

Minding Pinocchio

By Dharmacārī Advayacitta

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INTRODUCTION

THE FOLLOWING ESSAY is a critical analysis of explanations of consciousness offered by philosophical materialism (or physicalism, as it is otherwise called). In particular it is a logical analysis of the faults in materialist accounts of the phenomena of sense experience, or sentience (or ‘first person experience’). As such the essay contains no particularly Buddhist arguments. However, it should be of interest to Buddhists, especially western Buddhists, who have grown up in a scientifically influenced culture, a culture in which philosophical materialism is both pervasive and strong.

There are many different aspects of ‘mind’ or ‘consciousness’; these are often conflated or confused. The terms themselves can be used in many different ways, which can bring further confusion. In my essay I do not enter into discussion of most of the aspects of mind; instead I focus upon the one aspect, sense experience, which I recognise as the central aspect of consciousness for a metaphysical enquiry into the nature of mind. So I do not look at thinking, at self-consciousness, or at other aspects of mind, though these are very interesting topics. Though important, when considering whether mind can be reduced to physical processes they are secondary in importance to the phenomena of sense experience.

Over the years I have noticed how difficult it can be for many Buddhists, or would-be Buddhists, to see through the limitations of philosophical materialism. The stumbling block tends to be about whether consciousness can [135] continue beyond physical death; materialism identifies the mind with the body, and thus the Buddhist idea of rebirth is ruled out, for the mind must therefore perish with the body. Many westerners simply cannot get beyond this. In my essay I argue that the materialist identification of mind with the body is fundamentally wrong, because materialism cannot, in principle, explain the phenomena of sense experience. Thus materialism cannot in principle explain the existence of consciousness even in the living human being. Materialist beliefs that consciousness cannot possibly survive bodily death are therefore merely beliefs based upon a theory which is fundamentally unable to explain the existence of consciousness at all. Buddhists, and others, do not therefore have to take materialism so seriously. They can therefore consider seriously other views of mind than the materialist.

Traditionally Buddhism has various ways of understanding the mind. The early doctrine of the five *skandhas* divides up the human psycho-physical organism into five ‘heaps’, the first being *rūpa*, which corresponds roughly with physical form, and the last four *skandhas* corresponding to aspects of mind. It is not clear precisely how this doctrine relates to the question of whether or not consciousness can be reduced to matter. It is debatable whether *rūpa* corresponds to modern ideas of ‘matter’, and whether other *skandhas* such as *saṃskāraḥ* do not involve ‘material’ processes. In any case, the Buddha is quoted as having taught that there exists a radiant consciousness devoid of the material elements.

The later Yogācāra or Vijñānavāda School was ‘idealist’ in philosophical orientation, tending to understand the world in terms of consciousness, with ‘matter’ being a manifestation of consciousness. Thus some Vijñānavādins saw the physical universe as a manifestation of the store consciousness, *ālayavijñāna*, of sentient beings.

However it is in its recognition of *śūnyatā*, the emptiness of inherent existence of all phenomena, its most fundamental tenet, that Buddhism contradicts materialism. For concepts of ‘matter’ – the ‘substance’ from which ‘physical objects’ are made – are contradicted by the doctrine of *śūnyatā*: there is not, and cannot be, any ‘matter’, any ‘substance’, existing as a substrate from which the world is ‘made’. [136]

However it is not my concern in this essay to explore these Buddhist doctrines, bringing out specifically Buddhist arguments, but to meet materialism on its own ground, as it were, and to show it to be seriously inadequate.

MINDING PINOCCHIO

ONCE UPON A TIME, in the land of Italy, there was an old man called Geppetto, who lived alone. He decided to make a fine wooden marionette so that he could travel round the world with it, earning his bread and wine. Obtaining a piece of wood from his friend the carpenter, he began to carve a marionette. To his great amazement the puppet began to move and talk. The old man gave the toy a name – Pinocchio.

So begins a classic children’s story.¹ Of course in the story the coming to life of a piece of wood is simply a magical event. There is no explanation of precisely how some very basic material could suddenly become animated – could walk, talk, think, experience the world, have an emotional life and feel pleasure and pain.

Curiously, with the influence of the physical sciences upon our ideas, and the strength of materialist philosophy, we can be left in a similar position – we can believe that the world, including the people in it, is composed of nothing but matter, and we are then left with the problem of explaining how matter can become conscious. In particular we are left with what I will call the ‘Pinocchio Problem’, which is the problem of providing an explanation of how the matter in our bodies or our nervous systems can possibly give rise to *sentience* – the inner, ‘first person’ experience of sensory data such as noises and smells and visual images, pleasure and pain.²

The existence of such ‘first person experience’, or ‘the view from within’, is a crucial issue against which any philosophy that attempts to explain the world must be tested. Does that philosophy explain the existence of first person experience, explain it away, or ignore it? The issue has an inherently ethical dimension, for first person experience includes the experience, the existence, of pleasure and pain. Our ordinary everyday attitude towards other people, towards other living beings, is bound up with our awareness of their ability to experience pleasure and pain. A prisoner of some dreadful political regime is being tortured – put through appalling agonies of pain – and we [137] recognise this as an evil precisely because we recognise the existence of the experience of pain and have strong reason to believe someone being tortured has that experience.

