

Article

Soul Dust or a Matter of Mind

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Abstract

According to some materialists, consciousness is an illusion generated by matter mattering to itself, and is ultimately ontologically non-existent, thus, consciousness is just so remarkable that an unwary brain might be tempted to think consciousness is really real. However, both direct phenomenological investigation and modern science show that, contrary to materialists' desires, consciousness "has its own intrinsic degrees of freedom" and is a fundamental dimension of reality. Ultimately we are not the result of the evolution of an "original dollop of physical matter". The ideas presented in the book *Soul Dust* are an excellent example of the kind of ridiculous and logically incoherent accounts of the mindless evolution of matter into 'illusory' mind which are penned by materialist advocates of primordial mindlessness.

Keywords: materialism, consciousness, mindless evolution, mindless matter, quantum revolution, Darwinism.

In his 2008 paper '*Getting the Measure of Consciousness*' Nicholas Humphrey opens with the assertion that:

No one doubts that our experience of phenomenal consciousness - the felt redness of fire, the felt sweetness of a peach, the felt pain of a bee sting – arises from the activity of our brains.¹

This is not true, and this glaring untruth would seem to indicate that Humphrey does not bother to actually examine the views, or the evidence presented by, other researchers in the field of the investigation of the nature of consciousness and its relationship to the brain. In the previous year the important work *Irreducible Mind: Towards a Psychology for the 21st Century* was published. This work begins:

The central contention of this book is that the science of the mind has reached a point where multiple lines of empirical evidence, drawn from a wide variety of sources, converge to produce a resolution of the mind-body problem along lines sharply divergent from the current mainstream view.²

The "current mainstream view", of course, refers to exactly that claimed by Humphrey to be incontrovertible – the activity of the brain is the ultimate generator of consciousness. The authors of *Irreducible Mind*, in this extensively researched and exhaustively referenced work,

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bring together a wealth of evidence indicating the falsity of the ‘naturalistic’ view which Humphrey considers to be unquestionable and inviolable.

The authors of *IM*, examine in extensive and painstaking detail the evidence from phenomena which include such aspects as psychosomatic medicine, placebo effects, psychic healing, stigmata, multiple personalities, the exploits of yogis, physiological effects in hypnosis, automatism, near death experiences, the nature of genius, and meditation. All these topics are presented with reference to thoroughly researched and validated, exhaustively referenced, phenomenon that are accepted by leading authorities in the various fields covered. As one reviewer concludes: “The topics that I have some knowledge of ... were covered with more than sufficient thoroughness and accuracy to support the point that consciousness, including subliminal consciousness, can produce physical effects and is not a mere epiphenomenon as proposed by philosophical materialists.”³

Humphrey’s approach, in contrast to the extensiveness, depth and rigor of *IM*, however, relies on rather dubious and often clearly incoherent, in some cases almost childish, speculations, with little attention to evidence and scant regard for logical rigor.

The *Just So Stories for Little Children*, which were written by British author Rudyard Kipling, are described by Wikipedia as “highly fantasized origin stories”⁴ so it is very appropriate that Humphrey, described on Wikipedia as “an English psychologist, based in Cambridge, who is known for his work on the evolution of human intelligence and consciousness”⁵ entitled his 1982 *New Scientist* article ‘*Consciousness: a just-so story*’. The story of the evolution of consciousness he presents in this article is pure fantasy. According to Wikipedia the term ‘just-so-story’ also has an ‘anthropological sense’:

Just-so story, also called the *ad hoc* fallacy, is a term used in academic anthropology, biological sciences, social sciences, and philosophy. It describes an unverifiable and unfalsifiable narrative explanation for a cultural practice, a biological trait, or behaviour of humans or other animals. The use of the term is an implicit criticism that reminds the hearer of the essentially fictional and unprovable nature of such an explanation.⁶

As we shall see, this characterization is highly appropriate for Humphrey’s work.

The stories, or fairy tales, told around the camp fires of mindlessness in materialist strongholds regularly involve obvious nonsense, but in the academic corridors of materialism it doesn’t seem to matter! A central piece of such absurdity is the notion that consciousness is said to have ‘evolved’ from an absolute lack of consciousness or mind within the context of the materialist Darwinian paradigm. This means that at some point in the far mists of time there must be a point when there is absolutely no consciousness within the universe at all. And this further means that at some point consciousness, an aspect of reality which has qualities which are entirely absent from ‘matter’, must magically arrive on the evolutionary scene without any causal mechanism. At least the materialist account of Darwinian evolution of the natural world supplies a causal mechanism, random mutation and natural selection, even though it turns out to be unviable.

The notion that consciousness is purely and nothing more than magical arrangements, patterns and machinations of mindless matter means that there must have been some point at which there was absolutely no consciousness, but only mindless matter mutely mattering away to itself. And then, suddenly, the light, albeit only a glimmer, a feeble spark of internal awareness, suddenly takes hold within a magically complex bit of, heretofore mindless and unconscious, jelly. Presumably such feeble sparks of awareness were not continuous. Surely matter did not manage to turn the full light of awareness on all at once for all time. So one might ask what evolutionary advantage the occasional feeble spark of awareness taking place within a primordial piece of organic jelly could possible confer, surely the organism in question could hardly have been conscious of them!

According to Humphrey's article *Consciousness: a just-so story*:

...once upon a time there were animals ancestral to man who were not conscious. That is not to say that these animals lacked brains. They were no doubt percipient, intelligent, complexly motivated creatures, whose internal control mechanisms were in many respects the equals of our own. But it is to say that they had no way of looking in upon the mechanism. They had clever brains, but blank minds. Their brains would receive and process information from their sense organs without their minds being conscious of any accompanying sensation; their brains would be moved by, say, hunger or fear without their minds being conscious of any accompanying emotion; their brains would undertake voluntary actions without their minds being conscious of any accompanying volition ... And so these ancestral animals went about their lives, deeply ignorant of an inner explanation for their own behaviour.⁷

So these ancestral animals were kind of organic robots, without any glimmer of internal lighting so to speak, their brains are blank. But although their brains are utterly blank and devoid of internal glimmer or spark of any awareness, at the same time we are told that they process information, and they do so without sensation, or without being conscious of the sensation, for the moment which of these depictions is the one Humphrey has in mind is not clear. Furthermore they were "were no doubt percipient, intelligent, complexly motivated creatures, whose internal control mechanisms were in many respects the equals of our own." So they were, in fact, what in modern Western philosophical parlance is termed "zombies."

According to Humphrey, for such internally blank creatures "it was their behaviour itself, not their capacity to give an inner explanation of it, that mattered to their biological survival." A question which this vision begs, of course, is why a blank, organically but mindlessly functioning lump of organised matter wants, needs, is moved, or whatever, to survive biologically. For Humphrey and others of his persuasion, it is taken as a given that matter, although completely mindless and devoid of intentionality, for some mindless reason 'wants', for want of a better word, to club together to keep a blank organism in the survival race, unaware of course of any rewards. So at this point in time these zombies:

As the occasion demanded ... acted hungry, acted fearful, acted wishful and so on, and they were none the worse off for not having the feelings which might have told them why.

It is difficult to lend credence to such a simplistic view and there is absolutely no evidence for it. These creatures, according to Humphrey's vision of this time of abject mindlessness, have internal material machinations of their brains which trigger some kind of internal 'flag' which indicated 'hunger' for example, but they did not experience 'hunger' at all, there was no internal sensation, no consciousness of hunger, no hunger pangs, the brain just knew, in an unconscious unknowing manner, that the organism needed an intake of food in order not to eventually drop dead.

Presumably if these creatures did not manage to get the necessary sustenance they would start to exhibit behaviour of distress, all the time not actually feeling distress. This obviously follows from Humphrey's vision that "they acted hungry, acted fearful, acted wishful and so on" indicating that such zombie creatures acted in the same way as we do without the same sensations that we have. But then one must ask why would such creatures need to show distress behaviour, they are actually not in any conscious distress, so why did not the blank brain just register the severe lack of food without generating distress behaviour? Presumably it's just something matter cannot help doing when it gets hungry, it starts exhibiting distress behaviour even though it's not in any distress.

The section heading for this fantasy is 'Percipient but not conscious', a heading which indicates the employment of the usual materialist slight of mind in order to produce the illusion of the mindless becoming mindful. The technique is to use a word which generally indicates the presence of consciousness, in this case 'percipient', which means 'having the ability to perceive,' with the claim that the manner in which the word is being employed does not require the presence of consciousness. Then the implied presence of consciousness is used as a means to bring consciousness onto the evolutionary scene in a way which some unsuspecting people, and there are a lot of them, find quite natural. The story Humphrey is going to try and foist on us in his 'just-so-story', indeed as if we were children, is that these poor zombies, endowed with "clever brains, but blank minds", perhaps could have just carried on perceiving in complete and utter blankness and unconscious unknowingness but it just got too much for them, or they discovered that turning consciousness on was more fun.

The absurdities of language use which often accompanies this deception is so laughable that it is difficult not to wonder whether the people who fall for the intellectual fraud are not actually zombies, mechanically processing the meanings of words without employing consciousness. Here is Humphrey's next step in the delusional story:

Nonetheless, these animals were the ancestors of modern human beings. They were coming our way. Though their lives may once have been comparatively brutish and relatively short, as generations passed they began to live longer, their life-histories grew more complicated, and their relationships with other members of their species became

more dependent, more intimate, and at the same time more unsure. Sooner or later the capacity to explain themselves and to explain others - to take on, if it's not too grand a word, the role of a natural "psychologist", capable of understanding and predicting their own and others' behaviour within the social group – would become something they could no longer do without. At that stage would not their lack of consciousness have begun to tell against them?

It is vital to bear in mind that there is not one shred of evidence for these putative zombie ancestors of ours who, according to Humphrey, are "coming our way". They are conjured in the vivid, if simplistic, imagination of Humphrey's brain, rather like the consciousness that Humphrey hopes to persuade us must be conjured from the mindless and unconscious matter making up his increasingly social zombie creatures, which are now, we are told, desperately in need of the light of consciousness. They can't be fully social without it!

Apparently Humphrey's zombies, who please always bear in mind have "clever brains" *but not a glimmer of consciousness or awareness*, are not doing too badly in their darkness. Humphrey tells us that "their life-histories grew more complicated, and their relationships with other members of their species became more dependent, more intimate." So they were managing a degree of intimacy within their abject darkness. Furthermore they were living longer and more complicated lives, all without experiencing any passage of time or experiencing any complications of course.

However, according to Humphrey's story there is a problem. Despite the fact that up until now his zombies have been happily (without experiencing any happiness of course) perceiving away in complete darkness, satisfying their hunger without experiencing hunger, exhibiting wishing behaviour without wishing and so on, suddenly a degree of unsureness comes on the scene, presumably without them actually experiencing unsureness. Where it comes from or why it arises we are not told, it arrives unannounced without reason, except perhaps that things have got complicated because the zombies are living longer and getting more intimate without experiencing any intimacy.

It should be clear by now that the way that this story is being set up means that the zombie creatures are constantly experiencing without experiencing and the story is being concocted to give the appearance that they cannot continue like this. It's all getting too much for them. They need consciousness otherwise they will not be able to become 'natural psychologists' who are "capable of understanding and predicting their own and others' behaviour within the social group."

The important issue which Humphrey will conveniently leave out of the story, however, is that, if the stuff that makes up the bodies and brains of his increasingly "social" zombies is the kind of material stuff beloved by all staunch materialists, the ultimately solid extended matter-stuff with no extra, added, included free of charge 'mind' or 'consciousness', then, no matter how dire the

circumstances, there is nowhere that consciousness can possibly arise from, it is simply not included in the definition of matter.

