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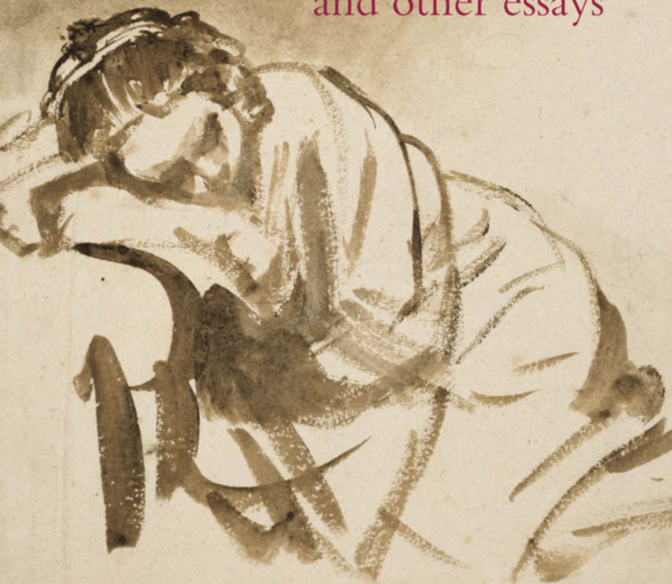
and other essays



Galen Strawson

REAL MATERIALISM

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and other essays

GALEN STRAWSON

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To my father P. F. Strawson
il miglior fabbro

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Preface

The original versions of these essays were first published in the following places. Essay 1, 'Real Materialism' (2003), in *Chomsky and his Critics* edited by L. Antony & N. Hornstein (Oxford: Blackwell), pp. 49–88. Essay 2, 'Realistic Monism: Why Physicalism entails Panpsychism' (2006), in *Consciousness and its Place in Nature* edited by A. Freeman (Thorverton: Imprint Academic) pp. 3–31. Essay 3, 'Can We know the Nature of Reality?' (2002, originally called 'Knowledge of the World') in *Philosophical Issues* **12** pp. 146–75. Essay 4, 'Red and "Red"' (1989), in *Synthese* **78:** 193–232. Essay 5, 'Self, Body, and Experience' (1999), in *Proceedings of the Aristotelian Society* **73** pp. 308–31. Essay 6, 'What is the Relation Between an Experience, the Subject of the Experience, and the Content of the Experience?' (2003), in *Philosophical Issues* **13** pp. 279–315. Essay 7, 'Against Narrativity' (2004), in *Ratio* **16** pp. 428–52. Essay 8, 'Episodic Ethics' (2007), in *Narrative and Understanding Persons* edited by D. Hutto (Cambridge: Cambridge University Press). Essay 9, 'Mental Ballistics: the Involuntariness of Spontaneity' (2003), in *Proceedings of the Aristotelian Society* **103** pp. 227–56. Essay 10, 'Intentionality and Experience: Terminological Preliminaries' (2005), in *Phenomenology and Philosophy of Mind*, edited by David Smith & Amie Thomasson (Oxford: Oxford University Press), pp. 41–66. Essay 11, 'Real Intentionality 3' (2008), in *Teorema* **27** (this is the final version of 'Real Intentionality' (2004), in *Phenomenology and the Cognitive Sciences* **3** pp. 287–313, and 'Real Intentionality 2' (2005), in *Synthesis Philosophica* **20** pp. 279–97). Essay 12, 'On the Inevitability of Freedom' (1986), in *American Philosophical Quarterly* **23** pp. 393–400. Essay 13, 'The Impossibility of Moral Responsibility' (1994), in *Philosophical Studies* **75** pp. 5–24. Essay 14, 'Consciousness, Free Will, and the Unimportance of Determinism' (1989), in *Inquiry* **32** pp. 3–27. Essay 15, 'Free Agents' (2004), in *Philosophical Quarterly* **32** pp. 371–402. Essay 16, 'Realism and Causation' (1987), in *Philosophical Quarterly* **37** pp. 253–77. Essay 17, 'The Contingent Reality of Natural Necessity' (1991), in *Analysis* **51** pp. 209–13. Essay 18, 'David Hume: Objects and Power' (2000), in *The New Hume Debate*, edited by R. Read and K. Richman (London: Routledge), pp. 31–51. Essay 19, 'Epistemology, Semantics, Ontology, and David Hume' (2000), in *Facta Philosophica* **2**, pp. 113–31.

When I cite a work in this book I give the date of first publication, or occasionally the date of composition, while the page reference is to the edition listed in the bibliography. Although I usually cite standard editions of texts, the translations are sometimes different from those found in the standard edition. In quoting Descartes, for example, I cite the Cottingham, Stoothoof, Murdoch, and Kenny edition, but draw also on Clarke's translations and my own. In the case of Kant, I refer to Kemp Smith's translation but draw also on Pluhar and the advice of friends.

References to Hume's *Treatise* give the Selby-Bigge page reference followed by the Norton page reference or paragraph number (e.g. '218/144' or '218/1.4.3.56'). References to Hume's *Enquiry* give the Selby-Bigge page reference followed similarly by the Beauchamp page reference or paragraph number.

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Introduction

Philosophy is world-wisdom; its problem is the world.

Schopenhauer (1819: 2.187)

Almost all the controversies of philosophy arise only from misunderstandings between philosophers.

Descartes (1646: 3.281)

1

Philosophy is one of the great sciences of reality. It has the same goal as natural science. Both seek to give true accounts, or the best accounts possible, of how things are in reality. They standardly employ very different methods. Philosophy, unlike natural science, usually works at finding good ways of characterizing how things are without engaging in much empirical or a posteriori investigation of the world. It has a vast field of exercise. Many striking and unobvious facts about the nature of reality can be established a priori, facts about the structure of self-consciousness, for example, or the possibility of free will, or the nature of intentional action, or the viability of the view that there is a fundamental metaphysical distinction between objects and their properties.

That some matters of fact are a priori (an infinite number) doesn't mean that they're not real matters of fact.[1] They're as much facts about reality as the fact that the sun shines.[2] Nor is an account of the nature of reality simply an account of what actually exists. It's equally an account of what could exist, of what is possible. To know the structure of reality is to know what is possible, and to know what is possible given what. This, accordingly, is a large part of the business of philosophy, as it is of physics, cosmology, mathematics and logic.

Philosophy, like physics, has its own distinctive domain, but it isn't isolated from natural science or empirical investigation. Good philosophy stays close to the science of its day and is continuous with it in certain respects. Philosophers regularly carry out empirical research on one of the most remarkable features of reality—conscious experience—by engaging in mental self-examination.[3] Here their work overlaps

At various points in this introduction I draw on material in the papers that follow.

[1] I don't use the expression 'matters of fact' in the same way as Hume (1748: 25–6/4.1).

[2] 'Logic is . . . about the real world', as Prior remarked (*c.*1967: 45).

[3] 'Empirical' doesn't imply 'publicly observable or checkable', although the two terms have often been pushed together. 'Empirical' covers anything given in experience.

with scientific psychology, although many recent experimental psychologists have neglected the information delivered by such research on the grounds that it isn't susceptible of precise quantitative treatment.

Common sense is fundamental in philosophy, but it doesn't follow that views taken to be part of common sense outside philosophy must prevail within it.[4] There's no more reason to think that this is a condition on good philosophy than it is on good science, which is constantly overturning common-sense views of the world. Common sense isn't a matter of a body of opinions, although some opinions are a matter of common sense. It's something one uses—a way of approaching things—and it's typically common sense, exercised within philosophy or science, that leads to the abandonment of opinions held to be part of common sense outside philosophy—such as the idea that colour-as-we-experience-it is an objective property of objects.[5] If we call the body of opinions that are held to be part of common sense outside philosophy 'Common Sense' we may say that in philosophy as in science, common sense regularly leads to the rejection of Common Sense. So too, many of the most dramatic departures from common sense within philosophy take the form of holding on at all costs to parts of Common Sense. It's ordinary factotum common sense that needs to operate in philosophy, and the fact that it can lead to conclusions far from Common Sense is itself a matter of common sense, for it's a matter of common sense that 'when you have eliminated the impossible, whatever remains, however improbable, must be the truth'.[6] William James says that 'metaphysics means nothing but an unusually obstinate effort to think clearly',[7] and proper obstinacy is, again, just an attitude of steady common sense in the face of the data.

Fear is probably the greatest enemy of common sense—philosophers often reach a point where they can't face the truth—but Nietzsche picks up on another, perhaps hardly less important, when he speaks of 'philosophers . . . with . . . their vice of contradiction, of innovation at any price', a trait that we may reasonably trace back to sexual selection.[8] Descartes concurs, remarking that when it comes to speculative matters the scholar will take the more pride in his views 'the further they are from common sense . . ., since he will have had to use so much more skill and ingenuity in trying to render them plausible'.[9] In mitigation, it should be said that although common sense is fundamental in philosophy it isn't everything. Sometimes its job is to keep thinking on track when it has started out from strange and counterintuitive premisses, or when it is exploring strange possibilities: 'nothing is more important for teaching us to understand the concepts we have than constructing fictitious ones'.[10]

[4] Nor does this follow from the fact that in philosophy as in life, many of 'the aspects of things that are most important for us are hidden because of their simplicity and familiarity' (Wittgenstein 1953: §129).

[5] See Essay 4. Philosophers will find a way to take the expression 'colour-as-we-experience-it' that allows them to say that colour-as-we-experience-it is indeed a quality in the objects themselves, but the sense in which it isn't is very plain.

[6] Sherlock Holmes in Conan Doyle 1890.

[7] 1890: 1.144.

[8] Nietzsche 1885–8: 98.

[9] Descartes 1637: 115.

[10] Wittgenstein 1914–51 (1948): 74.

It's often said that argument is the heart of philosophy, and especially of analytic philosophy, but I'm sure that's not true, if argument is thought of as primarily a matter of formally arrayed premisses and conclusions. Argument in this sense is the handmaiden of philosophy, an underlabourer (the head underlabourer), to be summoned as necessary. All arguments have premisses, after all, and not all premisses can be argued for on pain of never getting started. The fundamental philosophical activity, I think, is a kind of open, investigative dwelling on ideas. It may well make use of formal argument, but it need not, and it is at its heart an essentially looser matter of redescribing things, putting them in other ways, spreading them out descriptively, telling stories that articulate and animate them. These are the instruments and the experiments of philosophy. It is, as a science, a suasive art, a mixture of plain speaking and the 'arduous invention which is the very eye of research'.[11] Tight argument can be very fine, but it constantly degrades the quality of philosophical debate, scholasticizing it and pushing it into unimportant minutiae and fantasy. It obstructs vision if overdone, and it invites overdoing. There's nothing quite like formal argument for losing the philosophical plot. William James made the fundamental criticism a century ago when he observed that 'the abuse of technicality is seen in the infrequency with which, in philosophical literature, metaphysical questions are discussed directly and on their own merits'.[12] Descartes is right as usual when he writes that 'those who have never studied judge much more reliably and clearly about salient matters than those who have spent all their time in the Schools'.[13] It's a further point that logic and argument operate wholly within the realm of discursive thought, and that we can see a priori, within philosophy, that discursive thought and the metaphysics it standardly presupposes aren't adequate to the characterization of reality.[14]

I greatly enjoy coming across early expressions of views I think correct, especially if they're not widely known, and a number of these pieces incorporate newly added quotations (they're otherwise very little revised). The older philosophers very often put the issues we discuss today much more clearly and directly, and I find it hard not to quote them.[15] It's nice to find Joseph Priestley making the fundamental mind-body 'supervenience' claim in 1778,[16] and depressing to see philosophers making long-corrected mistakes over and over again in reputable printed places. It's sad and sometimes annoying,[17] and sometimes funny, to see philosophers falling into the happy trap of thinking that they have come up with something new, fiercely ignorant of the real history of the tradition in which they work and often little helped by much that is written under the heading of history of philosophy. (I speak as a past and no doubt future victim.) In this respect philosophy can't compare with science, logic and mathematics; but there are well known reasons why this isn't all a bad thing. First among them is the fact that philosophy is a practice and a discipline as much as it is a

[11] George Eliot 1871–2: ch. 16. [12] 1909: 15. [13] Descartes 1618–28: 1.16.

[14] See e.g. p. 73 below. See also James 1909, for some interesting (if slightly new-age sounding) support.

[15] We do discuss the same issues—but differently dressed and increasingly scholasticized in the pejorative sense.

