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CHAPTER 2

Realistic monism

Why physicalism entails panpsychism

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1. Physicalism

I take physicalism to be the view that every real, concrete phenomenon in the universe is . . . physical. It is a view about the actual universe, and I am going to assume that it is true. For the purposes of this paper I will equate 'concrete' with 'spatio-temporally (or at least temporally) located,' and I will use 'phenomenon' as a completely general word for any sort of existent. Plainly all mental goings on are concrete phenomena.¹

What does physicalism involve? What is it, really, to be a physicalist? What is it to be a *realistic* physicalist, or, more simply, a *real* physicalist? Well, one thing is absolutely clear. You're certainly not a realistic physicalist, you're not a real physicalist, if you deny the existence of the phenomenon whose existence is more certain than the existence of anything else: experience, 'consciousness,' conscious experience, 'phenomenology,' experiential 'what-it's-likeness,' feeling, sensation, explicit conscious thought as we have it and know it at almost every waking moment. Many words are used to denote this necessarily occurrent (essentially non-dispositional) phenomenon, and in this paper I will use the terms 'experience,' 'experiential phenomena,' and 'experientiality' to refer to it.

Full recognition of the reality of experience, then, is the obligatory starting point for any remotely realistic version of physicalism. This is because it is the obligatory starting point for any remotely realistic (indeed any non-self-defeating) theory of what there is. It is the obligatory starting point for any theory that can legitimately claim to be 'naturalistic' because experience is itself the fundamental given natural fact; it is a very old point that there is nothing more certain than the existence of experience.

1. More strictly, 'concrete' means 'not abstract' in the standard philosophical sense of 'abstract,' given which some philosophers hold that abstract objects – e.g. number or concepts – exist and are real objects in every sense in which concrete objects are. I take 'spatio-temporal' to be the adjective formed from 'spacetime,' not from the conjunction of space and time.

It follows that real physicalism can have nothing to do with *physicSalism*, the view – the faith – that the nature or essence of all concrete reality can in principle be fully captured in the terms of *physics*. Real physicalism cannot have anything to do with *physicSalism* unless it is supposed – obviously falsely – that the terms of physics can fully capture the nature or essence of experience.² It is unfortunate that ‘physicalism’ is today standardly used to mean *physicSalism* because it obliges me to speak of ‘real physicalism’ when really I only mean ‘physicalism’ – realistic physicalism.

Real physicalism must accept that experiential phenomena are physical phenomena. But how can experiential phenomena be physical phenomena? Many take this claim to be profoundly problematic (it is the ‘mind-body problem’). This is usually because they think they know a lot about the nature of the physical. They take the idea that the experiential is physical to be profoundly problematic *given what we know about the nature of the physical*. But they have already made a large and fatal mistake. This is because we have no good reason to think that we know anything about the physical that gives us any reason to find any problem in the idea that experiential phenomena are physical phenomena. If we reflect for a moment on the nature of our knowledge of the physical, and of the experiential, we realize, with Eddington, that “no problem of irreconcilability arises.”³

A very large mistake. It is perhaps Descartes’s, or perhaps rather ‘Descartes’s,’ greatest mistake,⁴ and it is funny that in the past fifty years it has been the most fervent revilers of the great Descartes, the true father of modern materialism, who have made the mistake with most intensity. Some of them – Dennett is a prime example – are so in thrall to the fundamental intuition of dualism, the intuition that the experiential and the physical are utterly and irreconcilably different, that they are prepared to deny the existence of experience, more or less (c)overly, because they are committed to physicalism (i.e. *physicSalism*).⁵

2. For a standard argument that this is impossible in principle, see e.g. Strawson (1994:62–65).

3. Eddington (1928:260); the thought was not new. In the background stood Arnauld (1641), Locke (1689), Hume (1739), Priestley (1777), and many others – see Strawson (2003a:§12). Kant makes the point very clearly, on his own special terms. See e.g. Kant (1781/7), A358–60, A380 and B427–8, where he remarks that the “heterogeneity” of mind and body is merely “assumed” and not known.

4. I think that, in his hidden philosophical heart, he did not make it (he is certainly not a ‘substance dualist’ as this expression is currently understood; see Clarke 2003). Arnauld saw the problem clearly, and Hume (1739:159 (1.3.14.8)) diagnosed the mistake definitively in two lines, with specific reference to the Cartesians, but the second half of the twentieth century – philosophical division – wasn’t listening.

5. Dennett conceals this move by *looking-glassing* the word ‘consciousness’ (his term for experience) and then insisting that he does believe that consciousness exists (to looking-glass a term is to use a term in such a way that whatever one means by it, it excludes what the term means – see Strawson 2005). As far as I can understand them, Dretske, Tye, Lycan and Rey are among

‘They are prepared to deny the existence of experience.’ At this we should stop and wonder. I think we should feel very sober, and a little afraid, at the power of human credulity, the capacity of human minds to be gripped by theory, by faith. For this particular denial is the strangest thing that has ever happened in the whole history of human thought, not just the whole history of philosophy. It falls, unfortunately, to philosophy, not religion, to reveal the deepest woo-woo of the human mind. I find this grievous, but, next to this denial, every known religious belief is only a little less sensible than the belief that grass is green.⁶

those who do the same. It seems that they still dream of giving a reductive analysis of the experiential in non-experiential terms. This, however, amounts to denying the existence of experience, because the nature of (real) experience can no more be specified in wholly non-experiential terms than the nature of the (real) non-experiential can be specified in wholly experiential terms. In the normal case, of course, reductive identification of X with Y is not denial of the existence of X. The reductive claim is ‘X exists, but it is really just this (Y).’ In the case of experience, however, to say it exists but is really just something whose nature can be fully specified in wholly non-experiential, functional terms is to deny its existence. ‘But what is this supposed thing you say we’re denying?’ say the deniers. It’s the thing to which the right reply to the question ‘What is it?’ is, as ever, the (Louis) Armstrong-Block reply “If you gotta ask, you ain’t never gonna get to know” (Block 1978). It’s the thing whose deniers say that there is no non-question-begging account of it, to which the experiential realist’s correct reply is: ‘It’s question-begging for you to say that there must be an account of it that’s non-question-begging in your terms.’ Such an exchange shows that we have reached the end of argument, a point further illustrated by the fact that reductive idealists may make exactly the same ‘You have no non-question-begging account’ objection to reductive physicalists that reductive physicalists make to realists about experience: ‘By taking it for granted that the physical is something that can (only) be specified in non-mental terms, you (reductive physicalists) simply beg the question against reductive idealists.’ It’s striking that the realist notion of the physical that present-day physicalists appeal to was thought to be either without warrant or unintelligible by many of the leading philosophers of the twentieth century. Many were in effect reductive idealists about the physical, and Quine famously compared belief in physical objects to belief in gods of Homer (Quine 1951:44).

6. Dennett has suggested that “there is no such thing [as]...phenomenology” and that any appearance of phenomenology is, somehow, wholly the product of some cognitive faculty, the “judgment module” or “semantic intent module” that does not itself involve any phenomenology. “*There seems to be phenomenology*,” he concedes, “but it does *not* follow from this undeniable, universally attested fact that *there really is* phenomenology” (1991:365–366). It is unclear what Dennett means by ‘phenomenology,’ but whatever he means this move fails immediately if it is taken as an objection to the present claim that we can be certain both that there is experience and that we can’t be radically in error about its nature. It fails for the simple reason that for there to seem to be rich phenomenology or experience just is for there to be such phenomenology or experience. To say that its apparently sensory aspects (say) are in some sense illusory because they are not the product of sensory mechanisms in the way we suppose, but are somehow generated by merely cognitive processes, is just to put forward a surprising hypothesis about part of the *mechanism* of this rich seeming that we call experience or consciousness. It is in no way to put in question its existence or reality. Whatever the process by which the seeming

Realistic physicalists, then, grant that experiential phenomena are real concrete phenomena – for nothing in life is more certain – and that experiential phenomena are therefore physical phenomena. It can sound odd at first to use ‘physical’ to characterize mental phenomena like experiential phenomena,⁷ and many philosophers who call themselves materialists or physicalists continue to use the terms of ordinary everyday language, that treat the mental and the physical as opposed categories. It is, however, precisely physicalists (real physicalists) who cannot talk this way, for it is, on their own view, exactly like talking about cows and animals as if they were opposed categories. Why? Because every concrete phenomenon is physical, according to them. So all mental (experiential) phenomena are physical phenomena, according to them; just as all cows are animals. So when physicalists – real ones – talk as if the mental (experiential) and the physical were entirely different all they can really mean to be doing is to distinguish, within the realm of the physical, which is the only realm there is, according to them, between mental (experiential) features of the physical, and non-mental (non-experiential) features of the physical.

As a real physicalist, then, I hold that the mental/experiential is physical, and I am happy to say, along with many other physicalists, that experience is ‘really just neurons firing,’ at least in the case of biological organisms like ourselves. But when I say these words I mean something completely different from what many physicalists have apparently meant by them. I certainly don’t mean that all characteristics of what is going on, in the case of experience, can be described by physics and neurophysiology or any non-revolutionary extensions of them. That idea is crazy. It amounts to radical ‘eliminativism’ with respect to experience, and it is not a form of real physicalism at all.⁸ My claim is different. It is that experiential phenomena ‘just are’ physical, so that there is a lot more to neurons than physics and neurophysiology record (or can record). No one who disagrees with this is a real physicalist, in my terms.

In a paper called “Real materialism” I considered some objections to the claim that the position I have just outlined can really be called a physicalist position. I did my best to answer them and ended concessively, allowing that one might better call the position

arises, the end result of the process is, as even Dennett agrees, at least this: that it *seems* as if one is having phenomenally rich experience of Beethoven’s eighth quartet or an Indian wedding; and if there is this seeming, then, once again, there just is phenomenology or experience (adapted from Strawson 1994: 51–52). In denying that experience can be physical, Dennett and his kind find themselves at one with many religious believers. This seems at first ironic, but the two camps are deeply united by the fact that both have unshakable faith in something that lacks any warrant in experience. That said, the religious believers are in infinitely better shape, epistemologically, than the Dennettians.

7. For the purposes of this paper I make the standard assumption that while all experiential phenomena are mental phenomena, the converse is not true.