Indeed, the belief that other people have first person experience is crucial to our attitude towards them. One takes extra special care in cooking a meal, for example, because one believes that one’s dinner guests will thereby experience more delicious flavours. Or, as another example, one’s love-making is informed by the desire to give the other person as exquisite an experience of sexual pleasure as possible. We do not usually go about the world assuming that other people are insentient, that they have no first person experience, no basic sensory consciousness (though of course we selfishly might not consider other people’s experience). In contrast we usually do not believe that machines and physical artefacts are sentient. There are many reasons inhibiting me from smashing my computer with a hammer when it goes wrong, but a belief that it would thereby feel pain is not one of them.

In contrast, too, the physical sciences, and with them philosophical materialism, are based upon ideas about the nature of matter which have no recognition of the existence of first person sensory experience. One would look in vain in a textbook of physics or chemistry for references to the sense experience of subatomic particles or complex molecules. There are no chapters headed 'the neutron's experience of light' or 'the amino acid's sense of touch'. Explicitly or implicitly the notion that such basic aspects of matter have sensory experience is dismissed. Of course this might be fine with regard to subatomic particles, atoms and molecules, but the human body, which is from the materialist point of view composed solely of subatomic particles, atoms and molecules, is associated with first person experience. How can a complex arrangement of insentient bits bring about sentience? That is the Pinocchio Problem.

Let's clarify what I mean by philosophical materialism.

Philosophical materialism is the view that all that exists is material or is wholly dependent upon matter for its existence. This view comprises (a) the general metaphysical thesis that there is only one fundamental kind of reality and that this is material, and (b) the more specific thesis [138] that human beings and other living creatures are not dual beings composed of a material body and an immaterial soul, but are fundamentally bodily in nature.³

Whilst many people are not likely to use the term 'soul' these days, they do use 'consciousness' and 'mind', and materialists have to explain the phenomena of consciousness or mind in terms of matter alone. This brings them to the question of sentience, and thus to the Pinocchio Problem. Materialists must have an explanation of this problem in order to prove their case. In practice they try to solve, or at least avoid, the problem in various ways. Some are sufficiently confused not to recognise the existence of the problem at all, and are thus rather like a child hearing of Pinocchio who naively accepts the story as it is written.

Strict or 'radical' materialists deny the existence of first person experience at all. The underlying argument goes something like this: There is no such thing as sense experience. There can't be, because everything must be made of matter, sense experience can't be made of matter, and therefore it doesn't exist! For if we look inside a brain all we find is matter in the form of nerves and other cells. We do not find pains, sounds, visual images or other sense experience, existing perhaps as a sort of 'mindstuff' alongside the cells, and since there is nowhere else for them to exist, they therefore cannot exist.

Understandably this is a difficult position to maintain because it is contradicted by the existence of one's own first person experience and also goes against one's strong assumption that other people have such experience too. Yet strict materialism has no place for sense experience to exist, and nothing from which it can be made. But then it is faced with a fundamental quandary – either there cannot be sense experience, or materialist assumptions about the world are wrong. Strict materialism tries to solve the quandary by denying the existence of sense experience and maintaining that people's beliefs that they have sense experience are fundamentally wrong.

More often materialists are self-contradictory about the existence of first person experience – there can be at one moment an acceptance of the existence of first person experience but later on a denial. The acceptance will show an awareness of the importance of acknowledging first person experience in everyday life. The denial is usually in the context of a philosophical argument about problems with the use of language, or with concepts, when referring to sense experience. Here for example are two quotes from Gilbert Ryle's influential book *The Concept of Mind*:

Much of our ordinary thinking is conducted in internal monologue or silent soliloquy, usually accompanied by an internal cinematograph show of visual imagery.⁴

In short, there are no such objects as mental pictures...⁵

Such a self-contradictory stance can have its functions, however. The acceptance of first person experience in everyday life prevents the materialist from being considered a fool, whilst the denial of its existence at another point, usually within a complex theoretical argument, prevents them from being considered a 'dualist', or worse, by other materialists (and dualism or non-materialist philosophies are usually viewed scathingly). It is usually stated or assumed by materialists that 'dualism' (the belief that body and mind are two very different things) is completely out of the question, as if someone somewhere has disproved it – which is not the case.

The second quote from Ryle is also an example of a common materialist line of argument, which is to find flaws in the use of a term such as 'object' when referring to sense experience, and then jumping to the conclusion that the actual or supposed flaws therefore imply that sense experience does not exist – for example, if mental pictures cannot be 'objects' they therefore cannot exist.