[16] See pp. 46–7 below. [17] It depends on the degree of self-importance.

body of doctrine, and that there are mistakes that have to be re-experienced by philosophers from generation to generation in the process of achieving understanding.[18]

In discussion groups, the rôle of distinguished older members often seems to be to speak first, after the paper has been delivered, in order to point out that the hot theory put forward by the younger member is really no different from what so-and-so said *n* years ago.[19] The young party is blithely confident that the old body just doesn't get it, and the young party is often right, inasmuch as the old body isn't entangled in the details of the new terminology, but the younger body is almost certainly wrong in the larger scheme of things.[20] I'm sure everything I'm saying here has been said before, including this.[21] But this comment too needs to be qualified, by Pascal's reply to the charge that there was nothing original in his work:

Let no one say that I have said nothing new: the organization of the subject matter is new. When we play tennis, we both play with the same ball, but one of us places it better.[22]

One reason why philosophy can seem so unappreciative of its history is internal to the nature of the discipline. Some philosophy 'has constantly to be done over again',

[18] '"How great a philosopher is Reid? The answer is best conveyed by a story concerning Roderick Chisholm, [who] received a telephone call from a man saying that he was a busy man but had time to read one serious book in philosophy and wanted to do so. He said that he was not interested in entertainment but simply wanted to read a book with a greater amount of truth than any alternative. Chisholm, wishing to reflect on the matter, said the man should call back the next day, and he would give him his advice. The next day Chisholm recommended that the caller study Reid. It was a sound judgement" [Lehrer 1989: 1]. Maybe it was a sound judgement, but it was a terrible idea. Chisholm should have told the man that he had the wrong approach, and that he should read several books or none—perhaps Descartes, Locke, Berkeley, and Hume, and then Reid. The latter may well have been right to say that "it is genius, and not the want of it, that ... fills [philosophy] with error and false theory", but he was quite wrong to say that genius thereby "adulterates" the subject. Philosophical understanding has a very strange dynamic, and makes progress only by means of the errors (it is not an adequate word) of genius. This is something Reid would probably have been the first to acknowledge: he owed his own philosophical achievement to the impact which Hume's "errors" were able to make on him given the enormous impact that Berkeley's "errors" had already made on him' (Strawson 1990: 15).

[19] *n* can be as large as 3,000.

[20] A. J. Ayer was particularly good at this, in the discussion group called 'Freddie's Group' after him. After his death my father took up something of the same rôle, although without any of Ayer's (not unenjoyable) exasperation. On the general question of influence, all professional philosophers, even the youngest, have a rich past of reading and listening and teaching in the course of which they often come across an idea, fail to see the point of it, fail to understand it fully or think it plain wrong and forget it, while remaining sensitized to it in such a way that it is more ready to hand in the mind when their own thoughts later lead them that way. But it may just as often happen that one has the idea in question simply because it lies in the logic of one's current train of thought, without any significant causal link to a past encounter.

[21] 'Everything has been said before, but since nobody listens we have to keep going back and beginning all over again' (André Gide, 1891). A good example is the present-day discussion of perception, which makes enjoyable use of new experimental-psychological results but hasn't surpassed the outstanding eighteenth-century debate in any fundamental respect (it has on the whole fallen short of it). The last fifty years of debate about the 'mind-body problem' have been greatly inferior to the seventeenth- and eighteenth-century debate (see Essay 1).

[22] *c.*1640–1662, §575; this is why introductions to philosophy can make important contributions. 'One might as well say that I've used old words', Pascal continued, for 'just as the same words constitute different thoughts by being differently arranged, so too the same thoughts constitute a different body of work by being differently arranged.'

as P. F. Strawson remarks in the course of making his well-known distinction between 'descriptive' and 'revisionary' metaphysics.[23] A different point concerns individuals rather than their times. It seems one never really understands an idea until one has had it oneself in some active, involved way that essentially outstrips off-the-page understanding. One consequence of this is that many, when they really grasp an idea, tend to experience it as new and somehow their own. And they're right in a way. It is oneself alone who has had the idea now and *in vivo* in one's own thinking, and there is in this sense a great deal of genuine private originality in the profession.[24] This, however, tends to lead to an illusion of Originality—greatly strengthened by the fact that one has probably added some small personal twist to the idea or employed a different terminology (to which one has become rather attached) to express it. Many derive great pleasure from a sense of new discovery, creation and independence, and this tilts the landscape of judgement. Some of us are intensely proprietorial creatures, strongly governed by the territorial instinct, the appropriative urge and the accompanying 'anxiety of influence'.[25]

None of this can be changed in human nature, and some of it may be needed. The free-will problem will always be recapitulated by each student philosopher in a way that involves considerable emotion, and an accompanying sense of individual ownership of the problem, and there's certainly nothing wrong with that. But present-day analytic philosophers badly need to know more about their intellectual ancestors, and to keep them alive by quotation on the pages of new work. No one should let the need to feel original undercut the thrill of belonging to a powerful, beautiful and ancient tradition. It's extremely moving to see thinkers dealing with the same difficulties and grasping the same abstract truths across the centuries, even as (nearly) everything has to be done over again. That apart, it can save a great deal of time. Some think no age or culture can really understand another because the differences—of

[23] 'There is a massive core of human thinking which has no history—or none recorded in histories of thought; there are categories and concepts which, in their most fundamental character, change not at all. Obviously these are not specialities of the most refined thinking. They are the commonplaces of the least refined thinking; and are yet the indispensable core of the conceptual equipment of the most sophisticated human beings. It is with these, their interconnexions, and the structure that they form, that a descriptive metaphysics will be primarily concerned.

Metaphysics has a long and distinguished history, and it is consequently unlikely that there are any new truths to be discovered in descriptive metaphysics. But this does not mean that the task of descriptive metaphysics has been, or can be, done once for all. It has constantly to be done over again. If there are no new truths to be discovered, there are old truths to be rediscovered. For though the central subject-matter of descriptive metaphysics does not change, the critical and analytical idiom of philosophy changes constantly. Permanent relationships are described in an impermanent idiom, which reflects both the age's climate of thought and the individual philosopher's personal style of thinking. No philosopher understands his predecessors until he has re-thought their thought in his own contemporary terms; and it is characteristic of the very greatest philosophers, like Kant and Aristotle, that they, more than any others, repay this effort of re-thinking' (P. F. Strawson 1959: 10–11).

[24] Grote 'can think of nothing more noxious for students than to get into the habit of saying to themselves about their ordinary philosophic thought, Oh, somebody must have thought it all before' (1865: 130).

[25] Most strikingly described, in the case of literature, by Nicholson Baker (1991). One often sees acknowledgements of others in early drafts of a piece of work drop out in later drafts in spite of the fact that they remain as apposite as ever.

idiom, presupposition, 'episteme'—are always too deep, but this idea is as silly in the history of ideas as it is in anthropology.

2

'So far as I know, the existence of . . . states of consciousness . . . has never been doubted by any critic, however sceptical in other respects he may have been. That we have *cogitations* of some sort is the *inconcussum* in a world most of whose other facts have at some time tottered in the breath of philosophic doubt.'[26] This was William James's view in 1890, and he was as far I know correct—that up to that point, no philosophers had actually denied the existence of consciousness or conscious experience, although they had denied almost everything else. It was only in the twentieth century that some philosophers took the final step and denied the existence of conscious experience, which I'll call 'experience' for short.[27]

This is surely the strangest thing that has ever happened in the whole history of human thought, not just in the whole history of philosophy.[28] It shows in a very pure way that the power of human credulity is unlimited, that the capacity of human minds to be gripped by theory, by faith, is truly unbounded. I wish it hadn't fallen to philosophy to expose the deepest irrationality of the human mind, but there's no escaping the fact. Next to the denial of the existence of experience, every known religious belief is only a little less sensible than the belief that grass is green. 'Nothing can be imagined which is too strange or incredible to have been said by some philosopher', as Descartes says,[29] but the denial of the existence of experience suggests that he was more right than he could have imagined.

There are psychiatric patients suffering from Cotard's delusion who sincerely believe they don't exist. It is, however, possible to give a rather plausible explanation of this pathological phenomenon, if only in general terms,[30] whereas no explanation of the same general sort seems available in the case of those who deny the existence of experience.[31] Their case deserves careful attention from anyone seeking a general theory of the mechanisms of delusion in human beings, for any such general theory must

[26] James 1890: 1.185. The *inconcussum* is the unknockable-out thing. He uses the word 'cogitation' or 'thought' in the wide Cartesian sense to cover all kinds of conscious mental episodes or 'states of consciousness' (see e.g. 1890: 1.186, 224).

[27] In 1904 James published a piece provocatively entitled 'Does Consciousness Exist?'. He was not, though, an early advocate of the silliest view ever put forward. His title is misleading, to put it mildly, for his central thesis in this essay is (in the words of the title of his next essay) that the world is 'A World of Pure Experience', and his opening proposal is that 'we start from the supposition that there is only one primal stuff or material in the world, a stuff of which everything is composed, and [that] we call that stuff "pure experience" ' (1904: 3). His objection is to the idea that consciousness is an 'entity' that is in any sense an isolable factor in experience.

[28] No Buddhist school, however nihilistic its language, has ever gone this far.

[29] 1637: 1.118.

[30] See e.g. Gerrans 2000: 112: 'The Cotard delusion, in its extreme form, is a rationalization of a feeling of disembodiment based on global suppression of affect resulting from extreme depression.'

[31] That said (and putting aside the effects of fashion) it is perhaps a serious empirical hypothesis that the most committed deniers of the existence of experience have in common certain sorts of psychological pain experienced in early life that they have dealt with in a way that made it possible

recognize the fact that people whom we do not consider to be psychologically unwell can sincerely (or so it seems) hold a view whose falsity is inescapably proved to them every second of their waking life, simply because it follows from some other view or views that they are utterly unprepared to give up (in this they are like sufferers from Capgras's delusion who are certain that someone very close to them is an impostor).

What could this other view be, in the present case? In the philosophy of mind it usually goes under the name of 'physicalism' or 'materialism', the view that everything mental—and indeed everything that concretely exists—is physical.[32] Physicalism about the mind is usually understood to be the same thing as 'naturalism' about the mind, and in these papers—essays—I accept this equation of naturalism with physicalism. I also accept that physicalism/naturalism is true. But I don't for a moment think that it has the consequence that there's no such thing as experience. This is because I'm a *realistic* physicalist, a *real* physicalist, a *realistic* or *real* naturalist, and one can't be one of those if one denies the existence of the entirely natural phenomenon whose existence is more certain than the existence of anything else: experience. Full recognition of the reality of experience is the obligatory starting point for any remotely realistic version of physicalism because it's the obligatory starting point for any remotely realistic theory of what there is. It's the obligatory starting point for any theory that can legitimately claim to be naturalistic because experience is itself the fundamental given natural fact.

It's also the only certainly known natural fact, according to one classical high standard of certainty that has an unshakably important place in philosophy (even if it must be sparingly used). This makes it all the more bewildering to find philosophers arguing from physicalism or naturalism to the non-existence of experience; for the foot, in fact, is in the other boot. If we call experience 'E', the correct argument can be expressed as follows.

[1] If there exists something other than E that we as naturalists take to be a natural phenomenon, e.g. physical-stuff-conceived-as-something-that-is-in-its-intrinsic-nature-wholly-non-experiential (call it 'NE'), and which is such that we find it hard to understand how E exists as it does if NE exists, then NE must be a problem for naturalism; but not E.

We are in this case in no position to say, as naturalists,

[2] NE certainly exists, as a matter of natural fact, and it's most unclear, given NE and the evidently intensely intimate relation between NE and E, how E is possible (and perhaps E is not possible).

We are in a position to say

[3] *If* NE exists, as a matter of natural fact, then it is most unclear how E is possible, given the intensely intimate relation between NE and E.

for them to be attracted to such a denial. The cases of the behaviourists Skinner and Watson are instructive.

[32] Many build 'concretism'—the view that no non-concrete or 'abstract' entities (e.g. numbers) are part of reality—into physicalism, and accordingly take physicalism to be the view that everything that exists is physical. It does not follow from this that all truths are truths about physical matters.

But then we must contrapose (roughly speaking) and go on to say

[4] Well, E certainly exists, as matter of certain natural fact, so it is most unclear how NE is possible, given the intensely intimate relation between NE and E; and we have in fact no good reason to believe NE is actual.

This is the correct conclusion. The truth is that we don't really have any good reason to believe that anything like NE exists in nature, although nearly everyone takes its existence for granted.[33]

My use of the words 'physicalism' and 'materialism' is non-standard relative to their use in the last fifty years or so, because many philosophers in this period have used them—and still use them—in such a way that it follows from the truth of physicalism or materialism that there's no such thing as experience. This is, however, a very recent use. None of the many and great materialists of past times held this view. Their view, as materialists, was (in Locke's words) that matter might think, i.e. that experience itself, conscious experience conceived of in a wholly realistic, non-reductionist way, might be a wholly physical phenomenon.[34] It was only in the twentieth century—the silliest of all the centuries, philosophically speaking (for all its achievements)—that 'materialism' and 'physicalism' came to have this extraordinary meaning (though never for all), in a way that allowed the debate about physicalism to become completely unreal.

It's hard to imagine a more anti-naturalist doctrine than naturalism as currently defined, given that it denies the existence of—treats as *super*natural—the fundamentally given natural fact: (conscious) experience. Some define naturalism primarily in a methodological way, as the doctrine that all valid enquiry into the nature of things must proceed in accord with the methods of the natural sciences, and believe that they can extract from this the conclusion that naturalism can take no account of experience (although it is the fundamental given natural fact) and indeed that experience doesn't exist. It takes a very rigid and peculiar definition of the methods of the natural sciences to achieve this result, in fact, for many experimental psychologists deal in the phenomena of experience in a fully realist manner. Still, some have persisted in the rigid definition of naturalism, and gone on to embrace—with some passion—the silliest view ever held by any human being.

Twentieth-century philosophy followed an extraordinary fashion, then, especially in its second half, and especially in the philosophy of mind. But no sensible philosophers ever took it seriously, even for a moment. They suffered radical eyebrow-elevation when people started talking about the 'hard' problem of consciousness (a) as if there were an easy problem of consciousness[35] and (b) as if the problem of consciousness had somehow slipped off the agenda in philosophy. These philosophers knew as

[33] See further Essay 2. [34] On Locke's view see further p. 39 n83 (Essay 1).

