
This book collects David Chalmers’ papers on consciousness, all but one first published after his highly influential first book *The Conscious Mind* (1996). They examine different aspects of the phenomenon of consciousness: methodological issues raised by studying it, its relationship to the physical, our concepts of and beliefs about it, as well as its putative unity. About a fifth is devoted to the special case of perceptual conscious states.

The book consists of an introduction, 14 papers (here called “chapters”), an appendix on two-dimensional semantics, a bibliography, and useful indices for both subjects and names. All the papers have previously been published elsewhere (two in journals, twelve in edited volumes). In one case, this volume prints an expanded version. The introduction and three postscripts are new. Chalmers also added further footnotes, marked as such, which I often found particularly helpful.

The first paper, “Facing up to the problem of consciousness”, whose revolutionary rhetoric sets it apart from the rest of the book, is the only which was originally published before the *Conscious Mind*. In it, Chalmers draws the famous distinction between the easy problems of consciousness and the hard problem – explaining how brain processes give rise to consciousness. He also offers an assessment of the state of cognitive science and neuroscience in the early nineteen nineties. To summarize this assessment in Kuhnian terms, we may say that their paradigm was functional explanation, and that normal science done under that paradigm was very successful in addressing the easy problems. However, conscious experience was an anomaly. The anomaly had been set aside for a few decades, but finally had received sustained attention in previous years. As Chalmers convincingly argues, the anomaly remained. In effect, he is declaring a state of crisis.

On a positive note, Chalmers proposes two new avenues of research. First, he suggests to study systematic correlations between processing and conscious experience. To do this, we need to take first-person data more or less at face-value, something that researchers under the old paradigm were often reluctant to do. This theme is expanded upon in chapters two to four. “How can we construct a science of consciousness” (ch. 2) discusses the epistemology of first-person data, and “What is a neural correlate of consciousness?” and “On the search for a neural correlate of consciousness” offer discussion of the kind of correlation we might expect to find. Second, Chalmers proposes to seek a so-called “non-reductive explanation” of consciousness in terms of new fundamental principles. In chapter 1, like in the *Conscious Mind*, he suggests the principle that “information ... has two basic aspects, a physical aspect and a phenomenal aspect” (p. 26). In “Consciousness and its place in nature” (ch. 5), Chalmers considers further options: property dualism, which postulates phenomenal in addition to physical fundamental properties, panpsychism, and a version of neutral monism according to which the fundamental properties are protophenomenal, in the sense of constituting phenomenal properties. Chalmers reserves some credence for all of these views.
It is tempting to read Chalmers as urging the scientific and philosophical community to tackle the hard problem of consciousness. In my view, this would not be accurate. Neither of the two avenues of research described above is facing a hard problem. Establishing correlations should surely be classified as “easy” in Chalmers’ technical sense of that word. Searching for new fundamental principles, in contrast, is quite unlike ordinary research projects in cognitive science or neuroscience. But what it is to engage in such a project does not fit Chalmers’ characterization of what it is like to face a hard problem: it does not evoke the same sense of puzzlement and perplexity. As we have seen, there is no shortage of schemas for dualist and neutral monist hypotheses that entail the existence of phenomenal consciousness.

According to Chalmers, those who give up physicalism still face the problem of giving a non-reductive explanation of consciousness. However, the notion of non-reductive explanation remained obscure to me, and Chalmers, uncharacteristically, does not provide any detail about how he understands it. To be sure, causal explanations are not typically reductive, but causal explanation is not the type that is relevant here. Positing something as fundamental simply does not seem to constitute an explanation of it. I suspect that the hard problem remains a hard problem only as long as we are committed to physicalism. From a Kuhnian perspective, this would not be surprising. A phenomenon that cannot be explained under the old paradigm, and thus constitutes an anomaly, need not be explained by a new paradigm, or aspiring new paradigm. Rather, it may no longer be in need of explanation.

Taking the number of printed pages in this book as evidence, only a small fraction of Chalmers’ work on consciousness after the publication of *The Conscious Mind* seems to have been directed at the hard problem. Nor have other authors produced pertinent work that he found worth engaging with. In his candid introduction, he acknowledges as much, and speculates that “it is too early in the science for positive theories that address the hard problem in a substantial and successful way” (p. xvi). It seems to me that there is an alternative explanation for the lack of such positive theories. If Chalmers is right that consciousness cannot be explained within the constraints imposed by physicalism, and if there is no pertinent kind of non-reductive explanation, as I suggested, then we cannot expect an explanation of consciousness before a new basis for reduction is specified. For the explanation to be reductive, that basis would need to be specifiable without invoking mental vocabulary.

If consciousness could be reductively explained as resulting from a particular complex constellation of both the physical and some non-physical and non-mental fundamental properties, we would end up with a view that does not neatly fit into the classification offered in chapter 5. The view would clearly not be physicalist. Since Chalmers characterizes dualism as postulating fundamental phenomenal properties, it would not be dualist in his sense. But neither is it monist, since it postulates two different kinds of fundamental properties. It seems to me some of our credence ought to be reserved for such a view.