Humphrey, however, doesn't rush to get consciousness onto the evolutionary scene. He decides to soften his readers' resolve to maintain some consciousness of coherence by subjecting them to a bizarre sequence of incoherent claims under the enigmatic section heading 'Watch your brain working'. In answer to his question "would not their lack of consciousness have begun to tell against them?" Humphrey answers:

Not necessarily. At least not at first, and not to the extent that all that's said above implies. For inner explanations are not the only kind of explanations of behaviour. Debarred as our unconscious ancestors may have been from looking in directly on the workings of their brains, they could still have observed behaviour from outside: they could have observed what went into the internal mechanism and what came out, and so have pieced together an external, objectively based explanatory model. "Why am I (Humphrey) looking in the larder?" Not, maybe, "Because I'm feeling hungry", but rather "Because it's five hours since Humphrey last had anything to eat" or "Because Humphrey has shown himself to be less fidgety after a snack". In short, while our ancestors lacked the capacity to explain themselves by "introspection", there was nothing to stop them doing it by the methods of "behaviourism".

The first thing I am forced to observe here is that, having read and pondered many such materialist fairy stories, I am convinced that very, very rarely do readers actually subject them to rigorous logical analysis. One would have thought that if a reasonably intelligent person were to subject Humphrey's claim here, and in many other places, to logical and conceptual analysis then they could only have a laughing fit! Yet Humphrey has given lectures along these lines to various collections of supposedly academic worthies and there is not a glimmer of a titter.

Once again it is vital to bear in mind that consciousness has not made an entrance onto the fairytale scene yet so all is blankness inside the "clever brains" of Humphrey's zombies. It is because of this inner 'blankness' which is due to the absence of consciousness that Humphrey says that the zombies cannot manage 'inner explanations.' It seems that Humphrey equates consciousness with an inner "watching" of the "brain working". There is, of course, absolutely no evidence that this is what consciousness is, but, what the hell, by Humphrey's own admission this is a 'just-so-story.' Now fortunately for the mindless zombies, although they do not have a clue about their own inner states, they can concoct 'behaviourist' type explanations of their own behaviour. They could, in the midst of complete, absolute and utter internal blankness, answer the question "Why am I looking in the larder?" without experiencing themselves asking the question, with a behaviourist-style explanation, without experiencing the explanation as an explanation - it's all blank inside. The story Humphrey has concocted is simply incoherent, the terms employed are simply inappropriate in a situation where the zombie creature really are all robotically blank inside. Robots would not be puzzled about their behaviour unless programmed to. The desire to have explanations is an aspect of the world of consciousness, not utter mindless blankness.

Try to seriously picture what Humphrey is suggesting here. We have the poor hungry and internally blank zombie. The zombie is hungry but does not experience itself as hungry or consciously know that it is hungry because of internal blankness. The brain somehow decides to deal with non-experienced hunger by going to the fridge. But the zombie does not know that it is going to the fridge because it is hungry because it does not experience itself as being hungry. It is therefore puzzled, without experiencing itself as being puzzled, and the only explanation it can come up with, without experiencing the explanation, is a behaviourist one.

If you are not laughing yet you've got no '*Soul Dust*' (the title of Humphrey's latest book), the notion of explaining one's own behaviour to yourself in behaviourist terms because of a complete inner blankness whilst not actually experiencing the explanation because of the inner blankness is beyond the ridiculous. And yet this was published in *New Scientist*!

In the next phase Humphrey refers to the behaviourist admiration of the 'objective' elimination of subjectivity:

"The behaviourist," wrote one of its first modern champions, J. B. Watson, "sweeps aside all medieval conceptions. He drops from his scientific vocabulary all subjective terms such as sensation, perception, image, desire, purpose, and even thinking and emotion." And who better placed to follow this recommendation than an unconscious creature for whom – such conceptions could not have been further from his mind?

Actually, of course, at this point in the story Humphrey's "unconscious creatures" do not have 'minds', remember "it's all blank inside" – you have keep very alert when dealing with materialists, they constantly try to sneak mind on the scene as if it were a concoction of matter, when actually it's just a sneaky use of words. We need to be quite clear that, according to Humphrey's story, the zombies have no trace, jot or glimmer of "sensation, perception, image, desire, purpose, and even thinking and emotion." Furthermore it's not that they just don't have the "conceptions", obviously they do not have the conceptions, how could they? It's all blank inside. They actually have no trace, jot or glimmer of "sensation, perception, image, desire, purpose, and even thinking and emotion." These unconscious zombie creatures are all matter and no mind and no experience. You have to be very stringent with materialists because given just a smidgen of a chance they will sneak mind into their matter without you noticing.

Humphrey next employs an observation by another behaviorist which is useful for his cause:

In fact, it is we conscious human beings who have trouble being hardheaded behaviorists: it is we who, as that other great behaviorist B. F. Skinner has lamented, "Seem to have a kind of inside information about our behaviour. We have feelings about it. And what a diversion they have proved to be!" Feelings have proved to be one of the most fascinating attractions along the path of dalliance." Why, then, when ignorance of

the inner reasons for behaviour might have been bliss, did human beings ever become wise?

And it is at this point that Humphrey abandons logical integrity. Our mindless zombies are made of pristine ‘matter’ with no trace of added mind. And full blown hard-core matter, the kind of matter which materialists consider to be the primary ontological stuff of reality does not have mind qualities or the qualities of consciousness. Humphrey’s zombies, by his own words, have no trace, jot or glimmer of “sensation, perception, image, desire, purpose, and even thinking and emotion.” This means that, according to Humphrey’s own story it is impossible for “human beings ever become wise”, by which Humphrey means acquire consciousness.

But it is clear that Humphrey has no intention of conforming to conceptual and logical coherence; it’s just a just-so-story, and it’s a conceptually incoherent and misleading just-so-story:

What tempted him was a leap in the complexity of social interaction, calling in its turn for a leap in the psychological understanding of oneself and others. Suddenly the old-time psychology which was good enough for our unconscious ancestors, which is still apparently good enough for Watson and for Skinner, was no longer good enough for their descendants, Behaviourism could take a natural psychologist only so far. And human beings were destined to go further.

We need to quite clear that on the basis of materialism, a materialism which has led to the evolution of Humphrey’s mindless zombies, who supposedly acted in lots of ways which made them look as if they had minds and experiences whereas in reality all was blank inside, no level of complexity of social interaction could call forth the new ontological realm of consciousness in order to provide “a leap in the psychological understanding of oneself and others”. If, as materialists maintain, matter is absolutely and completely non-conscious and has no glimmer of potentiality for consciousness, then no new modes of complex social interactions could possibly cause it to excrete a new ontological dimension of reality, no matter how powerfully Humphrey’s zombies were “tempted”, without being aware of temptation of course.

The notion that for the first part of the evolutionary process there is absolutely no glimmer of mind, absolutely no activity of consciousness, no trace of awareness, but only the mute and utterly dark and blank machinations of matter, and then suddenly, because of some adventitious and random requirement of getting along more intimately with one’s neighbours, or needing greater insight to their previously non-existent ‘minds’, blank evolution concocts a radically new quality of reality, a quality which just was not around before the magical point of consciousness creation, is quite simply ludicrous. And yet this is the incoherent picture regularly advanced by materialist ‘philosophers’ and ‘thinkers.’

And this absurd evolutionary picture is also inconsistent with other ‘just-so-stories’ indulged in at other points in time by Humphrey. But expecting consistency from materialist story tellers is a vain hope, as vain as the hope of turning mindless matter into mind. Humphrey is nothing if not grandiose in his belief in the efficacy of his just-so-stories. So in 2000 we find him publishing a

paper in the *Journal of Consciousness Studies* entitled ‘*How to Solve the Mind-Body Problem*’. This paper is extraordinarily insightful, although not in a way that supports Humphrey’s materialist cause. In this paper he quotes with approval the statement by the eighteenth century French philosopher Denis Diderot that “all phenomena, whether of weight, elasticity, attraction, magnetism or electricity, are all aspects of a single state.” He then tells us that:

...contemporary physicists are still uncertain whether such a theory of *everything* is possible even in principle. But within the narrower field that constitutes the study of *mind and brain*, cognitive scientists are increasingly confident of its being possible to have a unifying theory of these *two* things. They – we – assume that the human mind and brain are, as Diderot anticipated, aspects of a single state – a single state, in fact, of the material world, which could in principle be fully described in terms of its microphysical components. ... every instance of a human mental state is *identical* to a brain state ... meaning that the mental state and the brain state pick out the same thing at the microphysical level.⁸

Now this is a very interesting insight, an insight which actually undermines Humphrey’s materialist position. Why so? Because the ground level microphysical level is the quantum field which is immaterial. As a recent book on quantum theory explains:

Now, from a philosophical point of view, this is rather big stuff. Our whole manner of speech ... rather naturally makes us think that there is some stuff or *substance* on which properties can, in a sense, be glued. It encourages us to imagine taking a particle and removing its properties one by one until we are left with a featureless ‘thing’ devoid of properties, made from the essential material that had the properties in the first place. Philosophers have been debating the correctness of such arguments for a long time. Now, it seems, experimental science has come along and shown that, at least at the quantum level, the objects we study have no substance to them independent of their properties.⁹

So it would seem that, if we take the evidence of the physical sciences seriously, and as Humphrey considers himself to be a scientist of sorts there should be no reason for him not to, it seems that a unification of the material stuff of the brain and the realm of the mental is indeed metaphysically possible. But the common substrate, the quantum field, is entirely immaterial, although it does give rise to the fleeting realm of the apparent particles which appear to make up a ‘material’ world. As the physicist Robert Oerter says in his excellent book *The Theory of Almost Everything: The Standard Model, The Unsung Triumph of Modern Physics*:

In nineteenth-century physics, the universe contained two things, particles and fields. Particles were tiny and hard, like small billiard balls. Fields were elastic and spread throughout space. Particles produced fields according to their electric charge and their motion, and particles responded to the fields of the particles around them. Relativistic quantum field theory completely eliminates the distinction between particles and fields. Matter (the electrons and positrons) and forces (the photons) are both described in the same way - by quantum fields. Quantum fields combine particle nature and field nature

in a single entity. The quantum field spreads out through space, just like classical field, but it is quantized: When you try to measure the field you always find a whole particle, or two particles, or none. You never detect half an electron or a fractional photon. If fields were peanut butter, classical fields would be smooth and quantum fields would chunky.¹⁰

A materialist may be tempted to grasp at quantum straws, hoping that the chunky nature quantum field could resurrect a semblance of their beloved ‘matter’. However, it is the field aspect that is primary and the ‘particle’ aspect comes into being “when you try to measure the field.”

According to Humphrey a significant advance in understanding the nature of his putative “mind-brain identity” requires the recognition that:

...there can be no hope of scientific progress so long as we continue to write down the identity in such a way that the mind terms and the brain terms are patently incommensurable. The problem will be especially obvious if the dimensions do not match up.

Humphrey elucidates this claim with the example of dimensional analysis of mathematical equations. Any mathematical equation must reduce down to the same combination of dimensions on each side. The fundamental dimensional units are mass (**M**), length (**L**) and time (**T**). So if we reduce an Area to its fundamental dimensional form it is **L²** because it consists of a Length multiplied by a Length, Volume is **L³** because it consists of a Length multiplied by a Length multiplied by a Length, and Speed is **LT⁻¹** which is a Length divided by Time. Now consider the Einstein’s famous equation:

$$E = mc^2$$

In dimensional terms both **E** and **mc²** reduce to **ML²T⁻²** so both sides have the same combination of fundamental dimensions. Humphrey next extends this important insight this to conceptual analysis in general:

But what is true of these dynamical equations is of course just as true of all other kinds of identity equations. We can be sure in advance that, if any proposed identity is to have even a chance of being valid, both sides must represent the same kind of thing. Indeed we can generalise this beyond physical dimensions, to say that both sides must have the same conceptual dimensions, which is to say they must belong to the same generic class. So, if it is suggested for example that Mark Twain and Samuel Clemens are identical, **Mark Twain = Samuel Clemens**, we can believe it because both sides of the equation are in fact people. Or, if it is suggested that Midsummer Day and 21st June are identical, **Midsummer Day=21st June**, we can believe it because both sides are days of the year. But were someone to suggest that Mark Twain and Midsummer Day are identical, **Mark Twain=Midsummer Day**, we should know immediately this equation is a false one.