Then there are materialists who accept that first person experience exists but who argue that it is in some way just the physical activity of the brain. In effect they avoid the quandary that strict materialists get into by maintaining that really the quandary does not exist. Their belief is that somehow or other sentience can be reduced to the activity of the nervous system and nothing more. Indeed they strongly believe that this must be the case. All their arguments basically avoid the Pinocchio Problem. This can be difficult to spot because such arguments are often very long and highly technical. They can also be both confused and confusing. [140]

There are, or at least were, materialists – 'Identity Theorists' – who subscribe to the theory that first person experience is 'identical' to the activity of the nervous system. It is instructive to look at an analogy that has been used in their arguments, the 'lightning' analogy: our sensations (i.e. our first person experiences) are strictly the same as the motion of charged particles in the nervous system, just as a flash of lightning is strictly the same as the motion of charged particles through the atmosphere.⁶

This analogy was introduced in order to argue that sensations are brain processes even though careful introspection of our sense experience never reveals to us the motion of electrical charges in the nervous system. Lightning is just the motion of electric charges through the atmosphere even though when looking at it we can never see the electric charges themselves. Moreover, science has demonstrated that lightning is strictly identical with the motion of charged particles in the atmosphere. Thus we can observe, on the ordinary everyday level, the features of lightning, whilst theoretically we know that microscopically it is just charged particles in motion. Thus

we treat the two sets of observations as observations of the same event in those cases where the technical scientific observations set in the context of the appropriate body of scientific theory provide an immediate explanation of the observations made by the man in the street.

The implication is then that brain processes and sensations are strictly the same events, for the descriptions of first person experience by 'the man in the street' must correspond with what neuroscience could describe about brain processes, especially as science investigates brain processes with increasing sophistication.⁷

If we consider this analogy carefully it illustrates very neatly some typical faults in materialist arguments. The analogy contrasts our observation of the macroscopic features of a phenomenon with our theoretical understanding (or scientific observation) of its microscopic features. Macroscopically there is a flash of lightning, whilst microscopically there are charged

particles. Strictly applied to sentience the analogy is saying that macroscopically, or at least on some level, there is first person experience, and microscopically, or on a different level, there are charged particles in the nervous system – that they are [141] different aspects of the same thing. Thus the analogy is implicitly asserting that the relationship between particles in the nervous system and sensations is the same as the relationship between the microscopic and macroscopic aspects of a material phenomenon.

This is a curious assertion, for which no actual proof is offered. Actually one can draw a strict parallel between nervous system and lightning which highlights the falsity of using such an analogy to try to explain sentience. Thus the relationship between microscopic and macroscopic aspects of lightning is strictly paralleled by the relationship between microscopic and macroscopic aspects of nerve functioning – between the individual particles moving in and between neurones, and the overall pattern of waves of electro-chemical activity across the brain. Sentience does not come into this parallel, and thus is not explained by it.

What we actually see in this analogy is that a vague parallel has been implicitly advanced as a strict one, with a logical jump being made. To paraphrase the underlying argument, to expose its poor logic – sense experience and nerve functioning must be the same thing; there are two different ways of considering or observing lightning, macroscopically and microscopically; therefore sense experience and nerve functioning are the same thing.

However the analogy can *appear* to explain sentience. This is because, in the way that it was first introduced, it also smuggles in the pre-existence of sentience as one of its hidden assumptions. Thus a flash of lightning, to be seen as a flash of lightning, must be seen by an observer external to the lightning itself – an observer who is sentient, or at least not blind. Applying the analogy strictly to the motion of particles in the nervous system implies that there exists a sentient observer external to those particles experiencing their macroscopic features as sensations, i.e. there exists a non-material mind! The strict application of the analogy implies the acceptance of the very thing which the argument is trying to disprove. Moreover because this is so, but not immediately apparent in the words of the analogy itself, it appears that sentience has been explained by materialism, when in fact its prior existence has merely been surreptitiously assumed.

This is an example of how materialists, by explicitly denying the existence of mind, whilst at the same time implicitly assuming its existence, can [142] appear to explain it in material terms. It's rather like a conjurer getting a rabbit from an empty top hat – we know that he had the rabbit concealed somewhere. (There is also some interesting conjurer-like misdirection going on, when attention is drawn to macroscopic/microscopic relationships, that allows sentience to be smuggled in!).

Materialist arguments abound in analogies, where an aspect of consciousness, or its relationship to nerve function, is equated with some aspect, or relationship, of material things. Yet the assertion of an analogy is just that, an assertion. It requires argument and evidence to show whether the analogy is true. What such analogies really do, in materialist arguments, is merely assert the author's materialist beliefs in a particular way, and beg the question at issue. They boil down to saying that a particular aspect of mind is like a particular aspect of matter, or that the relationship between mind and nervous system is like the relationship between two different aspects of matter. Stating one's belief that something is like, or the same as, something else is very different to proving that belief. Argument by analogy, without supporting evidence, is argument by unproven assumption.