8. This follows from the fact that current physics contains no predicates for experiential phenomena, and that no non-revolutionary extension of it (no currently conceivable extension of it – see Footnote 2) could do so.

‘experiential-and-non-experiential monism’ rather than ‘real physicalism.’ It is, in any case, the position of someone who (a) fully acknowledges the evident fact that there is experiential being in reality, (b) takes it that there is also non-experiential being in reality, and (c) is attached to the ‘monist’ idea that there is, in some fundamental sense, only one kind of stuff in the universe.

The objectors then picked on the word ‘monist,’ and I considered a further concession. You can call my position ‘experiential-and-non-experiential ?-ism,’ if you like, and opt out of the monism-dualism-pluralism oppositions of classical metaphysics. Perhaps you can simply call it ‘?-ism.’⁹ But then you will have to allow that the existence of experiential being at least is certain, and is not put in question by the ‘?’ – so that it would be better to call it ‘experiential ?-ism.’ And if you then want to insist, in line with all standard conceptions of the physical, that non-experiential being also exists, then you will also need to signal the fact that the non-experiential is not put in question by the ‘?’. In which case you may as well go back to calling the position ‘experiential-and-non-experiential ?-ism.’

I persist in thinking that ‘physicalism,’ ‘real physicalism,’ is a good name for my position in the current context of debate, but it’s time to admit that in my understanding real physicalism doesn’t even rule out panpsychism – which I take to be the view that the existence of every real concrete thing involves experiential being even if it also involves non-experiential being. If this seems a little colourful then it’s time to read Locke on substance again.¹⁰

Surely I’ve pushed myself over the edge? How can I say that ‘physicalism’ is an acceptable name for my position? Because I take ‘physical’ to be a natural-kind term whose reference I can sufficiently indicate by drawing attention to tables and chairs and – as a realistic physicalist – experiential phenomena.¹¹ The physical is whatever general kind of thing we are considering when we consider things like tables and chairs and experiential phenomena. It includes everything that concretely exists in the universe. If everything that concretely exists is intrinsically experience-involving, well, that is what the physical turns out to be; it is what energy (another name for physical stuff) turns out to be. This view does not stand out as particularly strange against the background of present-day science, and is in no way incompatible with it.

I don’t *define* the physical as concrete reality, as concrete-reality-whatever-it-is; obviously I can’t rule out the possibility that there could be other non-physical (and indeed non-spatiotemporal) forms of concrete reality. I simply fix the reference of the term ‘physical’ by pointing at certain items and invoking the notion of a general kind of stuff. It is true that there is a sense in which this makes my use of the term vacuous,

9. A suggestion made by Sebastian Gardner, nearly twenty years ago.

10. Locke (1689), 2.23 and 4.3.6.

11. It’s striking that analytic philosophers and psychologists have talked so much about natural-kind terms but have failed to see that ‘physical’ is a paradigmatic example of such a term in every sense in which ‘gold’ is.

for, relative to our universe, ‘physical stuff’ is now equivalent to ‘real and concrete stuff’ and cannot be anything to do with the term ‘physical’ that is used to mark out a position in what is usually taken to be a substantive debate about the ultimate nature of concrete reality (physicalism vs immaterialism vs dualism vs pluralism vs...). But that is fine by me. If it’s back to Carnap, so be it.¹²

Have I gone too far? It seems to me that to go this far is exactly the right thing to do at this point in the debate. It’s worth it if it helps us to get back to a proper (realistic) openmindedness. But anyone who prefers to call my position ‘realistic monism’ instead of ‘real physicalism’ should feel free to do so.¹³

2. ‘It seems rather silly ...’

This may all seem a little giddy, so I will now rein things in a little by making three conventional substantive assumptions about the physical for purposes of argument, using the term ‘ultimate’ to denote a fundamental physical entity, an ultimate constituent of reality, a particle, field, string, brane, simple, whatever:

- (1) there is a plurality of ultimates (whether or not there is a plurality of types of ultimates)¹⁴
- (2) everything physical (everything physical that there is or could be) is constituted out of ultimates of the sort we actually have in our universe
- (3) the universe is spatio-temporal in its fundamental nature.¹⁵

I do not, however, think that I need these assumptions in order to show that something akin to panpsychism is not merely one possible form of realistic physicalism, real physicalism, but the only possible form, and, hence, the only possible form of physicalism

12. See Carnap 1950.

13. It is less certain that there is non-experiential stuff than that there is experiential stuff, and in most ears ‘real physicalism’ signals commitment to the existence of non-experiential stuff in a way that ‘realistic monism’ does not.

14. I believe that cosmology raises serious doubts about (Leibnizian) (1); a powerful rival (Spinozistic) view is that there is at bottom just one thing or substance, e.g. spacetime, or whatever underlies all spacetime appearances. But (1) does not beg any important questions. If anything, it makes things more difficult for me.

15. This is in doubt in present-day physics and cosmology, for “rumors of spacetime’s impending departure from deep physical law are not born of zany theorizing. Instead, this idea is strongly suggested by a number of well-reasoned considerations” (Greene 2004: 472; see also 473–491). Note that if temporality goes, i.e. not just spacetimeTM as we currently understand it but temporality in any form, then experience also goes, given that experience requires time. One of the fine consequences of this is that there has never been any suffering. But no theory of reality can be right that has the consequence that there has never been any suffering.

tout court. Eddington is one of those who saw this clearly, and I am now going to join forces with him and ask you to be as tolerant of his terminological loosenesses and oddities as I hope you will be of my appeals to intuition.¹⁶

One thing we know about physical stuff, given that (real) physicalism is true, is that when you put it together in the way in which it is put together in brains like ours, it regularly constitutes – is, literally is – experience like ours. Another thing we know about it, let us grant, is everything (true) that physics tells us. But what is this second kind of knowledge like? Well, there is a fundamental sense in which it is “abstract,” “purely formal,” merely a matter of “structure,” in Russell’s words.¹⁷ This is a well established but often overlooked point.¹⁸ “Physics is mathematical,” Russell says, “not because we know so much about the physical world” – and here he means the non-mental, non-experiential world, in my terms, because he is using ‘mental’ and ‘physical’ conventionally as opposed terms –

but because we know so little: it is only its mathematical properties that we can discover. For the rest, our knowledge is negative. ... The physical world is only known as regards certain abstract features of its space-time structure – features which, because of their abstractness, do not suffice to show whether the physical world is, or is not, different in intrinsic character from the world of mind.¹⁹

Eddington puts it as follows. “Our knowledge of the nature of the objects treated in physics consists solely of readings of pointers (on instrument dials) and other indicators.” This being so, he asks, “what knowledge have we of the nature of atoms that renders it at all incongruous that they should constitute a thinking object?” Absolutely none, he rightly replies: “science has nothing to say as to the intrinsic nature of the atom.” The atom, so far as physics tells us anything about it,

is, like everything else in physics, a schedule of pointer readings (on instrument dials). The schedule is, we agree, attached to some unknown background. Why not then attach it to something of a spiritual (i.e. mental) nature of which a prominent characteristic is *thought* (=experience, consciousness). It seems rather silly to prefer to attach it to something of a so-called ‘concrete’ nature inconsistent with thought, and then to wonder where the thought comes from. We have dismissed all preconception as to the background of our pointer readings, and for the most

16. I came upon Eddington’s book *The Nature of the Physical World* in a holiday house in Scotland in 1999.

17. Russell (1927a: 392, 382); (1956: 153); (1927b: 125).

18. It takes time to assimilate it fully. It cannot be simply read off the page.

19. Russell (1948: 240); see also p. 247. Russell’s overall view is that “we know nothing about the intrinsic quality of physical events except when these are mental events that we directly experience” (Russell 1956: 153), and that “as regards the world in general, both physical and mental, everything that we know of its intrinsic character is derived from the mental side” (1927a: 402). See Lockwood (1981; 1989), Strawson (2003a).

part can discover nothing as to its nature. But in one case – namely, for the pointer readings of my own brain – I have an insight which is not limited to the evidence of the pointer readings. That insight shows that they are attached to a background of consciousness

in which case

I may expect that the background of other pointer readings in physics is *of a nature continuous with that revealed to me in this way*,

even while

I do not suppose that it always has the more specialized attributes of consciousness.

What is certain is that

in regard to my one piece of insight into the background no problem of irreconcilability arises; I have no other knowledge of the background with which to reconcile it...*There is nothing to prevent the assemblage of atoms constituting a brain from being of itself a thinking [conscious, experiencing] object in virtue of that nature which physics leaves undetermined and undeterminable.* If we must embed our schedule of indicator readings in some kind of background, at least let us accept the only hint we have received as to the significance of the background – namely, that it has a nature capable of manifesting itself as mental activity.²⁰

This all seems intensely sensible and Occamical. Eddington's notion of silliness is extremely powerful. Why then – on what conceivable grounds – do so many physicalists simply assume that the physical, in itself, is an essentially and wholly non-experiential phenomenon?

I write this and think 'Do they really?', and this rapid inner question is not rhetorical or aggressive, meaning 'They must be pretty stupid if they really think, and think they know, that physical stuff is, in itself, and through and through, an essentially non-experiential phenomenon.' It is, rather, part of a feeling that I must be wrong. I must be doing what philosophers are famous for doing – setting up straw-man opponents who do not really exist while erasing awareness of my real audience, who will protest that of course they aren't so foolish as to claim to know that physical stuff is, in itself, in its root nature, a wholly non-experiential phenomenon.

20. Eddington (1928: 258–260); my emphasis on 'silly.' It is remarkable that this line of thought (so well understood by Russell, Whitehead, Eddington, Broad, Feigl and many others, and equally, in a number of slightly different guises, by Spinoza, Locke, Hume, Kant, Priestley and many others) disappeared almost completely from the philosophical mainstream in the wake of Smart's 1959 paper "Sensations and brain processes;" although it was well represented by Chomsky (see e.g. Chomsky 1968, 1995). At this point analytical philosophy acquired hyperdualist intuitions even as it proclaimed its monism. With a few honourable exceptions it out-Descartessed Descartes (or 'Descartes') in its certainty that we know enough about the physical to know that the experiential cannot be physical.