But what happens next in Humphrey’s materialist thought process is, contrary to his own important insight, entirely conceptually incoherent, although he tries to cover over this fact:

Now, to return to the mind-brain identity: when the proposal is that a certain mental state is identical to a certain brain state, **mental state, m = brain state, b**, the question is: do the dimensions of the two sides match? The answer surely is, Yes, sometimes they do, or at any rate they can be made to, provided cognitive science delivers on its promise, it should soon be possible to characterise many mental states in computational or functional terms, i.e. - in terms of rules connecting inputs to outputs. But brain states too can relatively easily be described in these same terms. So it should then be quite straightforward, in principle, to get the two sides of the equation to line up.

“Sometimes they do”! “Provided cognitive science delivers on its promise”! “It should soon be possible”!!! This is classic materialist obfuscation and avoidance of the truth of things. The famous twentieth century philosopher of science Sir Karl Popper called this kind of thing “promissory materialism,” in other words what is being said by Humphrey is that the identity is by no means evident or established, but Humphrey tells us he is sure ‘cognitive science’ will get around and prove it sometime in the future. However this is nothing more than blind faith in the face of a great deal of contrary evidence.

But why not just do a proper conceptual analysis, just like a mathematical dimensional analysis. In order to do this, however, we need to decide whether we can validly reduce mind and consciousness to anything simpler. And an important first step in this task is to consider where and why the fundamental dimensions of physics - **Mass, Length and Time** - come from. We tend to think of these as fully ‘objective’ entities which exist independently of us “out there” in an independent structure reality. But it is worthwhile considering the famous twentieth century physicist John Wheeler’s admonishment that quantum physics has shown us that:

The universe does not ‘exist, out there,’ independent of all acts of observation. Instead, it is in some strange sense a participatory universe.¹¹

If you ponder the issue of why mass, length and time are taken to be fundamental, the reason is clearly that these are aspects of our experience which appear within our immediate experience of the world to be fundamental, in the sense of being irreducible within first order experience, and independent of each other. For instance: is it possible in experience to straightforwardly, which is to say without convoluted conceptual elaboration, to experientially reduce mass to length? The answer is clearly no. Mass is related to the direct experience of obstructive contact and the direct experience of the ‘weightiness’ of objects, length is a measure of our direct experience of extension in space, and time is a measure of extension in, well, time. None of these can be directly in the immediacy of experience reduced to one of the others. I can, of course, connect these aspect in certain ways by conceptual elaboration, but within first order direct experience they are separate and irreducible to each other.

So what about mind or consciousness, can it be reduced, within direct experience, to any of the others. Of course, amongst many Western philosophers of mind and researchers within the field of consciousness studies it is held that consciousness is a great mystery, a ‘hard’ problem, as the

philosopher of mind David Chalmers has characterized it, something absolutely intractable to the mind! This view, if you think about it, is basically making the claim the consciousness has absolutely no comprehension of its own nature, which, also if you think about it, is very odd. But this view only arises because Western philosophers, like Humphrey, in general are convinced, *without any evidence whatsoever*, that consciousness *must* be reducible to matter. But this is in no way indicated within direct experience, and, as indicated above, the fundamental aspects of ‘physical’ reality are derived originally from our direct experience. In fact in direct experience consciousness, which is the immediately experienced clear field of awareness within which phenomena, both inner (feeling, thoughts) and outer (phenomena which appear as external entities) are experienced, is the ground of awareness within which all phenomena have an appearance. Experientially consciousness is the ground of awareness which provides the possibility for the other dimensions of experience.

So within direct experience of the primary phenomenological features of reality consciousness is the primary amongst primary constituents. And, remarkably this primacy is now emphasized by the fact that consciousness has been found to be entangled in an intimate way at the quantum level, which is why the quantum physicist Eugene Wigner said:

When the province of physical theory was extended to encompass microscopic phenomena, through the creation of quantum mechanics, the concept of consciousness came to the fore again; it was not possible to formulate the laws of quantum mechanics without reference to consciousness.¹²

And quantum Cosmologist Andre Linde has been prompted to ask the question which is indicated by the quantum situation:

Is it possible that consciousness, like space-time, has its own intrinsic degrees of freedom and that neglecting these will lead to a description of the universe that is fundamentally incomplete? What if our perceptions are as real as (or maybe, in a certain sense, are even more real) than material objects?¹³

So both direct phenomenological investigation and modern science show that, contrary to Humphrey’s materialist desires, consciousness “has its own intrinsic degrees of freedom” and is a fundamental dimension of reality. At this point our fundamental dimensions of reality must be **Mass, Length, Time, and Consciousness**.

In his discussion of the dimensional analysis of equations Humphrey tells us that because of the dimensional analysis of $E = mc^2$:

By the same token, if anyone were to propose $E = mc^3$, we would know immediately that something was wrong.

Now, by the same token, we know that if anyone were to propose, such as Humphrey does, that “**mental state, m = brain state, b**” we would know immediately that something was wrong. Why is this? Well according to Humphrey’s materialist perspective when we do a dimensional analysis we have:

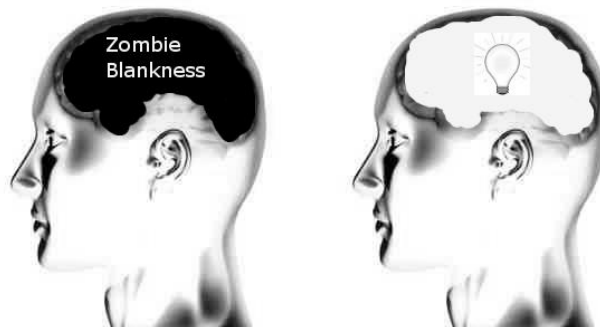
brain state, b → **is of dimension M** ('material' neurons)
mental state, m → **is of dimension C** (consciousness)
But we cannot have **M = C** because the dimensions do not match.

But what, then, can we say about Humphrey's breezy and confident assertion that it is easy to establish the identity of brain states and phenomenal experience within consciousness:

...this part of the task may be just as easy as in the case of cognitive states such as remembering the day. We do an experiment, say, in which we get subjects to experience contour sensations, while again we examine their brain by MRI. We discover that whenever someone has a red sensation, there is activity in cortical area Q6. So we postulate the identity: **phantasm of red = activity in Q6** cortex. So far, so good.

As Humphrey himself indicates on the very next page, the assertion of identity is actually a hypothesis, as yet unproven, but which he is sure will be proven at some future point, of a *correlation*. Again Humphrey makes the assumption that at some point in the future his faith will be vindicated, he does not bother to look at evidence available today which indicates that this is very, very unlikely.

At this point it is relevant to take a detour and recall Humphrey's just-so-story concerning blank zombie creatures "on the way" to having full human-type consciousness. This story is actually incompatible with Humphrey's assertion of confidence in the ultimate identity of brain states and phenomenal conscious experience. Figure 1a and 1b illustrate, in an appropriate light-hearted manner, the situation prior to, and subsequent to, the pressing need for the zombies to develop the inner light which enabled them to become "natural "psychologist(s)", capable of understanding and predicting their own and others' behaviour within the social group", and thus abandon their zombie condition. But if we accept this account then we must also accept that *evolutionary social pressures are capable of actually transforming the actual nature of the ontological 'stuff' of the material world*. The brain stuff in figure 1a must be adopting all the right states for making our zombie mimic being hungry or wishing etc. but in Humphrey's just-so-story it is certainly not producing the experiential-phenomenal accompaniment! So the kind of matter in 1a and 1b must be very different! But Humphrey does not mention this deep ontological transformation. Instead he implicitly maintains the view that the stuff of 1a and 1b is exactly the same except that in 1b the 'same' stuff does something dramatically different. Again this is incoherent.



Figures 1a and 1b

Humphrey was led to the idea that it might have been possible at some point in evolution for a human ancestor to have been doing all, or at least most, of things that we humans now do without any accompanying phenomenal consciousness by the phenomenon of blindsight. This is the ability of some people who are visually blind, which means they have no sensations of seeing the world, to be able to ‘perceive’ some features of reality. As Humphrey points out this is a “kind of *unconscious vision*,”¹⁴ which has now been demonstrated in many cases. This led Humphrey to make the radical suggestion that ‘perception’ can occur without an accompanying ‘sensation’. It follows from this that there can logically be a philosophical-zombie, functioning exactly like a human being but without any accompanying ‘sensations,’ which for normal human beings seem to be part and parcel of ‘perception.’ Humphrey, however, disagrees with this view. According to his vision, all perception actually takes place entirely in the dark as in blind sight, and also as in the zombie situation of figure 1a. The light of phenomenal consciousness or awareness (figure 1b) is an added extra which is not essential to perception.

In order to explain his viewpoint Humphrey uses the image shown in figure 2, I have added the images from figure 1 to indicate how they correspond. Humphrey explains:

The external object, **a**, transmits a stimulus to the sense organ, **a`**. The subject creates a sensation, **b**, as an active response to it - a *personal evaluative* response. This response is not designed to be a copy of the stimulus. But, just in so far as it is **S**'s response to the particular stimulus, it carries potentially a wealth of information about the stimulus, both as to what the stimulus is as a physical event and as to how the subject feels about it. **S**'s reading of this information, **p(b)**, can be put to several uses ...; but the one thing it is not used for is as the raw material for the perception of the world. Perception has its own quite separate channel, **p(a)**, beginning over again with the stimulus.¹⁵

This is indeed a radical, and bizarre, proposal which has produced, rightly, incredulity in some quarters. And it is easy to see serious flaws in its structure. According to this proposal the actual perception, the ‘real’ perception so to speak, takes place via route **a`** → **p(a)**, and it takes place in blankness. In other words the subject perceives without having a sensation, which means that they must perceive without ‘knowing’ that they perceive.

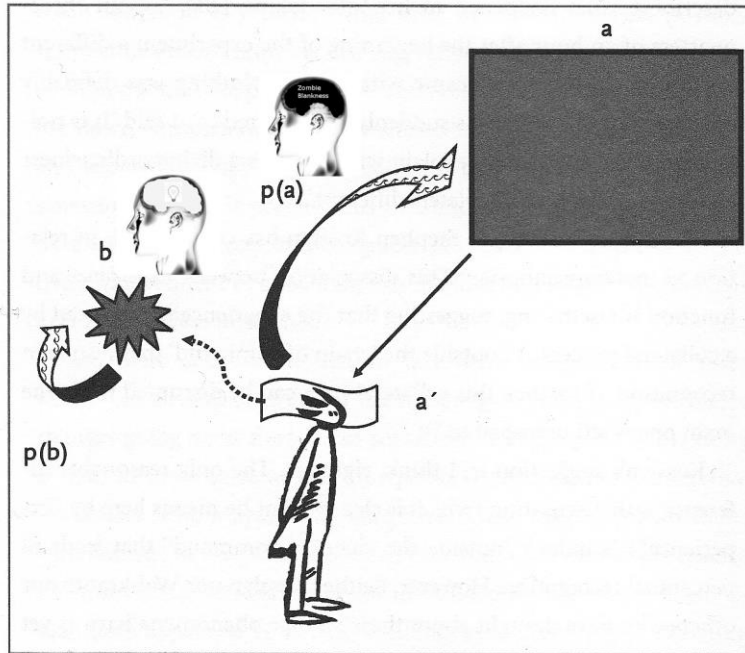


Figure 2⁽¹⁶⁾

According to Humphrey the sensation, the ‘inner light’ of phenomenal awareness, is generated via a completely different mechanism which is “active response” on the part of the subject, it is “a *personal evaluative* response” and “not designed to be a copy of the stimulus.” Humphrey’s personal evaluative ‘sensation’ also has amazing qualities, apart from the glow of phenomenal conscious-awareness. This is because, although the ‘sensation’ is “not a copy” and is only a subjective response, it also, says Humphrey, has “potentially a wealth of information about the stimulus.”