So the bulk of the book is not devoted to the hard problem of consciousness. Nor is it devoted to any of the easy problems. Rather, it is deals with philosophical problems that do not fit into either category.
In “The two-dimensional argument against materialism” (ch. 6), Chalmers presents a more sophisticated version of the central argument of *The Conscious Mind*. He also responds to a wide range of objections, and compares the argument to other anti-materialist arguments in an afterword. In “The Content of Phenomenal Concepts” (p. 8), he develops a view according to which possession of phenomenal concepts requires having phenomenal qualia. As a result, zombies cannot possess such concepts. In “The Epistemology of Phenomenal Belief” (ch. 9), he offers an account of how beliefs involving such concepts can be justified. (Chapters 8 and 9 are the result of splitting up the previously published paper “The Content and Epistemology of Phenomenal Belief”.) “Phenomenal Concepts and the Explanatory Gap” (ch. 10) develops a master argument against any physicalist attempt to locate the source of the explanatory gap in the special nature of phenomenal concepts rather than the special nature of phenomenal qualities. Chalmers argues that depending on the details of her theory of those concepts, the physicalist either fails to account for our possessing them, or for our epistemic situation with regard to consciousness. “The Representational Character of Experience” (ch. 11) and “Perception and the Fall from Eden” (ch. 12) are devoted to perceptual consciousness. According to Chalmers, perceptual differences have different types of contents associated with them, playing different explanatory roles. “What is the Unity of Consciousness?” (ch. 14), co-authored with Tim Bayne, uses a certain analysis of what is for consciousness to be unified to argue against certain representationalist and higher-order thought theories of consciousness.

All these papers offer a wealth of interesting analyses, hypotheses, and arguments. Limitations of space, and in some cases of competence, prevent me from critically discussing them, and from commenting on their significance in the respective debates to which they contribute.

A couple of papers do not directly deal with consciousness. In the classic “Conceptual Analysis and Reductive Explanation” (ch. 7), Chalmers and his co-author Frank Jackson argue that every macroscopic truths about the world can be a priori derived from a statement of all physical and phenomenal facts about the world, plus a “that's-all”-clause, plus full indexical information.

In “The Matrix as Metaphysics” (ch. 13), which has not so far received the attention that it deserves, Chalmers takes issue with the popular view that the scenario depicted in the movie “The Matrix” – where human brains are connected to a computer simulation of the world - is a sceptical one. The belief that there is a solid table in front of me is compatible with the region occupied by the putative table consisting, as science has discovered, mainly of empty space. It is also compatible, Chalmers argues, with our perceptual inputs as of a table being fed to us by a computer. The key idea is that being a table is a matter of playing the right kind of causal role vis-à-vis our perceptual system. In the movie scenario, only some of our metaphysical beliefs are false, unlike in a sceptical scenario where many of our everyday beliefs are false.

This contention is in line a certain structuralist view about physics that plays a prominent role in Chalmers’ anti-materialist arguments: the view that both microphysical and macrophysical
descriptions are a priori entailed by a complete structural description of the world –
descriptions that use no terms other than “spatiotemporal expressions, nomic expressions, and
logical and mathematical expressions” (p. 120). While in the same spirit, the kind of
structuralism advocated in “The Matrix as Metaphysics” is far stronger. A certain
computational process may be structurally isomorphic to the kind of physical processes that
standard metaphysical views take to constitute the existence of a table. But the above
structuralist claim does not let us conclude that there is a table in the movie scenario if there
is a table in a standard scenario. For the computational structure does not exhaust the
structure of the world: the computational process is only part of the world, and whatever
implements the computation may have additional structure too. Chalmers instead uses two
other principles, which appeal to the notion of an abstract computation underlying, or
constituting, a physical process. This notion remained obscure to me, and I was thus left
unconvinced. Still, I would like to particularly recommend this bold, stimulating and thought-
provoking piece to the reader’s attention.

The page layout is pleasing, and the editing of the book is excellent. I only encountered one
typo, and Chalmers apparently cut out some passages from the earlier version to reduce
repetition. There is still quite a bit of repetition, but as he notes, this has the advantage of
making the chapters self-contained.

In finishing, I would like to emphasize that the papers collected here exemplify all the virtues
that we have come to expect from Chamers’ work. The papers provide useful maps of the
logical space of positions on a certain issue. They are informed by impressive knowledge of
pertinent work both within philosophy and in relevant other disciplines. Instead of getting
bogged down discussing the details of other author’s work, Chalmers tends to prefer
discussing the archetypes of their positions in logical space. He does provide a great deal of
detail, however, when presenting his own original approaches to the topic under discussion.
He does that in a clear, didactically deft manner, with complexity introduced step by step.
Throughout, he is strikingly resourceful in articulating and defending his views.

Many philosophers interested in consciousness will already have read some of the papers in
this book, and will welcome having them collected in one place. The others should take
advantage of this second chance to acquaint themselves with a body of work that has had a
defining influence on the subject.¹

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