My next thought, however, is that I am not wrong. It looks as if many – perhaps most – of those who call themselves physicalists or materialists really are committed to the thesis that

[NE] physical stuff is, in itself, in its fundamental nature, something wholly and utterly non-experiential.

I think they take it, for a start, that ultimates are in themselves wholly and essentially non-experiential phenomena. And they are hardly going out on a limb in endorsing NE, for it seems to be accepted by the vast majority of human beings. I do not, however, see how physicalists can leave this commitment unquestioned, if they are remotely realistic in their physicalism, i.e. if they really do subscribe to the defining thesis of real physicalism that

[RP] experience is a real concrete phenomenon and every real concrete phenomenon is physical.

For if they are real physicalists they cannot deny that when you put physical stuff together in the way in which it is put together in brains like ours, it constitutes – is – experience like ours; all by itself. All by itself: there is on their own physicalist view nothing else, nothing non-physical, involved.

The puzzle, for me, is that I'm sure that some at least of those who call themselves physicalists are realistic physicalists – real realists about experiential phenomena. Yet they do, I think, subscribe to NE – even when they are prepared to admit, with Eddington, that physical stuff has, in itself, "a nature capable of manifesting itself as mental activity," i.e. as experience or consciousness.

3. Emergence

Is this a possible position? Can one hold RP and NE together? I don't think so, but one defence goes like this:

Experiential phenomena are *emergent* phenomena. Consciousness properties, experience properties, are emergent properties of wholly and utterly non-conscious, non-experiential phenomena. Physical stuff *in itself*, in its basic nature, is indeed a wholly non-conscious, non-experiential phenomenon. Nevertheless when parts of it combine in certain ways, experiential phenomena 'emerge.' Ultimates in themselves are wholly non-conscious, non-experiential phenomena. Nevertheless, when they combine in certain ways, experiential phenomena 'emerge.'

Does this conception of emergence make sense? I think that it is very, very hard to understand what it is supposed to involve. I think that it is incoherent, in fact, and that this general way of talking of emergence has acquired an air of plausibility (or at least possibility) for some simply because it has been appealed to many times in the face

of a seeming mystery.²¹ In order to discuss it I am going to take it that any position that combines RP with NE must invoke some notion of emergence, whether or not it chooses to use the word. I will start on familiar ground.

Liquidity is often proposed as a translucent example of an emergent phenomenon, and the facts seem straightforward. Liquidity is not a characteristic of individual H₂O molecules. Nor is it a characteristic of the ultimates of which H₂O molecules are composed. Yet when you put many H₂O molecules together they constitute a liquid (at certain temperatures, at least), they constitute something liquid. So liquidity is a truly emergent property of certain groups of H₂O molecules. It is not there at the bottom of things, and then it is there.

When heat is applied evenly to the bottom of a tray filled with a thin sheet of viscous oil, it transforms the smooth surface of the oil into an array of hexagonal cells of moving fluid called Bénard convection cells (see Velarde & Normand 1980). This is another popular example of an emergent phenomenon. There are many chemical and physical systems in which patterns of this sort arise simply from the routine workings of basic physical laws, and such patterns are called ‘emergent.’

This is all delightful and true. But can we hope to understand the alleged emergence of experiential phenomena from non-experiential phenomena by reference to such models? I don’t think so. The emergent character of liquidity relative to its non-liquid constituents does indeed seem shiniingly easy to grasp. We can easily make intuitive sense of the idea that certain sorts of molecules are so constituted that they don’t bind together in a tight lattice but slide past or off each other (in accordance with van de Waals molecular interaction laws) in a way that gives rise to – is – the phenomenon of liquidity. So too, with Bénard convection cells we can easily make sense of the idea that physical laws relating to surface tension, viscosity, and other forces governing the motion of molecules give rise to hexagonal patterns on the surface of a fluid like oil when it is heated. In both these cases we move in a small set of conceptually homogeneous shape-size-mass-charge-number-position-motion-involving physics notions with no sense of puzzlement. Using the notion of reduction in the familiar loose way, we can say that the phenomena of liquidity reduce without remainder to shape-size-mass-charge-etc. phenomena – I’ll call them ‘P’ phenomena for short, and assume for now that they are, in themselves, utterly non-experiential phenomena. We can see that the phenomenon of liquidity arises naturally out of, is *wholly dependent on*, phenomena that do not in themselves involve liquidity at all. We can with only a little work suppress our initial tendency to confuse liquidity as it appears to sensory experience (how, we may think, could *this* arise from individual non-liquid molecules?) with the physical phenomenon of liquidity considered just as such, and see clearly that it is just and wholly a matter of P phenomena.

21. Compare the way in which the word ‘immaterial’ comes to seem to have some positive descriptive meaning although it quite explicitly has none. For a recent helpful taxonomy of types of emergence, see van Gulick (2001); see also Broad (1925) and McLaughlin (1992).

This notion of total dependence looks useful. It seems plain that there must be a fundamental sense in which any emergent phenomenon, say Y, is wholly dependent on that which it emerges from, say X. It seems, in fact, that this must be true by definition of ‘emergent’; for if there is not this total dependence then it will not be true after all, not true without qualification, to say that Y is emergent from X. For in this case at least some part or aspect of Y will have to hail from somewhere else and will therefore not be emergent from X. Plainly this is not how it is with liquidity.²²

It is the dependence requirement that causes the problem when it comes to relating the supposedly emergent phenomena of experience to the supposedly wholly non-experiential phenomena from which they supposedly emerge. For it now seems that if experiential phenomena – colour-experiences, for example – really are somehow (wholly) dependent on non-experiential phenomena, as they must be if they are to be truly emergent from them, that is, emergent from them and from them alone, then there must (to quote myself in a former century) be

a correct way of describing things...given which one can relate [the experiential phenomenon of] color-experience, considered just as such, to the non-experiential phenomena on which it is supposed to depend, in such a way that the dependence is as intelligible as the dependence of the liquidity of water on the interaction properties of individual molecules. The alternative, after all, is that there should be total dependence that is not intelligible or explicable in any possible physics, dependence that must be unintelligible and inexplicable even to God, as it were.
(Strawson 1994:69)

I wouldn’t put it this way now. The notions of explicability and intelligibility are in origin epistemological, and are potentially misleading, because the present claim is not epistemological. It is not, for example, touched by the reply that there is a sense in which all *causal* dependence relations, at least, are ultimately unintelligible to us, even those that seem most intuitively understandable. For although there is a sense in which this is true, in as much all our explanations of concrete phenomena come

22. Here, then, I reject the commonly embraced but little examined and seemingly wholly mystical notion of emergence that van Gulick (2001) calls “Radical Kind Emergence” and defines as follows: “the whole has features that are both (a) different in kind from those had by the parts, and (b) of a kind whose nature is not necessitated by the features of its parts, their mode of combination and the law-like regularities governing the features of its parts.” (Liquidity, in van Gulick’s scheme, is by contrast a case of ‘Modest Kind Emergence’: it is simply that “the whole has features that are different in kind from those of its parts (or alternatively that could be had by its parts). For example, a piece of cloth might be purple in hue even though none of the molecules that make up its surface could be said to be purple.”) Some hold out for mystico-magical emergence by saying that liquidity is only a resultant phenomenon, not truly emergent, a truly emergent phenomenon being precisely one that does not perspicuously ‘reduce’ to what it emerges from in the way that the liquid phenomena reduce to non-liquid phenomena. Mystery, however, should be used sparingly. It should not be used to try to solve a problem of reconcilability that turns out on close examination not to exist.

to an end in things that are simply given, contingent, not further explicable, it has no bearing here. ‘Intelligible to God’ isn’t really an epistemological notion at all, it’s just a way of expressing the idea that there must be something about the nature of the emerged-from (and nothing else) in virtue of which the emerger emerges as it does and is what it is.

You can get liquidity from non-liquid molecules as easily as you can get a cricket team from eleven things that are not cricket teams. In God’s physics, it would have to be just as plain how you get experiential phenomena from wholly non-experiential phenomena. But this is what boggles the human mind. We have, once again, no difficulty with the idea that liquid phenomena (which are wholly P phenomena) are emergent properties of wholly non-liquid phenomena (which are wholly P phenomena). But when we return to the case of experience, and look for an analogy of the right size or momentousness, as it were, it seems that we can’t make do with things like liquidity, where we move wholly within a completely conceptually homogeneous (non-heterogeneous) set of notions. We need an analogy on a wholly different scale if we are to get any imaginative grip on the supposed move from the non-experiential to the experiential.

What might be an analogy of the right size? Suppose someone – I will call him pseudo-Boscovich, at the risk of offending historians of science – proposes that all ultimates, all real, concrete ultimates, are, in truth, wholly unextended entities: that this is the truth about their being; that there is *no* sense in which they themselves are extended; that they are real concrete entities, but are none the less true-mathematical-point entities. And suppose pseudo-Boscovich goes on to say that when collections of these entities stand in certain (real, concrete, natural) relations, they give rise to or constitute truly, genuinely extended concrete entities; real, concrete extension being in this sense an *emergent property* of phenomena that are, although by hypothesis real and concrete, wholly unextended.

Well, I think this suggestion should be rejected as absurd. But the suggestion that when non-experiential phenomena stand in certain (real, natural, concrete non-experiential) relations they *ipso facto* instantiate or constitute experiential phenomena, experience being an emergent property of wholly and utterly non-experiential phenomena, seems exactly on a par. That’s why I offer unextended-to-extended emergence as an analogy, a destructive analogy that proposes something impossible and thereby challenges the possibility of the thing it is offered as an analogy for. You can (to use the letter favoured by the German idealists when stating or rejecting the law of non-contradiction) get A from non-A for some substitutions for A, such as liquidity, but not all.

– My poor friend. The idea that collections of concrete entities that are truly, genuinely unextended can give rise to or constitute concrete entities that are truly, genuinely extended is actually scientific orthodoxy, on one widely received view of what ultimates are. It’s an excellent candidate for being an analogy of the right size.