But this is logically impossible! If *all* the perception gets done on route $a \rightarrow p(a)$, which according to Humphrey’s proposal must be the case because he makes an absolute division between the ‘perception’, which he conceives of as completely unconscious and mechanically blank, and the ‘subjective’ ‘glow’ of the ‘sensation’ which is added on, then the completely subjectively added on ‘sensation’ cannot contain information about the object, it’s all subjective. And the fact that it’s all ‘subjective’ produces a huge problem for Humphrey’s materialist perspective. If we allow that the real perception route is $a \rightarrow p(a)$ is all mechanically materialist, no new added extra immaterial ingredient of awareness is secreted from brain neurons along the way.

On the other route to the ‘sensation’, however, it’s a different matter because an immaterial subjective bit gets projected on. Humphrey, of course would claim it is all material machinations of the neurons, but this simply does not fit well with Humphrey’s description of this extra added

qualitative sensation as a 'subjective' "personal evaluation." 'Personal evaluations' are the stuff of consciousness, but here Humphrey wants us to believe that a completely blank brain carries out a "personal evaluation" and then generates a completely new kind of 'stuff' of reality, the phenomenal glow of conscious awareness, and sticks it on to the entirely blank perception. Furthermore this extra bit actually carries no aspect of the perception because it is all subjective and the perception is an 'objective' yet unconscious perception. None of this makes sense.

When materialists write this kind of nonsense they generally assume what they should be trying to prove, i.e. that matter produces consciousness. They have to; it cannot do anything of the kind. And one does not have to do experiments to know this; this fact is contained in the definitions of 'matter' and 'consciousness'. 'Matter' is defined to be all solid and extensive stuff lacking any conscious qualities and 'consciousness' is immaterial knowing 'stuff' (using this term very loosely). Because of quantum physics we now know that this kind of matter does not exist. Nevertheless, it is this kind of non-existent 'matter' which is generally held in high esteem in the brains of materialists.

As we shall see, the fact that the materialist version of 'matter' does not exist, reality is in fact all quantum 'dream-stuff' as quantum physicist Wojciech Zurek indicates, allows us to create a clear, coherent and comprehensive account of consciousness and the appearance of matter. Once realize that the physical properties of the quantum field contains the potentialities for the production of the appearances of the material world and the knowing awareness of consciousness all becomes very easy to understand because the ontological ground of reality, the quantum field, contains the potentialities for both kinds of production, the appearance of matter and experience of consciousness.

Materialists, however, claim that the ontological ground of reality is devoid of all traces of mind and consciousness, devoid of any glimmers of awareness or any glimmer of the potentiality for consciousness, and then start to propound deeply ridiculous, contradictory, incoherent and absurd claims such as Daniel Dennett's claim that:

An impersonal, unreflective, robotic, mindless little scrap of molecular machinery is the ultimate basis of all the agency, and hence meaning, and hence consciousness, in the universe.¹⁷

And here is Humphrey's less dramatic version:

Consciousness is made of a certain kind of physical activity inside the subject's head. And this activity, we can assume, has been designed by natural selection, using nothing other than the resources of a biologically evolved nervous system.¹⁸

And, because they place themselves in such an absurd intellectual position, they are forced then to resort to conceptual deception in their works. Presumably they are deceiving themselves as well as their readers, I cannot think of any reason why someone would engage in such a profoundly mistaken course of intellectual deception knowingly, but I could be wrong. However the deception is fundamentally the same in all materialist advertising campaigns, it simply

involves using language in a manner which relentlessly suggests the presence of consciousness, awareness and conscious intentionality whilst pretending that it is not there. As soon as they want to produce the new magical ingredient in their description of process of reality they simply make what is *implicit* in the consciousness-saturated language used to describe the putatively mindless material machinations *explicit*. An unwary reader, or a reader already sympathetic to the materialist cause, doesn't notice the trick and they impute the illusion, generated by the language use, to the process of reality, even though in reality the trick is impossible.

Humphrey's use of the notion of one bit of the brain suddenly carrying out a subjective personal evaluative response to the perception is example of assuming the presence of consciousness whilst in the midst of supposedly accounting for the generation of consciousness is an example of this strategy. The notion that, once have performed the personal evaluation, the unconscious brain neurons somehow 'subjectively' excrete a glob of consciousness to stick on to the perception is just silly, but such silliness is regularly indulged in during materialist advertising campaigns.

Remarkably, in his '*How to Solve the Mind-Body Problem*' paper Humphrey actually admits that his method involves a bit of linguistic skullduggery:

Our task was to recast the terms on each side of the mind-brain identity **phantasm, p = brain state, b**, so as to make them look more like each other. What we have done so far is to re-describe the left hand side in more concrete terms. Thus the phantasm of pain becomes the sensation of pain, the sensation of pain becomes the experience of actively paining, the experience of actively paining becomes the activity of reaching out to the body surface in a painful way, and this process becomes self-resonant and thick...¹⁹

In this absurd sequence Humphrey is actively and painfully trying to re-describe phenomenal-consciousness of the "phantasm of pain" so that it looks or sounds more like 'matter' being "self-resonant". The implausibility of the desperately forced links *is* painful, and this is not a matter of "reaching out to the body surface in a painful way" (I've just made my pain worse by re quoting this gibberish!). Even more depressingly painful is the fact that such ideas are entertained as worthy of consideration by many in the academic community.

In the final section of this paper Humphrey presents another version of his evolutionary vision of how mind is generated from mindlessness which he says he will do "in cartoon form" as if what had gone before did not have a certain cartoon quality. We are asked to return to the "earliest of times and imagine a primitive amoeba like animal floating in the ancient sea." The boundary of this animal is important because:

...everything within it is part of the animal, belongs to it, is part of "self", everything outside it is part of "other". The boundary holds the animal's own substance in and the rest of the world out. The boundary is the vital frontier across which exchanges of material and energy and information can take place.²⁰

Notice the blurring of the conceptual boundaries between the material stuff of the animal and its realm of “self”. Humphrey is about to tell us that this animal is in no way “mentally aware of what is happening” and yet he has imputed a “self” in order to allow the further imputation of intentionality to what he claims is purely mindless mechanistic processes. What follows makes one wonder whether Humphrey might have been better off writing children’s bedtime stories:

Now light falls on the animal, objects bump into it, pressure waves press against it, chemicals stick to it. No doubt some of these surface events are going to be a good thing for the animal, others bad. If it is to survive it must evolve the ability to sort out the good from the bad and to respond differently to them - reacting to this stimulus with an ow! to that with an ouch! to this with a whoee! Thus, when, say, salt arrives at its skin it detects it and makes a characteristic wriggle of activity- it wriggles saltily, when red light falls on it, it makes a different kind of wriggle: - it wriggles redly. These are adaptive responses, selected because they are appropriate to the animal's particular needs, wriggling saltily has been selected as the best response to salt, while wriggling sugarly, for example, would be the best response to sugar, wriggling redly has been selected as the best response to red light, while wriggling bluey would be the best response to blue light.

All this is supposed to be totally mechanical with no component of any kind of mentality, although, in conformity with a general procedure within materialist descriptions, implications of mentality are contained within some of the language employed, the animal responds with “an ow!” or “an ouch!” or “a whoee” (I did say that many of Humphrey’s elucidations border on the childish).

Also note the use of the descriptions that the animal, in response to various stimuli, “wriggles saltily”, “wriggles redly” and so on. Now in this context this terminology is supposed to be describing purely material-mechanical, non-mental reflexes. However if you go back to the quote on page 81 where Humphrey talks of the need to describe “phantasms”, which are phenomenal-sensations involving consciousness, more like brain-states one find that he has identified the *experience* of pain as “the activity of reaching out to the body surface in a *painy* way.” He has replaced, for his own convenience, what should be experience within consciousness with a seemingly mechanical description. This of course paves the way for identifying what should be a purely mechanical “wriggling redly” with the *experience* of red! This is in line with Humphrey’s ‘theory’ that:

...sensations derive their characteristic phenomenology from the fact that they are – in evolutionary origin – a kind of bodily action, involving reaching back to the stimulus at the bodily surface with an evaluative response.²¹

But it is not a “fact” that sensations are “in evolutionary origin - a kind of bodily action.” And “evaluative responses” are the kind of processes minds engage in, not bodies. Humphrey constantly presupposes what he is supposed to be demonstrating. And the primary technique he employs amounts to smoke and mirrors linguistic deception.

In an LSE public lecture promoting his book *Soul Dust: The Magic of Consciousness* Humphrey once more reiterates his simplistic and incoherent ‘theory’ that ‘sensations’, the immediate

awareness within a person's field of perception, are nothing more than a species of bodily "performances" with some wonderful, and deeply deceptive for those not up to the task of seeing the illusion, conceptual perfidy. In this book Humphrey tells us that consciousness is a "magical mystery show" "put together" by evolution, using nothing other than material components, of course. Now the term "magic show" is, of course, not a precise technical description of the phenomenon of consciousness, it is an evocative metaphor. But Humphrey treats his vague and suggestive metaphors as if they were precise links in rigorous demonstration. If consciousness is a "show", he says, then it must have been a "show" at the outset and "sensations have indeed always involved a kind of performance". This is because, according to Humphrey, "sensation originated in evolution as a kind of active response to stimulation, a bodily expression of what was happening to the animal and how it felt about it."²²

The outrageously dubious nature of the links that Humphrey employs here should be obvious to anyone with an ability to do a bit of conceptual analysis. We begin with the vague metaphorical assertion that consciousness is a "magic show"; and the question that Humphrey wants to answer is: how can purely material evolution create this magic show of consciousness, which appears to be entirely different in qualitative nature to the material realm? Well, a "show", asserts Humphrey, is a kind of "performance" and his theory that sensation is actually nothing more, or was originally nothing more, than a "bodily action involving reaching back to the stimulus at the bodily surface with an evaluative response" is a kind of "performance" therefore it follows that this "bodily action" is the "magic show" of consciousness. Hence the "performance" of the "magic show" of consciousness is the same as the "performance" of the "bodily action" of sensation. It's all so easy when you misuse language! No wonder a member of the audience asked at the end of the lecture "isn't your presentation a linguistic and intellectual illusion." At least one member of the audience saw through the illusion of Humphrey's magic show.

At this point in the lecture Humphrey recounts his just-so-story of the floating pre-Cambrian animal non-mentally responding with "an ow!" or "an ouch!" or "a whoee" to various stimuli. In this way the stimuli are "assessed" and the animal responds with some kind of "wriggle" of "acceptance" or "rejection" accompanied by a "smile" a "scowl" a "grin" at "the level of a very primitive organism." And all this is supposed to be happening with absolutely no dimension of mentality, no glimmer of consciousness. "However," says Humphrey:

Suppose that the animal should actually want to know what was happening to it, and form a mental representation of that stimulus its responding to. Well a neat solution would be for the animal to monitor its own response because the reflex behaviour carries lots of information about the stimulus...²³

How can an absolutely mechanical organism, which is completely devoid of any trace glimmer or spark of consciousness or mentality, "want to know what is happening to it?" And, then, furthermore, come up with "a neat solution!" However, according to Humphrey:

...our ancestors soon discovered that they could represent what was happening at their body surfaces by monitoring what they themselves were doing about it.²⁴

And now Humphrey has simply slipped in the realm of consciousness and intentionality as if it were the most natural thing in the world, even though there has been no demonstration of how a purely material-mechanical stimulus-response organism could exude this realm of awareness, ‘wanting’ and intentionality.