Typically materialists seem to recognise, or half-recognise, the logical gap between the notion of insentient individual bits of matter and the idea of a sentient mind or brain. Then they try

to bridge that gap by drawing analogies between the mind-brain relationship and physical systems, analogies which in some way distinguish between the individual constituent bits and the overall functioning or macroscopic features of a complex physical system.

These days materialists often think of consciousness or mind as an ‘emergent’ property of complex material systems – a new property that was not there before when those systems were less complex. Thus first person experience is seen to be an emergent property coming from the material evolution of complex nervous systems. The philosopher John Searle is a proponent of this view, and one who is very clear that first person experience needs to be properly recognised and explained (he actually criticises very strongly materialists who do not face up to the existence of first person experience).⁸ Interestingly he uses a very similar analogy to the lightning analogy. For Searle first person experience is an emergent property of complex nervous systems in the same way that macroscopic qualities such as solidity are emergent properties deriving from the microscopic features of atoms and molecules. Searle actually thinks that his analogy explains how, whilst one cannot say of a particular neurone that it is ‘in pain’ or ‘experiencing thirst’ one can say of a particular brain that it is conscious or is experiencing pain or thirst. He states that this is the same as not being able to say of an individual particle that it is solid or liquid whilst being able to state that system of particles is solid or liquid. Thus he believes sentience to be a macroscopic feature of a system of neurones, a ‘causally emergent property’.⁹

Searle’s assertion has precisely the same faults as the lightning analogy – it merely asserts without proof that the relationship between sensation and nerve functioning is the same as that between macroscopic and microscopic features of a material system, and it smuggles in sentience rather than explains it (Searle’s assertion that consciousness is a macroscopic property of a *brain* is also begging a question).

Furthermore, we can also understand that there is a logically or theoretically necessary connection between the microscopic properties of atoms and molecules and the macroscopic properties of a collection of them. Thus we know that on the microscopic level there are forces of attraction between atoms and molecules, which tend to hold them close together. There is also random motion due to thermal energy, which tends to keep them apart. If the random thermal motion is small enough then the forces of attraction are strong enough to keep the atoms and molecules bound closely together – and a large collection of closely bound atoms or molecules is precisely what constitutes a solid. Moreover, although, as Searle says, we cannot say that an individual atom or molecule is solid, we can identify a certain type of motion which an individual atom or molecule has when it is part of a solid (i.e. it tends to vibrate around the same location, in contrast to the motion of a particle in a gas).

We thus understand the logical connection between microscopic and macroscopic properties. But, in contrast, precisely how is there such a logical connection between the motion of charged particles in a nerve, or waves of electrochemical activity in any possible system of neurones or parts of the brain, and the experience of pain? On the contrary, there is no such logical or theoretical connection that we can identify, whether we look at neural activity [144] on a microscopic or macroscopic level. We are in fact back where we started, with the Pinocchio Problem.

The term ‘emergence’ can often be used in a way which confuses its various meanings. Etymologically it implies the arising of some pre-existing thing from out of other things which were concealing it, like a diver emerging from the sea. In contrast, used in the context of evolution it implies the arising of a completely new phenomenon which previously did not exist. Searle uses it to mean something like the arising of a not really new thing that is really reducible to already

existent phenomena (however he does recognise quite clearly that he is using the term in a weaker sense, rather than a stronger). Because 'emergence' has these very different meanings, proposing that sentience is an 'emergent' property of nervous systems tends to give the illusion that sentience has or can be explained in this way. But does it emerge as a pre-existing phenomenon (in the older, etymological sense of the term) or as something really new, or as something that is really something else seen from a different perspective? The term 'emergent' has all these conflicting connotations. Its use therefore allows the existence of sentience to emerge out of a materialist argument once again like a rabbit out of a conjurer's hat.

CONCEPTUAL CONFUSION IN MATERIALIST ARGUMENTS

SUCH CONTRADICTORY AND CONFUSED use of language is widespread in materialist arguments about mind. Other terms used in such a fashion are 'conscious', 'mind', 'model', 'representation', 'thinking', 'intentionality', and many more. Typically a term is used in one way when applied to human consciousness and in another way when applied to matter or machine, and then the two uses are conflated to arrive at a conclusion that human consciousness is identical to the behaviour of matter or machine. For example, to paraphrase a common argument: human sense experience involves the construction of 'representations' or 'models' of aspects of the outside world (such as visual images of the things in front of our eyes). Computers can be constructed to make 'representations' and 'models' of aspects of reality. Therefore human consciousness is nothing but the activity of a complex biological computer. The terms 'representations' and 'models' are used with different meanings in [145] each of the first two sentences of the foregoing argument (and even if the meanings were identical the conclusion still does not follow).

