

# There Are No Easy Problems of Consciousness<sup>1</sup>

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This paper challenges David Chalmers' proposed division of the problems of consciousness into the 'easy' ones and the 'hard' one, the former allegedly being susceptible to explanation in terms of computational or neural mechanisms and the latter supposedly turning on the fact that experiential 'qualia' resist any sort of functional definition. Such a division, it is argued, rests upon a misrepresentation of the nature of human cognition and experience and their intimate interrelationship, thereby neglecting a vitally important insight of Kant. From a Kantian perspective, our capacity for conceptual thought is so inextricably bound up with our capacity for phenomenal consciousness that it is an illusion to imagine that there are any 'easy' problems of consciousness, resolvable within the computational or neural paradigms.

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David Chalmers is to be commended for challenging the complacent assumptions of reductive physicalism regarding the tractability of the problems of consciousness, but he concedes too much to such physicalists in allowing that some, at least, of these problems — the 'easy' ones — will fall prey to their favoured methods.<sup>2</sup> I do not consider that there are *any* 'easy' problems of consciousness, and consider that Chalmers' division of the problems into 'easy' ones and the 'hard' one betrays an inadequate conception of conscious thought and experience — a conception which plays into the hands of physicalists by suggesting that the only problem with functionalism is its apparent inability to say anything about 'qualia'.<sup>3</sup>

At the beginning of his paper, Chalmers lists some of the problems of consciousness which he considers to be 'easy', in the sense that these are the ones which, in his view, 'seem directly susceptible to the standard methods of cognitive science, whereby a phenomenon is explained in terms of computational or neural mechanisms' (p. 200). These problems include: the ability to discriminate, categorize and react to environmental stimuli; the integration of information by a cognitive system; the reportability of mental states; and the deliberate control of behaviour. Chalmers remarks that, 'All

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2 See Chalmers (1995); all page references are to this paper.

3 Much of what I have to say about consciousness, thought and experience in this paper is developed at much greater length in Lowe (1996) and, in an earlier version, in Lowe (1992).

of these phenomena are associated with the notion of consciousness,' and confidently asserts that, 'All of them are straightforwardly vulnerable to explanation in terms of computational or neural mechanisms' (p. 201). But it needs to be pointed out at once that the terms employed in describing these problems – terms like 'discrimination', 'information', 'report' and 'control' – are extremely slippery, and that we use them both in a 'high level' way to describe the conscious, intelligent activity of genuinely thoughtful creatures like ourselves and also in a 'low level' way (which may in fact be no more than a metaphorical way) to describe the programmed behaviour of mindless machines and various lowly forms of life. For example, we may speak of a thermostat as 'discriminating' ambient temperatures and as 'controlling' a switch, or of a computer as storing 'information' and 'reporting' on the contents of its 'memory'. But there is no reason whatever to believe that the activities thus described really have much in common with those activities of thoughtful human beings which we would customarily describe in these same terms. To suppose otherwise is to fall victim to the so-called pathetic fallacy – the fallacy of ascribing thought and feeling to mindless objects on account of superficial likenesses between their behaviour or appearance and our own. Now, it is true enough that the activities of thermostats and computers which we describe in such terms can indeed be explained in the ways Chalmers suggests, but it is far from evident that those of human beings can. Indeed, I shall try to make it evident in what follows that the latter activities can certainly *not* be explained in these ways, and that the reason for this has to do with the nature of human consciousness and its relation to our capacities for thought, understanding and concept-formation.

As a preliminary to tackling this task, I want to say something more about Chalmers' notions of experience and consciousness, which I find seriously inadequate. As regards the notion of *experience*, it seems to me that he distorts this notion by focusing exclusively upon the *sensuous*, or *phenomenal*, or *qualitative* character of experience (the 'what it is like' aspect of experience, to use Thomas Nagel's well-worn phrase). And this distortion serves, in my view, to obscure the intimate relation between experience and thought. Some experiences – pains provide a possible example – are indeed almost purely sensational in character, but the sort of experiences which are central to our *cognitive* capacities – namely, *perceptual* experiences – are certainly not. Perceptual experiences – such as, for example, a visual experience of seeing a red book lying on top of a brown table – possess not only qualitative or phenomenal characteristics but *also*, most importantly, *intentional* or *representational* content. Not only is it 'like something' to enjoy such an experience, in which the phenomenal character of sensed colours impresses itself upon our awareness, but also such an experience represents – or, better, *presents* – our immediate physical environment as *being some way* (in this case, as containing a red book on top of a brown table). Moreover, and quite crucially, the intentional content of such an experience stands in an especially intimate relation to its qualitative or phenomenal character: the two aspects of the experience are not simply independent of one another.