Later, Humphrey tells the audience, as the animal becomes more sophisticated it is not happy with this state of affairs and ‘wants’ a more sophisticated tracking mechanism. So “what can it do?” The answer is “for the responses to become internalized where they can be still monitored.” “Sensory responses have become what” Humphrey “calls ‘privatized.’” Figure 3 is Humphrey’s image of this process, with a small addition (the faces). As I said Humphrey should have been a children’s writer, there is absolutely no evidence for his absurd cartoon concoction, it is indeed an incoherent private fantasy, which should be met with laughter and derision for its childish implausible incoherence.

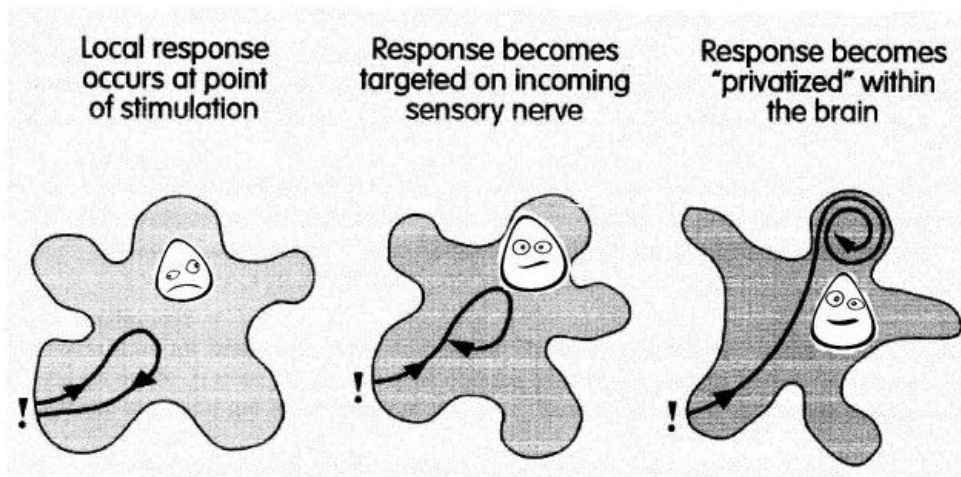


Figure 3⁽²⁵⁾

In the third of the cartoons of figure 3 we are supposed to imagine that the ‘privatized’ response causes a “self-resonant and thick” feedback loop within the material of the emerging ‘brain’ of the primitive creature. As with many materialist fantasies Humphrey considers that if the matter of the brain can be imagined into performing some kind of really complicated and almost mystical feat of internal self-referencing then its material stuff *must* be then capable of producing the illusion of consciousness. The ‘wiggles’ on the body surface are now internalized into the stuff of the brain, and because our brains are now tying themselves up into convoluted wriggling knots it is no wonder that they start excreting this strange illusory magic show of consciousness:

It has been true all along, ever since the days when sensory responses were indeed actual wiggles at the body surface, that they have been having feedback effects by modifying the very stimulation to which they are a response. In the early days, however, this feedback circuit was too round-about and slow to have had any interesting consequences. However, as and when the process becomes internalized and the circuit so much shortened, the conditions are there for a significant degree of recursive

interaction to come into play. That's to say, the command signals for sensory responses begin to loop back upon themselves, becoming in the process partly self-creating and self-sustaining. These signals still take their cue from input from the body surface, and still get styled by it, but on another level they have become signals about themselves. To be the author of such recursive signals is to enter a new intentional domain.²⁶

Again we are in the realm of smoke and mirrors, there is absolutely no reason why "recursive signals" should conjure up "a new intentional domain". Humphrey next reveals another of his ridiculous hunches, these internal brain knots require more than four dimensions:

...my hunch is that re-entrant circuits in the brain are creating complex attractor states that require more than the usual four dimensions to describe them - and that it is this that makes these "states of mind" seem to have immaterial qualities. But you do not need to understand what I have just said to get the message. Creating something that gives the illusion of having weird and wonderful properties need be no great shakes, certainly much easier than creating something that actually has them...²⁷

But this is just another indication that the complex "re-entrant circuits" in Humphrey's brain must be short-circuiting. For if the "complex attractor states" (Humphrey supplies the picture shown in figure 4) are exemplified in the material of the brain then how can they possibly "require more than the usual four dimensions," within the four-dimensional matter of the brain, Humphrey makes no mention of subtle atomic structures or quantum physics. As far as I can see Humphrey is not referring to abstract "re-entrant circuits", he is taking about the crude neuronal 'stuff' of the brain. This is certainly suggested by Humphrey's remark that:

We can surely assume that the kind of development I have sketched above will not have happened accidentally. It must be the result of natural selection favouring genes that underwrite the specialised neural circuits - whatever they turn out to be - that do indeed sustain the illusion of qualia, giving rise to the magical mystery show for the first-person.²⁸

We should surely conclude from this that it is the "specialized neural circuits" which are more than four-dimensionally convoluted into "complex attractor states." One can find research into how the various subtle neuronal activities produce some kind of multiple-dimensional informational states generated by electrical-informational fields as when a research paper refers to "integrator circuit models characterized by multiple dimensions of slow firing-rate dynamics,"²⁹ but this is not what is suggested by Humphrey's elucidations, if elucidations they can be called. Indeed the very reference to "the usual four dimensions to describe them" would suggest that Humphrey *is* indicating three spatial dimensions and time. Which would further suggest that he thought the brain could create new dimensions of spacetime whilst remaining thoroughly 'material'.

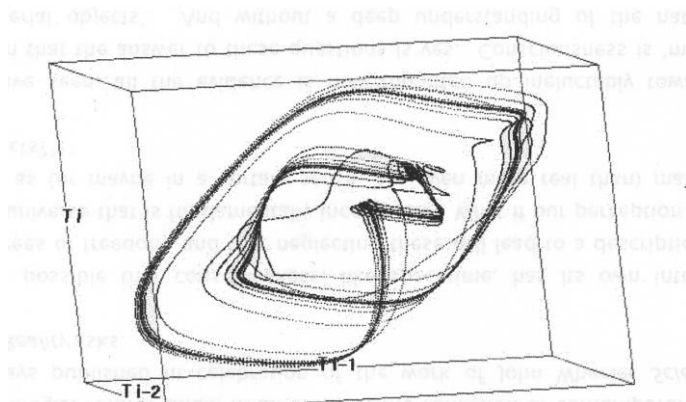


Figure 4 – A differential attractor³⁰

Humphrey writes that “you do not need to understand what I have just said to get the message”. But unfortunately this is not true. What is true that his attempted explanations here are “confused and confusing” as the *New Statesman* reviewer Raymond Tallis says:

He claims to have solved “the hard problem” of consciousness: how it is that a piece of matter such as a human organism (or its brain) can have conscious experiences, items that do not seem of a nature that can be conjured out of matter alone. His “explanation” is confused and confusing, not the least for his conclusion that consciousness is “a magical mystery show that you lay on for yourself”, a “self-created entertainment for the mind”, staged by one part of the brain to influence another part of the brain.³¹

There is, indeed, no talk of subtle ‘consciousness fields’ in Humphrey’s attempted explanations, it seems always to be a matter of one bit of jelly laying on a show for another bit of jelly. Is any of this at all plausible?

But suppose we give Humphrey the benefit of the doubt and accept for a moment that he might have thought in terms of the brain exuding subtle multidimensional consciousness fields which produce the qualitative aspect of consciousness. In this case we are back with the problem that this means that, prior to the remarkable shift from zombie status to fortunate ‘magic show’ status, the brain would not have been exuding such consciousness fields. And this means that the very material stuff of the brain changed very, very radically at some point. Again such a notion is beyond implausibility. When his ideas are analyzed with any precision there are so many huge problems one can only conclude that many people do not bother to really make an effort to investigate. This is often the case in the materialist camp.

In the concluding remarks to his paper on *How to Solve the Mind-Body Problem* Humphrey says regarding his linguistic massaging to make brain-states look identical to phenomenal-consciousness:

To return to our identity equation: We *needed* a certain set of features on the brain side. We could have *invented* them if we were brave enough. But now, I submit, we actually

have them handed to us on a plate by an evolutionary story that delivers on every important point.³²

A rigorous analysis of his various fantasies, however, clearly indicates that, indeed, the truth of Humphrey's "evolutionary story" is that he did invent it!

In his essay '*Consciousness: The Achilles heel of Darwinism? Thank God, not quite*' inadvertently exposes the absurdity of the materialist case; and the fact that he does this, and the manner in which he does it, also exposes the deficiencies in his own intellectual acuity. The apparent existence of the phenomenon of consciousness, with its remarkable immaterial qualities, he indicates, might be thought to require some kind of 'Super-Intelligent Design.' However, we know with absolute confidence, he implies, that:

Living beings, remarkable as they are, are nonetheless physical mechanisms made of purely material substance. And even if there are some puzzles about what's gone into their evolutionary design (and there really are not many such puzzles left), biology has progressed so far that we can see in just about every case how the living machinery operates. Many scientists would predict it will soon be in every case but one. And, yet this one hard case is so central to our world and of such personal importance that it may be enough to call the whole scientific enterprise into question. The problem case is human consciousness. Consciousness ... is unquestionably a phenomenon apart.

Most of this is just fallacious. Are living beings "made of purely material substance?" No, if one believes the findings of modern physics then everything is made of quantum 'stuff'. And quantum 'dream-stuff', as Zurek calls it, is not material, if we are using this term with the connotation that Humphrey is employing.

The next issue is that biology has not progressed as far as Humphrey claims. There is one huge problem of our understanding of "evolutionary design", which is how "living machinery" arose in the first place from utterly dead, non-conscious matter. With reference to this, the general and mistaken image of the origin of life from utter, blank lifelessness is brilliantly described by Simon-Conway Morris:

...images of warm ponds, seething volcanic springs, and massive thunderstorms rumbling across a deserted yet pregnant landscape are used to feed the imagination. At this stage, life has yet to exercise its peculiarly specific grip, its spinning of the genetic code, it's weaving of biochemical complexities; ...the nascent processes of Darwinian selection are already winnowing and reaping ... Metaphorically the molecules slug it out by tooth and claw. Cycles develop, life emerges...

But this is pure fantasy, despite much misreporting to the contrary it is the case that:

...something is missing, life cannot be created in the laboratory, nor is there any clear prospect of it happening.³³

There is no compelling evidence for this overused fantasy. The announcements of the test tube creation of life are wildly overstated and one of the chief exponents of this research, Stanley Miller, was candid enough to say that:

The problem of the origin of life has turned out to be much more difficult than I, or most, people envisioned.³⁴

And there is growing evidence that the quantum level of the process of reality is likely to be fundamental in the development from apparent lifelessness to the first glimmers of life and consciousness.

The claim that just about all evolutionary biological mechanisms are understood is absurd bluster. Humphrey's assertions about evolutionary biology being pretty much sown up were made in 2006; the following report is from the New York Times July 7th 2007:

The \$73.5 billion global biotech business may soon have to grapple with a discovery that calls into question the scientific principles on which it was founded. Last month, a consortium of scientists published findings that challenge the traditional view of how genes function. The exhaustive four-year effort was organized by the United States National Human Genome Research Institute and carried out by 35 groups from 80 organizations around the world. To their surprise, researchers found that the human genome might not be a "tidy collection of independent genes" after all, with each sequence of DNA linked to a single function, such as a predisposition to diabetes or heart disease. Instead, genes appear to operate in a complex network, and interact and overlap with one another and with other components in ways not yet fully understood. According to the institute, these findings will challenge scientists "to rethink some long-held views about what genes are and what they do." Biologists have recorded these network effects for many years in other organisms. But in the world of science, discoveries often do not become part of mainstream thought until they are linked to humans. With that link now in place, the report is likely to have repercussions far beyond the laboratory. The presumption that genes operate independently has been institutionalized since 1976, when the first biotech company was founded. In fact, it is the economic and regulatory foundation on which the entire biotechnology industry is built.³⁵

And, furthermore, the Evo-Devo revolution has seriously upset the canonical mainstream Darwinian perspective, although committed materialist Darwinists are trying to cover over the cracks.