But this won’t do. It won’t do when one is being metaphysically straight, not *metaphysically* instrumentalist, or positivist, or operationalist, or phenomenalist, or radical-empiricist, or verificationist, or neo-verificationist or otherwise anti-realist or Protagorean (alas for the twentieth century, in which all these epistemological notions somehow got metaphysicalized). If one is being metaphysically straight, the intuition that nothing (concrete, spatio-temporal) can exist at a mathematical point, because there just isn’t any room, is rock solid.²³ It may be added that anything that has, or is well understood as, a field, or that has any sort of attractive or repulsive being or energy, or any area of influence or influencability, *ipso facto* has extension – extension is part of its being – and that although there are plenty of ultimates that have no charge in what physicists call ‘the standard model,’ there are I believe none that are not associated with a field.²⁴ So if the idea of unextended-to-extended emergence is offered as an analogy for non-experiential-to-experiential emergence, it can’t help.

I’ll take this a little further. Suppose someone proposes that there are real, concrete, intrinsically, irreducibly and wholly *non-spatial* phenomena (‘wholly non-S phenomena’), and that when they stand in certain wholly non-spatial relations they give rise to or constitute real, concrete, intrinsically and irreducibly spatial phenomena, (‘S phenomena’), these being emergent features of wholly non-S phenomena. Those who claim to find no difficulty in the idea that genuinely unextended concrete entities can give rise to or constitute genuinely extended concrete entities may like to consider this case separately, because they presumably take it that their putative mathematical-point entities are at least spatial entities, at least in the sense of being spatially located. My hope is that even if they think they can make sense of the emergence of the extended from the unextended, they won’t think this about the more radical case of the emergence of the spatial from the non-spatial.

But what do I know about this? Almost nothing. With this kind of speculation “we are got into fairy land,” as Hume says, or rather I am, and any impossibility claim on my part, or indeed anyone else’s, may seem rash.²⁵ And some may now propose that the ‘Big Bang’ is precisely a case in which S phenomena are indeed emergent features of wholly non-S phenomena.

23. Do not be cowed by physicists or philosophers of physics. It seems intuitively obvious, by the grace of mathematics, that to introduce real, concrete entities that are infinitely small and therefore metaphysically impossible into one’s theory will lead to infinite largenesses popping up in protest elsewhere in one’s equations. And so it came to pass.

24. As I understand it, every particle in the standard model feels a force, even the photon (i.e. photon-photon forces, mediated by – virtual – pair creation/annihilation processes for the sources of the photon). This sort of point no longer seems required, however, in string theory (M-theory or brane-theory), given that all the ultimates of M-theory have extension.

25. Hume (1748:72). It is quite plain, in any case, that people can think (or think they think) anything.

Don't believe it, I say, falling back on the *argumentum a visceris*. S phenomena, i.e. real, concrete, intrinsically and irreducibly spatial phenomena (bear in mind that we are seeking an analogy for experiential phenomena that we know to be real, concrete, intrinsically and irreducibly experiential) *can't* be emergent properties of wholly non-S phenomena. This is a case where you can't get A from non-A. The spatial/non-spatial case may look like an analogy of the right size for the experiential/non-experiential case, but all it turns up, I suggest, is impossibility. If there is any sense in which S phenomena can be said to emerge from wholly non-S phenomena, then they must fall back into the category of mere appearance, and they are then (by definition, see above) not S phenomena at all. Experiential phenomena, however, cannot do this. They cannot be mere appearance, if only because all appearance depends on their existence.²⁶ If it were to turn out that real S phenomena can after all emerge from wholly non-S phenomena, all that would follow would be that the spatial case did not after all constitute an analogy of the right size. The experiential/non-experiential divide, assuming that it exists at all, is the most fundamental divide in nature (the only way it can fail to exist is for there to be nothing non-experiential in nature).²⁷

The claim, at least, is plain, and I'll repeat it. If it really is true that Y is emergent from X then it must be the case that Y is in some sense wholly dependent on X and X alone, so that all features of Y trace intelligibly back to X (where 'intelligible' is a metaphysical rather than an epistemic notion). *Emergence can't be brute*. It is built into the heart of the notion of emergence that emergence cannot be brute in the sense of there being absolutely no reason in the nature of things why the emerging thing is as it is (so that it is unintelligible even to God). For any feature Y of anything that is correctly considered to be emergent from X, there must be something about X and X alone in virtue of which Y emerges, and which is sufficient for Y.

I'm prepared to allow for argument that an ultimate's possession of its fundamental properties could be brute in the sense of there being no reason for it in the nature of things, so long as it is agreed that *emergence* cannot be brute. One problem is that brute emergence is by definition a miracle every time it occurs, for it is true by hypothesis that in brute emergence there is absolutely nothing about X, the emerged-from, in virtue of which Y, the emerger, emerges from it. And this means that it is also a contradiction in terms, given the standard assumption that the emergence of Y from X entails the 'supervenience' of Y on X,²⁸ because it then turns out to be a strictly lawlike

26. See Footnote 6. One current view of the 'Big Bang' is that it occurred everywhere in an already existing infinite space.

27. The viscera are not unsophisticated organs. They can refuse the getting of A from non-A for some substitutions for A even while they have no difficulty with the strangest quantum strangenesses (see e.g. Strawson 2003a:65).

28. The supervenience thesis states that if Y is supervenient on X then whenever you have a X-type phenomenon you must also have an Y-type phenomenon.

miracle. But a miracle is by definition a violation of a law of nature!²⁹ If someone says he chooses to use the word 'emergence' in such a way that the notion of brute emergence is not incoherent, I will know that he is a member of the Humpty Dumpty army and be very careful with him.

How did the notion of brute emergence ever gain currency? By one of the most lethal processes of theory formation, or term formation, that there is. The notion of brute emergence marks a position that seemingly has to exist if one accepts both RP (or, more simply, the reality of experience) and NE. And since many are irredeemably committed to both RP and NE, the notion of brute emergence comes to feel substantial to them by a kind of reflected, holographical energy. It has to be there, given these unquestioned premisses, so it is felt to be real. The whole process is underwritten by the wild radical-empiricism-inspired metaphysical irresponsibilities of the twentieth century that still linger on (to put it mildly) today and have led many, via a gross misunderstanding of Hume, to think that there is nothing intrinsic to a cause in virtue of which it has the effect it does.³⁰

I'll say it again. For Y truly to emerge from X is for Y to arise from or out of X or be given in or with Y given how X is. Y must arise out of or be given in X in some essentially non-arbitrary and indeed wholly non-arbitrary way. X has to have something – indeed everything – to do with it. That's what emerging is (that's how liquidity arises out of non-liquid phenomena). It is essentially an in-virtue-of relation. It cannot be brute. Otherwise it will be intelligible to suppose that existence can emerge from (come out of, develop out of) non-existence, or even that concrete phenomena can emerge from wholly abstract phenomena. Brutality rules out nothing.³¹ If emergence can be brute, then it is fully intelligible to suppose that non-physical soul-stuff can arise out of

29. This is Hume's definition of a miracle (I'm assuming that there is no *deus ex machina*). It is often said that this definition requires an absolute, non-statistical notion of a law of nature, but this is not so (see Mackie 1982, Chapter 4).

30. Here I make the common assumption that it is legitimate to segment the world into causes and effects. Hume's wholly correct, strictly epistemological claim – that so far as we consider things *a priori* 'any thing may produce any thing' – came to be read as the metaphysical claim that anything may produce anything. For a discussion of this error see e.g. Craig (1987), Chapter 2; Strawson (2000). It is worth noting that the epistemological restriction is usually explicitly stated in Hume's *Treatise*, in spite of his youthful liking for dramatic abbreviation: "I have infer'd from these principles, that *to consider the matter a priori*, any thing may produce any thing, and that we shall never discover a reason, why any object may or may not be the cause of any other, however great, or however little the resemblance may be betwixt them" (*Treatise*, p. 247); "*for ought we can determine by the mere ideas*, any thing may be the cause or effect of any thing" (pp. 249–250; my emphasis). Brute emergence does indeed license the non-Humean, ontological version of 'any thing may produce any thing.'

31. Even if a universe could just come into existence when nothing existed, it certainly couldn't emerge from non-existence in the relevant sense of 'emerge.' *Ex nihilo nihil fit*, whatever anyone says (Nobel Prize winners included).

physical stuff – in which case we can't rule out the possibility of Cartesian egos *even if we are physicalists*. I'm not even sure we can rule out the possibility of a negative number emerging from the addition of certain positive numbers. We will certainly have to view with equanimity all violations of existing laws of (non-experiential) physics, dross turning adventitiously into gold, particles decaying into other particles whose joint charge differs from that of the original particle.

Returning to the case of experience, Occam cuts in again, with truly devastating effect. Given the undeniable reality of experience, he says, why on earth (our current location) commit oneself to NE? Why insist that physical stuff in itself, in its basic nature, is essentially non-experiential, thereby taking on

- a. a commitment to something – wholly and essentially non-experiential stuff – for which there is *absolutely no evidence whatever*

along with

- b. the wholly unnecessary (and incoherent) burden of brute emergence

otherwise known as magic? That, in Eddington's terms, is silly.

– What about the emergence of life? A hundred years ago it seemed obvious to many so-called 'vitalists' that *life* could not emerge from utterly lifeless matter (from P phenomena), just as it seems obvious to you now that *experience* could not emerge from utterly non-experiential matter (from P phenomena). Today, however, no one seriously doubts that life emerged from matter that involved no life at all. The problem of life, that seemed insuperable, simply dissolved. Why should it not be the same with consciousness, a hundred years from now?

This very tired objection is always made in discussions of this sort, and the first thing to note is that one cannot draw a parallel between the perceived problem of life and the perceived problem of experience in this way, arguing that the second problem will dissolve just as the first did, unless one considers life completely apart from experience. So let us call life considered completely apart from experience 'life*'. My reply is then brief. Life* reduces, experience doesn't. Take away experience from life and it (life*) reduces smoothly to P phenomena. Our theory of the basic mechanisms of life reduces to physics via chemistry. Suppose we have a machine that can duplicate any object by a process of rapid atom-by-atom assembly, and we duplicate a child. We can explain its life* functions in exquisite detail in the terms of current sciences of physics, chemistry and biology. We cannot explain its experience at all in these terms.