I want to say that the intentional content of a perceptual experience is, in a certain sense, *grounded* in its phenomenal character, but that the grounding relation here is a complicated one, which arises at least in part through the subject's individual history of perceptual learning. One of the most important things we learn through perception is what various sorts of physical object *look like* (or otherwise 'appear' to other sense modalities — what they *sound like*, and *feel like*, for instance). And how objects *look* to us is, at least in part, a matter of how they affect the phenomenal or qualitative character of our visual experience. (The same applies, *mutatis mutandis*, with regard to the other sense modalities.) The importance of all this lies in the fact that how we *conceive* of physical objects is inextricably bound up with how they *appear* to us in perception — how they *look*, *sound*, *feel* and so forth. Thus, although conscious thought is not, of course, the same thing as perceptual experience, the *conceptual content* of thought is intimately related to the content, both phenomenal and intentional, of perceptual experience. Thoughts differ from perceptual experiences in possessing only *intentional*, and not *sensuous* content; yet, even so, the intentional content of our thought depends inescapably, by way of its conceptual structure, upon our capacity to enjoy perceptual experiences with sensuous or phenomenal characteristics. And, at the same time, our perceptual experiences possess intentional content — often, the very same content as may be possessed by our thoughts — because we are able to bring concepts to bear upon the deliverances of our sense organs and so clothe our perceptual sensations with representational properties.

All this has been said before, of course — and no doubt much better than I have been able to — by Immanuel Kant, and is encapsulated in his famous dictum that 'Thoughts without [sensible] content are empty, [sensible] intuitions without concepts are blind' (1933, p. 93). But the upshot is that it is quite erroneous to suppose that we can ascribe genuine thoughts, with conceptually articulated structure, to creatures or machines lacking altogether the capacity to enjoy conscious experiences with phenomenal or qualitative character. Whatever a computer can do by way of information processing, storage and retrieval is not by any means to be confused with what a thinking human being does who reasons, remembers and recalls. And here I note a particularly serious inadequacy in the (essentially Shannonian) notion of *information* which Chalmers deploys in attempting to characterize aspects of human cognition. This notion of information is appropriate enough for describing the activities of computing machines, but is wholly inappropriate for characterizing the cognitive states — beliefs, thoughts and judgements — of human beings. And the reason, once again, has to do with *conceptual content*. An informational state in Chalmers' sense is not, essentially, a state possessing conceptually articulated content; but the beliefs, thoughts and judgements of human beings most certainly do possess such content essentially. A simple, if somewhat timeworn, example will serve to bring out this distinction. Consider the pattern of rings exposed by a horizontal cut through a tree's trunk: such a ring pattern is, in the sense of 'information' deployed by Chalmers, an *informational state* of the tree — it carries 'information' about the tree's age, amongst other things. Clearly, though, it is *not* a state with conceptual content: it would be ludicrous to suggest that

the ring pattern somehow embodies the concepts of *number* and *time* (concepts which are themselves involved in the analysis of the concept of a tree's age). By contrast, one cannot properly ascribe to a person a *belief* that a certain tree is so-and-so many years old without simultaneously ascribing to that person *concepts* of number and time. And, once again, I would appeal to the Kantian principle that our conceptual capacities — even those relating to such relatively abstract concepts as those of number and time — are intimately related to our capacities for perceptual experience, in order to explain what the relevant difference between a human being and a tree is in this regard. That a tree can merely carry (Shannonian) 'information' about its age, whereas a human being can *believe* that, or *think* that, it has a certain age is intimately related to the fact that human beings can, whereas trees cannot, enjoy conscious perceptual experiences with phenomenal character.

So far I have criticized Chalmers' notions of *experience* and *information*, but there is a related criticism I have to make which goes to the heart of his attempted distinction between the 'easy' problems of consciousness and the 'hard' problem. This concerns his terminological proposal regarding the use of the words 'consciousness' and 'awareness'. Chalmers suggests that we 'reserve the term "consciousness" for the phenomena of experience, using the less loaded term "awareness" for the more straightforward phenomena described earlier' (p. 201). But given that I dispute Chalmers' claim that the latter phenomena are indeed 'more straightforward' (in the sense of being amenable to computational or neural explanation), I cannot acquiesce in his terminological proposal. To do so would be, implicitly, to concede far too much to reductive physicalism and at the same time would be to gainsay all I have just said concerning the intimate relationship between phenomenal consciousness and the intelligent thought and activity of human beings. In Chalmers' proposed sense of 'awareness', it seems fair to say, there could be nothing in principle wrong in speaking of a computer, or even a thermostat, as being 'aware' — but then to suggest that *human beings* are only 'aware' in this attenuated sense is completely to misrepresent the capacities involved in our being 'aware' of our selves and of our own thoughts and experiences.