Did Humphrey care that he had promulgated an utter falsehood in an 'academic' paper? Of course not, it is an entrenched and seemingly accepted feature of current Western academic practice that established figures can perpetuate absolute falsehoods with impunity. To a large extent in many university departments the accepted ethos is not the pursuit of truth but the pursuit of academic careers and ego enhancement, and as a result:

Philosophers of mind appear to have arrived, today, at less-than-satisfactory solutions to the mind-brain and free will problems, and the difficulties seem, at least *prima facie*, very closely connected with their acceptance of a known-to-be-false understanding of the nature of the physical world, and of the causal role of our conscious thoughts within it.³⁶

This leads us to the final odd assertion contained in Humphrey's observation, which is that the phenomenon of consciousness "may be enough to call the whole scientific enterprise into question." The truth is that the quantum revolution opens up a new territory wherein consciousness becomes a natural quality of the quantum ground of reality, and because of this science is expanded. As the physicists Rosenblum and Kuttner have recently pointed out, reinforcing the insights of Penrose, Stapp, Mensky and many others:

Consciousness and the quantum enigma are not just two mysteries; they are *the* two mysteries; first, our physical demonstration of the quantum enigma, faces us with the fundamental mystery of the objective world 'out there;' the second, conscious awareness, faces us with the fundamental mystery of the subjective, mental world 'in here.' Quantum mechanics seems to connect the two.³⁷

These issues do not impinge upon Humphrey's blank brain because he operates in an academic environment wherein showing a few paradoxical pictures serves as an argument that consciousness is an illusion created by the ultimately blank 'material' brain.

But where was all this 'material' at the moment of the big bang, when all was quantum potentiality? No matter! Let's not bother with scientific details, it's all a matter of matter and, according to Humphrey, a few paradoxical pictures will help to prove the point (see figure 5). Referring to William Paley's Argument from Design, proposed in 1800, involving a traveller finding a watch and concluding the existence of a Designer, Humphrey employs this example in the context of consciousness:

But suppose now we were to come across an object ... that, so far as we can see, does not belong to the world of normal physical phenomena. Something whose nature - lets not say what it is yet - is such that we cannot understand it as a mechanism or see how it could have been put together to function as it does. In short, something seemingly impossible to make. Suppose, for illustration, we were to stumble on the object in this picture. Surely the inference would be inevitable that we were confronted not merely by evidence of an intelligent designer but of a designer with august supernatural powers.

Humphrey's "object" here is, of course, consciousness. According to Humphrey consciousness is just so remarkable that an unwary brain might be tempted to think consciousness is really real and must have been "designed". However, according to his simplistic and dogmatic viewpoint, the fact that it is possible to draw paradoxical pictures is meant to lend support to his claim that consciousness *must be* an illusion.

Another image Humphrey has resorted to as part of his campaign to claim that consciousness can be easily thought of as being an illusion is that of the impossible triangle shown in figure 6. Such examples, Humphrey seems to think, are entirely appropriate for demonstrating that consciousness, when seen from a “third person point of view,” whatever that might possibly mean, can be easily seen to be a “trick”. Humphrey says about this:

Now, no one wants to think that consciousness is likewise some kind of trick ... But let us nonetheless see where the analogy may lead. The standard philosopher's example of how hard the problem is, is the case of what it is like to see red. So, now, suppose you were to be looking at a ripe tomato: what might you want to explain about the extraordinary qualia-rich red sensation that you are having? Since the qualia are indeed so up-front and remarkable, and since no one knows what this is really about, we are all, most probably, going to start off by asking what may be a bad question: “How can we explain the existence of these qualia as we experience them?” So here again it will only be if we undergo a radical shift in perspective and realise that the “qualia as we experience them” could be a mental fantasy, that we shall move on to asking what may be the good question: “How can we explain why we have the impression that such fantastic qualia exist even if they do not?” But, now, here is why it is likely to be so difficult to make this move: in the case of consciousness we cannot simply turn over the page to see the solution. We are all innocents, no one has ever seen qualia from a different viewpoint, we are stuck with the first-person perspective. So, the result is we persist with questing for the qualia as such.³⁸

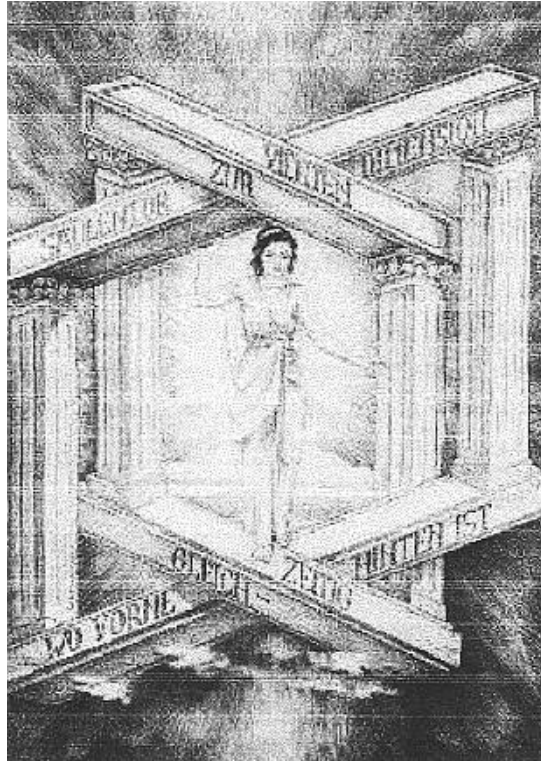


Figure 5⁽³⁹⁾

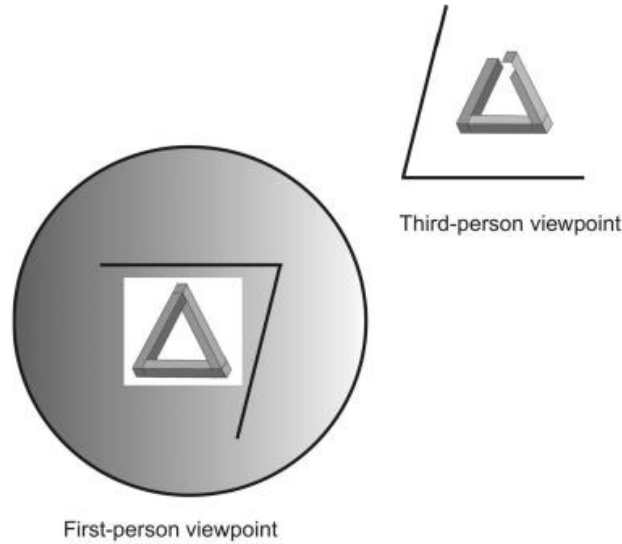


Figure 6⁽⁴⁰⁾

Let us consider these remarks for a few moments. Consider the situation where someone is looking at a red tomato. The situation is one in which it is indeed the case that the actual experienced phenomenon of redness within the field of consciousness of the observer does not exist externally as a film of ‘redness’ glued, so to speak, on to the surface of the tomato. At the level of analysis of atomic structure photons of light are falling upon the atomic structure of the tomato and, because of the nature of that atomic structure, red wavelength photons are emitted into the eyes of the observer. Now at this point in time, as Humphrey indicates, we have very little in the way of detailed knowledge of how the atomic processes within the brain give rise to the direct and immediate experience of ‘redness’, “extraordinary qualia-rich red sensation”, which is experienced by the observer. This is why consciousness is supposed to be such an immense problem.

Humphrey is quite aware of the deficiency in our knowledge. He says clearly that “the qualia are indeed so up-front and remarkable, and since no one knows what this is really about.” In other words, the actual first-hand experience is impressive and we do not know the mechanism by which it arises. But then Humphrey claims something which is entirely incoherent, without support and absurd. Because the experience is so “up-front and remarkable”, so powerfully present as something which seems very real, in fact the very basis of any experience of reality, Humphrey actually claims that the question as to how this remarkable and very real looking phenomenon comes into existence is a “bad question” and, astonishingly, Humphrey asks his readers to accept that the correct approach is ask how *it doesn't come into existence*.

If we were to adopt this as a scientific or philosophical principle then this would mean that the more real a phenomenon appeared to be the more we must suspect that we are being deceived,

and the more determined we must be in resisting the temptation to account for its reality and, to the contrary, must diligently search for highly implausible explanations for why it does not exist. A corollary to this seems to be, amongst crude materialists like Humphrey, that the more unreal a phenomenon has been shown to be the more we must pretend it is real. For, as Stapp has pointed out with reference to the belief that the ‘matter’ of the brain is ultimately ‘real’ stuff:

...no such brain exists; no brain, body, or anything else in the real world is composed of those tiny bits of matter that Newton imagined the universe to be made of.⁴¹

The stuff of reality is all ultimately made up from insubstantial “dream-stuff.”

Humphrey, adding insult to injury, then tells us that it is not possible to have a third person point of view of qualia. In the case of consciousness we cannot turn the page over to see the impossible triangle shown to be an illusion. The kind of simplistic illusions that Humphrey employs as support for his case, however, are entirely inappropriate. This is easily seen. When the solution to how the ‘impossible triangle’ trick is revealed there is no shock at the way that the trick is carried out, we are not amazed that the “solid wood” that the triangle is constructed out of can be formed into the shape required to perform the trick. But, as we have seen, Humphrey himself thinks ‘matter’ is going to have to perform amazing self-referential convolutions of multidimensional interconnections in order to get what he considers to be the illusion of consciousness off the ground. The two situations are incommensurate and in the case of consciousness there is a yawning gap of credibility between the basis of the illusion and the illusion. To put it as crudely as Humphrey’s materialism, there is no apparent difference in the *kind of stuff*, the “solid wood,” that is involved in the two perspectives. In the case of consciousness, however, the kind of stuff involved appears to be dramatically different.

Humphrey, however, assumes that he knows without a doubt, despite the contrary evidence of physics, that everything that can and does exist must be ‘material’:

...in consciousness we find ourselves right at the centre of something which - if we were not already conscious - would be far beyond what we could imagine. Let’s not deny this or try to explain it away as an illusion. The paradoxical features of consciousness are precisely the features with which scientific understanding has to begin. Nonetheless, even though we should not try to explain it away, this doesn’t mean we must assume that consciousness is not an illusion. Our starting assumption as scientists ought to be that on some level consciousness has to be an illusion. The reason is obvious. If nothing in the physical world can have the features that consciousness seems to have, then consciousness cannot exist as a thing in the physical world. So, while we should concede that as conscious subjects we do indeed have a valid experience of there being something in our minds that the rules of the physical universe don’t apply to, this has to be all it is – the experience of something in our minds.