One of the odd things about the supposed problem of life* is that although it was very popular at the end of the nineteenth century it would not have been thought very impressive in the seventeenth and eighteenth centuries. The problem of *experience* seemed as acute then as it does today, but many found little difficulty in the idea that animals including human beings were – except insofar as they had experience –

simply physical machines.³² It may be added that many were quite unmoved by the problem of life* even when it was at the height of its popularity, but found the problem of experience as acute as their seventeenth- and eighteenth-century predecessors and twentieth- and twenty-first century successors.³³

4. 'Proto-experiential'

Some may insist again that they find nothing intolerable in the idea that S phenomena can be emergent properties of something wholly non-S, and they may add that they feel the same about the experiential emerging from the wholly non-experiential.

What should one do? Encourage them, first, to see – to allow – that if (spatial) S phenomena can be emergent properties of wholly non-S phenomena then the stuff emerged-from, the non-spatial whatever-it-is, must at the very least be somehow *intrinsically suited* to constituting spatial phenomena, on their view; it must be 'proto-spatial' in that sense.

– Quite so. And exactly the same may be true of experiential phenomena. Experiential phenomena can indeed emerge from wholly and utterly non-experiential phenomena. This is possible because these non-experiential phenomena are intrinsically suited to constituting experiential phenomena in certain circumstances, and are 'proto-experiential' in that sense, although ultimately non-experiential in themselves.

This doesn't escape the problem, it simply changes the terms. 'Proto-experiential' now means 'intrinsically suited to constituting certain sorts of experiential phenomena in certain circumstances,' and clearly – necessarily – for X to be intrinsically suited to or for constituting Y in certain circumstances is for there to be something about X's nature *in virtue of which* X is so suited.³⁴ If there is no such in-virtue-of-ness, no such intrinsic suitability, then any supposed emergence is left brute, in which case it is not emergence at all, it is magic, and everything is permitted, including, presumably, the emergence of the (ontological) concrete from the (ontological) abstract. If on the other hand there is such intrinsic suitability, as there must be if there is to be emergence, how

32. Many also took it that experience, too, was just a physical phenomenon, although we could not understand how. Joseph Priestley made the point that we know nothing about the physical that gives us reason to think that the experiential is not physical with its full force in 1777; Locke had already made it, somewhat circumspectly, in the 1690s; as had Regius in 1648.

33. See e.g. James (1890), and references there.

34. It is not clear what the import of the phrase 'in certain circumstances' is, but the circumstances must presumably themselves be wholly non-spatial and non-experiential, and they cannot in any case make any contribution to the spatiality or the experientiality if it is to emerge wholly and only from the wholly non-spatial and non-experiential phenomena that are being taken to be distinct from the circumstances in which they find themselves.

can this be possessed by wholly, utterly, through-and-through non-experiential phenomena? (This is the unargued intuition again. Bear in mind that the intuition that the non-experiential could not emerge from the wholly experiential is exactly parallel and unargued.) If you take the word 'proto-experiential' to mean 'not actually experiential, but just what is needed for experience,' then the gap is unbridged.³⁵ If you take it to mean 'already intrinsically (occurently) experiential, although very different, qualitatively, from the experience whose realizing ground we are supposing it be,' you have conceded the fundamental point.

– You're waving your arms around. H₂O molecules are, precisely, 'proto-liquid,' and are at the same time, in themselves, wholly and utterly non-liquid.

To offer the liquidity analogy is to see its inadequacy. Liquidity is a P phenomenon that reduces without remainder to other P phenomena. Analysed in terms of P properties, liquid bodies of water and H₂O molecules have exactly the same sorts of properties, and they are made of exactly the same stuff (ultimates). This is not the case when it comes to experiential phenomena and non-experiential phenomena, for it is built into our starting point, set by NE, that they do not have the same sorts of properties at all in this sense. The analogy is not of the right size or kind. What we need, to put it now in terms of P properties, is, precisely, an analogy that could give us some idea of how (natural, intrinsic, non-conventional) non-P properties could emerge from P properties – and of how things with only P properties could be proto-non-P phenomena.³⁶

It may be said that the analogy can still help indirectly by pointing to a version of what is sometimes called 'neutral monism.' The central idea of neutral monism is that there is a fundamental, correct way of conceiving things – let us say that it involves

35. Compare Chalmers's (1996) use of 'protophenomenal.' Chalmers is a realist about experience but he gives central place to an idea that rules out real physicalism; the idea that there could be creatures that have no experiential properties although they are 'perfect physical duplicates' of experiencing human beings. These creatures, *Australian zombies*, have done a lot of damage in recent discussion, blotting out classical philosophical zombies, who are outwardly and behaviourally indistinguishable from human beings but with unknown and possibly non-biological insides. Chalmers holds that Australian zombies are a real possibility, but this is not something that can be shown, if only because there is a great deal we do not know about the physical, and it is fabulously implausible to suppose that an atom-for-atom, state-for-state duplicate of an experiencing human being could be produced and not have experience (note that one cannot produce an atom-for-atom, state-for-state duplicate of one of us while varying the laws of nature).

36. Objections to (a) standard physicalism and (b) the rejection of radical emergence sometimes advert to the fact that conventional phenomena – phenomena essentially involving conventions – may plausibly be said to arise from wholly and utterly non-conventional phenomena. There is, however, no difficulty in the idea that all concretely existing conventional phenomena are wholly physical phenomena, and the emergence of conventional phenomena from non-conventional phenomena is easily explicable in general terms by real physicalism, which acknowledges, of course, the existence of experiential phenomena.

conceiving of them in terms of 'Z' properties – given which all concrete phenomena, experiential and non-experiential, are on a par in all being equally Z phenomena. They are on a par in just the same way as the way in which, according to NE physicalism, all concrete phenomena are on a par in being P phenomena. The claim is then that if one duly conceives all concrete phenomena as Z phenomena, thereby acknowledging their fundamental uniformity, (i) the emergence of experiential phenomena from non-experiential phenomena is as unsurprising as (ii) the emergence of liquid phenomena from non-liquid phenomena is when one conceives things in terms of P phenomena. For both non-experiential P phenomena and experiential phenomena are Z phenomena, so really all we find is the emergence of Z phenomena from Z phenomena.

This proposal, however, merely confirms the current position. For what we do, when we give a satisfactory account of how liquidity emerges from non-liquidity, is show that there aren't really any new properties involved at all. Carrying this over to the experiential case, we get the claim that what happens, when experientiality emerges from non-experientiality, is that there aren't really any new properties involved at all. This, however, means that there were experiential properties all along; which is, precisely, the present claim. One cannot oppose it by appealing to 'neutral monism' in any version that holds that really only the Z properties are ultimately real, if this involves the view that experiential and non-experiential properties are at bottom only appearances or seemings. Such a view is incoherent, because experience – appearance, if you like – cannot itself be only appearance, i.e. not really real, because there must be experience for there to be appearance (see Footnote 6).

Some may reject 'intrinsically suited to *constituting* Y' as a gloss on 'proto-X.' In place of 'constituting' they may want to substitute 'giving rise to' or 'producing'; and this may for a moment seem to open up some great new leeway for the idea of radical emergence. The idea will be that X remains *in itself* wholly and utterly non-experiential, but *gives rise to* something wholly ontologically distinct from itself, i.e. Y. But real physicalists can't make this substitution. For everything real and concrete is physical, on their view, and experiential phenomena are real and concrete, on their view, and none of them will I think want to throw away the conservation principles and say that brand new physical stuff (mass/energy) is produced or given rise to when experiences are emergent from the non-experiential, i.e. all the time, as we and other animals live our lives. That is magic again, and I am assured that nothing like this happens with liquidity and Bénard convection cells.

Quite independently of these examples, and the laws of physics, the relevant meta-physical notion of emergence is I think *essentially* conservative in the sense of the conservation principles.

5. Micropsychism

I have been trying to see what can be done for those who want to combine NE and RP and (therefore) hold that the experiential may emerge from the wholly and utterly non-experiential. I looked for other examples of emergence, in case they could help us understand the possibility, at least, of such a thing, but examples like liquidity seemed wholly inadequate, not the right size. I then looked for cases of emergence that promised to be of the right size, but they seemed to describe impossibilities and so backfire, suggesting that there really could not be any such thing as radical non-experiential-to-experiential emergence.

That is what I believe: experiential phenomena cannot be emergent from wholly non-experiential phenomena. The intuition that drives people to dualism (and eliminativism, and all other crazy attempts at wholesale mental-to-non-mental reduction) is correct in holding that you can't get experiential phenomena from P phenomena, i.e. shape-size-mass-charge-etc. phenomena, or, more carefully now – for we can no longer assume that P phenomena as defined really are wholly non-experiential phenomena – from *non-experiential* features of shape-size-mass-charge-etc. phenomena. So if experience like ours (or mouse experience, or sea snail experience) emerges from something that is not experience like ours (or mouse experience, or sea snail experience), then that something must already be experiential in some sense or other. It must already be somehow experiential in its essential and fundamental nature, however primitively or strangely or (to us) incomprehensibly; whether or not it is also non-experiential in its essential nature, as conventional physicalism supposes.

Assuming, then, that there is a plurality of physical ultimates, some of them at least must be intrinsically experiential, intrinsically experience-involving. Otherwise we're back at brutality, magic passage across the experiential/non-experiential divide, something that, *ex hypothesi*, not even God can understand, something for which there is no reason at all as a matter of ultimate metaphysical fact, something that is, therefore, objectively a matter of pure chance every time it occurs, although it is at the same time perfectly lawlike.³⁷

I conclude that real physicalists must give up NE.³⁸ Real physicalists must accept that at least some ultimates are intrinsically experience-involving.³⁹ They must at least embrace *micropsychism*. Given that everything concrete is physical, and that everything physical is constituted out of physical ultimates, and that experience is part of concrete

37. Note again that this is not a version of the merely epistemological point that all concrete connection (e.g. causal connection) is ultimately unintelligible to us (ultimately 'epistemologically brute' for us).

38. Part of being realistic, evidently, is that one does not treat experience as objectively miraculous every time it occurs.

39. The most ingenious attempt to get round this that I know of is Broad's – see Broad (1925), Chapter 14; and McLaughlin (1992) – but it does not, in the end, work.

reality, it seems the only reasonable position, more than just an 'inference to the best explanation.' Which is not to say it is easy to accept in the current intellectual climate.