Such an argument is logically seriously flawed, committing the logical error of 'equivocation' – using a word in more than one sense when the argument strictly requires it to be used in one sense only. The logical flaw is not however so easy to spot, because the two senses of the word are analogous to some extent (this means that once again an analogy is being put forward as a strict identity, whereas to accept it as such without evidence begs the question). Such arguments are really extended metaphors: a word, such as 'thinking', referring to human consciousness is used in a metaphorical sense when applied to a material system such as a computer.

Many materialist arguments about mind simply side-step the Pinocchio problem. They consider another aspect of consciousness and make comparisons between this and computer functioning, and thereby assume they have 'explained' consciousness in materialist terms. For example they equate human thinking and electronic computation. Without explicitly answering the Pinocchio Problem they have definitely not explained consciousness in materialist terms. Frequently also they contain errors of logic such as the 'equivocation' I mentioned above. Of course such arguments can be very complex, with much use of sophisticated scientific and philosophical terminology. They can also be very tortuous, with sophisticated understanding interwoven with poor logic. Long difficult essays looking at functionalism, neural nets, parallel processing, computation, Wittgenstein's ideas on 'private language', and the like, frequently amount to 'blinding with science', if not torturing with linguistic philosophy. This is not to say that there are not interesting essays about mind and brain functioning, with useful and true things in them; however none of them prove the materialist case about mind. As an example, consider this:

In short, then, it is proposed that networks evolve during embryogenesis by 'natural selection' based, among other variables, on a commonality of intrinsic electrophysiological frames of reference. These electrical properties are basically single cell oscillation and ensemble

resonance via coupled oscillation and reverberation. This commonal-[146]ity of electrical behaviour is proposed as serving to reinforce synaptic interactions and growth. In conjunction with this hypothesis, the formal treatment elaborated by Pellionisz and myself as the tensor network theory of nervous system function... is based partially on mathematical deductions and partly on deductions from the electrophysiology of neuronal systems.

Given the above, then, one may say that mind is a computational state of the brain generated by the interaction between the external world and an internal set of reference frames.¹⁰

Whatever the correctness of the above theory for understanding brain functioning, what it does not do is prove that 'the mind is a computational state of the brain' as the author asserts. The Pinocchio Problem is simply unrecognised, and certainly unanswered. Actually in the essay from which this excerpt is taken the author does refer to a student saying to him 'But, now that I have learned neuroscience, I find that I still do not understand, for example, how I see'. The author then goes on to write that 'This problem arises because we forget to tell our students that seeing is reconstructing the world, based not on the reflecting properties of light on external objects but, rather, on the transformation of such visual sensory input (a vector) into perception vectors in other sets of co-ordinate systems.'¹¹ What an ambiguous phrase: 'perception vectors in other sets of co-ordinate systems'. Does it refer to nervous system activity or the first person experience of visual images, or what? Does the author seriously believe that that is what first person visual experience actually is?

The author has committed a very common error – confusing the question of finding out where in the brain nerve activity gives rise to which kind of sense experience, with the question of whether that activity in that place is the same as that experience. Of course the first type of question leads to interesting and useful scientific investigations, and I am quite sure that nerve functioning affects how we have sense experience (because, for example, damage to the brain can profoundly alter normal sense experience). I even expect future neuroscience might be able to find out what precise nerve ac-[147]tivity in what parts of the brain is associated with particular sense experiences (it is already beginning to do so) – but giving rise to something is not the same as being identical to that something (and nor is it the same as being a sufficient cause of that something).

Confusing these two types of question prevents materialists seeing the limitations of their model. They assume, or rather believe, that sense experience must be explainable in materialist terms. Thus 'that everything should be explicable in terms of physics... except the occurrence of sensations seems to me to be frankly unbelievable' admitted one materialist.¹² Such a belief then leads to the further belief that sensations are in fact the same as the activity of the nervous system. This belief then leads to confusing the two things, sensations and nerve activity, so that in argument about them the materialist jumps from one to the other as if they are the same thing, thinking that he has explained sentience when he has not. He has merely begged the question. So in the example above the author might be describing nerve functioning accurately with his talk of 'perception vectors' but he is not describing sensory experience, nor explaining its existence.

COMPUTER MODELS OF MIND

SOME MATERIALISTS THINK they explain the nature of consciousness by identifying it theoretically with computer programs or software. They are explicitly or implicitly identifying the relationship between computer hardware and software as the same relationship as that between nervous system and consciousness (this is of course another example of assuming that an analogy is actually true, and begging the question thereby). They might do this in part because they recognise that you cannot get sentience out of insentient particles per se. Yet precisely how can software or a computer

programme be sentient? Is it sentient when written out by a programmer as a sequence of symbols on a page? No, you say, that is absurd. Then does it become sentient when installed in a computer and the electricity is turned on and the programme is running? In other words when particles are moving and interacting? How can that be? Isn't this the Pinocchio Problem once again? [148]

The thesis that the mind is basically a computer is related to a species of materialism called 'functionalism'. For functionalism 'there is nothing specifically mental about the so-called mental states. Mental states exist entirely in their causal relations to each other and to the inputs and outputs of the system of which they are a part'.¹³ Functionalism commits two basic errors: it ignores the Pinocchio Problem by pretending, at some point, that first person experience does not exist, and it makes the logical error of assuming that because two systems have some analogous properties then those two systems are identical.