As usual with Humphrey there are a few extraordinarily incompetent, yet entertaining, observations and formulations. The fact that comments such as consciousness presents us with a phenomenon which “if we were not already conscious - would be far beyond what we could

imagine” are not met with howls of laughter by more acute colleagues is as mysterious as consciousness itself is supposed to be. If “we were not already conscious”, of course, we would not be able to imagine anything whatsoever! Humphrey, however, seems to think that it is possible for there to be a non-conscious type of life-form which can, indeed, imagine away to its heart’s content. The following piece of fantastic nonsense is from Humphrey’s brief article ‘*Seeing Red: A Postscript*’:

Let’s stipulate, then, that the theory of consciousness has to be comprehensible to a scientist from Mars - an individual in many ways not unlike ourselves, highly intelligent, perceptive and even capable of self-reflection, but who nonetheless has never evolved into the kind of being who has sensations. Suppose we could explain to this Martian what happens in the brain of a human being who is engaged, say, in smelling a rose. And suppose he could thereby arrive at the entirely novel (to him) conclusion that it must be like something to be this human being, and indeed like this: “I am feeling this thick, sweet, olfactory sensation in my nostrils”. It’s a tall order; but, still, it’s what the theory ought to do. Is a theory which could bring this off a possibility even in principle? Since the theory must employ only such concepts as the Martian can make sense of at the outset, we need to consider what kind of pre-theoretic notions he brings with him. Given that as yet he knows nothing about sensations, will he have other essential concepts on which to build?

The answer for any kind of being with a normal brain and normal consciousness and with a modicum of non-Martian intelligence, of course, is that without consciousness there is no basis for any kind of conceptuality, as Humphrey indicated in his other just-so-stories, without consciousness its all utter blankness. Here, however, he now wants us to believe, with no evidence and on the basis of incoherent arguments, of the ‘existence’ of a type of consciousness (Martian) which has absolutely no phenomenal-sensational-awareness. But this is just making things up on the spur of the moment for the convenience of materialist storytelling, or fantasy-spinning. The materialist tendency to inappropriately impute consciousness and capacities derived from consciousness, for their convenience, to Martian zombies for example, really makes me see red!

Humphrey has begun this particular section (the quote before last) with a degree of incoherence that he is determined to consistently maintain, for he next tells us that we must not explain the phenomenon away but we must show it to be an illusion. Showing something is an illusion *is explaining it away!* And, he attempts to explain, the reason is “obvious.” According to Humphrey the ‘physical’ world is material and has no qualities of consciousness, so consciousness cannot exist. Although it does have a ghostly and illusory semi-existence!

A final example of Humphrean incoherence that is worth considering is from his short article *placebo effect*. He accepts that the effect has been scientifically proven and then writes:

How do these changes in what a patient thinks (particularly) or feels (more generally) about his ailment activate the physiological mechanisms that lead to recovery? And, then, the deeper question about the evolutionary design: what biological advantage can there be in having mind control the bodies healing systems in this way?

In this article Humphrey constantly indicates that it is the sphere of mind which is able to intervene and have leverage upon the realm of the physical, which is to say the 'material' realm: "How does the mind talk to the body's healing systems in such specific ways?" Humphrey does not offer a materialist explanation and the article gives the impression that, when not having to present a contrived materialist advertising spiel for an academic audience, Humphrey quite naturally thinks in terms of mind as being a significant and effective ontological aspect of reality. Indeed the concluding paragraph reads:

And so, today, the very prospect of medical attention - the patient's belief in it - works its magic for the simple reason, ... that for most of human history, once a sick person has had cause to think that he will soon be safe and well, he has had just the excuse he needs to bring on his own recovery as fast as possible.

This is an observation which seems to indicate quite forcefully the power of mind to have a dramatic effect upon the physical realm. Such effectiveness of mental intentionality is completely incompatible with Humphrey's assertion that the realm of sensation, consciousness and mentality is just an ultimately non-existent illusory trick of matter performing magical machinations. Humphrey, however, seems completely oblivious to this glaring inconsistency. Perhaps he really does have only a blank brain after all!

There is, however, one huge significant insight in Humphrey's new, "radical" perspective which is contained in his latest book *Soul Dust: The Magic of Consciousness*, an insight which is totally undermined by Humphrey's dogmatic and unscientific materialism. This insight is that consciousness has an intrinsic value, or even may be a significant part of the intrinsic value of the process of reality:

...consciousness *makes life more worth living*, conscious creatures enjoy *being* phenomenally conscious. They enjoy *the world* within which they are phenomenally conscious. And they enjoy *their selves* for being phenomenally conscious. But "enjoy" is too weak a term. In the case of human beings at any rate, it would be truer to say that they *revel in being* phenomenally conscious. They *love the world* in which they are phenomenally conscious. They esteem their selves for being phenomenally conscious. Moreover,...for conscious creatures there is real biological value in all this. The added *joie de vivre*, the new *enchantment* with the world they live in, and the novel sense of their own *metaphysical importance* has, in the course of evolutionary history, dramatically increased the investment that individuals make in their own survival.⁴²

And in a remarkable turn of affairs for a materialist Humphrey indicates an intense appreciation of the remarkable qualities of consciousness and its importance in personal growth and even spiritual growth:

It is our good fortune ... that other types of researchers of recognized this all along. We might call them the “alternative natural historians of consciousness: on one side are painters, poets and musicians; on the other, followers of meditative religious traditions such as Buddhists.”⁴³

However, it is better not to get too excited because, although Humphrey appears to be a great appreciator of the qualities of consciousness, indeed the book contains many long quotations which indicate how humans have always valued sense-perception and consciousness, this does not undermine his fervent and unshakeable belief that this remarkable aspect of reality ultimately does not exist.

So, the issue is, then, if consciousness does not ultimately exist, how and why did it come to at least *to appear to exist, or have an illusory ‘existence’*. Well the answer Humphrey offers goes something like this. Evolution, for some mystical reason that no materialist has yet offered any explanation for, after a few billion years managed to get non-conscious zombie-type organic beings wandering pointlessly around planet Earth in complete internal blankness, no internal glimmer at all. Because this blank existence was no fun, although why completely non-conscious organic zombies should require fun is, again, a mystery, these zombie beings did not have much in the way of incentive to keep surviving, there was nothing much in it for them. Without the internal light of phenomenal consciousness they felt, in their blank unaware type of zombie non-feeling mode, that they might just as well be non-surviving ‘matter’ just lying around doing nothing much except being non-conscious matter, at least they wouldn’t have to make an effort.

Evolution needed to come up with a solution to this block to getting more complex organic zombies lumbering around the planet. Again, why ‘Evolution’ wanted to do this is a mystery; in the end, according to materialists, it’s all a matter of unconscious matter mattering to itself. But Evolution has its random purposes. Anyway it needed some way of motivating its reluctant zombie ‘survivors’. Then, as if by magic, in the way evolution generally manages to keep evolving, a solution came into being. Evolution figured out that if it could trick its zombies into thinking that they were not zombies but had an wonderful internal glow of sensation, although at this moment in time of course these zombies were not capable of thinking or sensing anything, but that’s a minor issue, then they could be tricked into surviving on their own account. The pressure would be off of Evolution. The evolving survivors could slug it out for survival on their own account! You can see why materialists value Evolution so highly; it’s very crafty, almost intelligent!

In his essay *Consciousness: ‘The Achilles heel of Darwinism? Thank God, not quite’* Humphrey explains his vision as follows:

We can see, then, how it might have been within the power of natural selection to design human minds to experience consciousness the way they do. But there remains of course a crucial proviso. The basic premise of Darwinism is that natural selection selects for traits that are biologically adaptive - leading to greater success in reproduction. So

natural selection will only have designed human minds to experience consciousness this way if, in the history of our species, individuals who harboured this experience made out especially well in the struggle for survival. And how could that be? Why should our particular take on being conscious bring us biological good fortune? To answer this, the most important question, we must look objectively at what the encounter with the magically rich features of consciousness actually does for us – how, if at all, it changes human lives.

... without the experience of being conscious we would simply not have the sense we have that there is something substantial at the centre of our psychological existence, something it's like to be us. But once we do experience it, the Self is there for us. A self that has this at its centre is a self to be reckoned with, a self worth having. And such a self bursts with the potential to become the principle around which we organize our private mental lives.

This could be true not only for human beings but animals as well. Perhaps whales, dogs, monkeys - maybe all mammals, all birds - have comparable experiences of consciously being there. But for human beings it evidently goes much further. For in our case we now have a self that seems to inhabit a separate universe of spiritual being. And this is something else. As the subjects of something so mysterious and strange, we humans gain new confidence and interest in our own survival, a new interest in other people too. We begin to be interested in the future, in immortality, and in all sorts of issues to do with co-consciousness and how far consciousness extends around us.

This feeds right back to our biological fitness, in both obvious and subtle ways. It makes us more fascinating and more fascinated, more determined to pursue lives wherever they will take us. In short more like the amazing piece of work that humans are. Lord Byron said that “the great object of life is sensation - to feel that we exist, even though in pain.” That's the raw end of it. But, at a more reflective level, what keeps us going, gives us courage, makes us aim high for ourselves and our children is the feeling that as human Selves we have something very special to preserve.

Matters might rest there. But in the context of writing about Intelligent Design, I want to leave you - and tease you - with one further idea about how consciousness can change our view of things, for which we have the evidence right before our noses.

The novelist Thomas Mann, when asked to contribute his thoughts to Ed Murrow's 1950s radio program *This I Believe*, came out with the following: “In my deepest soul I hug the supposition that with God's ‘Let there be,’ which summoned the cosmos out of nothing, and with the generation of life from the inorganic, it was man who was ultimately intended, and that with him a great experiment is initiated, the failure of which because of man's guilt would be the failure of creation itself, amounting to its refutation. Whether that be so or not, it would be as well for man to behave as if it were

so.” Mann had earlier written, in *The Magic Mountain*, “Consciousness, then, was simply a function of matter organized into life; a function that in higher manifestations turned upon its avatar and became an effort to explore and explain the phenomenon it displayed - a hopeful-hopeless project of life to achieve self-knowledge. Hopeful-hopeless it may always be. But ... it is reflection on the mysteries of consciousness - our very failure to see how consciousness “fits in” - that is the chief inspiration for the belief in special creation that Mann hugged to his soul. Now, as Mann hints, this belief - whether true or not - may be a significant life-force in its own right. For if we can indeed believe that we owe our lives to a beneficent creator who (presumably having some choice in the matter) deliberately arranged that the world He created would come to contain human beings, then this can and arguably ought to encourage us to make it our cause in life to honour the very cause of life, by living up to our creator’s plan So, here’s the irony. Belief in special creation will very likely encourage believers to lead biologically fitter lives. Thus one of the particular ways in which consciousness could have won out in evolution by natural selection could have been precisely by encouraging us to believe that we have not evolved by natural selection. Anyone for “natural creationism”?”

I have quoted this at length because this extraordinary passage is so replete with magnificent nonsense which, when investigated and corrected, leads to deep and significant insight!

The first sentence indicates how materialists regularly use language which imputes intelligence and intentionality to their beloved “natural selection”, which is supposed to be blind, random and entirely unintelligent. Humphrey tells us that natural selection has the “power” to “design human minds to experience consciousness the way they do.” However, given that according to the materialist cause ‘matter’ is entirely devoid of all glimmer or potentiality for the manifestation of the qualities of consciousness, “natural selection” would need the *supernatural power* for the creation from absolute nothingness of a new ontological aspect of reality to accomplish this. This is one of the central absurdities of the materialist worldview.

Humphrey next tells us that natural selection would only deploy this intentional power if it endowed the favoured species endowed with the new capacity a biological advantage. This means that according to this vision prior to the deployment of the new ontological aspect of reality, or illusory ontological aspect, there was absolutely no trace or tiny spark of consciousness, or the illusion of consciousness, then suddenly ‘natural selection’ deploys its power to create an illusion of sentience in order to give a biological-mechanical advantage. We suddenly think and feel that we have ‘selves’ which we, mistakenly, think are “worth having” and “begin to be interested in the future, in immortality, and in all sorts of issues to do with co-consciousness and how far consciousness extends around us,” furthermore an apparently ‘spiritual’ dimension seems to open before the amazed illusory minds which humans, and perhaps some animals, have been tricked, by the power of natural selection, into thinking that they have. In reality, according

to this ridiculous vision, none of this is real; everything is blind, blank, mindless organic mechanism.

