Part I

The power of the knowledge argument
1 Introducing the knowledge argument

1.1 Setting the context

In a book, Matter and Sense, which was published in 1982, I attempted to evaluate the various modern materialist accounts of consciousness that had been discussed in the literature up to that time. In this volume I shall be concentrating on the various forms of materialism that have become current since then, and then develop the arguments for mental substance. Much of the discussion in the later period has focused on the so-called knowledge argument (KA), which was brought centre stage by Frank Jackson’s ‘Epiphenomenal qualia’ (1982): hence the title of this book. One important objective of this book is to see whether the versions of materialism that have been developed in the wake of Jackson’s knowledge argument manage to avoid what, in 1982, I argued were the fundamental weaknesses of the earlier theories.

A version of KA was not absent from Matter and Sense. Indeed a form of it was present on page 4. I set the argument out in the following way.

Imagine that a deaf scientist should become the world’s leading expert on the neurology of hearing. Thus, if we suppose neurology more advanced than at present, we can imagine that he knows everything that there is to know about the physical processes involved in hearing, from the ear-drum in. It remains intuitively obvious that there is something which this scientist will not know, namely what it is like to hear. The same problem can be setup by imagining investigations carried out on a Martian who possesses a sixth sense that we lack. No matter how much we discover about his nervous system, we will not discover what the experiences he had by that sense were like (unless, perchance, the machinery suggested that it resembled one of our five senses). No amount of new information about the physical process will amount to information about what it is like to possess the sense in question. ‘What it is like’ is the sense viewed from the standpoint of the subject. It is the subjective element which presents a serious challenge to the materialist. (1982: 4–5)

I did not then treat this as a refutation of physicalism, but rather as a way of setting up the problem that faced the physicalist. The passage continues,
The mentalist thinks of these subjective states as instances of peculiarly mental properties, such as feeling a pain or sensing redly. It would seem that the materialist cannot do this and must find some other treatment for subjectivity. (1982: 5)

I thought that the problem I illustrated by the case of the deaf scientist would be generally recognisable – including by physicalists – as a statement of the issue that physicalism faced, and I treated the various forms of physicalism that I discussed as attempts to answer this problem. As we shall see soon, I now think that, once we see the full force of KA, it becomes clear that most of the theories I discussed are hardly responses to it at all.

1.2 Smart, Armstrong and topic neutrality

Although I discussed Donald Davidson, Richard Rorty, Paul Feyerabend and other philosophers, the ones I had mainly in mind were J. J. C. Smart and D. M. Armstrong. The common fundamental feature of their accounts of consciousness is that we are only what they call topic neutrally aware of the contents of our own consciousness. In 1982 I thought that if the topic neutral account could be made to work, then it would solve the problem that my deaf scientist raised for the physicalist. I now think that it does not touch that problem. On the other hand, I believe that physicalism keeps being forced back towards the topic neutral approach, and, in some fundamental way, needs it.

Before expounding KA itself, I want to look again at Smart and Armstrong’s claim that our knowledge of our experiences is topic neutral, to see why this seems to be difficult for a physicalist to avoid, and to explain why this approach has been largely neglected. Then I’ll look at why the topic neutral approach does not work.

Smart illustrates his theory as follows:

The man who reports a yellowish orange after-image does so in effect as follows: what is going on in me is like what is going on in me when my eyes are open, the light is normal etc. etc. and there really is a yellowish-orange patch on the wall. In this sentence the word ‘like’ is meant to be used in such a way that something can be like itself … with this sense of ‘like’ the above formula will do for a report that one is having a veridical sense datum too. Notice that the words ‘what is going on in me is like what is going on in me when … ’ are topic neutral. (1963: 94–5)

Armstrong says the following:

The concept of a mental state is primarily the concept of a state of a person apt for bringing about a certain sort of behaviour … In the case of some mental states only
they are also states of the person apt for being brought about by a certain sort of stimulus . . .