An interesting clinical phenomenon which highlights the inadequacies of functionalism is that of 'blindsight'. This phenomenon occurs when people have the misfortune to suffer from a specifically localised type of brain damage. This prevents them seeing in a part of their visual field. Thus they do not see anything if they are constrained by experimental procedures so that the image of the object their eyes are looking at falls on those parts of the retinas of the eyes which connect with the damaged part of their brain. They have no visual experience of the object. Yet if, for example, they are asked to guess what they are looking at, but cannot actually see, they guess much better than chance. Other neural pathways are still intact, allowing them to process visual information even without visual experience. In a manner of speaking they are 'seeing' the object, without any visual imagery of it. Now a 'functionalist', when comparing consciousness to computer activity, makes the claim that a computer, when programmed to 'recognise' objects in front of a video camera connected to it, is functionally identical to a human being seeing objects.¹⁴ But all that computer 'vision' may be functionally identical with is the phenomenon of blindsight, not ordinary visual consciousness, and thus computers with visual recognition programmes can only ever be sophisticated blindsight machines.

MATERIALIST ARGUMENTS AGAINST NON-MATERIALISM

BEFORE I CONCLUDE I need to discuss arguments which try to prove the materialist case by attempting to disprove – or at least discredit – its opposite. This method of argument is common, perhaps due to the inherent difficulty (or, rather, impossibility) of proving the materialist case directly. [149]

The most basic, and invalid, materialist argument against alternative views is 'argument by abuse'. Thus calling someone a 'dualist', or 'mystic' can be enough in some circles to seriously discredit a non-materialist's arguments. To disagree with materialism is also, in such arguments, often compared with believing in something patently stupid. The logical error of 'argument by force', or appealing to authority (the authority of 'science'), can also accompany the argument. As an example, here is Daniel Dennett:

Dualism (the view that minds are composed of some nonphysical and utterly mysterious stuff) and vitalism (the view that living things contain some special physical but equally mysterious stuff – *elan vital*) have been relegated to the trash heap of history, along with alchemy and astrology. Unless you are also prepared to declare the world is flat and the sun is a fiery chariot pulled by winged horses – unless, in other words, your defiance of modern science is quite complete – you won't find any place to stand and fight for these obsolete ideas.¹⁵

Labelling mind ‘the ghost in the machine’ is a similar tactic. Of course no sensible person seriously believes in ghosts, so no sensible person can seriously believe in mind – such is the implication.

To non-materialists who are browbeaten by such invalid arguments I would simply say this: don’t be intimidated by any arrogant invective or appeals to authority, but instead rigorously identify their lack of logic. Thus how, precisely, has dualism ‘been relegated to the trash heap of history’? Who did it, where, with what arguments and evidence? Dennett has here committed to print a version of what I call the ‘materialist fallacy’, by which I mean the belief that materialism has somewhere been proven. This fallacy is very common. It often seems to be associated with an exaggerated estimation of what science has proven. Yet the successes of the physical sciences, at understanding and manipulating the physical aspects of the world, are no proof of materialism whatsoever.

Frequently such arguments are accompanied by criticism of Rene Descartes’ ideas about mind. Descartes proposed that there were two substances, *res extensa* and *res cogitans* (i.e. the physical and the mental) which interacted in a part of the brain known as the pineal gland. There is much wrong [150] with the details of Descartes’ actual argument, not least the part about the pineal gland. These errors have been pounced on by materialists to discredit any ‘dualist’ ideas of mind, or ‘mindstuff’, whatsoever. They seem to argue that Descartes’ theories were wrong and therefore materialism must be right. This is yet another example of flawed logic. Actually they use Descartes as a ‘straw man’ – an easy opponent upon whom to focus, thereby avoiding more difficult arguments.

Another materialist tactic is to discredit the normal acceptance of the existence of sense experience. Thus such acceptance is disparagingly viewed as a feature of the ordinary person’s ‘folk psychology’, the implication being that such folk psychology is seriously flawed, cannot stand up to sophisticated scientific scrutiny, and is therefore wrong in its acceptance of the existence of first person experience. This is really argument by snobbish abuse. Once again one should attend to the logic of the argument rather than be diverted by its implicit appeal to authority.

