

Type-Q Materialism

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§0. Introduction

As Gibson (1982) correctly points out, despite Quine's brief flirtation with a "mitigated phenomenalism" (Gibson's phrase) in the late 1940's and early 1950's, Quine's ontology of 1953 ("On Mental Entities") and beyond left no room for non-physical sensory objects or qualities. Anyone familiar with the contemporary neo-dualist qualia-freak-fest might wonder why Quinean lessons were insufficiently transmitted to the current generation.

Chalmers (1996a, 2003a) has been a prominent member of the neo-dualists, though he does not leave Quine unmentioned. Neo-dualist arguments proceed by inferring from an epistemic gap between the physical and the phenomenal to an ontological gap between the physical and the phenomenal. Chalmers sorts various materialist responses to these arguments as follows: Type-A materialism denies that there's any epistemic gap in the first place. Type-B materialism accepts that there is an epistemic gap, but denies that the epistemic gap entails any ontological gap. Type-C materialism is like type-B materialism except it thinks the epistemic gap in question is only temporary. Type-Q materialism (Q for "Quine"), according to Chalmers (2003a), rejects the kinds of distinctions needed to formulate both the neo-dualist arguments and the type-A, type-B, and type-C materialist responses to them. Such rejected distinctions include the conceptual vs. the empirical, the a priori vs. the a posteriori, and the contingent vs. the necessary. Chalmers (2003a, 123) charges Type-Q materialism with being incapable of avoiding the problems alleged to arise for the types from earlier in the alphabet. The aim of the current paper is to argue the contrary point that Quineans are inoculated against these so-called problems. We spell out how Quinean allegiance to holism and prag-

matic criteria for ontic commitment protect Type-Q materialism from the complaints of the qualia-freaks.

The remainder of the paper is as follows. In § 1, we review Quine’s and Chalmers’s agreement on the existence of physical entities and raise the question of how there can be room for disagreement on the existence of non-physical entities. We turn, then, in §§ 2 and 3 to pit Chalmers’s views on the “hard problem” and “taking consciousness seriously” against Quine’s views on conceptual revisability and holism. In §4 we make our case for the superiority of Type-Q materialism over not just dualism, but materialisms of types A, B, and C as well.

§1 If you are going to believe in physical stuff at all, why not believe in *only* physical stuff?

Most discussions in contemporary philosophy of physicalism, qualia, and other issues pertinent to the mind-body problem proceed against a seldom discussed yet shared background assumption of the existence of physical objects, while what’s debated is whether to affirm the existence of anything *else*, for instance, qualia. However, contemporary thinkers would do well to examine the grounds for belief in physical objects and question whether existing considerations in favor of so-called qualia are consistent with such grounds.

Another way of framing the issues we would like to examine in the current section would be to ask what reasons for *not* being a phenomenalist (a person who believes only in experiences and their properties) wouldn’t also lead to being a full-blown physicalist (a person who believes only in physical objects and their properties). If one wanted to consider such a question and some of the best answers to it, it would be no idle exercise to retrace the thoughts of Quine on precisely these issues.

For present purposes, the main choices of what to believe in comprise the following three positions

1. Only phenomenal entities (Phenomenalism)
2. Only physical entities (Physicalism)
3. Both phenomenal entities and physical entities (Dualism)

(We thus set aside, for current purposes, any discussion of abstract mathematical entities. However, note that the main arguments for mathematical abstracta mirror arguments in favor of physical entities.) One of the most important questions to ask about these three choices is why believe in physical entities. The Quinean answer is, in condensed form, “theoretical

utility”. Given such an answer, the question that we’d really like to press is the following: What arguments are there for the superiority of choice 3 over choice 1 that don’t invite the threat of acknowledging the ultimate superiority of 2?

We turn now, in §§ 1.1. and 1.2., respectively, to review Quine’s and Chalmers’s separate yet converging cases in favor of physical objects.