[35] This was part of the implication of the phrase as popularized by Chalmers, but it involved a shift in the standard philosophical meaning of the word 'consciousness'. The *mind-body* problem does have an easy part, from the materialist point of view, but it's not part of the traditional problem of *consciousness*. See Strawson 1994: 93–6.

well as Descartes, Locke, Leibniz[36] and a host of others that the problem of consciousness was the hard part of the mind-body problem (given the standard conception of the nature of the physical) and continued to discuss it fruitfully throughout the crazy years.

3

I've given the issue of physicalism (in the philosophy of mind) special mention in this introduction, because it's a constant theme of these papers.[37] I'll now say a little more about their content and origins. Looking back, I see a strong degree of developmental coherence. Sidetracks turn out to be things that I needed to work out given existing concerns. I had no idea that this was so, although I expect it's true of nearly everyone.

I took up philosophy in 1972 in my fourth and final year at Cambridge University after two years of Islamic Studies and a year of Social and Political Science. My intention was to go back to social and political science after having acquired a better idea of its foundations, but that intention expired in the pleasure and often painful fascination of doing philosophy. I sat the Cambridge University Moral Sciences Part II exam in May 1973 after less than six months' study of the subject,[38] and knew almost nothing about it when I began on a DPhil at Oxford in October 1974 (having in the intervening period lived in Paris, worked on a building site and in television, and got married). After about a year my supervisor Derek Parfit advised me to switch from the DPhil to the BPhil in order to acquire some grounding in the subject. I followed this good advice and took the BPhil exam in 1977—but still without having read any Locke, nor indeed any significant amount of Hume, nor any moral philosophy. In the BPhil exam I answered at length a question about the difference between being the same person and being the same man without having any idea that the question contained a reference to Locke's famous discussion of personal identity.

At this time I had a wife, a daughter, a mortgage and no money. We moved to Paris for a year. My wife worked as a *capésienne* schoolteacher, I attended the Ecole normale supérieure as an *auditeur libre* and French government scholar, joining Jacques Derrida's Groupe de Recherche pour l'Enseignement de la Philosophie and his seminar for Yale students in Paris and trying (with no success) to understand what he was talking about. In June 1978 we returned to England and I took a temporary job as an editorial assistant at the *Times Literary Supplement* under John Gross, reading and marking up proofs, editing copy, and, later on (when the job prolonged itself), commissioning reviews. From 1978 to 1986 I worked two to three days a week at the

[36] For Leibniz's famous story of the mill see p. 401 below.

[37] See in particular Essays 1 and 2. I repeat the point in many of the other papers, which were written as self-standing pieces, because I have to explain my use of the terms 'physicalism' and 'naturalism'.

[38] I returned late to Cambridge for my final year, having contracted hepatitis in the Middle East in the preceding summer, and learnt what I could in a short time under the sure direction of Philip Pettit, David Papineau and Timothy Smiley. I think I had about a dozen supervisions in all.

Times Literary Supplement office, commuting from Oxford to London forty-six weeks a year, and from 1979 onwards I also taught full-time at Oxford, holding a series of temporary college lecturerships, wrote numerous book reviews for a number of different papers and magazines (something I found very difficult), and tried to finish my DPhil thesis on free will. I applied for all the many junior research fellowships and other research posts on offer in Oxford during this period but was uniformly unsuccessful, as I was also in applying for permanent teaching jobs—until 1987, when with a shiny first book in hand I had the good fortune to be elected Fellow and Tutor in Philosophy at Jesus College.

For these reasons and others, including the birth of my son Tom, I didn't publish any work of philosophy until 1986, when I was thirty-four. These papers are a selection of those I've published since then. Philosophers often write papers and work them into a book, but I've gone the other way. Most of these papers develop themes either from my DPhil thesis and subsequent book *Freedom and Belief* (1986) or from *The Secret Connexion* (1989) and *Mental Reality* (1994). I'm struck now by the fact that I've written almost exclusively about the things I wanted to write about when I was an undergraduate in a state of high excitement. The feeling of excitement remains the same thirty-five years later. I find philosophy a profoundly concrete, sensual activity.[39] The world of ideas is as solid as the world of seas and mountains, or more so. One can no more change its topography than one can move Oxford closer to London, although one can discover new views or discover that one has got the topography wrong, or that many people have for many years. Ideas seem as embodied, in the world of ideas, with its views and obstructions and vastness, as we do in our material world. They seem tangible, with specific savours, aesthetic properties, emotional tones, curves, surfaces, insides, hidden places, structure, geometry, dark passages, shining corners, auras, force fields and combinatorial chemistry.

I've been almost uniformly unsuccessful in submitting papers to journals. Almost all my early work was published only in book form. Only three of the papers in this book (4, 12, and 16) made it through the process of anonymous peer review.[40] All the others are commissions of one sort or another. My publication record with *Mind* is particularly distinguished: six submissions between about 1985 to 2000, six rejections, including Essays 1, 4, 16 and papers that were eventually published as parts of books, such as 'The Weather Watchers', which became chapter 9 of *Mental Reality*, and a paper of which I was particularly fond (it became §§1.4 and 1.7 of *Mental Reality*), which received the most dismissive criticism of all. This may or may not be disheartening to younger philosophers, depending on their view of the rejected work and their finances. I was in any case lucky to get a job in the UK, where there is no tenure process, near the beginning of my publishing career. This freed me from dependence on the process of learned-journal peer review, a process that probably

[39] In some sense of 'sensual' given which the intellectual can be sensual. Mention of *The Critique of Pure Reason* always causes in me the same physiological reaction as hungry thought about food.

[40] Of these only Essay 12 (my first submission) had a straight passage. Essays 4 and 16 were rejected and re-rejected in their present form before finding a peer-reviewed berth.

works reasonably well in knocking out papers below a certain level of basic competence, but seems otherwise close to random.

The first two papers, 'Real Materialism' and 'Realistic Monism: Why Physicalism entails Panpsychism', take forward the discussion of the 'mind-body problem' in chapters 3 and 4 of *Mental Reality*. The discussion in *Mental Reality* arose in turn from problems encountered when writing a DPhil in the late 1970s, problems with the standard opposition between mental and physical that led me increasingly to abandon the terms 'mental' and 'physical' in favour of a distinction between the mental and the non-mental (or the experiential and the non-experiential).[41] Both these papers terminate in the claim that if you're a materialist or physicalist in the philosophy of mind, if you want to call yourself a materialist or a physicalist, then you should be prepared to be a panpsychist physicalist (a view already adopted in *Mental Reality*, but rather covertly).

The next, somewhat overwrought paper, 'Can we Know the Nature of Reality as It is In Itself?', is a revision of a paper first published under the title 'Knowledge of the World', itself a pruning and elaboration of chapter 7 and Appendix B of *The Secret Connexion*. I argue that there's nothing wrong with the much-criticized phrase 'reality as it is in itself', and that it's often very useful although strictly speaking redundant. I then argue that there's no reason in principle why one couldn't attain to some knowledge of the nature of that part of concrete reality (as it is in itself) that is other than the part that consists of one's own conscious experience, whose nature I take it that one does know as is in itself, at least in certain respects, simply because 'the having of it is the knowing'.[42] At the same time I grant that one could never know that one had done so, and that there are also considerable difficulties in the whole idea.

I also defend the irrefutability of scepticism, arguing that the determination to refute scepticism is one of the great sources of philosophical error. Many philosophers have thought that a good philosophical theory should provide an answer to scepticism, but this is the reverse of the truth. Acknowledgement of the irrefutability of scepticism (so far as claims to knowledge of the ultimate nature of reality other than one's own conscious experience are concerned) is an essential part of a realist attitude to the world, and therefore of any defensible philosophical attitude to the world. Realism broadly construed—the view that something other than one's own conscious experience is real and that this reality has some intrinsic or ultimate nature—is effectively inescapable,[43] and with it comes the irrefutability of scepticism. It follows that any theory which on its own terms provides an answer to scepticism with respect to knowledge claims about the ultimate nature of mind-independent reality (more precisely, reality independent of one's own experience) is ipso facto refuted.

To think that scepticism must be defeated is to take it too seriously. It is to accord it too much force. To acknowledge that it is irrefutable is to keep it in proportion. In this sense Kant is wrong to say that 'it remains a scandal to philosophy and to human

[41] See e.g. *Freedom and Belief*, ch. 9 §1.

[42] pp. 25, 41 below (Essay 1). I develop the point in Strawson 2006b: 250–6, responding to queries raised by Goff (2006).

[43] Berkeley counts as a realist by this fundamental measure, as he should.

reason in general that the existence of things outside us . . . must be accepted merely on *faith*, and that if anyone thinks good to doubt their existence, we are unable to counter his doubts by any satisfactory proof',[44] and Heidegger is right (although not for the right reasons) to say in reply that 'the "scandal of philosophy" is not that this proof has yet to be given, but that such proofs are expected and attempted again and again'.[45] It is not a virtue of Wittgensteinian accounts of the nature of language and thought that they build the falsity of scepticism about other minds into the very meaning of terms for mental states and occurrences; it is, rather, a proof of their inadequacy. The price they pay—severing words like 'pain' from what they actually mean or refer to—is so high that it constitutes a spectacular if covert capitulation to scepticism.

The fourth paper, 'Red and "Red" ', has its origins not in a book, but in an undergraduate project to write a paper called 'Red, Square, and In Pain'.[46] It argues that words for colour properties are essentially words for phenomenal properties, i.e. properties whose whole and essential nature can be and is fully revealed in sensory experience.[47] It defends and endorses the well known colour-spectrum-inversion thought-experiment, according to which (in its most dramatic version) it's possible that the experience you think of as red-experience is qualitatively just like the experience I think of as green-experience although we agree fully in language about which things are red and which things are green. It considers the consequence for language: that if we take a word like 'red' to be essentially a word for a phenomenal property, as it seems we should, then it doesn't seem that it can name any *particular* phenomenal property. This paper already has a somewhat historical air because of the way in which it focuses on questions about language. It was the first paper I read to 'Freddie's Group', an Oxford discussion group presided over by A. J. Ayer which I had recently joined. I remember the sympathetic manner in which Donald Davidson, then a temporary member, phrased his criticisms.

The fifth paper, 'Self, Body, and Experience', was a contribution to an enjoyable symposium at the Aristotelian Society and Mind Association Joint Session in 1999 at which Sydney Shoemaker was the first speaker and Greg McCulloch the combative commentator. The paper has its origins in a paper written for Ralph Walker in 1976 when studying for the BPhil, and abridges a much longer piece, 'The Grounds of Self-Consciousness', which I wrote in 1995 after being asked to give the final lecture on 'The Self' in the 1996 Wolfson College Lecture Series 'From Soul to Self'. Writing this paper left me empty, although the later parts flowed effortlessly.[48] One reason for this may have been that the paper argued directly against the neo-Kantian framework of discussion of self-consciousness established by my father in his books *Individuals* (1959) and *The Bounds of Sense* (1966) and widely endorsed in the Oxford

[44] 1781–7: Bxxxix n. [45] 1927: 249.

[46] Ch. 8 of *Mental Reality* ('Pain and "Pain" ') attempts to carry out the third part of this project. It strikes me now that the second ('Square') part of the project turned into Essay 3.

[47] Mark Johnston (1992) calls this position 'Revelation' and is followed in this by Frank Jackson (1998) and others (e.g. Stoljar 2006).

[48] It is now Part Three of *Selves: An Essay in Revisionary Metaphysics*, one of two fission products of an abandoned book called *The Self*.

philosophical community to which I had no sense of belonging although I was at that time a Fellow of Jesus College.

The next paper, 'What is the Relation between an Experience, the Subject of the Experience, and the Content of the Experience?' grew out of work on the abandoned book *The Self*, largely completed in 1998, after a wonderful year of writing as a Leverhulme Trust Senior Research Fellow, but unfinished for lack of time.[49] This is another paper that flowed out, for better or worse. It argues that if one starts from a currently unusual but not unnatural 'thin' or 'live' understanding of the notion of the subject of experience, according to which a subject of experience exists *sensu stricto* only when there is experience that it is the subject (or haver) of, then the right answer to the title question is 'identity'.[50] This, of course, is a piece of extreme revisionary metaphysics, and I am therefore the more happy to report that my father, renowned as a descriptive metaphysician who regarded revisionary metaphysics with considerable suspicion, told me that he thought the conclusion was probably right—if one chose to do philosophy that way at all.

When I went back to this paper in preparing this collection I found many errors of numbering, notation, typography and thought. The fundamental drift and spirit of the paper are clear in spite of its errors (it was published to a deadline before I had had time to finish it properly), but I've revised it thoroughly for this collection in an attempt at greater clarity.