A related tactic is to rule out of court people’s discussion of their first person experience because such experience is ‘private’ and supposedly therefore unverifiable (at least by the physical sciences), and thus invalid as evidence. The underlying rationale to such a tactic is this: we don’t believe that first person experience exists, because it cannot be explained in materialist terms; therefore when people talk about it they are talking nonsense; therefore we won’t seriously consider what they are saying.

The ruling out of court of first person experience as evidence is often accompanied by a belief that only what can be publicly ‘measured’, or experienced by more than one person, can be considered as existing. The argument then runs like this: first person experience can only be directly experienced (if at all) by the person experiencing it. Therefore it cannot be shared, verified or measured directly by other people. Therefore it is subjective and not objective. Therefore it does not exist.

There are two points in particular to make here: The first point concerns inference. Sometimes we do not and cannot have direct experience or observation of something. However we may have very good grounds for inferring its existence. I can strongly infer the existence of other people’s first person experience from the existence of my own, and from various close similarities [151] between their behaviour and mine. Such inference is not necessarily invalid. Indeed, ‘objective’ physical science uses inference, and not just direct observation. One cannot directly observe quarks (and thus they are perhaps more ‘private’ than first person experience), nor ‘superstrings’, nor even atoms. One infers their existence or possible existence from other

experience – for example it might be through reading measuring instruments or seeing photographic images of diffraction patterns on a page that one develops the basis for inferring the existence of atoms – or reading other people’s explanations of why atoms can be considered to exist. One never ever directly observes a single atom. One believes in its existence through a combination of logic and indirect evidence, that is through a process of inference.

The second point is that people can be mistaken about aspects of their first person experience – a fact which materialists can confusedly take to mean that people are therefore mistaken about having first person experience at all. This is basically another example of flawed logic. I can be mistaken in my identification of, say, a car – confusing a Ford for a Fiat. That does not mean that cars do not exist! Likewise I can be mistaken about some aspect of my sense experience, but that does not mean that therefore I have no such experience at all. Actually materialists often argue correctly against an old assumption that we have complete and flawless (‘in corrigible’) knowledge of our first person experience. However they take their arguments too far by making the logical error that, because people can be mistaken about the details of their experience, therefore they are mistaken about having any experience at all.

A striking example of illogic used to discredit people’s descriptions of their first person experience comes from Daniel Dennett’s book *Consciousness Explained*.¹⁶ First of all he proposes the discipline of ‘heterophenomenology’. This is a hypothetical science which involves studying people’s descriptions of their first person experience, but without the assumption that they are describing anything that really exists – for heterophenomenology, according to Dennett, leaves it as an open question whether first person experience exists or not (though he compares it to the study of what people say about novels they read, the content of novels being entirely fictitious, and thus not about real events – the implication being that although people talk [152] about the contents of their experience, these are no more real than the events in a novel). Suppose physical science then studies what he calls the ‘real goings-on’ in people’s brains.

My suggestion, then, is that if we were to find real goings-on in people’s brains that had enough of the “defining” properties of the items that populate their heterophenomenological worlds, we could reasonably propose that we had discovered what they were really talking about. And if we discovered that the real goings-on bore only a minor resemblance to the heterophenomenological items, we could reasonably declare that people were just mistaken in the beliefs they expressed.

Put in plain English this argument reads as follows: if we find similarities between the physical characteristics of brain functioning and people’s descriptions of their sense experience, then sense experience is just brain functioning. If there are differences then people’s beliefs that they have sense experience are mistaken. This is a wonderful ‘heads I win, tails you lose’ argument. Notice too the pointed reference to brain functioning as ‘real goings-on’ in tacit contrast to the implied unreality of sense experience. This is far from being a method that starts by assuming that the existence of sense experience is an open question.

A further materialist tactic is to consider a non-materialist referring to first person experience as in itself begging the question. Given what I have discussed already, this is really ‘the pot calling the kettle black’. To argue that one cannot refer to one’s private experience is simply to rule out of court the most crucial evidence. Such a tactic is often accompanied by subtle linguistic arguments that try to discredit any language used which refers to first person experience. One such argument is that of ‘words don’t refer to things’. If we consider the issue carefully we can realise that words don’t always refer to ‘things’ – they can be reifications or refer to complex processes. So

much is true. But the materialist puts forward an argument like this: perception is a process, and therefore when we use a term like ‘visual image’ we are employing a reification. Because it is a reification of an aspect of a process, it does not refer to anything, and therefore there are no such things as visual [153] images (Ryle’s argument from which I quote above is a version of this). Once again the logic employed in a materialist argument is seriously flawed.

There have even been suggestions that our usual language referring to our sensations should be replaced by more ‘objective’ language employing neurological terms, with the belief that if people use such ‘objective’ language they will stop believing in first person experience. Personally I doubt whether shouting out “my neurones are discharging at a faster rate” after banging my head accidentally will lessen the experience of pain very much – or stop me believing in its existence.