Micropsychism is not yet panpsychism, for as things stand realistic physicalists can conjecture that only some types of ultimates are intrinsically experiential.⁴⁰ But they must allow that panpsychism may be true, and the big step has already been taken with micropsychism, the admission that at least some ultimates must be experiential. 'And were the inmost essence of things laid open to us'⁴¹ I think that the idea that some but not all physical ultimates are experiential might look like the idea that some but not all physical ultimates are spatio-temporal (on the assumption that spacetime is indeed a fundamental feature of reality). I would bet a lot against there being such radical heterogeneity at the very bottom of things. In fact (to disagree with my earlier self (Strawson 1994: 77)) it is hard to see why this view would not count as a form of dualism. So I'm going to assume, for the rest of this article at least, that micropsychism is panpsychism.

So now I can say that physicalism, i.e. real physicalism, entails panexperientialism or panpsychism. It entails panpsychism given the impossibility of 'radical' emergence. All physical stuff is energy, in one form or another, and all energy, I trow, is an experience-involving phenomenon. This sounded crazy to me for a long time, but I am quite used to it now that I know that there is no alternative short of 'substance dualism,' a view for which (as Arnauld saw) there has never been any good argument. Real physicalism, realistic physicalism, entails panpsychism, and whatever problems are raised by this fact are problems a real physicalist must face.

They seem very large, these problems (so long as we hold on to the view that there is indeed non-experiential reality). To begin with, 'experience is impossible without an experiencer,' a subject of experience.⁴² So we have, with Leibniz, and right at the start, a rather large number of subjects of experience on our hands – if, that is, there are as many ultimates as we ordinarily suppose. I believe that this is not, in fact, a serious problem, however many ultimates there are,⁴³ but we will also need to apply our minds to the question whether the class of subjects of experience contains only ultimates, on the one hand, and things like ourselves and other whole animals, on the other hand, or whether there are other subjects in between, such as living cells. Panpsychism certainly does not require one to hold the view that things like stones and tables are subjects of

40. They may for example propose (after assuming that the notion of charge has application to ultimates) that only those with electric charge are intrinsically experiential.

41. Echoing Philo, who speaks for Hume in his *Dialogues*: "And were the inmost essence of things laid open to us, we should then discover a scene, of which, at present, we can have no idea. Instead of admiring the order of natural beings, we should clearly see, that it was absolutely impossible for them, in the smallest article, ever to admit of any other disposition" (Hume 1779: 174–175).

42. Frege (1918:27). No sensible Buddhist rejects such a claim, properly understood.

43. For reasons I lay out in Strawson (2003b).

experience – I don't believe this for a moment, and it receives no support from the current line of thought – but we will need to address William James's famous objection to the idea that many subjects of experience can somehow constitute a single 'larger' subject of experience.⁴⁴ In general, we will have to wonder how macroexperientiality arises from microexperientiality, where by microexperientiality I mean the experientiality of ultimates relative to which all evolved experientiality is macroexperientiality.⁴⁵

We also have to wonder how the solution to the 'problem of mental causation' is going to drop out of all this. We know, though, that different arrangements of a few types of fundamental ultimates give rise to entities (everything in the universe) whose *non*-experiential properties seem remarkably different from the non-experiential properties of those fundamental ultimates, and we have no good reason not to expect the same to hold true on the experiential side. It may be added that there is no more difficulty in the idea that the experiential quality of microexperientiality is unimaginable by us than there is in the idea that there may exist sensory modalities (qualitatively) unimaginable by us.

It is at this point, when we consider the difference between macroexperiential and microexperiential phenomena, that the notion of emergence begins to recover some respectability in its application to the case of experience. For it seems that we can now embrace the analogy with liquidity after all, whose pedagogic value previously seemed to lie precisely in its inadequacy. For we can take it that human or sea snail experientiality emerges from experientiality that is not of the human or sea snail type, just as the shape-size-mass-charge-etc. phenomenon of liquidity emerges from shape-size-

44. James (1890), Vol. 1, Chapter 6. The following fine passage precedes his statement of the objection: "We need to try every possible mode of conceiving the dawn of consciousness so that it may not appear equivalent to the irruption into the universe of a new nature, non-existent until then. Merely to call the consciousness 'nascent' will not serve our turn. It is true that the word signifies not yet quite born, and so seems to form a sort of bridge between existence and nonentity. But that is a verbal quibble. The fact is that discontinuity comes in if a new nature comes in at all. The quantity of the latter is quite immaterial. The girl in 'Midshipman Easy' could not excuse the illegitimacy of her child by saying, 'it was a very small one.' And Consciousness, however small, is an illegitimate birth in any philosophy that starts without it, and yet professes to explain all facts by continuous evolution. If evolution is to work smoothly, consciousness in some shape must have been present at the very origin of things. Accordingly we find that the more clear-sighted evolutionary philosophers are beginning to posit it there. Each atom of the nebula, they suppose, must have had an aboriginal atom of consciousness linked with it; and, just as the material atoms have formed bodies and brains by massing themselves together, so the mental atoms, by an analogous process of aggregation, have fused into those larger consciousnesses which we know in ourselves and suppose to exist in our fellow-animals" (1890, Vol. 1, pp. 148–149).

45. As Nick White reminded me, we certainly don't have to suppose that microexperientiality is somehow weak or thin or blurry (this is perhaps how some people imagine the most primitive Leibnizian monads). It can be as vivid as an experience of bright red or an electric shock (both of which are 'confused' and 'indistinct' in Leibniz's terms). Compare Rosenberg (2004), Chapter 5.

mass-charge-etc. phenomena that do not involve liquidity. Human experience or sea snail experience (if any) is an emergent property of structures of ultimates whose individual experientiality no more resembles human or sea snail experientiality than an electron resembles a molecule, a neuron, a brain, or a human being. Once upon a time there was relatively unorganized matter, with both experiential and non-experiential fundamental features. It organized into increasingly complex forms, both experiential and non-experiential, by many processes including evolution by natural selection. And just as there was spectacular enlargement and fine-tuning of non-experiential forms (the bodies of living things), so too there was spectacular enlargement and fine-tuning of experiential forms.⁴⁶

This is not to advance our detailed understanding in any way. Nor is it to say that we can ever hope to achieve, in the experiential case, the sort of feeling of understanding that we achieve in the liquid case.⁴⁷ The present proposal is made at very high level of generality (which is not a virtue); it merely recommends a general framework of thought in which there need be no more sense of a radically unintelligible transition in the case of experientiality than there is in the case of liquidity. It has nothing to offer to scientific test.

One can I think do further work on this general framework, by working on one's general metaphysics. The object/process/property/state/event cluster of distinctions is unexceptionable in everyday life but it is hopelessly superficial from the point of view of science and metaphysics, and one needs to acquire a vivid sense that this is so. One needs a vivid sense of the respect in which (given the spatio-temporal framework) every object is a process; one needs to abandon the idea that there is any sharp or categorical distinction between an object and its propertiedness.⁴⁸ One needs to grasp fully the point that 'property dualism,' applied to intrinsic, non-relational properties, is strictly incoherent (or just a way of saying that there are two very different kinds of properties) insofar as it purports to be genuinely distinct from substance dualism, because there is nothing more to a thing's being than its intrinsic, non-relational propertiedness.

We are as inescapably committed to the discursive, subject-predicate form of experience as we are to the spatio-temporal form of experience, but the principal and unmistakable lesson of the endlessness of the debate about the relation between objects and their propertiedness is that discursive thought is not adequate to the nature

46. The heart of experience, perhaps, is electromagnetism in some or all its forms, electromagnetism in all its forms being one expression of some single force whose being is intrinsically experiential, whatever else it is or is not. (Unfortunately, I do not foresee any kind of scientific research programme.)

47. Feelings of understanding are just that; they are essentially subjective things with no metaphysical consequences.

48. See e.g. Strawson (2008c), following Nagarjuna, Nietzsche, James, Ramsey, and many others.

of reality: we can see that it doesn't get things right although we can't help persisting with it. There is in the nature of the case a limited amount that we can do with such insights, for they are, precisely, insights into how our understanding falls short of reality, but their general lesson – that the nature of reality is in fundamental respects beyond our grasp – needs always to be borne in mind.

I have argued that there are limits on how different X and Y can be (can be intelligibly supposed to be) if it is true that Y emerges from X. You can get A from non-A for some substitutions for A but not all. The extended, I have proposed, can't emerge from the intrinsically wholly non-extended (except on pain of being a mere appearance and so not really real). The spatial can't emerge from the intrinsically wholly non-spatial (except on the same pain). The experiential can't emerge from the intrinsically wholly non-experiential, and it doesn't have the option of being a mere appearance. You can make chalk from cheese, or water from wine, because if you go down to the subatomic level they are both the same stuff, but you can't make experience from something wholly non-experiential. You might as well suppose – to say it once again – that the (ontologically) concrete can emerge from the (ontologically) abstract.⁴⁹ I admit I have nothing more to say if you question this 'can't,' but I have some extremely powerful indirect support from Occam's razor and Eddington's notion of silliness.

I finish up, indeed, in the same position as Eddington. "To put the conclusion crudely," he says, "the stuff of the world is mind-stuff" – something whose nature is "not altogether foreign to the feelings in our consciousness." "Having granted this," he continues,

the mental activity of the part of the world constituting ourselves *occasions no surprise*; it is known to us by direct self-knowledge, and we do not explain it away as something other than we know it to be – or, rather, it knows itself to be. It is the physical aspects (i.e. non-mental aspects) of the world that we have to explain.⁵⁰

Something along these general panpsychist – or at least micropsychist – lines seems to me to be the most parsimonious, plausible and indeed 'hard-nosed' position that any physicalist who is remotely realistic about the nature of reality can take up in the present state of our knowledge.

49. Objection: the comparison is false because the experiential and the non-experiential are two categories within the concrete. Reply: the concrete and the abstract are two categories within the real.

50. Eddington (1928:276–277). 'Mind-stuff' is William James's term: "The theory of 'mind-stuff' is the theory that our mental states... are composite in structure, made up of smaller [mental] states conjoined. This hypothesis has outward advantages which make it almost irresistibly attractive to the intellect, and yet it is inwardly quite unintelligible" (James (1980), Vol. 1, p. 145).