(1968: 82)

He adds, slightly later, that his ambition is to
give a satisfactory and complete account of situations covered by the mental
concepts in purely physical and topic-neutral terms. (84)

It is important to note that Smart and Armstrong are concerned with
identifying conscious states with occurrent physical events, not with
higher-order abstract states. It was essentially the abstractness of beha-
vioural dispositions which, in their view, made them unsuitable to be 'raw
feels'. It is, therefore, essential to what the identity theorist wants to
achieve that the mental state be literally identical to some brain state or
process. In Armstrong’s case this means that the causal, functional or
dispositional state be so identical. We shall see soon that this leads to one
of the main problems with the theory, but it is difficult to deny the drive
that lies behind Smart and Armstrong’s approach: sensations are con-
crete, occurrent events, not abstract or higher-order states, and it would
seem that a physicalist must, therefore, identify them with some physical
events, because he holds that physical events are the only events that there
are. It is reasonable to presume that they are events in the brain.

So topic neutrality seems to be vital to the physicalism of Smart and
Armstrong, and to any form of physicalism that involves mind–brain
identity, whether type or token, because of three essential features of
such theories.

(i) Conscious states are identical to neural states.
(ii) Neural states possess only those properties recognised by physical science.
    There are no 'emergent properties'.
(iii) We are not explicitly aware of those physical neural properties in being aware
    of our own conscious states.

Put these together with the uncontroversial claim that
(iv) we are aware of the contents of our conscious states in some way or other;
it would seem to follow that we must be aware of our brain states in some
manner that does not positively reveal any of their actual and physical
properties. As the physical properties are the only ones that they possess,
we must be aware of those neural states in some way that does not reveal
their intrinsic nature, which is the force of saying that our knowledge of
our conscious states must be topic neutral.

Nevertheless, as far as I can see, few if any physicalists subsequent to
Smart and Armstrong explicitly avow the doctrine of topic neutrality, by
which I mean that they do not use that term or own up to that pedigree.
Prima facie, it is difficult to see how they can avoid such a commitment. As they are, in general, anti-emergentist, they are committed to (ii) above. They certainly accept (iii), that, in conscious awareness, we are not aware of our brain states as such. Whether they accept (i), the identity theory, is more variable. In general they reject the type–type identity theory of Smart and Armstrong, but in fact token identity theories and any account allowing for the occurrent nature of sensations seem to be caught in the same trap. The fact is that if one wishes to identify conscious states with specific occurrent physical events – and what else is a physicalist to do, given that he regards them as occurrent events? – the forces that pressed for topic neutrality are still there.

It might seem that talk of the supervenience of mental states or of their realisation in physical states or of their functional role could give mental content more autonomy from the physical than talk of identity allows. But these expressions seem to fit much better with propositional attitude states than with brute sensation. Of course, there is much more to say on these questions, and it will emerge in the course of this book. Nevertheless, I think it is worth bearing in mind how difficult it might prove to be for physicalists to entirely avoid the strategy associated with Smart and Armstrong, if they admit that something that is merely a disposition or a functional role lacks the occurrent specificity of a raw feel.

The idea that the classic identity theorists thought that dispositions (and, by extension, functional states) were too abstract to constitute sensory content, and that they thought that central state identity theory remedied this problem, played a major part in the argument of Matter and Sense and will be important at several points in this book, including the present chapter. It is, therefore, important to get a little clearer on what the claim that dispositional and functional states are ‘abstract’ means. A contemporary functionalist might seek to reject the accusation by pointing out that Smart and Armstrong were responding to Ryle, who thought of dispositions as not being physical states at all, but rather conditional statements about which stimuli tend to be correlated with which responses. Modern functionalists reject Ryle’s non-realist (what Armstrong (1968: 86) calls his phenomenalist) account of dispositions. For them dispositions and functional states are physical and causal processes, and so are quite ‘non-abstract’ and ‘concrete’.

But treating functional states as realised in physical processes does not avoid the accusation that they are too abstract to constitute occurrent conscious states, and this for two reasons. First, functional states are higher-order states and not specific neural states. (See the next section and footnote 3 for further explanation of this.) This means that they are not appropriate objects for the ‘internal perception’ that Armstrong
wants. This is important because identity theorists want sensations to be not just non-abstract states, but specific objects of awareness. A complex functional mechanism is not suitable to be that. Second, and perhaps more important in this context, is the fact that ‘functional’ means rather different things in physical and psychological settings. Physically, a functional state is defined by what physical changes it brings about, but a psychological state is characterised by behaviours that will often have nothing in common. In Ryle’s words they ‘signify ... not things of one unique kind, but lots of different kinds’ (1949: 118). In more modern jargon, they are multi-track dispositions. This is true of even sensory states: there is no unified physical response to seeing something red, for example. Even if one tries to limit the response to ‘discriminating similar objects’, the physical movements involved in this could be of an indefinite variety. This means that the functional unity of a psychological state is more a matter of interpretation within a certain framework than of brute physical similarity: it is more a product of what Dennett calls the intentional stance than a brute physical unity. This is not the non-abstract physical identity for which Smart and Armstrong – and later Lewis – were searching.

