metaphor: A Physicalist Approach to the Problem of Consciousness’ (1999), and his upcoming book *Conceiving the Mental*) and by Zoltan Torey in his recent (1999) book *The Crucible of Consciousness*. It is, however, based on the work of others – typically neuroscientists. They not only give an account of the illusion, but also explain why it should happen. To summarise, their work draws on our knowledge that higher organisms possess neurally based self-representation systems, but do not possess the same kind of perceptual access to those systems as they possess for access to the environment. So our tendency to think in metaphors creates our phenomenal inner world. Thus, as Hopkins puts it ‘we are natural Cartesians; but our innate inclination towards dualism is explicable in terms of a physicalist understanding of the world which it constantly tempts us to repudiate ...just as we have not been shaped to feel the motion of the outer world, so we have not been shaped to *feel* the physicality of the inner’ (1999, p. 16). Torey presents an evolutionary neurophysiological account which develops this further. Evolution has designed us with a brain sophistication (via mushrooming of the cortex) that opened up the relatively closed circuits of our old mammalian and reptilian brain, allowing extended thinking, but at the cost of increased vulnerability to perpetuated stress, insofar as we can now contemplate our own ends, extend our fears, fret about possible danger. But our brains are also designed to maintain organismic equilibrium – and that very extended thinking comes to the rescue by providing palliative belief-systems and ‘projective pseudo-explanations’. Hence, ‘humanity’s psycho-religious constructions, i.e., their tendency to fashion belief systems to sustain them in a self-created predicament, is adaptive in character’ (1999, p. 116). This point was made by Anaximander two and a half thousand years ago, and by Freud last century, but neither of them possessed the neurophysiological data to back it up. Now, we do have that knowledge. Thus, ‘The naïve mind must seem to itself non-material and elusive ... what we sense and think of as ‘the mind’ is materially and technically traceable and is neurologically well anchored ... the system generates entelechy-like impressions about itself and ... these are used for human mythopoeic self-schematisations. Hence there is no enigma and no mystery, only a gap in comprehension’ (Torey 1999, p. 217).

Conclusions and future directions

I conclude with four points: Firstly, psychology is in no danger of losing consciousness in the Skinnerian sense, for we are creatures whose brains can be aware of their environment, aware of themselves, and aware of being aware. Secondly, eclecticism (with respect to the need to consider behavioural, neurophysiological, and verbal phenomenological data) is not in this case either a lazy stance or a pseudo-liberal stance – it is necessitated by what we now know about consciousness, and it is demanded by science. Thirdly, what we are presently learning about consciousness reflects the sea-change that is occurring in psychology. After a century of behaviourism and cognitive science, the recognition of the emotional core of consciousness and its crucial relation to the body, suggests that the way of the future is the combination of neuroscience with a return to the evolutionary, wholistic, organismic spirit of Darwin, James, Freud and even Piaget – those who had the vision but lacked the crucial neurophysiological knowledge we are now acquiring. Finally, Shakespeare was undoubtedly correct that ‘there are more things in heaven and earth than are dreamt of in our philosophy’. But the scientific spirit of critical inquiry also demands that we be alert to the possibility that *some* of what *is* dreamt of in our philosophy may actually be nowhere to be found, either in heaven or on earth. Yet that should not leave us depressed. To quote the neuroscientist Damasio: ‘Solving the mystery of consciousness is not the same as solving all the mysteries of the mind ... Understanding consciousness says little or nothing about the origins of the universe, the meaning of life, or the likely destiny of both. After solving the mystery of consciousness and making a dent on a few related mysteries of mind, assuming science achieves either, there is enough

mystery left to last many a scientific lifetime, enough awe at nature to keep us modest for the foreseeable future. After considering how consciousness may be produced within the three pounds of flesh we call brain, we may revere life and respect human beings more, rather than less" (2000, p. 28).

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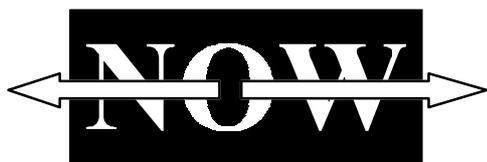
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