Appendix

On the Sesmet Theory of Subjectivity*

[The following is adapted from Strawson's response to critics, "Panpsychism? Reply to Commentators with a Celebration of Descartes," which was first published in *Journal of Consciousness Studies*, 13, 10–11 (2006). Here he elaborates on his conception of subjects of experience as 'thin subjects' or 'sesmets.' It is important in the present context as a positive theory of mind that accepts panpsychism. – DS.]

1. What are the prospects for *pure* panpsychism, the view that all being is experiential being? What are the prospects for realistic, naturalistic pure panpsychism?⁵¹ Let me say first that I make no distinction between panpsychism and panexperientialism, because the word 'panpsychism' doesn't have any implications that the word 'panexperientialism' doesn't also have. 'Psyche' was a mass term before it was a count noun, and 'panpsychism' doesn't in itself imply that there are subjects of experience in addition to experiential reality, or indeed that everything that exists involves the existence of a subject of experience in addition to the existence of experiential reality.

It wouldn't matter if 'panpsychism' did carry this implication, though, because it is as Shoemaker says "an obvious conceptual truth that an experiencing is necessarily an experiencing by a subject of experience, and involves that subject as intimately as a branch-bending involves a branch" (1986:10). There can't be experience without a subject of experience simply because experience is necessarily experience *for* – for someone-or-something. Experience necessarily involves experiential 'what-it-is-likeness,' and experiential what-it-is-likeness is necessarily what-it-is-likeness *for* someone-or-something. Whatever the correct account of the nature of this experiencing something, its existence cannot be denied. "An experience is impossible without an experiencer," in Frege's words (1918:27). To understand this claim in the sense in which it is intended is to see that it is true.⁵² Let no one think that Hume thought otherwise. His target in his discussion of personal identity is certainly not this view, which is after all a necessary truth. It is, as he clearly says, the view, standard in his

* I thank Sam Coleman and David Skrbina for their comments.

51. As on p. 33, I take the first principle of genuine naturalism to be the full acknowledgment of the reality of experience, i.e. conscious experience. The existence of experience is the fundamental natural fact.

52. The claim is in fact analytic, if not obviously so, for to understand what experience is is to understand that it is essentially experience-*for*, in the intended sense. Note that I take 'experience' to cover cognitive phenomenology as well as sensory phenomenology: to cover not just sensory episodes but all conscious mental goings on, including the most abstract conscious thoughts (see Strawson 1994:§1.4; Strawson 2009:§2.6).

time, that the self or subject is something that has “perfect identity and simplicity” and that “continue[s] invariably the same, through the whole course of our lives” (1739–40: 251).

To say that an experience is impossible without an experiencer is not to commit oneself to any particular view about the ultimate ontological category of the necessarily existing subject. It is not (for example) to commit oneself to the idea that it must be an individual substance in any sense of the word ‘substance’ according to which a substance is understood to be something that stands in fundamental ontological contrast with a property. One can be certain that an experience is impossible without an experiencer while knowing nothing more than Descartes knows in his *Second Meditation* when he says “I know that I exist; the question is, what is this ‘I’ that I know?” (1641: 18). Descartes stresses the point that he is at this stage entirely uncommitted on the question of the ontological nature of what gets referred to when he says ‘I’; he is not ruling out the possibility that it is a “thin vapour which permeates the limbs – a wind, fire, air, breath,” or his body.

Kant makes a related move in the Paralogisms sections of the *Critique of Pure Reason* (using for this purpose the terms of the conventional substance/property distinction). One knows that one exists, he says, but it is “quite impossible” for one, given one’s self-conscious experience of oneself as a mental phenomenon, “to determine the manner in which [one] exist[s], whether it be as substance or as accident” (1781–7: B420, my emphasis). Certainly “the I who thinks or is conscious must *in such thought or consciousness* always be *considered* as a *subject*, and as something that does not merely attach to thought or consciousness like a predicate” (1781–7: B407, first two emphases mine),⁵³ but – this is Kant’s point – nothing follows from this about how things actually are metaphysically. We can acknowledge the certainty of the existence of the subject, the experiencing ‘someone-or-something,’ while remaining wholly metaphysically neutral as to its ultimate ontological category.

Nothing in Buddhism conflicts with this point when it is understood as it is here (the notion of a subject carries no implication of long-term persistence). If someone agrees that there is necessarily *subjectivity* when there is experience, but not that there is necessarily a *subject of experience*, we have a merely terminological disagreement. For (with Kant and the Descartes of the *Second Meditation*) I understand the word ‘subject’ in a maximally metaphysically neutral way given which the existence of subjectivity entails the existence of a subject.⁵⁴ Isn’t it misleading to make the ‘experience entails an experiencer’ point using nouns like ‘experiencer,’ ‘subject of experience,’ or ‘someone-or-something?’ Doesn’t it imply that objects or substances are in question? Well, I’ve just explicitly cancelled any such implication (while not ruling out that it might in the end be right).

53. Note that Kemp Smith and Guyer and Wood translate this incorrectly.

54. This is part of the explanation of why Lichtenberg’s famous objection to Descartes is no good.

2. It is plain to most philosophers that there can’t possibly be experience – experiencing, experiential reality, experiential being (I use these terms interchangeably) – without a subject of experience. What is less plain, or less remarked on, is that there is an important use of the term ‘subject of experience’ given which the converse is also true. There are two common conceptions of what a subject of experience is. First,

- a. the *thick* conception according to which it is only human beings and other animals *considered as a whole* that are properly said to be subjects of experience.

Second,

- b. the *traditional* conception of the subject, the traditional *inner* conception according to which the subject *properly or strictly speaking* is some sort of persisting, inner, mentally propertied entity or presence.

I take it that [a] and [b] both build in the assumption that a subject may and standardly does continue to exist even when it is not having any experience (for whether you think that human subjects are whole human beings or whether you think they are inner loci of consciousness, you are likely to allow that they can continue to exist during periods of complete experiencelessness – in periods of dreamless sleep, say), and it is this that creates the need for the third, relatively unfamiliar conception of the subject:

- c. the *thin* conception according to which a subject of experience, a true and actual subject of experience, does not and cannot exist without experience also existing, experience which it is having itself.

The thin conception stands opposed to both [a] and [b] precisely because they both contain the ordinary assumption that a subject of experience can be said to exist in the absence of any experience.

As it stands, the thin conception doesn’t offer any support to the idea that thin subjects (as I will call them) are short-lived or transient entities. I suspect that they are always short-lived in the human case, as a matter of empirical fact, that the stream of human experience is constantly interrupted, in large ways and small, but Cartesian subjects also qualify as thin subjects by the present definition, and they are long-lived, possibly immortal.⁵⁵

There is a problem of exposition here, because most are so accustomed to [a] and/or [b], and to the idea that they exhaust the options, that they cannot take [c] seriously. And yet [c] simply makes a place for a natural use of the term ‘subject’ according to which it is a necessary truth, no less, that

55. Cartesian minds can’t exist without experiencing. Other thinkers whose subjects are ‘thin’ in this sense include Leibniz, whose subjects are like Descartes’s long-lived. On the short-lived side we find William James, Buddhists, who are sometimes wrongly supposed to deny the existence of subjects of experience, and, arguably, Fichte. Hume’s more cautious, epistemological view is there is no empirical evidence for anything other than short-lived thin subjects.

there cannot be an actual *subject of experience*, at any given time, unless some *experience* exists for it to be a subject of, at that time.

On this view, there can no more be a subject of experience without an experience than there can be a surface without extension.

In what follows I'm going to mean 'thin' subjects, when I speak of subjects of experience, and I propose to call them 'sesmets,' an acronym that stands for *subject of experience that is a single mental thing*, or more precisely: subject of experience that is correctly judged to be a single thing when considered specifically as a subject of experience that is being considered specifically in its mental being, and so without regard to any non-mental being that it may have.⁵⁶ My pure panpsychist proposal is that they are the only things that exist (it is not as if the existence of experience is somehow something over and above the existence of sesmets). I take a sesmet to be a portion of energy-stuff, just as physicists take any portion of matter to be a certain kind of energy-stuff (I take it, in fact, that we're talking about the same thing). I assume that there is more than one of them at any given time. This corresponds to the assumption (see p. 38) that there is a plurality of ultimate constituents of reality or 'ultimates,' whether they're best thought of as standard-model 'fundamental particles,' or 'field quanta,' or 'strings,' or 'loops,' or 'simples,' or 'preons' (whether simple or 'braided'), or. . . . Evidently all ultimates are sesmets, on this view, and I take it that some but not all pluralities of sesmets constitute further numerically distinct sesmets. I take it, in other words, that not every plurality of sesmets constitutes a further sesmet (without claiming to know this with certainty).⁵⁷

3. With this in place, consider an experience of mine, e_1 , with which I necessarily (by definition) have direct, 'from-the-inside' acquaintance. The proposal is that e_1 may be somehow constitutively composed of many 'small' experiences e_2 - e_n with which I have no such direct from-the-inside acquaintance (equally necessarily, for they are the experiences of numerically distinct subjects). This is how it must be, I think, if any realistic and 'smallest'⁵⁸ version of pure panpsychism (the view all being is experiential being) is to stand up, for we are trying to give an account of our own experience, and in having an experience we have no experience of ourselves as somehow being many subjects of experience. The idea that one subject may be somehow constituted of many other distinct subjects is famously difficult (see James 1890: 1.160–161; Goff 2006)

56. See Strawson 2009:§4.9, where the notion is explained in detail. Note that it is not an intrinsically panpsychist notion.

57. One no longer has any right to be impressed by 'spatial separation' (whatever the ultimate nature of space), and we are taught that particles light years apart may be 'entangled' in such a way as to put their real or ontological distinctness in question (especially once we have a correct metaphysics of object and property).

58. For 'smallest' see Coleman 2006.

but I cannot avoid the difficulty in the way Coleman can (2006: 48–50), by proposing that an experience of mine may be somehow composed of many experiences whose existence does not essentially involve subjects of experience. This is not only because I take it that there cannot be an experience without a subject of experience, but also because I believe in the ultimate identity of experience and experiencer.⁵⁹ I think, like Kant, that "the thinking or the existence of the thought [experience] and the existence of my own self are one and the same" (Letter to Herz 1772: 75).