There is, I think, a historical explanation for why the ‘Australian’ approach to ‘raw feels’ was not more generally adopted. It is because the centre of discussion moved to the United States, and the historical background to the problem there was rather different. The simplest way to see this is to consider the difference between Armstrong’s theory and Putnam’s.

While it is, on the one hand, natural to regard Putnam’s functionalism as very closely related to Armstrong’s causal theory of mind, the problem on which it was mainly focused was different. Smart and Armstrong were dissatisfied with the way that the informal behaviourism of Ryle and Wittgenstein coped with raw feels. By contrast, Putnam, like other philosophers who followed Chomsky, was dissatisfied with the crudity of the stimulus-response scientific behaviourism of Skinner and Quine. Whereas the Australians were focused specifically on finding a more adequate account of occurrent conscious states, Putnam was searching for a more sophisticated account of mental processes in general, and this latter required a more complex modelling of the dispositional or functional role of our mental states than a crudely stimulus-response account seemed naturally fitted to give. Topic neutrality figures in the former quest. It is not a wholly unjust generalisation to say that it was not until Nagel’s (1974) that modern American philosophers of mind were forced to think seriously about the problem of raw feels as something insufficiently abstract to be treated as a mere functional state, and it came as
something of a shock for them to realise that there was an urgent issue of that kind.¹ Jackson’s promulgation of the knowledge argument can be seen as a follow-up to Nagel. In a sense, it was only with the reception of Nagel and Jackson that American analytic philosophy was forced to take seriously the problem that Smart and Armstrong’s theory had been devised to solve. If Nagel and Jackson are right, neither the approach of Australian identity theorists nor of the American functionalists shows signs of success.

1.3 Problems with the topic neutral analysis

Quite apart from KA, which, as we shall see, itself constitutes a response to the topic neutral analysis, that theory faces objections which are interesting in their own right.

The view that consciousness presents us with states of our central nervous system in a topic neutral fashion has at least five serious faults. The first might be dismissed on the grounds that it is ‘merely intuitive’. It is that when we are in an experiential state – for example, having a yellow-orange after-image – it is plainly false that we are unaware of what the mental state in question is like: its being of, or as of, a yellow-orange patch gives it a positive quality.² The second and third could be regarded as more systematic versions of the counterintuitiveness accusation. The second is that our conception of the world depends on how it – the world – appears to us. This is the ‘manifest image’. But if ‘how it seems’ is phenomenologically neutral, how can we give content to our manifest image? The third point in a way drives home the first two. It is that Smart’s theory reverses an essential order of priority in a way that undermines our perception of the world. Smart characterises the experiential states in terms of what they are naturally brought about by, but how do we know what is out there causing our experiences, except on the basis of what the experiences they cause are like? This is not to deny that we characterise the experiences in terms of what in the external world they seem to be of, but this very fact means that we can, de facto, distinguish the experiences themselves by what they are like. The topic neutral analysis proceeds as if we identify our experiences by correlating them

¹ It is true that Herbert Feigl’s long essay ‘The “Mental” and the “Physical”’ (1957) is concerned with ‘raw feels’, but it is difficult to see that it had a very direct influence on the development of the discussion within the American tradition. Neither Putnam nor Davidson took much notice of raw feels, and the emphasis on the computer analogy, which goes along with functionalism, puts the emphasis on propositional attitudes.

² We will find ourselves discussing later, in Chapter 4, the suggestion that we are aware of a (non-existent) intentional object but this account tells us nothing about what it is to be aware of such objects.
with what happens to cause them, but this is not a position any subject could adopt.