When the physicist John Bell heard about the ‘many-worlds’ interpretation of quantum theory he said that if one were to take such a proposal seriously then it would not be possible to take anything seriously ever again. The same can be said of these kinds of materialist visions, which dissolve into cartoon-like laughable nonsense when examined with logical rigor and precision. If ‘matter’ is entirely devoid of the qualities of consciousness and awareness there is absolutely no way it could produce even the illusion of consciousness and awareness, no matter how powerful Humphrey and his materialist compatriots fantasize ‘natural selection’ to be. As Mary Midgley writes in her review of *Soul Dust*:

Inert stuff could never have produced the crystals, the galaxies, the volcanoes and, above all, the living things that have evolved out of our original dollop of physical matter. And after all those achievements, why should it seem surprising for matter to have topped things by adding consciousness.⁴⁴

Whilst Midgley is quite correct in asserting that inert stuff could not produce living beings, it is unfortunate that the criticism does not go far enough. For ultimately we are not the result of the evolution of an “original dollop of physical matter”, as Hawking and Mlodinow point out in their recent book *The Grand Design: New Answers to the Ultimate Questions of Life*:

We are the product of quantum fluctuations in the very early universe.⁴⁵

Just understanding this one obvious fact, that, to parody Dennett: the ground quantum field is the ultimate basis of all the agency, and hence meaning, and hence consciousness, in the universe, renders the materialist cause hopeless.

It is because of this central scientific fact, established by physics, that the quote from Thomas Mann, who of course lived before quantum discoveries, that “consciousness, then, was simply a function of matter organized into life” is wrong and irrelevant. The notion that somehow ‘natural selection’ is able to magically produce entirely new qualitative aspects of reality, even ‘illusory’ ones, from primal stuff which has no trace of, no glimmer of, no tiny spark of, no potentiality to manifest those qualities, is nothing but illogical, irrational and incoherent nonsense.

Furthermore it is entirely *unscientific*, even though Humphrey and his materialist cohorts puff themselves up with imagined scientific pride (here in fact is an illusion generated to produce an illusory self-importance). At the end of Humphrey’s attempted explanation of the manner in which ‘natural selection’ “designed” consciousness in order to encourage the poor deluded sentient beings in the, essentially blank, meaningless and purposeless, evolutionary rat race of survival, he asks: Anyone for “natural creationism”? For anyone who takes the evidence of science seriously, which materialists seldom do, the answer has to be yes! This is because the most recent scientific accounts of the ‘birth’ of the universe, including everything which subsequently evolves within it, require that:

...the universe appeared spontaneously, starting off in every possible way. Most of these correspond to other universes Some people make a great mystery of this idea, sometimes called the multiverse concept, but these are just different expressions of the Feynman sum over histories.⁴⁶

This quantum scenario, which is essentially the view proposed by the famous twentieth century physicist Richard Feynman, indicates a spontaneous creative burst, emerging from a vast pool of potentiality, which creates the multiverse of *possible worlds*, which are in a state of quantum superposition. This means that there is no ‘matter’ to be found in this realm of vast potentiality. There is, however, the potentiality for everything which can come into manifestation. Nothing can later come into being, or evolve, which is not a potentiality within the quantum realm hovering at the edge of time. A hugely significant feature of this presentation is the fact that the “observers are part of the system”⁴⁷ and:

The histories that contribute to the Feynman sum don’t have an independent existence, but depend on what is being measured. We create history by our observations, rather than history creating us.⁴⁸

In other words the observers, or what another famous twentieth century physicist John Wheeler called ‘observer-participants,’ are able to weed out possible universes, and thereby select those which remain in the possibility mix, even backwards in time. Thus one of the central chapters in *The Grand Design* is entitled ‘Choosing Our Universe’:

The idea that the universe does not have a unique observer-independent history might seem to conflict with certain facts that we know. There might be one history in which the moon is made of Roquefort cheese. But we have observed that the moon is not made of cheese, which is bad news for mice. Hence histories in which the moon is not made of cheese do not contribute to the current state of our universe, though they might contribute to others. This might sound like science fiction but it isn’t.⁴⁹

Here Hawking and Mlodinow are reiterating Wheeler’s assertion that:

Directly opposite to the concept of universe as machine built on law is the vision of *a world self-synthesized*. On this view, the notes struck out on a piano by the observer participants of all times and all places, bits though they are in and by themselves, constitute the great wide world of space and time and things.⁵⁰

And this viewpoint clearly requires, and shows that consciousness is an internal aspect of the process of reality, it is the driving force which unfolds and manifests the quantum potentialities within the quantum realm. If, then, one accepts the most up to date findings of physics, which Humphrey and other crude materialists simply ignore, a deep and non-individuated level of consciousness-awareness is a fundamental ontological aspect of the process of reality.

It is a great pity that some of the people who were asked to review Humphrey’s book *Soul Dust* did not seem to be aware of the current state of physics and therefore were not able to fully

indicate the extent to which Humphrey's fantasies are grossly unscientific. Thus Midgley wrote that:

Humphrey ... still rules that this everyday consciousness is an illusion. He seems not to notice that illusions are impossible unless somebody conscious is there to be deluded. He sees his problem as simply one of fitting the unreal entities that we think we see and hear into the only real world, which of course, the world as science reports it.⁵¹

And later in the review she refers to "the core error" which "is a common but shockingly obvious one: the suggestion that nothing is real except what the physical sciences tell us."⁵² Such a view, however, indicates a lack of knowledge of what physics does tell us, which is, as Stapp points out:

We live in an *idea-like* world, not a matter-like world.' The material aspects are exhausted in certain mathematical properties, and these mathematical features can be understood just as well (and in fact better) as characteristics of an evolving idea-like structure. There is, in fact, in the quantum universe no natural place for matter. This conclusion, curiously, is the exact reverse of the circumstances that in the classical physical universe there was no natural place for mind.⁵³

The majority of significant physicists: Schrödinger, Planck, Heisenberg, Wheeler, Hawking (if he takes his own writings in *The Grand Design* seriously), Linde, Penrose, Wigner, Zurek, to name just a few, come down on the side of Stapp's evaluation of the ultimate nature of the process of reality as being mind-like. As Stapp evaluates the kind of ideas presented by Humphrey's fantastic and incoherent mindless materialist meanderings:

...the re-bonding [between mind and the appearance of matter] achieved by physicists during the first half of the twentieth century must be seen as a momentous development: a lifting of the veil. Ignoring this huge and enormously pertinent development in basic science, and proclaiming the validity of materialism on the basis of an inapplicable-in-this-context nineteenth century science is an irrational act.⁵⁴

Indeed!

¹ Humphrey, N. (2008) 'Getting the Measure of |Consciousness?':
<http://www.humphrey.org.uk/papers/2008GettingTheMeasure.pdf>, 264

² Kelly E. F., Kelly E. W., Crabtree A. & Gauld A. (2009), 1

³ Kennedy, J. E. *Journal of Parapsychology*, 2006, Volume 70, 373-377

⁴ http://en.wikipedia.org/wiki/Just_so_story

⁵ http://en.wikipedia.org/wiki/Nicholas_Humphrey

⁶ http://en.wikipedia.org/wiki/Just-so_story

⁷ *New Scientist*, 19 August 1982

⁸ Humphrey, N, 2000, "How to solve the mind-body problem," *Journal of Consciousness Studies*, 7, 5-50.

⁹ Allday, Jonathan (2009), 493

¹⁰ Oerter, Robert (2006), 132

¹¹ Dolling, L.M.; Gianelli, A. F. & Statile, G. N. (eds) (2003) p491 – John A. Wheeler (1978): 'The 'Past' and the 'Delayed Choice' Double-Slit Experiment.'

¹² Quoted in Stapp, Henry (2007), 162

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- ¹³ Barrow, John D., Davies, Paul C. W., Harper, Charles L. (eds.) (2004), 451
¹⁴ Humphrey, N. (2006), 47
¹⁵ Humphrey, N. (2006), 50-51
¹⁶ Humphrey, N. (2006)
¹⁷ Dennett, Daniel (1991), 27
¹⁸ Humphrey, N. (2006), 75
¹⁹ Humphrey, N. (2000), 'How to Solve the Mind-Body Problem', 14
²⁰ Humphrey, N. (2000), 'How to Solve the Mind-Body Problem', 15
²¹ Humphrey, N. 'A Self Worth Having' – <http://www.edge.org/conversation/a-self-worth-having>.
²² Soul Dust Lecture LSE - <http://www.youtube.com/watch?v=drIJSNUbuN8>
²³ Soul Dust Lecture LSE - <http://www.youtube.com/watch?v=drIJSNUbuN8>
²⁴ Soul Dust Lecture LSE - <http://www.youtube.com/watch?v=drIJSNUbuN8>
²⁵ <http://www.humphrey.org.uk/papers/2000MindBodyProblem.pdf>
²⁶ Humphrey, N. (2000), 'How to Solve the Mind-Body Problem', 19
²⁷ Humphrey, N. (2008) 'Getting the Measure of |Consciousness':
<http://www.humphrey.org.uk/papers/2008GettingTheMeasure.pdf>, 266
²⁸ Humphrey, N. (2008) 'Getting the Measure of |Consciousness':
<http://www.humphrey.org.uk/papers/2008GettingTheMeasure.pdf>, 267
²⁹ 'Spatial gradients and multidimensional dynamics in a neural integrator circuit.'
³⁰ <http://www.humphrey.org.uk/papers/2008GettingTheMeasure.pdf>
³¹ <http://www.newstatesman.com/books/2011/02/mind-self-consciousness-brain>
³² Humphrey, N. (2008) 'Getting the Measure of |Consciousness':
<http://www.humphrey.org.uk/papers/2008GettingTheMeasure.pdf>, 266
³³ Conway Morris, Simon (2003), 46
³⁴ Conway Morris, Simon (2003), 48
³⁵ http://www.nytimes.com/2007/07/01/business/yourmoney/01frame.html?pagewanted=all?_r=1
³⁶ Stapp, Henry: 'Philosophy of Mind and the Problem of Free Will in the Light of Quantum Mechanics', 19
³⁷ Rosenblum, B. and Kuttner, F. (2006), 179
³⁸ Humphrey, N. (2008) 'Getting the Measure of |Consciousness':
<http://www.humphrey.org.uk/papers/2008GettingTheMeasure.pdf>, 268
³⁹ <http://www.humphrey.org.uk/papers/2006Consciousness.pdf>
⁴⁰ <http://www.humphrey.org.uk/papers/2008GettingTheMeasure.pdf>
⁴¹ Stapp, Henry (2007), 139
⁴² Humphrey, N. (2012)
⁴³ Humphrey, N. (2012)
⁴⁴ <http://www.guardian.co.uk/books/2011/feb/05/nicholas-humphrey-soul-dust-review>
⁴⁵ Hawking & Mlodinow (2010), 139
⁴⁶ Hawking & Mlodinow (2010), 136
⁴⁷ Hawking & Mlodinow (2010), 135
⁴⁸ Hawking & Mlodinow (2010), 140
⁴⁹ Hawking & Mlodinow (2010)
⁵⁰ Barrow, John D., Davies, Paul C. W., Harper, Charles L. (eds) (2004) p577 – Wheeler, J A (1999) 'Information, physics, quantum: the search for links.' In *Feynman and Computation: Exploring the Limits of Computers*, ed A. J. G. Hey, p309 (314). Cambridge, MA: Perseus Books.
⁵¹ <http://www.guardian.co.uk/books/2011/feb/05/nicholas-humphrey-soul-dust-review>
⁵² Ibid.
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⁵³ Stapp, Henry (2004), 223

⁵⁴ Stapp, Henry: 'Quantum Interactive Dualism', 18