§1.1. Quine on physical objects

Phenomenalism affirms that all talk, including talk of physical objects, can be reduced to talk of sense data (and mathematical and/or logical constructions thereof). Quine never affirmed phenomenalism so-defined. What Gibson calls “mitigated phenomenalism” is a view that simultaneously denies the reductive claim but affirms that, somehow phenomenalism constitutes the “*literal truth* about the world,” (Gibson 1982, 156). Gibson attributes mitigated phenomenalism to the Quine of the late ‘40s and early ‘50s, especially as revealed in essays such as “On What there Is” (1948), “Identity, Ostension, and Hypostasis” (1950), and “Two Dogmas of Empiricism” (1951).

This flirtation was brief, and Gibson enumerates seven arguments from Quine against mitigated phenomenalism, five of which are arguments why sense-data are inadequate in lieu of physical objects and two of which why sense data are inadequate in addition to physical objects.

Here we provide very brief descriptions of Quine’s arguments as Gibson identifies them, postponing expanded discussion until needs arise. (The following draws from Gibson (1982, 156–159).

The five arguments why sense data are inadequate in lieu of physical objects are:

- (a) “Language learning requires physical objects” (Gibson 1982, 157; Quine 1960, 1).
- (b) Qualia talk is a derivative idiom. (Gibson 1982, 157; Quine 1960, 1; Quine 1953, 225).
- (c) The sense data hypothesis is prompted by presumed knowledge of physical objects and their impingements on our bodies’ peripheries. (Gibson 1982, 157-158; Quine 1960, 1-2).
- (d) “...sense datum accounts of memory are inadequate.” (Gibson 1982, 158; Quine 1953, 224).
- (e) Our present stream of consciousness includes conceptualizations of past experiences and past and present objects. (Gibson 1982, 158; Quine 1960, 2; Quine 1953, 224).

The two arguments why sense data are inadequate in addition to physical objects.

- (f) Sense data are unneeded to account for illusion and uncertainty. Illusion and uncertainty can be accounted for with regard to propositional attitudes like “seems that” (Gibson 1982, 159; Quine 1960, 235).
- (g) Sense data are not needed for our knowledge. Peripheral nerve stimulations will suffice (Gibson 1982, 159; Quine 1960, 235).

Gibson summarizes these seven arguments in terms of “an application by Quine of his general principle of systematic efficacy or utility for theory” (1982, 159) where we can understand arguments (a)–(e) as spelling out the unparalleled theoretical utility of a commitment to physical objects and arguments (f) and (g) as spelling out the comparatively laughable theoretical utility of sense data.

§1.2. Chalmers on physical objects

Regarding the question why believe in physical objects at all, dualists and physicalists don’t have different answers. At least, we can see that our main targeted dualist, Chalmers, doesn’t have much of a different answer from our exemplary physicalist, Quine.

In his paper, “The Matrix as Metaphysics,” Chalmers (2003b) discusses skeptical hypotheses of various strengths concerning the external world. A few examples include permutations of brain-in-vat and matrix hypotheses as well as Descartes’s dream and deceitful demon hypotheses. The most extreme one that he discusses is what he calls the “Chaos Hypothesis”:

Chaos Hypothesis: I do not receive inputs from anywhere in the world. Instead, I have random, uncaused experiences. Through a huge coincidence, they are exactly the sort of regular, structured experiences with which I am familiar.

As Chalmers points out, if the Chaos Hypothesis were accepted, then “it would cause us to reject most of our beliefs about the external world.” Chalmers however, thinks that we can have some basis for a rejection of the chaos hypothesis:

...on the Chaos Hypothesis, there is no causal explanation of our experiences at all, and there is no explanation for the regularities in our experience. ...

[I]f we are granted the assumption that there is some explanation for the regularities in our experience, then it is safe to say that some of our beliefs about the external world are correct...

Even an extremely weak version of inference to the best explanation justifies us in ruling out this sort of hypothesis. If so, then this sort of reasoning may justify our belief in the existence of the external world. (Chalmers 2003b)

Chalmers's appeal to explanation as a basis for rejecting the chaos hypothesis is no different in kind from Quine's appeal to theoretical utility as a basis for rejecting phenomenalism. However, these sorts of considerations also serve as Quine's basis for rejecting qualia. Why don't Chalmers and others follow in suit? A big part of the answer to that question is that Chalmers and others see consciousness as insulated against the sorts of appeals to explanation that Quine uses to rule them out. As we will explore in later sections, it is doubtful that such insulation schemes are ultimately tenable.