My foregoing criticisms of Chalmers bear directly upon section III of his paper, in which he attempts to explain why the 'easy' problems are easy and the 'hard' problem hard. Here he asserts that 'The easy problems are easy precisely because they concern the explanation of cognitive *abilities* and *functions* [and] to explain a cognitive function, we need only specify a mechanism that can perform the function' (p. 202). He gives the following example, amongst others: 'To explain reportability . . . is just to explain how a system could perform the function of producing reports on internal states' (*ibid.*). But, of course, I must immediately protest that if by 'producing a report on an internal state' Chalmers just means generating a second-order informational state (in the Shannonian sense of 'information'), then although this is something which can indeed be perfectly well explained in a mechanistic way, it is *not* the sort of thing that *needs* to be explained when we are talking about the ability of human subjects to express in words their knowledge of the contents of their own thoughts and experiences — for such an

ability demands the possession of genuine concepts, not only concepts of the things those thoughts and experiences are about but also the very concepts of *thought* and *experience* themselves. And the truth is that we have not the slightest reason to believe that a ‘mechanistic’ explanation is available, even in principle, for the capacity of creatures like ourselves to deploy the concepts of thought and experience and to ascribe the possession of such concepts to ourselves. Only by trading upon a thoroughly jejune sense of ‘reportability’ can Chalmers make out even the appearance of a case for saying that such a capacity, as exercised by human beings, is ‘easy’ to explain as being a ‘function’ performed by a computational or neural mechanism.

The key point here is that a ‘function’, in Chalmers’ sense, is specified in terms of certain *behaviour* which a system subserving that function produces. (As Chalmers himself puts it, ‘Here “function” is . . . used . . . in the . . . sense of any causal role in the production of behavior that a system might perform’ (p. 202 f).) But then everything turns on how we characterize the ‘behaviour’ in question. In the example just discussed, the ‘behaviour’ in question was described by Chalmers as that of ‘producing reports on internal states’. But only if such ‘behaviour’ is interpreted in a narrowly physicalistic way — for example, in terms of the generation of a second-order (Shannonian) informational state — is a ‘mechanistic’ explanation of the corresponding ‘function’ going to be straightforwardly available. If, by contrast, we understand ‘producing reports on internal states’ to embrace such genuinely intelligent, thoughtful activities as a human being’s using language to express its knowledge of the contents of its own thoughts and experiences, then there is not the slightest reason to suppose that a mechanistic explanation for this capacity is possible. *Mechanistically characterized* ‘behaviour’ is, quite unsurprisingly, amenable to mechanistic explanation, and this is what underlies Chalmers’ own perception that ‘In a way, the point is trivial’ (p. 202) — the ‘point’ being that you can always explain the performance of a function by ‘specifying a *mechanism* that performs the function’ (*ibid.*). Chalmers’ problem is that he entirely begs the real question at issue in supposing that the sort of *performance* we have to do with in cases of thoughtful human activity is something that can be characterized in a mechanistic way and which, consequently, a ‘mechanism’ can uncontroversially be supposed capable of engaging in.

Because Chalmers misconstrues what he sees as being the ‘easy’ problems of consciousness, he also misrepresents what he calls the ‘hard’ problem. According to Chalmers, the ‘hard’ problem is this: ‘Why doesn’t all this information-processing go on “in the dark”, free of any inner feel?’ (p. 203). Believing as he does that human thought and cognition in general are just a matter of ‘information-processing’, of a sort which could in principle go on in a mindless computer, he is left with the idea that all that is really distinctive about consciousness is its qualitative or phenomenal aspects (the ‘what it is like’, or ‘inner feel’). And then it begins to look like a strange mystery or quirk of evolution that creatures like us should possess this sort of consciousness *in addition* to all our capacities for thought and understanding — these capacities being, for Chalmers, simply capacities for certain sorts of information-processing and storage.

My response is that consciousness has only been put in this queer position by Chalmers (and, to be fair, by many others) *because* he has mistakenly denied it any role in his account of the nature of human thought and understanding. In short, it is the reductive, and wholly inadequate, *information-processing* conception of human cognition which is responsible for the misperception that ‘consciousness’ (in the form of ‘qualia’ and the like) occupies what threatens to be a merely epiphenomenal role as a peculiar additional feature of human mentation that is in no way essential to our basic intellectual capacities. Once we appreciate the Kantian point that genuine thought, with real conceptual content, is only available to creatures with a capacity for perceptual experiences bearing not only intentional but also phenomenal content, we see that the sort of phenomenal consciousness which we humans enjoy but which computers and trees do not, far from being an epiphenomenon of ‘information-processing’ in our brains, is an absolutely indispensable element in our cognitive make-up, without which we could not properly be described as thinking beings at all. In a curious way, it is perhaps a rationalistic, quasi-Cartesian bias which is responsible for this side-lining of phenomenal consciousness as an epiphenomenon of cognition: a failure to recognize that human cognition is not a matter of abstract computation but is, on the contrary, thoroughly integrated with our sensitive nature as embodied creatures acted upon by and ourselves acting upon our physical environment. There is irony, then, in Chalmers’ concessive remark, towards the end of section III of his paper, that ‘Perhaps [experience] will turn out to play an important cognitive role’ (p. 203). Perhaps! If Kant is right, no one who is in any doubt about this has even begun to achieve an adequate grasp of the notions of experience and cognition.