CONCLUSION

WHETHER DIRECTLY ARGUING for materialism, or arguing against non-materialism, ultimately many materialist arguments stem from the conviction, the belief, that physical science has somehow proven the materialist case, or at least rendered dualism impossible. As I have argued, this belief is simply wrong. However, some materialists can be aware that the Pinocchio Problem has not yet been solved by materialism or science. Yet they avoid facing up to this through the belief that one day science will have a sophisticated and complex enough understanding of nervous system and computer functioning to come up with an answer. This is just a belief.

In essence, to give a materialist explanation of sentience you have to take lots of insentient atoms and subatomic particles, and have to explain precisely how they become sentient when they interact in some complex way. But how can the motions and interactions (individual or collective) of a load of insentient atoms and particles ever amount to sentience, no matter how complex? How does a collection of insentient atoms and particles within the nervous system suddenly feel pain, for example, because they are moving and interacting in certain ways and not others? You will not find any answer in Quantum Electrodynamics, the most sophisticated scientific description of particle and atomic motions and interactions, or anywhere else in a scientific textbook or journal article. You will definitely not find the answer in a textbook of neuropsychology, though you might find there interesting evidence as to which areas of the brain are associated with conscious experience. *Yet whatever complex set of physical motions and interactions, in whatever parts of the nervous [154] system, a materialist theory might propose as equivalent to sentience that still leaves it with the Pinocchio Problem as yet unanswered.* In effect materialist arguments that equate sentience with some possible, or hypothetical, or hoped for, pattern of nerve or electronic functioning simply hide Pinocchio inside the head and quietly forget the Pinocchio Problem once he is hidden there.

Consider the different types of sense experience – visual, auditory, etc. Apart from the similarities between taste and smell, perhaps, it is very difficult and even impossible to envisage or even predict the existence of each type of sense experience from the others. If one were blind from birth one could not envisage visual sense experience by extrapolating from auditory sense phenomena. Likewise, and even more so, one cannot theoretically predict the nature of particular sense experience of any kind from theoretical assumptions of the insentience of matter. A materialist argument, to explain sense experience, has to explain precisely how the different sense phenomena arise. Thus it must predict theoretically, from primary assumptions of the insentience of matter, the nature of visual experience, and of auditory experience, and so on. This it can never do.

So science, if it is to understand the mind, will always fail if it tries to reduce mind to matter. On the contrary, a science of the mind needs to expand beyond materialist assumptions,

treating sentience as a phenomenon irreducible to matter, in order to have an adequate approach to its subject.

If you think that there is a materialist argument that solves the Pinocchio Problem then I offer you a challenge: send me written out any argument that tries to explain the nature of mind in materialist terms, and I will find its errors. I will finish by repeating my assertion: no possible materialist argument can solve the Pinocchio Problem. It is logically impossible to explain first person experience when your argument is based upon materialist assumptions about the world. You are trying to make sounds out of a sow's ear. If you begin with insentience you end up with insentience, and all materialist arguments must inevitably smuggle in sentience when they try to derive it from materialist assumptions. Sentience is a fundamental phenomenon in its own right.

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NOTES

¹ Collodi, *The Adventures of Pinocchio*.

² 'First person experience' refers to the grammatical 'first person' – 'I' or 'me'. It is a term used to point out the contrast between the experience of the subject and knowledge of an external object – 'it' – the grammatical 'third person'.

³ Urmson and Rée p.194.

⁴ Ryle, *Concept of Mind*, Chapter 2, p.28.

⁵ Ryle, *Concept of Mind*, Chapter 8, p.241.

⁶ Smart p.37. 'When I say that a sensation is a brain process or that lightning is an electric discharge, I am using 'is' in the sense of strict identity.'

⁷ Place p.27–28 introduced the analogy, although he did not *explicitly* state that the case of lightning and charged particles, and that of sensations and nerve impulses, were strictly parallel. After discussing the case of lightning he went on to assert without proof that talking of sensations as non-

physical things is to commit a ‘phenomenological fallacy’. He then asserted that ‘there is nothing that the introspecting subject says about his conscious experiences which is inconsistent with anything the physiologist might want to say about the brain processes...’. The implication the reader is meant to draw from this is that sensations and brain processes are identical in the same way that lightning and particular electrical processes in the atmosphere are identical.

⁸ Searle actually does not call himself a materialist, and seems to confine the term to what I have called strict materialists or to people who do not seem to take the existence of first person experience seriously (who ‘leave out the mind’ in Searle’s phrase).

⁹ Searle, *The Rediscovery of Mind*, Chapter 5.

¹⁰ Llinas p.354–355.

¹¹ Llinas p.351–352.

¹² Smart p.34.

¹³ Searle p.6.

¹⁴ e.g. Dennett, *Consciousness Explained*, Chapter 4, p.85–95.

¹⁵ Dennett, *Kinds of Minds*, Chapter 2, p.31.

¹⁶ Dennett, *Consciousness Explained*, Chapter 4, p.85.