§2 Revisability: We are not Demons

Why might qualia have a special status, one that avoids the usual pressures of explanatory relevance and utility relevant to ontological considerations? The answer lies in Chalmers's defense of what he terms the "hard problem" of consciousness (1996a). The hard problem exists, he claims, because qualia cannot be given a "reductive explanation" and therefore cannot be located in a materialist ontology. A reductive explanation, in Chalmers's sense, is a certain kind of deductive argument entailing that a macro-level phenomenon is realized by some micro-level parts or process. Such an explanation is a two-step process. First, the target phenomenon must be conceptually analyzed into a suitable form, as a kind of complex functional-role description. Second, empirical work must be done to show what micro-physical features realize this complex functional role. If this explanation is possible, the macro-level phenomenon is reductively explained, and this gains acceptance into a materialist ontology. It has been shown to be nothing "over and above" some collection of micro-physical parts and processes. Note the a priori aspects of this process: first, the conceptual analysis of macro-level phenomena is all "from the armchair." Second, the deductive claim can be evaluated a priori; that is, we can consider if the deductive argument is valid without engaging in empirical investigation. And third, we can consider what Chalmers calls "supervenience conditionals," conditionals of the form: "If H₂O realizes the watery role, then water is H₂O" or "If XYZ realizes the watery role, then water is XYZ" and so on. These three a priori check points allow Chalmers to argue from the armchair against materialism, on the basis of a conceptual analysis of the qualitative aspects of conscious experience—qualia.

§2.1 Troubles with Qualia

The problem with qualia arises, according to Chalmers, because the qualitative aspects of conscious experience—the redness of a red experience, the painful feeling of pain—cannot be functionally characterized. We establish the failure of a functional analysis, on Chalmers's view, by way of armchair reflection on

possible cases. He holds that we'd still consider an experience to be one of pain even if none of the usual functional relations associated with pain were present. So long as the state feels this way, it is pain, no matter what one is disposed to do. And likewise with the other qualitative aspects of mind: if a quality looks *this* way, then it is red, regardless of what I'm disposed to do or say. These analyses are underwritten, according to Chalmers, by the easy conceivability of zombies, creatures functionally and even physically identical to ourselves, but lacking all qualitative experience. Function does not entail feel.

And this is enough, on Chalmers view, to threaten materialism. We can see a priori that qualia are not functional. But the standard means of reductive explanation requires a functional role characterization. If no such role analysis is possible, reductive explanation is ruled out. But without reductive explanation, there is no way to locate qualia in a materialist ontology. Thus, there is a "hard problem" of consciousness.

One can, of course, argue against Chalmers's idea that reductive explanation, in his sense, is the only route to materialism. But for the purposes of this paper, we propose to grant Chalmers his model, in order to show that even on his own ground, his antimaterialist argument does not go through. So, we will accept that materialism is committed to the claim that all macro-level facts are a priori entailed by the micro-physical facts; that is, knowing the micro-level facts and possessing the requisite analyses of our concepts, we ought to be able to determine, from the armchair, where everything is located in a purely physical world.

§2.2 Qualia Revised

The trouble for Chalmers's account begins when we consider the complex micro-physical description of the world we must consider in our armchair. Any description of the world in microphysical terms will be unreadable in practice. It will be far too long and complex to be of any use as a guide for us regular folk in deriving the relevant facts. Thus, Chalmers holds that such a priori reasoning is *idealized*: an ideal rational observer, with unlimited time and mental resources, could perform the derivation. This does not require any additional rational abilities; it requires only additional computing power and memory (Chalmers 1996a, 68; Chalmers and Jackson 2001, 11).

Chalmers holds that the relevant physical description need not be restricted to micro-level language. It can include

information about the structure and dynamics of the world at the macroscopic level, at least insofar as this structure and dynamics can be captured in terms of spatiotemporal structure (position, velocity, shape, etc.) and mass distribution (Chalmers and Jackson 2001, 9).