§7 of the paper is concerned with the object/property distinction. I argue in Cartesian terminology for the Cartesian view (I didn't then know it to be such) that there is no 'real distinction' between an object and its properties or propertiedness, no sense in which the object and its properties or propertiedness are metaphysically distinct, although we can make a valid 'conceptual' distinction or 'distinction of reason' between them. This was my first encounter with the 'problem of universals', and I have revised this section for two reasons. First, I no longer think that there is any respect in which ordinary thought (as opposed to philosophy) makes an error about the nature of the object/property relation. Second, I no longer think it's rhetorically helpful to defend any version of the claim that there is a sense in which objects can be said to be 'collections' of properties, however carefully the claim is qualified.[51]

The next two papers, 'Against Narrativity' and 'Episodic Ethics', expand on the themes of a Wolfson College lecture on 'The Sense of the Self' delivered in 1996.[52] These too were once parts of *The Self*, and I hope that their descendants will one day appear in a distinct book called *Life in Time*. 'Against Narrativity' begins by introducing a distinction between 'Diachronic' and 'Episodic' personalities. When people think about themselves they often figure themselves as something whose identity and persistence conditions are not necessarily the same as the identity and persistence

[49] *The Self* grew in turn from ch. 9 of *Freedom and Belief*, 'Self-Consciousness', and its Appendix, 'The Sense of Self', together with ch. 5 of *Mental Reality*.

[50] I say unusual, but it is in fact Descartes's conception of the subject of experience, and Hume's, and Fichte's, and I think Spinoza's, and Leibniz's. . . .

[51] On this point I have benefited from discussions with Philip Goff.

[52] Strawson 1999c.

conditions of the human being that they know themselves to be when considered as a whole. More particularly, people often figure themselves specifically as a self or 'inner mental someone', rather than as a whole human being, and to be *Diachronic* is to experience oneself, so figured, as something that was there in the (further) past and will be there in the (further) future, something that has relatively long-term diachronic continuity, something that persists over a long stretch of time—perhaps for life. To be Episodic is to lack this perspective. It is to have little or no sense that the self that one experiences oneself to be was there in the (further) past and will be there in the (further) future, although one is perfectly well aware that one has long-term continuity considered as a whole human being.

I then introduce a further distinction between 'Narrative' and 'non-Narrative types'. To be Narrative is, roughly, to have a tendency to apprehend one's life as constituting a story or having a story-like development of some sort, and also, no doubt, to have some sort of investment (positive or negative) in this way of apprehending it. To be *non-Narrativ*e is to have no such tendency or investment.

With these distinctions in hand, I argue against two theses that are currently widely accepted in the humanities: a descriptive empirical thesis which I call the 'psychological Narrativity thesis', according to which all ordinary, normal human beings see or live or experience their life as a narrative or story of some sort, or at least as a collection of stories, and a normative thesis which I call the 'ethical Narrativity thesis', according to which such an outlook on one's life is a good thing, essential to living well, essential to true or full personhood.

It seems plausible that psychological Narrativity presupposes Diachronicity (although this can be challenged), and this leads some to think that an Episodic person can't live a good life. Some think that being Episodic rules out leading a good life even if one can live a good life and develop fully as a person independently of being properly moral. 'Episodic ethics' argues against both these opinions.

The next paper, 'Mental Ballistics: the Involuntariness of Spontaneity', is a recasting and expansion of material largely omitted from my DPhil thesis and *Freedom and Belief*, supplemented by a good number of quotations picked up over the years. It argues that there's a fundamental respect in which reason, thought and judgement neither are nor can be a matter of action. Nor can they be said to be a matter of spontaneity in anything other than Kant's original sense of the term according to which the freedom of true spontaneity is in fact wholly a matter of necessity, of being determined by reason. Rimbaud is the poet of the point when he writes that

> it's false to say: I think. One ought to say 'it thinks [in] me . . . for *I* is an other. . . . It's obvious to me that I am a spectator at the unfolding of my thought: I watch it, I listen to it[53]

but you certainly don't have to be a genius to agree with him.

The tenth and eleventh papers, 'Intentionality and Experience: Terminological Preliminaries' and its sister paper 'Real Intentionality 3', try to advance the position adopted in chapter 7 of *Mental Reality* according to which all genuinely intentional

[53] 1871: 249, 250.

states are conscious or experiential states.[54] Both stress the point that the phenomenological character of our experiences is not just a matter of sensory character but also of cognitive character, so that we need a *cognitive phenomenology* as well as a sensory phenomenology. Both grew out of a long and rather rickety paper prepared for the 2002 NEH Summer Institute on Intentionality and Consciousness held in Santa Cruz. 'Intentionality and Experience' laments the extraordinary terminological wreckage that has recently been visited on large parts of the philosophy of mind as the flight from 'psychologism' in the theory of meaning has (utterly predictably) returned like a boomerang to produce an anti-psychologistic psychology, or rather an anti-psychological psychology—an anti-psychology psychology.

Both papers repeat a proposal from *Mental Reality* which is I think important but unlikely to achieve adequate recognition in the current philosophical, cognitive-psychological and experimental-psychological climate of thought. This is the proposal that when we engage in phenomenology, and consider experience, we need a more general category than the category of a *sensory modality*—even when we blithely stretch the meaning of 'sensory' to cover all affective or emotional matters, all matters of mood. We need the general category of an *experiential modality*. We can then subsume the sensory modalities under this general category while leaving a clear place for a distinct experiential modality: the experiential modality of conscious thought. Having done this, we need to be very clear that (find no difficulty in the idea that) the particular form of the experiential modality of conscious thought that is found in creatures like ourselves is something that has evolved naturally—just as the particular forms of the sensory modalities that are found in creatures like ourselves have evolved naturally. Any realistic physicalist who believes in the theory of evolution by natural selection must believe that this has happened, because the existence of the experiential modality of conscious thought is an evident fact (as I try to show in these two papers).

Perhaps nothing like the fully developed human form of the experiential modality of conscious thought can evolve until sensory modalities like ours are already well evolved. Perhaps the former grow out of the latter, or on top of them, in some way.[55] It may well be that the former cannot exist in nature independently of the latter. These are interesting (and old) questions, but they are questions of detail none of which impugn the point that the existence of the experiential modality of conscious thought—its concrete reality—is an unbudgeable natural fact. Nor do they cast any doubt on the idea that the experiential modality of conscious thought is a distinct experiential modality, as distinct from each of the sensory modalities as they are from each other.

The free-will papers, 'On the Inevitability of Freedom', 'On the Impossibility of (Ultimate) Moral Responsibility' and 'Consciousness, Free Will, and the Unimportance of Determinism', overlap considerably. They develop some of the themes of

[54] 'Real intentionality 3' is so-called because it's the finished version of a paper—'Real intentionality'—that was published uncompleted to a deadline in 2004, and published again, still unfinished, in 2006.

[55] Or perhaps the latter are already seeded with the former in some way. There are various reasons to suspect the idea of pure or mere sensation, given the entanglement of sensation and cognition in perception.

Freedom and Belief, in which I argue that there is a fundamental 'strong' sense of the word 'free' given which we neither are nor can be free agents in such a way as to be truly or ultimately responsible for what we do. It strikes me now that 'On the Inevitability of Freedom' deals with the problem posed by Harry Frankfurt's famous paper 'Alternate Possibilities and Moral Responsibility', a paper which I somehow managed to be ignorant of at the time. 'Consciousness, Free Will, and the Unimportance of Determinism' is a contribution to a set of papers that discuss Ted Honderich's book *A Theory of Determinism* (Oxford University Press, 1990). 'Free Agents' is a recent attempt to compress the core of Part III of *Freedom and Belief* —penetrated, understandably, by very few readers—into a single more accessible paper.

What is this so-called 'ultimate' responsibility? One dramatic way to characterize it is by reference to the story of heaven and hell: ultimate moral responsibility is responsibility of such a kind that, if we have it, it makes sense to propose that it could be just to punish some of us with torment in hell and reward others with bliss in heaven. It makes sense because what we do is absolutely up to us. I say 'makes sense' because one doesn't have to believe in the story of heaven and hell in order to understand the notion of ultimate responsibility that it is used to illustrate. Nor does one have to believe in the story of heaven and hell in order to believe in ultimate responsibility (many atheists have believed in it). One doesn't have to have heard of the story at all, and there's another equally good if less colourful way to characterize the notion of ultimate responsibility, although it takes a little more thought: ultimate responsibility exists if and only if punishment and reward can be fair without having any pragmatic justification.[56]

The next paper, 'Realism and Causation', expounds the causal realism that forms the background to the discussion of Hume in *The Secret Connexion*. In that book I argue directly against the view, then orthodox (although not universal) in philosophy, that Hume did not merely hold the epistemological view that all we can *know* of causation is regular succession or constant conjunction, but also held the outright ontological view that such regular succession is quite definitely all there *is* to causation in the world and was, in addition, right to do so.

One of the strange things about this orthodoxy, back in the day, was that although the philosophical community tended to take the correctness of the regularity theory for granted when discussing other things, they were considerably less likely to do so when causation was itself their main topic of discussion: a respectable number of philosophers always had their doubts about the regularity theory. By far the oddest thing, though, was the way in which the regularity theory of causation had by then come completely apart from the phenomenalism about physical objects with which it had so intimately co-evolved. The regularity theory made a lot of sense in partnership with phenomenalism, and really only in that partnership,[57] and yet it

[56] See p. 361 below.

[57] Given his idealism, Berkeley was quite right to hold a regularity theory about the nature of causation considered as a phenomenon that exists in the physical world. It is instructive to compare the phenomenon of causation as it exists in cartoon worlds, discussed in Strawson 1989b: Appendix A.

somehow persisted after the phenomenalism had been largely abandoned. The standard and extraordinary position at that time was a combination of realism about physical objects and radical anti-realism about the causal relations that held between them. On this view it was not only the case that the order of the world was a complete, fully objective, constant and enormous fluke; it was also the case that we knew this to be so.

The next paper, 'The Contingent Reality of Natural Necessity', responds briefly to an objection to *The Secret Connexion*, put by Nicholas Everitt, that has nothing essentially to do with Hume. It makes a suggestion about how best to convey the character of a non-regularity theory of causation. Like its predecessor, it presupposes a view of time as something that (so to say) really passes and flows. Neither paper addresses an issue of which I was then unaware: the issue of whether the distinction between regularity and non-regularity views of causation survives in a 'four-dimensionalist' or 'block-universe' view of reality.

The next two papers, 'Epistemology, Semantics, Ontology, and David Hume' and 'David Hume: Objects and Power', seek, overlappingly, to strengthen the case in favour of the 'sceptical realist' interpretation of Hume offered in *The Secret Connexion*, an interpretation originally so named and championed by John Wright in his 1983 book *The Sceptical Realism of David Hume* in the face of an almost perfect consensus of disagreement. These papers are contributions to what came to be known as 'the Hume wars', in which Kenneth Winkler fired the first retaliatory salvo against the so-called 'New Hume' (who was really none other than Hume himself).[58] For a time the Hume establishment did its best to ignore the sceptical realist interpretation, along with Edward Craig's outstanding (and essentially more moderate) account of 'One Way to Read Hume' in his book *The Mind of God and the Works of Man*. Things have moved on since then, and many members of the old establishment seem now to have accepted the main idea behind the sceptical realist interpretation while pretending, to varying degrees, that they never really thought otherwise. Don Garrett was never, perhaps, a full member of the old establishment, but he is now the doyen of Hume studies, and a useful measure of the distance that has been covered since the publication of Wright's book in 1983 is provided by the following quotation from Garrett's rightly admired book *Cognition and Commitment in Hume's Philosophy* (1997):

> Hume is not forbidden by his empiricist principles from postulating the existence of unperceived deterministic mechanisms that would underlie the propensities of perceptions to appear in particular ways. He is forbidden by his principles only from trying to specify the nature of those mechanisms [in a way that goes] beyond what experience can warrant.[59]

This is an observation that would have left pre-'New Hume' Humeans gasping.

One of the most striking things about the resistance to the sceptical realist reading of Hume has been the way in which commentators have newly defended their existing view while refusing to address directly the objections it faces from the sceptical

[58] Winkler 1991. [59] Garrett 1997: 171.

realist reading. The issue of Hume's two definitions of cause provides an example. After stating that

> the ideas which we form concerning [the relation of cause and effect are] so imperfect . . . that it is impossible to give any just definition of cause, except what is drawn from something extraneous and foreign to it

Hume gives his two famous definitions and immediately reiterates the point that they are imperfect, observing that 'we cannot remedy this inconvenience, or attain any more perfect definition, which may point out that circumstance in the cause, which gives it a connexion with its effect'.[60] The sceptical realist point here is that this by itself refutes the view that Hume held that there was nothing more to causation 'in the objects', or in reality, than regularity, for if causation in the objects were just regular succession or constant conjunction, then there would be no inconvenience or imperfection in the first definition at all, and in giving the first definition we could hardly be said to be in the position of finding it 'impossible to give any just definition of cause, except what is drawn from something extraneous and foreign to it'. The challenge to members of the old orthodoxy—it has not been faced, as far as I know—is simply to explain why this does not definitively and forever refute their view.[61]

[60] 1748: 76/7.29.

[61] See pp. 434–6 below. See also the discussion of the use of the word 'definition' in the eighteenth century on p. 436.

1

Real Materialism

'Trinculo might have been referring to modern physics in the words, "This is the tune of our catch, played by the picture of Nobody".'

Eddington (1928: 292)

Love like Matter is much
  Odder than we thought.

Auden (1940, 'Heavy Date')

1 INTRODUCTION

Materialism is the view that every real, concrete[1] phenomenon[2] in the universe is physical. It is a view about the actual universe, and for the purposes of this paper I am going to assume that it is true.