If what I have said so far is correct and our capacity for genuine thought and understanding is quite inseparable from our capacity for phenomenal consciousness, then, to the extent that Chalmers himself is correct in contending that reductive physicalism offers no prospect for an explanation of phenomenal consciousness, the conclusion ought to be that reductive physicalism, far from being equipped to solve the so-called ‘easy’ problems of consciousness, has in fact nothing very useful to say about *any* aspect of consciousness. This indeed is my own conclusion. (I hasten to add, though, that I am very far from considering disciplines such as cognitive neuropsychology as being utterly worthless and uninformative: such disciplines take the notion of conscious thought and experience *for granted*, and attempt to correlate features of such mental states with structures and processes in the brain — an enterprise with which I have no argument — but they do not and cannot pretend to explain what thought and experience are and how their existence is possible in physically embodied creatures like ourselves.) But Chalmers, by contrast, occupies an unstable position, precisely because he has already conceded *so much* to reductive physicalism. Effectively, he subscribes to a position which we might call ‘functionalism plus qualia’. According to this view, everything about human mentation *except* for the fact of ‘qualia’ can be explained in reductive (computational or neural) terms. But how, then, can ‘qualia’ be anything but epiphenomenal — and in that case, why should they exist at all? The position is unstable because there is intense pressure on it *either* to give

qualia some more substantive causal role — and this would be to challenge the reductive physicalist account of the rest of human mentation — *or else* to squeeze qualia out altogether, as Dennett and others have tried to do. The awkwardness of Chalmers' position is, I think, clearly brought out by his allegiance to what he calls the 'principle of organizational invariance' (p. 214). According to this principle, 'any two systems with the same fine-grained *functional organization* will have qualitatively identical experiences' (*ibid.*). As he himself points out, this means that the 'philosophical hypotheses of "absent qualia" and "inverted qualia", while logically possible, are empirically and nomologically impossible' (p. 215). But this is, in effect, finally to concede the whole game to functionalism. For once one has adopted what I just now called the position of 'functionalism plus qualia', the *only* reason for holding on to a special, physicalistically irreducible notion of phenomenal consciousness is that possibilities like those of absent and inverted qualia escape any attempt at functionalist explanation. But now that these 'possibilities' are denied to be anything more than merely *logical* possibilities, there is nothing substantive left which functionalism is allegedly incapable of explaining about human mentation. One can perfectly well see *why* Chalmers is attracted to his 'principle of organizational invariance', given how much ground he has already conceded to functionalism and given the correspondingly nugatory role he accords to phenomenal consciousness in an account of the nature of human cognition. What he doesn't seem to appreciate is that, having conceded this much, to adopt this principle as well is effectively to sell out completely to functionalism.

At the end of his paper, Chalmers becomes more speculative, suggesting that the most fundamental notion of all, both as regards the physical world and as regards conscious experience, is that of *information* (again, quite explicitly in Shannon's sense of this term). And he offers a 'double-aspect' hypothesis, whereby one and the same 'information space' is both physically and phenomenally embodied. Noting that physics only characterizes its basic entities 'extrinsically', he even goes so far as to speculate, in what seems to be a quasi-idealistic vein, that 'the intrinsic properties of the physical . . . are themselves phenomenal properties' (p. 217). This is heady stuff, and to some extent offsets the earlier concessions Chalmers has made to physicalism. But this sort of challenge to physicalism comes too late, operating as it does only at a level of speculative metaphysics. By this account, physicalism is still left unchallenged as a *scientific* doctrine. My own view, as I hope I have made plain, is that the challenge to a physicalist account of the human mind has to be mounted much earlier than this, and in mounting that challenge one of the first things to appreciate is that the (Shannonian) notion of information is too impoverished to be of use in characterizing the conceptually articulated structure of human thought and its intimate relation to our capacity for phenomenal consciousness (our 'sensitivity', as Kant calls it). We human beings are creatures capable of both thought and perceptual experience, but these capacities are inextricably interrelated. Thought is more than just information-processing and perceptual experience is more than just the having of 'qualia': *both* are states which are conceptually articulated and each depends for its possibility upon the other. Kant was right!

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