The expression 'from-the-inside' is not entirely stable, but it's very natural in this context, and it offers one way of making a distinction that must I think be made in some way if realistic smallest pure panpsychism is to have any chance of being true. It may also lead us forward in a crucial way, because it may give us a first intimation of how pure panpsychist monism can allow some sort of fundamental and all-pervasive duality to existence even as it shuns any dualism (a glimmering of the possibility that 'ESFD monism'⁶⁰ may be intelligible after all). And this, perhaps, is just as well, for it is extremely plausible to think that we cannot in the end do without some such duality.⁶¹ It cannot be a betrayal of pure panpsychism to require this, if pure panpsychism as I understand it is to have any realistic chance of being true, for it must I take it accommodate the existence of such real natural facts as the facts of (say) reproduction and evolution. Pure panpsychism as I understand it gives a wholly *mentalist* account of the nature of the entities, the ultimates, that constitute the existence of the phenomena of (say) reproduction and evolution, and hence of the phenomena of reproduction and evolution themselves, but it does not give any sort of *idealist* account of these phenomena, if by this is meant an account of ultimates as somehow nothing more than the content of ideas in someone's mind and in that intuitive sense not really real after all.⁶²

A first, inadequate way to express the idea of duality is to say that while an experience, a sesmet, a piece of energy-stuff, say e_1 , necessarily has a (from-the-inside) 'inside,' i.e. its experientiality-as-experienced, which is its essential nature, it must also,

59. For the argument see Strawson 2008b; 2009:§§8.8–10. As I understand them, Descartes, Spinoza and James – among others – agree.

60. According to "Equal-Status Fundamental-Duality monism [1] reality is a substantially single [2] all reality is experiential and all reality is non-experiential [3] experiential and non-experiential being exist in such a way that neither can be said to be based in or realized by or in any way asymmetrically dependent on the other" (Strawson 2006: 241, adapted from Strawson 1994: 56).

61. Skrbina (2006b: 153) remarks that my position is one of "dual-aspect monism. . . an approach that dates back at least to Spinoza. . . and strongly urges one toward panpsychism."

62. The term 'idealist' is standardly misused where 'mentalist' is appropriate. Berkeley, for example, was an idealist *about the world of tables or chairs*, but he was not of course an idealist in his basic ontology. He was a mentalist, who (crucially) admitted the existence of things that were not ideas. See Strawson 1994: Chapter 5. I fear that the chances of correcting this misuse are vanishingly small.

as energy-stuff, have an ‘outside,’ which is no less part of its essential nature. By this, though, I mean only that its existence must affect other sesmets; e_1 ’s outside is not something ontologically extra. I take ‘inside’ from ‘from-the-inside,’ aware that the words ‘inside’ and ‘outside’ are almost bound to mislead (quite apart from being spatial metaphors), for it is not as if any sort of non-experiential stuff is being introduced, in talking of the ‘outside’ of the experience: it remains central to the present view that the inside of an experience or sesmet like e_1 , i.e. its experiential nature, is its whole essential nature, its whole being.

“ e_1 ’s outside is not something ontologically extra.” What is it, then? Two main issues arise, with respect to its outside: the issue of causation and the issue of constitution. With respect to causation, we may say that e_1 ’s outside is just a matter of how e_1 is disposed to interact with other sesmets, other portions of experiential⁶³ energy-stuff, given its own experiential energy-stuff inside. With respect to constitution, we may say that it is a matter of how e_1 is constituted of numerically distinct sesmets e_2 – e_n .⁶⁴

Mysterious, you may say; but the proposal about causation returns us to a crucial point that surfaces in the discussion of Descartes (in Strawson 2006: 199–216) and has already been drawn on. This is the point that experience cannot be thought of as just passive content, in any plausible (reproduction-and-evolution-allowing) pure panpsychism, but must always be understood to be active stuff or substance (in the mass term, non-count-noun sense of ‘substance’). *Experience is itself active substance* (and conversely).⁶⁵

I think that this, too, is a difficult idea for many of us, and that effective grasp of it requires considerable acclimatization, but the basic smallest picture remains plain for all that. Many believe that it is legitimate to think of our actual world, conceived of as involving non-experiential substance (substance that is not experience), as in some sense composed wholly of energy, in various forms, and the present (Eddingtonian) suggestion is simply that the intrinsic nature of that energy is in fact experience. If so, everything that exists, everything studied by physics, including of course reproduction and evolution realistically understood, is left in place by the pure panpsychist hypothesis.

One principal reason why it’s difficult to think of what I am calling ‘experience’ as a kind of energetic stuff is that we have, as previously noted, a tendency to think of it

63. The word ‘experiential’ is redundant.

64. I refrain from saying that e_1 ’s inside, i.e. its experiential nature, is wholly non-relational, for I take it that its experiential nature will be partly a function of its interactions with other sesmets. The effect that e_1 has on e_{n+1} will indeed be wholly a function of its experiential nature, but its experiential nature may be partly a function of how it is being affected by e_{n+2} . Great complications lie here, no doubt, about which I have said nothing (Mach’s famous principle – that everything in the universe if affected by everything else – comes to mind).

65. All substance is active, as Leibniz says (activity does not imply any sort of intentional agency).

as ‘just’ content, experiential content conceived of as something passive, content contained in a container. It’s fine to think of it in this way in some philosophical contexts, but it is hopelessly obstructive in the present context, and one way to try to offset the obstruction is to speak instead of *experiencing*. My first impulse is to add immediately that ‘experiencing’ in this use is not just a verbal noun denoting an activity, but a noun denoting a certain sort of stuff. This, however, obscures the deeper point, which is that the activity in question is the stuff in question.

4. There is, then, causation between sesmets (in addition to relations of constitution). But where – in what ontological dimension or ‘dimension-space’ – does this causation (and constitution) take place? Well, we must as pure panpsychists suppose that the dimension-space of the concrete real, although not understood by us, is something that fits with the nature of the concrete real conceived of as nothing but experiencing in exactly the same general way as the way in which the dimension-space of physical space or spacetime (which is certainly not understood by us) fits with the nature of the concrete real conceived of as nothing but good old fashioned non-experientially propriated extended physical stuff.

The causal effect of anything on anything will have an experiential aspect, will indeed be experiential, and this is why even microsubjects – sesmets that are ultimates – may reasonably be said to have sensation, and intentionality, and to represent things (rather than just having some sort of non-sensational, non-intentional ‘bare’ experientiality). There is no more difficulty in the idea that ultimate sesmets have sensation and intentionality and represent things than there is in the idea that one particle exerts attribute or repulsive force on another – for these are in fact the same thing. Doubtless this intentionality will not be explicit conceptual intentionality. Nevertheless the experiential event that is particle a ’s registering what physics describes as the ‘repulsive force’ of particle b (which is itself an experiential phenomenon) may be said to be of or about particle b .⁶⁶

Might we in the end have to posit a universe-wide sesmet in order to posit the existence of many sesmets existing in a dimension that allows for their interaction? I’ve been assuming that the answer is No, but I would not be much troubled if it were Yes, first because the universe-wide sesmet would have no more to do with religion than the view that there is a single universe, second because of a methodological principle integral to serious naturalism: if one finds oneself pushed towards an apparently extraordinary hypothesis like panpsychism, when one is trying to account for the given natural facts, of which the first and most fundamental is and will always be the fact of experience, one should bear in mind the certainly equal and arguably much greater extraordinariness of many of the hypotheses seriously entertained, and in some cases well supported, in present-day physics and cosmology.

66. In Strawson 2008a I consider particles’ claim to have intentionality in a context in which I put aside panpsychism.

All this needs, to put it mildly, development. The basic proposal is that ultimates – sesmets – experiencing(s) – can be as they are to themselves, and their being as they are to themselves can be what they are, intrinsically, compatibly with their having causal effects on other sesmets and compatibly with their playing a part in constituting other numerically distinct sesmets (sesmets that are not only numerically but also qualitatively distinct). They have the effects or constituting roles they have wholly in virtue of their experiential being, which is all the being they have, and yet when one sesmet or (portion of) experiencing affects another, in accordance with the Laws of Experiential Nature, whatever they are, or goes to constitute another, in accordance with those Laws of Experiential Nature that are Laws of Experiential Composition, the second will obviously not experience the from-the-inside nature of the first in the way in which only the first can. Nor is there any more reason to think that the second will take on the experiential character of the first, in some direct way, in the case of interaction, than there is to think that a positively charged particle will in some direct way take on the character of a negatively charged particle with which it is in interaction – a point independent of the fact that the second of these two phenomena is, on the current view, an instance of the first.⁶⁷ In this sense experiential realities may be said to *function* as non-experiential but experience-causing realities for other experiential realities, although there is no non-experiential being. One might say that although there is no non-experiential being absolutely speaking, there is non-experiential being relatively or relationally speaking. . . .

5. This may seem like uncontrolled speculation. But it is not entirely uncontrolled, and it is not unwarranted, because I am not defending a thesis that is already crazy and that is now pushing me into further craziness. The dialectical situation is rather this. A hard and genuinely naturalistic nose for reality obliges one to endorse some sort of panpsychism (or at least micropsychism – see p. 53) long before any wild speculation has taken place, for ‘radical’ emergence (see p. 43) is impossible. Given that one then knows that some sort of panpsychism must be true, speculation as to how it could be true is fully licensed, and strongly to be encouraged. “The truth. . . *must* be strange” in this area, as Russell once said (1912: 19), and we have to do our best to understand how what must be true could be true. So when Goff says (2006: 60) that I have nothing to offer on the question of how macroexperientiality emerges from microexperientiality, only “faith that *it must happen somehow*,” I enthusiastically agree, and am happy to find the James of *A Pluralistic Universe* (1909) by my side in spite of the powerful doubts expressed in his earlier *Principles of Psychology* (1890).

67. What about the case of composition? Unfortunately I know nothing about the Laws of Experiential Composition.



—but they may involve something like Bohm's enfoldedness or 'implicate order' (Bohm 1986, see also Schaffer 2006).