It has been characterized in other ways. David Lewis once defined it as 'metaphysics built to endorse the truth and descriptive completeness of physics more or less as we know it',[3] and this cannot be faulted as a terminological decision. But it seems unwise to burden materialism—the view that every real concrete phenomenon in the universe is *physical*—with a commitment to the descriptive completeness of *physics* more or less as we know it. There may be physical phenomena which physics (and any non-revolutionary extension of it) cannot describe, and of which it has no inkling, either

This paper is an attempt to elaborate on 'Agnostic materialism' (Strawson 1994: 43–105); trailers appeared in Strawson 1998 and 1999b. Since writing it I have come across several expressions of similar views and have added a considerable number of quotations. When I cite a work I give the date of first publication, or occasionally the date of composition, while the page reference is to the edition listed in the bibliography.

[1] By 'concrete' I simply mean 'not abstract'. It is natural to think that any really existing thing is *ipso facto* concrete, non-abstract, in which case 'concrete' is redundant. But some philosophers like to say that numbers (for example) are real things—objects that really exist, but are abstract.

[2] I use 'phenomenon' as a completely general word for any sort of existent that carries no implication as to ontological category (the trouble with the perfectly general word 'entity' is that it is now standardly understood to refer specifically to things or substances); and suppress its meaning of *appearance*.

Note that someone who agrees that physical phenomena are all there are but finds no logical incoherence in the idea that physical things could be put together in such a way as to give rise to non-physical things can define materialism as the view that every real, concrete phenomenon that there is *or could be* in the universe is physical.

[3] 1986: x.

descriptive or referential.[4] Physics is one thing, the physical is another. 'Physical' is a natural-kind term—it is the ultimate natural-kind term[5]—and no sensible person thinks that physics has nailed all the essential properties of the physical. Current physics is profoundly beautiful and useful, but it is in a state of chronic internal tension.[6] It may be added, with Russell and others, that although physics appears to tell us a great deal about certain of the general structural or mathematical characteristics of the physical, it fails to give us any further insight into the nature of whatever it is that has these structural or mathematical characteristics—apart from making it plain that it is utterly bizarre relative to our ordinary conception of it.

It is unclear exactly what this last remark amounts to (is it being suggested that physics is failing to do something it could do?), but it already amounts to something very important when it comes to what is known as the 'mind–body problem'. Many take this to be the problem of how mental phenomena can be physical phenomena *given what we already know about the nature of the physical.* But those who think this are already lost. For the fact is that we have *no* good reason to think that we know anything about the physical that gives us any reason to find any problem in the idea that mental phenomena are physical phenomena. If we consider the nature of our knowledge of the physical, we realize that 'no problem of irreconcilability arises'.[7] Joseph Priestley saw this very clearly over two hundred years ago, and he was not the first. Noam Chomsky reached essentially the same conclusion over thirty years ago, and he was not the last.[8] Most present-day philosophers take no notice of it and waste a lot of time as a result: much of the present debate about the 'mind–body' problem is beside the point.

2 TERMINOLOGY

I am going to use the plural-accepting, count-noun form of the word 'experience'[9] for talking of experience*s* as things (events) that may (and presumably do) have non-experiential being as well as experiential being. And I am going to reserve the adjective 'experiential' and the plural-lacking form of the noun 'experience' for talking about the qualitative character that experience*s* have for those who have them as they have them, where this qualitative character is considered wholly independently of

[4] Physics is trivially referentially complete, according to materialism, in so far as its object of study is the universe, i.e. the whole of concrete reality. There may nevertheless be specific, smaller-scale phenomena of which physicists have no descriptive or referential inkling.

[5] Failure to recognize this simple point, long after the existence of natural-kind terms has been generally acknowledged, is one of the more disastrous legacies of positivism. (Compare the survival of the 'regularity theory of causation' after the abandonment of phenomenalism.)

[6] I have in mind the old quarrel between general relativity theory and quantum mechanics, but there is also turmoil in cosmology.

[7] Eddington 1928: 260.

[8] Chomsky 1968: 6–8, 98; 1988: 142–7; 1994 passim; 1995: 1–10; 1996: 38–45; 1998: 437–41; compare Crane and Mellor 1990.

[9] The words 'experience' and 'experiential' were capitalized in the originally published version of this paper, and I have removed this as unnecessary.

everything else. The phenomenon of experiential[10] qualitative character is part of what exists—it is part of reality, whatever its ontological category—and it is important to have some unequivocal way of referring to it and only to it.

One could express this terminological proposal by saying that 'experiential phenomena' and 'experience' (plural-lacking form) refer in a general way to: that part of reality which one is left with when, continuing to live and think and feel as one does, one engages in an old sceptical thought experiment and imagines that the 'external world', including one's own body, does not exist. They refer to the part or aspect of reality one has to do with when one considers experience*s* specifically and solely in respect of the experiential qualitative character they have for those who have them as they have them, and puts aside the fact that they may also be correctly describable in such non-experiential terms as 'a 70–20–30 Hertz coding triplet across the neurons of area V4'.[11]

3 REALISTIC MATERIALISM

Realistic materialists—realistic anybodys—must grant that experiential phenomena are real, concrete phenomena, for nothing in this life is more certain.[12] They must therefore hold that they are physical phenomena. It may sound odd to use the word 'concrete' to characterize the qualitative character of experiences of colour, gusts of depression, thoughts about diophantine equations, and so on, but it isn't, because 'concrete' simply means 'not abstract'.[13] For most purposes one may take 'concrete' to be coextensive with 'possessed of spatiotemporal existence', although this will be directly question-begging in some contexts.[14]

It may also sound odd to use 'physical' to characterize mental phenomena like experiential phenomena: many materialists talk about the mental and the physical as if they were opposed categories. But this, *on their own view*, is like talking about cows and animals as if they were opposed categories. For every concrete phenomenon in the universe is physical, according to materialists. So all mental phenomena, including experiential phenomena, are physical phenomena, according to materialists: just as all cows are animals.

So what are materialists doing when they talk, as they so often do, as if the mental and the physical were entirely different? What they may mean to do is to distinguish, within the realm of the physical, which is the only realm there is, according to them,

[10] 'Qualitative' has to be qualified by 'experiential' because experiences also have non-experiential qualitative character, according to materialists (every non-relational property of a thing contributes to its qualitative character). Having made the point, I will either bracket 'experiential' or follow common practice and omit it.

[11] Churchland 1995: 202. Obviously 'correctly describable' does not entail 'fully describable'. Note that one also puts aside the fact that they can be correctly described in such non-experiential terms as 'a perception of the Eiffel Tower'.

[12] I make no distinction between 'materialism' and 'physicalism'.

[13] If 'immaterial souls' existed, they would of course be concrete phenomena.

[14] Experiential phenomena would be concrete phenomena even if space and time were not really real—were somehow mere forms of experience.

between the mental and the non-mental, or between the experiential and the non-experiential; to distinguish, that is, between mental (or experiential) features of the physical, and non-mental (or non-experiential) features of the physical.[15]

It is this difference that is in question when it comes to the 'mind-body' problem; materialists who persist in talking in terms of the difference between the mental and the physical perpetuate the terms of the dualism they reject in a way that is inconsistent with their own view. I use the words 'mental' and 'non-mental' where many use the words 'mental' and 'physical' simply because I assume, as a (wholly conventional) materialist, that every real concrete phenomenon is physical, and find myself obliged to put things in this way.[16]

There is tremendous resistance to abandoning the old mental/physical terminology in favor of the mental/non-mental, experiential/non-experiential terminology, although the latter seems to be exactly what is required. Many think the old terminology is harmless, and a few are not misled by it: they consistently use 'physical' to mean 'non-mental physical'. But it sets up the wrong frame of thought from the start, and I suspect that those who are never misled by it are members of a small minority.

When I say that the mental, and in particular the experiential, is physical, and endorse the view that 'experience is really just neurons firing', I mean something completely different from what some materialists have apparently meant by saying such things. I don't mean that all aspects of what is going on, in the case of conscious experience, can be described by current physics, or some non-revolutionary extension of it. Such a view amounts to radical 'eliminativism' with respect to consciousness,[17] and is mad. My claim is different. It is that the experiential (considered just as such)[18]—the feature of reality we have to do with when we consider experiences specifically and solely in respect of the experiential character they have for those who have them as they have them—that 'just is' is physical. No one who disagrees with this is a remotely realistic materialist.

When aspiring materialists consider the living brain, in discussion of the 'mind–body problem', they often slide into supposing that the word 'brain' somehow refers only to the brain-as-revealed-by-current-physics. But this is a mistake, for it refers just as it says, to the living brain, i.e. the living brain as a whole, the brain in its total physical existence and activity. Realistic—real—materialists must agree that the total physical existence and activity of the brain of an ordinary, living person, considered over time, is *constituted* by experiential phenomena (if only in part) in every sense in which it is constituted (in part) by non-experiential phenomena characterizable by physics. A real (realistic) materialist cannot think that there is something still left

[15] One needs to distinguish between mental and experiential phenomena because although all experiential phenomena are mental, not all mental phenomena are experiential, on the ordinary view of things: certain *dispositional* states—beliefs, preferences, and so on—are mental phenomena although they have no experiential character. There are also powerful reasons for saying that there are *occurrent* mental phenomena that are non-experiential.

[16] See Chomsky 1968: 98.

[17] Some readers doubt this, but it follows from the fact that current physics contains no predicates for experiential phenomena at all, and that no non-revolutionary extension of it could do so.

[18] The parenthesis is redundant given the definition of 'experiential' in §2.

to say about experiential phenomena, once everything that there is to say about the physical brain has been said.

4 MATERIALISM FURTHER DEFINED

Materialism, then, is the view that every real concrete phenomenon is physical in every respect, but a little more needs to be said, for experiential phenomena—together with the subject of experience, assuming that that is something extra—are the only real, concrete phenomena that we can know with certainty to exist,[19] and as it stands this definition of materialism doesn't even rule out idealism—the view that mental phenomena are the only real phenomena and have no non-mental being—from qualifying as a form of materialism! Now there is a sense in which this consequence of the definition is salutary (see e.g. §§14–15 below), but it would none the less be silly to call an idealist view 'materialism'. Russell is right to say that 'the truth about physical objects *must* be strange',[20] but it is reasonable to take materialism to be committed to the existence of non-experiential being in the universe, in addition to experiential being, and I shall do so in what follows.

It is also reasonable to take materialism to involve the claim that *every* existing concrete phenomenon has non-mental, non-experiential being, whether or not it also has mental or experiential being. Applied to mental phenomena, then, materialism claims that each particular mental phenomenon essentially has non-mental being, in addition to mental being. This is, I think, the standard view.[21]

I will assume, then, that all realistic materialists take it that there is both mental and experiential being and non-mental, non-experiential being. Must all realistic *monists* also take it that there is non-mental, non-experiential being? Many would say Yes, on the grounds that it is not remotely realistic to suppose either that there is, or might be, no non-mental or non-experiential being at all. But the question of what it is to be (metaphysically) realistic is far harder here than it is when it is merely the existence of experience that is in question. For the purposes of this paper I will *assume* that any realistic position does take it that there is non-mental or non-experiential being in addition to mental and experiential being, for this assumption accords with ordinary conceptions, and my main argument does not require me to challenge it. But it is at best an assumption. Idealists, of course, reject the assumption that realistic monism requires acknowledgement of non-mental, non-experiential phenomena, and I will enter a number of reservations along the way.[22]

[19] Unless the existence of experiential phenomena of kinds that we know to exist entails the existence of non-experiential phenomena. See n22 below.

[20] 1912: 19.

[21] In the case of experiences, it amounts to saying that they are not just experiential phenomena, although experiential phenomena are of course part of what constitutes their existence. Note that to distinguish between mental being and non-mental being is not to claim to know how to draw a sharp line between them. The starting situation is simply this: we know there is mental being, and we assume, as materialists, that this is not all there is.

[22] Elsewhere (1994: 134–4) I argue that there could not be experiential or experiential content phenomena of the sort with which we are familiar unless there were also non-experiential phenomena;

It is clumsy to oscillate between 'mental' and 'experiential', or constantly double them up, and in the next few sections I will run the discussion in terms of the mental/non-mental distinction (such as it is). This said, all my *examples* of mental phenomena will be experiential phenomena, for they suffice to make the relevant point and are, in the present context, what matter most.

It may be added that the reference of the term 'experiential' is much clearer than that of the essentially contestable term 'mental', and that the latter may in the end deserve the treatment proposed for the term 'physical' in §15 below. Nevertheless it seems best to begin in this way.[23]

I will quote Russell—post-1926 Russell—frequently when discussing materialism, for my views converge with his in certain respects, and he has been wrongly ignored in recent discussion.[24] He was still inclined to call himself a 'neutral monist' at that time, but he is equally well read as a thoroughgoing materialist.[25] He rejects materialism in name, pointing out that 'matter has become as ghostly as anything in a spiritualist séance'—it has, he says, disappeared 'as a "thing"' and has been 'replaced by emanations from a locality'[26]—, but he grants that 'those who would formerly have been materialists can still adopt a philosophy which comes to much the same thing. They can say that the type of causation dealt with in physics is fundamental, and that all events are subject to physical laws'.[27] And this, in effect, is what he does himself.[28]

and if it is true (1) that a subject of experience cannot itself be a wholly experiential phenomenon (ibid. p. 144), and (2) that 'experience is impossible without an experiencer' (Frege 1918: 27), then the conclusion that the existence of experience entails the existence of non-experiential phenomena is guaranteed. The argument stalls, however, if one substitutes 'mental' for 'experiential', if only because of the vagueness of the term 'mental' (ibid. pp. 140–2 and ch. 6).