It might be argued that this last objection, though it works against Smart, does not apply to Armstrong, because Armstrong emphasises the role of mental states in producing behaviour, rather than their receptivity to certain stimuli. This, put together with his account of perception as the acquiring of a readiness to behave in a certain way, might seem to distinguish him from Smart. Nevertheless, this cannot apply to raw feels, even of a perceptual sort. The phenomenology of ‘seeming to see red’ is not reportable as ‘something is going on in me that makes me feel inclined to red-behave’: that is, the phenomenology seemingly presents its object, not our disposition to respond. Armstrong himself says,

it is part of our notion of seeing or seeming to see something yellow that it is the sort of inner event characteristically produced in us by the action of a yellow physical object. But a full account must do more than this. To show us that he can perceive, a man must show us that . . . he can systematically discriminate in his behaviour between certain classes of things. (1968: 81)

In other words, what we topic neutrally know in conscious perception must be a state which is both apt to be brought about by a certain stimulus and apt to cause us to respond appropriately to a stimulus of that kind. But as far as the experience is concerned, it must be its intentional object, rather than some usually deferred, invariably multiform potential response that characterises it, even if the same state plays both roles.

The fourth problem concerns not so much the topic neutrality as the identification of the mental state with the brain state, and it has the causal theory of Armstrong as its target. (So if you think that he avoids the previous objection, you can fall back on this one.) Armstrong’s identity theory, which is often labelled the causal theory of the mind, shares with functionalism the identification of mental states with their functional or causal role. Armstrong’s theory differs from functionalism, however, in identifying the mental states with specific brain states. This is not fundamentally a matter of the functionalist denial of the type identity theory: the problem I am about to describe would arise for a token identity theory.

As I have emphasised, Smart and Armstrong are concerned with identifying conscious states with occurrent physical events, not with higher-order abstract states. It is, therefore, essential for them that the mental state be literally identical to some brain state or process. In Armstrong’s case this means that the causal, functional or dispositional state be so identical. The analogy used for mental states by functionalists, that they are like states of a programme, will not do to establish the kind of non-abstract status that sensations require. But the unfortunate fact is
that the causal significance of a particular brain process depends entirely on its context: the immediate electronic output of a cluster of neurons has the behavioural-functional significance that it does, only given the rest of the apparatus. Alter the rest of the system and one might reverse the significance of a central process. Behavioural dispositions are, so to speak, long-term dispositions, and not immediate ones, and cannot be identified with a specific central state or its causal output. Thus the conflation of causal role and neural identity that the identity theorist was seeking cannot be brought off.

The failure of the central state identity theorists to identify causal role with localised hardware undermined their attempt to improve on classical behavioural theories. I drew attention to this point in *Matter and Sense*, but, though the fact that functional states are abstract has often been made, I’m not sure that the full nature of the problem of identifying mental content with a brain state or its local causal output, whether that content be phenomenal or propositional, has been fully absorbed.3

I said earlier that this objection works against the token, as well as the type, identity theory. This is true, but it does not follow that the type theory is not needed to preserve the role of the identity theory in preserving occurrence. If it is the occurrent state that constitutes the nature of the experience, and if all occurrences of a particular kind of mental state feel similar to a given subject – red is consistent in what it looks like to him – then it better be constituted by the same neural state. But the functional/causal analysis seemed to undermine this appeal to type identity by arguing that the same functional or causal role could be filled by different mechanisms. This is the functionalist doctrine of *multiple realizability*. David Lewis’s article ‘Mad Pain and Martian Pain’ (1983b) was meant to be a response to this problem. He claimed that type identity was species restricted, so that if, in a certain species S, the normal pain state was P, and if in a particular member of S, namely M, P played a different role – say that of how claret tasted – then the member, M, of P had a mad pain: claret tasted painful to him, though he reacted as any other claret drinker would. The idea was that it would still feel to this member of S the way that pain feels to others, both its stimulus – claret taken through the mouth – and the response – saying what a good year that was – would remain the same as for someone who had had what we would call the taste of good claret. But if another creature, N, who was physically indistinguishable from M, had this same state in the claret role in the context of a community where this was the normal claret-taste state, then it would not be mad, but would be a genuine claret taste. The suggestion is not that

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3 For a longer version of this argument, see *Matter and Sense*, 53–60 and 67–8.