[23] I discuss the difference between 'experiential' and 'mental', and the vagueness of 'mental', in Strawson 1994 (see e.g. pp. 136–44 and ch. 6). Here I am trying to avoid the issue as far as possible.

[24] Largely, perhaps, because of the looseness of his use of the word 'see', and the reactive excesses (which led to exegetical insensitivity) of the first wave of twentieth-century 'direct realists'. See, however, Lockwood 1981.

[25] See e.g. Russell 1927b: 110, 119, 123, 126, 170. I do not understand everything Russell says and may misrepresent him. I aim to take what I think is right from his views without attempting exegesis, and I will sometimes detour from the main argument in Russellian directions.

[26] 1927b: 78, 84. N. R. Hanson spoke similarly of the 'dematerialization' of matter, and Priestley (1777) made essentially the same point. See also Lange 1865.

[27] 1927b: 126–27.

[28] In his introduction to Lange's *History of Materialism*, Russell notes that 'physics is not materialistic in the old sense, since it no longer assumes matter as permanent substance' (1925: xix), and he may have the following passage from Lange in mind: 'We have in our own days so accustomed ourselves to the abstract notion of forces, or rather to a notion hovering in a mystic obscurity between abstraction and concrete comprehension, that we no longer find any difficulty in making one particle of matter act upon another without immediate contact. We may, indeed, imagine that in the proposition, "No force without matter", we have uttered something very Materialistic, while all the time we calmly allow particles of matter to act upon each other through void space without any material link. From such ideas the great mathematicians and physicists of the seventeenth century were far removed. They were all in so far still genuine Materialists in the sense of ancient Materialism, that they made immediate contact a condition of influence. The collision of atoms or the attraction by hook shaped particles, a mere modification of collision, were the type of all Mechanism and the whole movement of science tended towards Mechanism' (1865: 1.308, quoted in Chomsky, 1996: 44).

5 'MENTAL' AND 'NON-MENTAL'

It may seem odd to take 'mental' as the basic positive term when characterizing materialism. But one is not a thoroughgoing materialist if one finds it so. For all materialists hold that every concrete phenomenon in the universe is physical, and they are neither sensible nor realistic if they have any inclination to deny the concrete reality of mental phenomena like experiential phenomena.[29] It follows that they have, so far, no reason to find it odd or biased to take 'mental' rather than 'non-mental' as the basic term.

—Surely it would be better, even so, to start with some positive term 'T' for the non-mental physical, and then define a negative term, 'non-T', to cover the mental physical; or use a pair of independently positive terms?

There are two good reasons for taking 'mental' as the basic positive term, one terminological, the other philosophical. The terminological reason is simply that we do not have a convenient positive term for the non-mental (obviously we can't use 'physical', and there is no other natural candidate). The philosophical reason is very old: it is that we have direct acquaintance with—know—fundamental features of the mental nature of (physical) reality just in having experience in the way we do, in a way that has no parallel in the case of any non-mental features of (physical)[30] reality. We do not have to stand back from experiences and take them as objects of knowledge by means of some further mental operation, in order for there to be acquaintance and knowing of this sort: the having is the knowing.[31]

This point has often been questioned, but it remains immovable. Russell may exaggerate when he says that 'we know *nothing* about the intrinsic quality of physical events except when these are mental events that we directly experience',[32] or that 'as regards the world in general, both physical and mental, *everything* that we know of its intrinsic character is derived from the mental side',[33] for it is arguable that the spacetime character of the world is part of its intrinsic character, and, further, that we may have some knowledge of this spacetime character. I don't think he exaggerates much, however. He is onto something important, and the epistemological asymmetry between claims to knowledge of experiential being and claims to knowledge of non-experiential being is undeniable, however unfashionable.

[29] This is so even if 'eliminativism' about other candidate mental phenomena—dispositional phenomena like preferences, beliefs, and so on—is worth serious discussion.

[30] The word 'physical' is bracketed because it is redundant, here as elsewhere. See §14.

[31] Compare Shoemaker's idea (rather differently applied) that many mental states and goings on are 'constitutively self-intimating' (1990). See also Maxwell 1978: 392, 396.

[32] 1956: 153; my emphasis.

[33] 1927a: 402; my emphasis. See Lockwood 1989: 159: 'Consciousness . . . provides us with a kind of "window" on to our brains, making possible a transparent grasp of a tiny corner of material reality that is in general opaque to us . . . . The qualities of which we are immediately aware, in consciousness, precisely *are* some at least of the intrinsic qualities of the states and processes that go to make up the material world—more specifically, states and processes within our own brains. This was Russell's suggestion.'

The asymmetry claim that concerns me is not the claim that all epistemic contact with concrete reality involves experience, and that we are inevitably a further step away from the thing with which we are in contact when it is a non-experiential phenomenon. It is, rather, the claim that we are acquainted with reality *as it is in itself*, in certain respects, in having experience as we do. This second claim revolts against the tendency of much current epistemology and philosophy of mind, but there is no reason why it should trouble thoughtful materialists, and I will offer a brief defence of it in §13. Here it is worth noting that it is fully compatible with the view that there may also be fundamental things we don't know about matter considered in its experiential being.[34]

6 ASIDE: 'AS IT IS IN ITSELF'

Does one need to defend the phrase 'as it is in itself', when one uses it in philosophy? I fear one does, for some think (incoherently) that it is somehow incoherent. Still, it is easy to defend. The supposition that reality is in fact a certain way, whatever we can manage to know or say about it, is obviously true. To be is to be somehow or other. Nothing can exist or be real without being a certain way at any given time.[35] And the way something is just is how it is in itself. This point is not threatened by the suggestion that our best models of the behaviour of things like photons credit them with properties that seem incompatible to us—wave-like properties and particle-like properties, for example. What we learn from this is just that this is how photons affect us, given their intrinsic nature—given how they are in themselves, and how we are in ourselves. We acquire no reason to think (incoherently) that photons do not have some intrinsic nature at any given time. Whatever claim anyone makes about the nature of reality—including the claim that it has apparently incompatible properties—just is a claim about the way it is. This applies as much to the Everett 'many-worlds' theory of reality as to any other.

Some think that what we learn from quantum theory is that there is, objectively, no particular way that an electron or a photon is, at a given time. They confuse an epistemological point about undecidability with a metaphysical claim about the nature of things. The problem is not just that such a claim is unverifiable. The problem is that it is incoherent. For whatever the electron's or photon's weirdness (its weirdness to us: nothing is intrinsically weird), its being thus weird just is the way it is.

So we may talk without reservation of reality as it is in itself. Such talk involves no (allegedly dubious) metaphysics of the Kantian kind. Its propriety derives entirely

[34] Not only facts about experience in sense modalities we lack, or (e.g.) about the brightness-saturation-hue complexity of seemingly simple colour-experience, but also, perhaps, murkier facts about its composition, and also, perhaps, about the 'hidden nature of consciousness' postulated by McGinn 1990: chs 3 and 4.

[35] If you are worried about the concept—or reality—of time, drop the last four words.

and sufficiently from the thought that if a thing exists, it is a certain way. For the way it is just is how it is in itself.

7 STRUCTURE AND STRUCTURED

So much, for the moment, for our theoretical conception of the mental: it has some securely anchored, positive descriptive content, and we can know that this is so; for whatever the best general account of the mental, it includes experiential phenomena in its scope; and experiential phenomena are not only indubitably real; they are also phenomena part of whose intrinsic nature just is their experiential character; and their experiential character is something with which we are directly acquainted, however hard we may find the task of describing it in words. This is so even if we can make mistakes about the nature of our experiences, and even if we can do so even when we consider them merely in respect of their (experiential) qualitative character.[36] It is so even if we differ dramatically among ourselves in the qualitative character of our experiences, in ways we cannot know about.

Our theoretical conception of the mental, then, has clear and secure descriptive content. (Don't ask for it to be put further into words; the anchoring is sufficiently described in the last paragraph.) Our theoretical conception of the non-mental, by contrast, remains, so far, a wholly negative concept. It has, as yet, no positive descriptive content.

Can anything be done about this? On one reading, Russell thinks not: the science of physics is our fundamental way of attempting to investigate the non-mental being of physical reality, and it cannot help us. 'Physics is mathematical', he says, 'not because we know so much about the physical world, but because we know so little: it is only its mathematical properties that we can discover. For the rest, our knowledge is negative.' 'We know nothing about the intrinsic quality of physical events except when these are mental events that we directly experience.' On this view, neither physics nor ordinary experience of physical objects give us any sort of knowledge of the intrinsic nature of non-mental reality.[37]

Is Russell right? Something needs to be said about his use of the word 'intrinsic'. It is potentially misleading, and it helps to consider other ways in which he puts the point. Thus he talks regularly of the 'abstractness' of physics. The knowledge it gives is, he says, 'purely formal'. It reveals the abstract 'structure' of physical phenomena while saying nothing about their 'quality'.[38]

[36] See e.g. Dennett 1991a: ch. 11.

[37] Russell 1927b: 125, 1956: 153. Lockwood 1989: ch. 10 contains some illuminating pages on Russell and a useful historical note on versions of the idea that precede Russell's. See also Maxwell 1978, whose Russellian approach is treated sympathetically in Chalmers 1996: 153–4 (and see index), and Chalmers 1997: 405–6. Jeremy Butterfield and Bas van Fraassen have pointed out to me the link here to John Worrall's 'structural realism'; see e.g. Worrall 1989 and Ladyman 1998.

[38] 1927a: 392, 382, 388.

I am not sure that the distinction between structure and quality is clear, or fundamental in such a way that it holds 'all the way down',[39] but (putting that doubt aside) it seems that the fundamental distinction that Russell has in mind can be expressed by saying that it is a distinction between *how X is structurally disposed* and *what X is apart from (over and above) its structural disposition*.[40] Physics gives the structure, but not the structure-transcendent nature, of the thing that has the structure. If we say that truths about how X is structurally disposed have purely *structure-specifying* content, while truths about what X is over and above its structural disposition also have *structure-transcendent* content, or, more simply, *non-structural* content, then we may say that 'non-structural' covers everything that Russell has in mind when he talks of the 'intrinsic' nature of things.[41]

One might dramatize Russell's idea by saying that physics can be thought of as a formal system which remains, in a peculiar sense, an *uninterpreted* formal system, even though we know that it *applies* to something=x—reality, the universe—and even though it is elaborated specifically in causal response to x. On this 'Ramseyfied' view, we may suppose that the universe has features that are *structurally isomorphic* to the structures delineated in the equations of physics, but we have no account of the non-structural nature of the thing that has the structure(s) in question.[42]

So we are (to pursue the metaphor) in the peculiar position of having a known, concrete *application* (and so, in one sense, an *interpretation*) for a formal system, without that application constituting a *model* (in the sense of model-theoretic semantics) that can confer positive descriptive meaning on its terms. In being the

[39] Structure is a matter of quality because a thing's qualitative character, exhaustively considered, is a matter of *all* aspects of how it is, and its structural character is an aspect of how it is. The converse claim—that quality (in spacetime) is in some sense a matter of structure—sounds a bit mystical, but it can on further reflection begin to seem hard to rebut, even when one maintains, as one must, a sharp distinction between epistemology and metaphysics. (The distinction between form and content may seem more robust, but may also succumb.)

[40] It seems (subject to the doubt expressed in the last footnote) that this distinction must be a real one—that if there is structure, there must be something structured. Only extreme positivistic irresponsibility, or failure to 'realize what an abstract affair form [or structure] really is'. Russell 1927a: 392, can make this seem questionable.

[41] At one point Russell also takes it that position in spacetime is an intrinsic property of things. Considering the relation between a perception and the object it is a perception of, he remarks that 'we cannot say whether or not it resembles the object in any intrinsic respect, except that both it and the object are brief events in space-time' (1927b: 118).

[42] When thinking of structural isomorphism, it is helpful to consider a version of an old example: the structural isomorphism between (1) sound waves produced by an orchestra playing Sibelius's 'Valse Triste' that are registered as (2) vibrations of a condenser plate in a microphone and sent as (3) electrical signals to a recording device that stores them as (4) pits on the surface of a compact disk that is then read as (5) digital information by a machine that transmits this information in the form of (6) radio waves to (7) a receiver that puts it through (8) an amplifier to (9) speakers that give rise to (10) sound waves that give rise to (11) electrical impulses in the auditory nerve that give rise to (12) neural occurrences in the auditory cortex and elsewhere that are conscious auditory experiences. There is a structural description that captures the respect in which all these phenomena are the same (assuming no significant loss of information even at the stage of conscious hearing). The abstract character of this description is revealed precisely by the fact that this is what it does: capture the respect in which all these substantially different phenomena are—structurally—the same. Compare Wittgenstein 1922: 4.0141.

subject matter of physics, the universe provides it with a merely referential model or object, of which it gives a merely structure-specifying description. Physics is *about* the physical, and may give a correct abstract representation of its structural disposition as far as it goes; but it does not and cannot tell us anything about what the physical actually is, over and above the fact that it exemplifies a certain formal structure.[43]

8 THE NON-MENTAL—SPACE

Back now to the question whether physics can endow our general theoretical conception of the non-mental with any positive descriptive (not merely referential) content. Russell in 1927 thinks not. I disagree because correct structural description of a thing is already description of a feature of its intrinsic nature. But this disagreement is merely terminological, and the real question is this: Can one go any further than structure-specifying content, when attempting to give a satisfactory theoretical characterization of the non-mental? Again, Russell in 1927 thinks not. It seems to me, however, that we may be able to go a little further. For I think that our ordinary conception of space may get something fundamental right about the nature of reality as it is in itself, and hence about the intrinsic nature of reality—something that survives even after the finite-but-unbounded curved gravity-constituting spacetime of relativity theory (or the ten- or eleven- or twelve-dimensional spacetime of one of the leading versions of string theory) has been granted to be closer to the truth.

I am tempted to hold up my hands, like G. E. Moore, and to consider, not my hands, but the space—by which I mean only the spatial extension[44]—between them, and to say: 'This is space (spatial extension), and it is real, and I know its nature, in some very fundamental respect, whatever else I do not know about it or anything else (e.g. the fact that it is an aspect of spacetime).' On this view the ordinary concept of space, or indeed the concept of spacetime, in which (I claim) a fundamental feature of our ordinary conception of space survives, has correct non-structural descriptive content. It does not relate only to 'what we may call the causal skeleton of the world',[45] if to say this is to say that it does not capture any aspect of the non-structural nature of the world. It has non-structural content, and can transmit this content to our more general conception of the non-mental.[46]

Russellians may object as follows 'This line of thought is profoundly natural, but it depends on a fundamentally false imagining. It involves the conflation of 'objective'

[43] In 1928, a year after the publication of *The Analysis of Matter*, Max Newman published a conclusive objection to the pure form of this view, as Russell immediately acknowledged (1967–9: 413–14). See Demopoulos and Friedman 1985.

[44] I am not at all concerned with the 'substantivalist' versus 'relationalist' debate about the nature of space.

[45] Russell 1927a: 391.

[46] Cf. Hirsch 1986: 251–4. I will not here consider the 'direct realist' view that we may have some real insight into the non-mental nature of force, say, or causation, as a result of experiencing pushes and pulls and so on in the way we do.

spatial extension, spatial extension 'as it is in itself' (where this is taken as a merely referential, structural-equivalence-class specifying term with no pretension to non-structural content) with the phenomenological space (or spaces) associated with perception. It involves an almost irresistible but entirely fatal failure to 'realize what an abstract affair form really is'.[47] All those, like yourself, who think that it is viable are 'guilty, unconsciously and in spite of explicit disavowals, of *a confusion in their imaginative picture*' of reality.[48]

In reply I think that some who take this line may be suffering from excessive empiricism. They take it that the notion of spatial extension—or indeed shape—that we possess is essentially informed by the character of our sensory experiences, and in this I think they are mistaken. It may well be true that sensory experiences of specific kinds are necessary for the acquisition of concepts like SHAPE or SPACE, in the case of beings like ourselves.[49] Such concepts can nevertheless float free of the different possible sensory bases of their acquisition and subsequent deployment, without *ipso facto* becoming 'merely' formal or structure-specifying in character. It is easy to see that grasp of the content of SHAPE (say) does not require essential reference to any specific sensory experience. It suffices to point out that exactly the same concept of shape—that is, *the* concept of shape, for there is only one—can plausibly be supposed to be fully masterable by two different creatures A and B on the basis of sensory experiences in entirely different sensory modalities familiar to us—sight and touch.[50] One has to endorse a rather crude form of meaning-empiricism or concept-empiricism to suppose that A and B do not—cannot—have the same concept, as they do geometry together. A concept is not a faint copy or transform of a sensory experience. It is, precisely, a concept.

That's one point. Another, crucial in this context, is that the concept of shape or space that A and B have in common is not an entirely abstract or purely formal concept, as the supporters of Russell seem to suggest. There is more to A and B sharing the specific concept SHAPE or SPACE than there is to their sharing mastery of the principles of an uninterpreted formal system that is in fact suitable for the expression of shape configurations or spatial relations although they know it only as an uninterpreted formal system. It is precisely because pure form is such a *very* 'abstract affair', as Russell says, that the concept of shape or space that A and B can have in common in spite of their different sensory experiences cannot be supposed to be a matter of pure form. To think that it is a matter of pure form is to miss out precisely their grasp of the *spatiality* of space—of that which makes their grasp of the concept of space more than grasp of (say) an abstract metric. The concept has non-structural content.

It is true that this content is abstract in one sense: it is abstract relative to all the particularities of sensation, in a way that is sufficiently indicated by reference to the fact that different creatures can acquire it (the very same concept) on the basis of

[47] Russell 1927a: 392. One could say that it is this point that Newman turns back against Russell (see n43).

[48] Russell 1927a: 382; my emphasis.

[49] I use small capitals for names of concepts.

[50] One may contrast the case of a congenitally blind person with the hypothetical case of a fully sighted person congenitally paralysed and devoid of tactile or any other somatosensory sensation—before thinking of superintelligent echolocating bats and aliens with other sensory modalities.

experience in entirely different sensory modalities. It is indeed, and essentially, a *non-sensory* concept.[51] But it is not purely abstract in Russell's sense, because (to repeat) it involves grasp of the spatiality—rather than what one might call the mere abstract dimensionality— of space.[52] Spatiality is not abstract dimensionality: the nature of abstract dimensionality can be fully captured by a purely mathematical representation; the nature of spatiality cannot. One can give a purely mathematical representation of the dimensionality of space, but it won't distinguish *space* from any other possible three-dimensional 'space', e.g. the emotional state-space of a species that have just three emotions, love, anger, and despair.

Obviously questions arise about the precise nature of the non-structural content of concepts like SHAPE and SPACE, about what it is, exactly, to grasp the spatiality of space, given that SHAPE and SPACE may be fully shared by A, B, superbats, and others. But in the present context I am inclined just to hold up my hands again.[53]

Russellians may be unimpressed. Michael Lockwood, in particular, is sympathetic to the idea that knowledge of spacetime structure is not knowledge of any feature of the 'intrinsic' or non-structural nature of reality. In doing physics, Lockwood says, we may grasp the abstract structure exemplified by space while having 'no conception of its content: i.e. what it is, concretely, that fleshes out this structure. (For all we know, on this view, Henry More and Newton may be right in equating space with God's sensorium!)'[54]

But I am prepared to grant this. I am prepared to grant that we cannot rule out the possibility that space is God's sensorium,[55] or something even more unknown, and that there is therefore a sense in which we may have no idea of what it is that 'fleshes out' the abstract structure exemplified by space. For it may still be true that one grasps something fundamental about the non-structural nature of space in thinking of it as having, precisely, spatiality, rather than mere abstract dimensionality. If space is God's sensorium, so be it: God's sensorium may really have the property of spatiality. Between a fat-free, purely mathematical and thus wholly abstract representation of the structure of space and a partly structure-transcending conception of space as God's sensorium (or some such) lies a third option: an ostensibly less rich

[51] See Evans 1980: 269–71; McGinn 1983: 126.

[52] Even if no finite sensory-intellectual being can possess SHAPE or SPACE without having, or without at least having grasp of the nature of, some form of sensory experience, it does not follow that specification of the content of the concept it possesses necessarily involves reference to any features of sensory experience.

[53] If empiricists press me further I will offer (a) the suggestion that sensory modalities that differ qualitatively at first order (i.e. in the way that sight and touch do) may be said to be crucially similar at second order in as much as they are 'intrinsically spatial' in character, (b) the speculation that this similarity can itself be understood as a kind of similarity of (experiential) *qualitative* character, (c) the acknowledgement that it may be that one must be capable of experience in some 'intrinsically spatial' sensory modality or other (even if only in imagination) in order to possess SHAPE or SPACE, (d) the reservation that even if a *non-conceptual* experiential modality must be in play, it is not obvious that this must be a *sensory* modality. This, however, is too simple (I discuss the question further in Essay 3).

[54] Personal communication. Eddington agrees: 'We know nothing about the intrinsic nature of space' (1928: 51–2).

[55] After setting aside the problem of evil.

but still structure-transcending conception of space as specifically spatial (hands held up) in its dimensionality. Some may think this a fine point, but it is (I take it) a huge step away from Russell's claim that we know *nothing* about the intrinsic quality of non-mental events.[56]

I am not claiming that we do know something about the non-structural nature of space, only that we may (I hold up my hands, I move them apart—but my sense of the vulnerability of this claim has increased since I wrote this paper in 1997). This claim allows, as it should, that there may well be more to space than we can know. SPACE, like PHYSICAL, is a natural-kind concept, and there are some atrociously good reasons for thinking that there is more to space than we know or can fully understand. In addition to the (already weighty) points that physical space is non-Euclidean, and is itself something that is literally expanding,[57] and the non-locality results,[58] and questions about the nature of the vacuum, and widespread agreement that 'there is no good a priori reason why space should be a continuum',[59] I for one still can't fully understand how space and time can be interdependent in the way that they demonstrably are. We are also told on very good authority that gravity is really just a matter of the 'curvature' of space, and that string theory is an immensely promising theory of matter (especially after the 'second superstring revolution' and the growth of M-theory, and especially when it comes to understanding gravity) that entails that there are at least ten spatial dimensions . . .

These points reopen the connection to the mind–body problem. For as they pile up, one can't reputably hold on to the old, powerful-seeming Cartesian intuition that there is a 'deep repugnance' or incompatibility between the nature of conscious experience and the nature of spatial extension—the intuition that 'the mental and the spatial are mutually exclusive categories'.[60] We have direct acquaintance with fundamental features of conscious experience—experiential features—just in having it; but we really have no good reason to think that we know enough about the nature of space—or rather, about the nature of matter-in-space-considered-in-so-far-as-it-has-non-mental-being—to be able to assert that there is any repugnance.[61] And if

[56] 'We know nothing about the intrinsic quality of physical events except when these are mental events that we directly experience' (1956: 153). Perhaps Russell takes this distancing step himself in his 1928 reply to Newman (see n43): 'It was quite clear to me, as I read your article, that I had not really intended to say what in fact I did say, that *nothing* is known about the physical world [the non-mental world as opposed to the mental world, in my terminology] except its structure. I had always assumed that there might be co-punctuality between percepts and non-percepts, and even that one could pass by a finite number of steps from one event to another compresent with it, from one end of the universe to the other . . . spaciotemporal continuity of percepts and non-percepts was so axiomatic in my thought that I failed to notice that my statements appeared to deny it' (1967–9: 413).

[57] In such a way that the correct answer to the question 'Where was the Big Bang taking place at the first moment in which it made sense to say that it was taking place anywhere?' is 'Right here', wherever you are.

[58] Bell 1996; for an informal illustration see Lockwood 1996: 163–4.

[59] Isham and Butterfield 2000.

[60] McGinn 1995: 221.

[61] Foster 1982a: ch. 5 and McGinn 1995 give forceful presentations of the repugnance intuition. At one point McGinn makes the funky suggestion that consciousness might be a manifestation of the non-spatial nature of pre-Big Bang reality (223–4). I think he moves in a better direction

conscious experience is in time, as almost everyone agrees, then it is in spacetime, given the way in which space and time are demonstrably interdependent—in which case it is in space in every sense in which it is in time.

Note that it follows that even if our notion of space can confer some non-structural content on our best theoretical conception of the non-mental, it cannot confer any content that is guaranteed to distinguish it from any fully articulated theoretical conception of the mental, although we still intuitively feel it to fit with the former conception in a way in which we don't feel it to fit with the latter.[62]

9 THE NON-MENTAL—SPIN, MASS, AND CHARGE

I have proposed that our theoretical conception of the non-mental may be able to acquire some non-structural content from its first lieutenant, the concept of space. Can it acquire any more? Well, I think that our more particular spatial concepts of shape, size, position, distance, and local motion (I raise my hands and bring them together) *may* also get something right about reality as it is in itself, and so contribute to the non-structural content of our general theoretical conception of the non-mental; I think Locke may be essentially right in his view that some of our ideas of primary qualities correctly represent how things are in themselves, although his account needs recasting.[63] It may also be that our ordinary conception of time gets something right about the nature of reality (both experiential and non-experiential)—even if we need to conceive time as part of spacetime in order to think about it properly. I just don't know.[64]

Going on from space, time, extension, shape, position, distance, and motion, in the attempt to give a positive characterization of the non-mental, one may want to mention properties like spin, mass, charge, gravitational attraction, 'colour' and 'flavour' (in the quantum-theoretic sense). But one will have to bear in mind that our grasp of these things—any grasp of them over and above that which is conveyed by their intimate relation to concepts of space and time—is expressed merely in equations;[65] and the truth in Russell's remark that physics is mathematical not because we know so much about the physical world, but because we

when he shifts to the very different claim that 'consciousness tests the adequacy of our spatial understanding. It marks the place of deep lack of knowledge about space' (230).

[62] I am grateful to Mark Sainsbury for encouraging me to make this point more explicit.

[63] Locke's talk of 'resemblance' between primary qualities and ideas of primary qualities is unfortunate in as much as it suggests a (mere) picturing relation, and Russell, 1927a: 385, holds that Locke is definitely wrong.

[64] Perhaps it gets something right in an Augustinian sense, according to which we can be said to know what time is even though we find we don't know what to say when someone asks us what it is.

[65] Unless some 'direct realist' account of our understanding of force is defensible. See n48. Note, though, that no sensible direct realist view can suppose that we derive understanding of the nature of force directly from the merely *sensory* character of experiences of pushes, pulls, and so on; that would be like thinking that we can get some real insight into the nature of electricity from the qualitative character that experiences of electric shocks have for us (compare Evans 1980: 270). Somehow, the sensory experiences would have to be the basis of an abstract, essentially cognitive, general, non-sensory concept of force.

know so little. So although I like to think that concepts of space and time carry non-structural content, I do not think this can be true of any of these other concepts considered independently of their relations to concepts of space and time. Here Russell is right: we know nothing of the non-mental non-structural nature of—for example—electrical phenomena apart from their spacetime structure; all we have are equations.[66]

But even if knowledge of spacetime structure is all we have, in the way of non-structural knowledge of the nature of the non-mental, it makes a huge difference to the case. Consider the difference between a characterization of the forces of electrical attraction and repulsion in which their spatial character (the way they decrease with increasing distance) is given a purely mathematical, abstract-dimensional interpretation, and one in which it is given a genuinely spatial interpretation. Consider any account of anything in which time relations have a merely mathematical abstract representation, and one in which the temporality of time is somehow represented.

10 HENS' EGGS

I want now to give a further characterization of what it is to be a genuine materialist. But I must first answer an objection that occurs to many.

—It seems to follow, from your claim that we have no knowledge of the non-structural, intrinsic or as we may say *N-intrinsic* nature of things, that we cannot know that there are tables and chairs and hens and hens' eggs and 'that hens' eggs are generally laid by hens'.[67] But this is a chair I'm sitting in, and it's made of wood, and this is a hen, and this is a hen's egg, and this hen laid it. These are all facts I know, and they are N-intrinsic facts—ultimate, absolute truths—about the nature of reality. They must be included in any true and full account of the history of the universe.

My reply to this objection is similar to Moore's a hundred years ago. I agree that we know many such truths, but I take it, as a materialist, that hens are wholly made of the fundamental constituents of matter that physics discusses, and that when we consider our knowledge of these fundamental constituents we encounter the crucial and entirely general sense in which we know nothing about the fundamental N-intrinsic nature of matter. As far as I can see, this ignorance is entirely compatible with the sense in which we do have knowledge of the N-intrinsic of reality in knowing that there are hens, and what hens are, and what wood is, and so on. And this compatibility is no more surprising than the fact that I can know that this is a statue without knowing what it is made of.

—But we know what hens are made of—carbon, hydrogen, and oxygen, mostly—and we know what carbon, hydrogen, and oxygen are made of—electrons and quarks with

[66] The word 'non-mental' is not redundant in the last sentence, for it seems very plausible to suppose that consciousness is an electrical phenomenon, whatever else it is; in which case it may be said that we do have some knowledge of the non-structural nature of electrical phenomena just in having conscious experience.

[67] Moore 1905–6: 64.

various characteristics. Physics gives us knowledge of the properties of these things. If you think that it fails to give us any knowledge of their ultimate, N-intrinsic nature that's because you think that a thing is more than its properties. But that's just bad old metaphysics. A thing is not in any sense more than its properties.

I agree that there is an irredeemably difficult but inescapable sense in which it is true to say that a thing is not more than its properties—I agree that 'in their relation to the object, the properties are not in fact subordinated to it, but are the way of existing of the object itself'[68]—but the present claim is not that a concrete phenomenon must be more than its properties, but that it must be more than its purely formal or structural properties. If you say that this is more bad metaphysics, a yearning for lumpen stuff, our disagreement will be plain. My reply will be that you have evidently forgotten 'what an abstract affair form really is'. A concrete phenomenon must be more than its purely formal or structural properties, because these, considered just as such, have a purely abstract mathematical representation, and are, concretely, nothing—nothing at all. It is true that we get out of the realm of the purely abstract when we add in spatiotemporal properties, on my account, but a thing's non-structural properties can't consist only in its spatiotemporal properties—at least so long as spacetime is conceived merely as a dimensional manifold with no physical or substantial nature.[69]

Here, then, we return to the point that—the sense in which—we have no knowledge of the N-intrinsic nature of things in spite of the sense in which it is true to say that we know what hens and hens' eggs are.

11 TRUE MATERIALISM

I have suggested that our general theoretical conception of the mental has substantial non-structural descriptive content, because we have acquaintance with fundamental features of the mental nature of reality just in having experience in the way we do. Our general theoretical conception of the non-mental has substantial structure-specifying content, and I have suggested, with some hesitation, that it may also have crucial and correct *non*-structural content deriving from spatiotemporal concepts. Apart from this, though, it is arguable (subject to note 46) that we know nothing about the intrinsic or non-structural nature of non-mental reality.

With this in place, we may ask what is to be a genuine materialist. The first thing to do is to intone once more that realistic or real materialism entails full acknowledgement of the reality of experiential phenomena: they are as real as rocks, hence wholly physical, strictly on a par with anything that is correctly characterized by physics.[70] They are part of fundamental reality, whatever is or is not the case.

[68] Kant 1781: A414/B441. I have substituted 'object' and 'property' for 'substance' and 'accident' respectively.

[69] For the importance of this qualification, see n122 below.

[70] 'As characterized by physics' is a necessary qualification; see the remarks about 'brain' on p. 22 above.

It follows that current physics, considered as a general account of the general nature of the physical, is like *Othello* without Desdemona: it contains only predicates for non-experiential being, so it cannot characterize experiential being at all (recall the definition in §2). It cannot characterize a fundamental feature of reality at all.

No one who doubts this is a true materialist. Partly for this reason, I think that genuine, reflective endorsement of materialism is a considerable achievement for anyone who has had a standard modern Western education. Materialism must at first provoke a feeling of deep bewilderment in anyone contemplating the question 'What is the nature of the physical?' The occurrence of such a feeling is diagnostic of real engagement with the materialist hypothesis, real engagement with the thought that experiential phenomena are physical phenomena just like extension phenomena and electrical phenomena in so far as they are correctly characterized by physics (or indeed common sense). I think Russell is profoundly right when he says that most are 'guilty, unconsciously and in spite of explicit disavowals, of a confusion in their imaginative picture of matter'.

I suspect that some will be unable to shake off the confusion, although Locke made the crucial move long ago. Some may say that modern science has changed the situation radically since Locke's time. It has—but only in so far as it has massively reinforced Locke's point.

Perhaps I am generalizing illegitimately from my own experience, revealing my own inadequacy rather than the inadequacy of recent discussion of the 'mind–body' problem, but I don't think so. Genuine materialism requires concerted meditative effort. Russell recommends 'long reflection'.[71] If one hasn't felt a kind of vertigo of astonishment, when facing the thought, obligatory for all materialists, that consciousness is a wholly physical phenomenon in every respect, including every experiential respect—a sense of having been precipitated into a completely new confrontation with the utter strangeness of the physical (the real) relative to all existing common-sense and scientific conceptions of it—, then one hasn't begun to be a thoughtful materialist. One hasn't got to the starting line.[72]

Some may find that this feeling recurs each time they concentrate on the mind-body problem. Others may increasingly think themselves—quietistically, apophatically, pragmatically, intuitively—into the unknownness of the (non-mental) physical in such a way that they no longer experience the fact that mental and non-mental phenomena are equally physical as involving any clash. At this point 'methodological naturalism'—the methodological attitude to scientific enquiry into the phenomena of mind recommended by Chomsky—will become truly natural for them, as well as correct.[73] I think it is creeping over me. But recidivism is to be expected: the powerfully open state of mind required by true materialism is hard to achieve as a natural

[71] 1927b: 112.

[72] The only alternative, I think, is that one has a very rare and beautiful intellect.

[73] See Chomsky 1994; 1995: 1–10. Chomsky is a clear example of someone who is, methodologically, a true materialist in my sense. I am not sure that he would accept the title, however; he avoids the term 'materialist' because of the point made by Lange in n26 above, which I try to counter on pp. 48–9 below.

attitude to the world. It involves a profound reseating of one's intuitive theoretical understanding of nature.[74]

I say 'intuitive theoretical understanding of nature', but it isn't as if there is any other kind. For (briefly) what we think of as real understanding of a natural phenomenon is always at bottom just a certain kind of *feeling*, and it is always and necessarily relative to other things one just takes for granted, finds intuitive, feels comfortable with. This is as true in science as it is in common life. I feel I fully understand why this tower casts this shadow in this sunlight, given what I take for granted about the world (I simply do not ask why light should do *that*, of all things, when it hits stone). I may also feel I understand—see—why this billiard ball does *this* when struck in this way by that billiard ball. But in this case there is already a more accessible sense in which I don't really *understand* what is going on, and it is an old point that if I were to ask for and receive an explanation, in terms of impact and energy transfer, this would inevitably invite further questions about the nature of impact and energy transfer, starting a series of questions and answers that would have to end with a reply that was not an explanation but rather had the form 'Well, that's just the way things are.'[75]

The true materialist outlook may become natural for some, then, but many will find they can maintain it only for relatively short periods of time. It is not a small thing. To achieve it is to have evacuated one's natural and gripping common-sense ± science-based conception of the nature of the physical of every element that makes it seem puzzling that experiential phenomena are physical. I think it is to be at ease with the idea that consciousness is a form of matter.[76]

It can help to perform special acts of concentration—focusing one's thought on one's brain and trying to hold fully in mind the idea that one's experience as one does so is part of the physical being of the brain (part of the physical being of the brain that one may be said to be acquainted with as it is in itself, at least in part, because its being as it is for one as one has it just is what it is in itself, at least in part). It is worth trying to sustain this—it is part of doing philosophy—, forcing one's thought back to the confrontation when it slips. At first one may simply encounter the curious phenomenological character of the act of concentration, but it is useful to go on—to engage, for example, in silent, understanding-engaging subvocalizations of such thoughts as 'I am now thinking about my brain, and am thinking that this experience I am now having of this very thinking—and this subvocalization—is part of the physical activity and being of my brain.' It is also useful to look at others, including young children, as they experience the world, and to think of the common-or-garden matter that is in their heads (hydrogen, oxygen, carbon, iron, potassium,

[74] In fact one doesn't have to be a materialist to hold that no defensible conception of the physical contains any element that gives one positive reason to doubt that experiential phenomena are physical. One can hold this even if committed to dualism.

[75] See e.g. van Fraassen 1980: ch. 5; Strawson 1994: 84–93.

[76] I think that it requires realization that this claim is inadequately expressed by saying 'consciousness is a property of matter', or even 'consciousness is a physical property of matter', given the almost irresistible incentives to metaphysical misunderstanding that are—I argue elsewhere—already built into the word 'property'.

sodium, and so on). It is useful to listen to music, and focus on the thought that one's auditory experience is a form of matter.[77]

12 KNOWLEDGE OF IGNORANCE

Finding it deeply puzzling how something could be physical is not the same as finding something that one takes to be physical deeply puzzling. It is often said that quantum theory is deeply counterintuitive—in its description of the wave-like and particle-like behaviour of fundamental particles, for example—but no one seems to find it puzzling to suppose that it deals wholly with physical phenomena.[78]

The main reason for this seems to be as follows: WAVE and PARTICLE engage smoothly with standard physics concepts of shape, size, position, motion, and so on. There is, so far, a clear sense in which the two concepts are *theoretically homogeneous*, or at least non-heterogeneous; they operate on the same, single conceptual playing field of physics.[79] But when we try to integrate conscious-experience terms with the terms of physics (and common-sense physics), we find that they entirely lack any such felt theoretical homogeneity, or non-heterogeneity. To this extent, they force constantly renewed bewilderment—in a way quite different from the way in which quantum-mechanical phenomena do—on materialists who like to think they have *some* sort of coherent, theoretically unified understanding of the overall nature of the physical, however general that understanding may be, and however incomplete in its details.

But this is the central mistake: to think that one has some sort of theoretically unified understanding of the overall nature of the physical. Once one realizes that this cannot be true, if materialism is true, things change.[80] It begins to look as if there is actually *less* difficulty in the suggestion that physical phenomena have both experiential and non-experiential being than in the suggestion that photons (for example) behave both like particles and waves. For in the case of experiential terms and non-experiential terms there is no direct clash of concepts of the sort that occurs in the case of the wave-particle duality. Being a wave is incompatible with being a particle,

[77] Perhaps intuitive materialism is not always an achievement, and comes easily, and without positive error, in certain Eastern schools of thought. The requirement that there be no positive error of conception is, however, important.

[78] Some may object that there is a compelling description of quantum-mechanical phenomena that completely eliminates the air of mystery attaching to wave-particle duality (see e.g. Deutsch 1997: ch. 2); but it does so at the cost of another large strangeness, because it requires one to accept Everett's many-worlds hypothesis; and although it may be that this is what one should do, I will continue to use the case of wave-particle duality as an example for the purposes of discussion. (I will also put aside the view that the real intuitive difficulty resides in the phenomenon of superposition rather than in the wave-particle duality.)

[79] I try to give more content to the idea of theoretical homogeneity in Strawson 1994: 88–93. Note that one can have a sense that a group of terms is theoretically homogeneous, or at least not problematically heterogeneous, without feeling that one *understands* the phenomena these terms are used to describe.

[80] Although there are plenty of deep puzzles in physics even when mind is put to one side.