So we may require much less than ideal computing power to figure out the relevant facts. Still, we will be dealing with a massive amount of data in a clumsy and unfamiliar language. Our usual way of handling such data is to organize and systematize it using theory. We are only able to weed out the irrelevant details by passing the data through the sieve of theory. We are not Laplacian demons; we require a means of organizing and synthesizing the data.

But this opens up a space of uncertainty within Chalmers's model. If theory is required to make the data comprehensible, it is open to question whether we at present possess the proper theory. This may seem at first a minor concern; surely, we can pick out the table-like masses from the data, and so adequately apply our concept "table," as the model requires—there is no "hard problem of tables." However, things are not so neat and clean when it comes to qualia. We do not yet know how to pick out all the neural structures that are relevant to our phenomenal states. Why think that the failure to deduce the phenomenal facts is anything more than a lack of adequate theory? We cannot, like the Laplacian demon, simply "read off" the facts from the microphysics. Instead, we require theory to intercede, and it is quite clear that we are in the early stages of theorizing about the brain. When we develop adequate theories, it may become obvious—even from future armchairs—that when such-and-such brain events occur, qualia occur. To put the point another way, the phenomenal facts might be a priori entailed by the physical facts, but we just may not know it yet.

A historical example helps to make the point. In manner quite similar to Chalmers, British Emergentist C. D. Broad argued that the behavior of chemical compounds could not be deduced from lower-level facts. He writes,

If the emergent theory... be true, a mathematical archangel ... could no more predict the behavior of silver or of chlorine or the properties of silver-chloride without having observed samples of those substances than we can at present. And he could no more *deduce* the rest of the properties of a chemical element or compound from a selection of its properties than we can (quoted from McLaughlin, 1992, 88; emphasis added).

Imagine Broad consulting his intuitions about how to apply his term 'silver' when given a microphysical description of the world. He would conclude that the properties of silver were not entailed by the description, and thus that silver was irreducible. But in the interceding years, physical and chemical theory have progressed, and we can now organize the data in ways that allows us to see that if the correct physical conditions are present, then silver is present. Perhaps our intuitions about qualia are like Broad's intuitions about silver.

But it may be countered that qualia are not like silver. They are characterized in a way that cannot be captured in physical theory—they cannot be given a functional analysis. Thus, while Broad may have been unable to see how the silver "role" was filled, he would arguably recognize that silver could be charac-

terized in a way that allowed us to see how physical theory might make it true. It's only that he didn't think physical matter could fill the relevant role. (Cf. Chalmers 1997, §2.1.)

But this claim runs afoul of a central feature of Quine's critique of conceptual analysis (Quine 1951; 1960). Quine argued that we can never be sure that we will not need to revise our concepts in the face of empirical evidence. On discovering that cats are really robots from Mars, to take Putnam's famous example, we could well reason that, after all, cats are not animals, despite prior intuitions to the contrary. Why think that theoretical advances might not alter our conception of qualia in similar ways?

Chalmers anticipates this sort of objection, and responds by stipulating that *all* the relevant empirical information can be packed into the antecedent physical description of the situation. We can reason a priori what revisions will occur given the data, and then apply our concepts. Thus, revisions can be accounted for by the model (see Chalmers and Jackson 2001, 12). But our complaint is that even if we pack all the relevant empirical information in the physical description, we still must be able to comprehend it. This, as argued, requires the intercession of theory. If in developing the theory we alter our conception of consciousness, we may well then find the deduction we are looking for. Only if we can be sure that theoretical development won't affect the concepts in question can we be sure beforehand of the failure of the relevant deduction. But Quine argues that we have no principled way of guaranteeing that fact, prior to the adoption of a particular theory (Quine 1951, 1960; see also Putnam 1962a, 1962b; Harman 1999). We do not yet possess the requisite brain theory; therefore, we do not yet know if the physical entails the phenomenal.

There is an additional important point concerning theory. In general, we do not simply invent theory in our armchair. We get our hands dirty with experiment and observation, and in this way we craft and elaborate our hypotheses. Further, it is well known that odd and recalcitrant results are the engine of scientific change and breakthrough. To say that we could pack all the empirical information into the relevant conditionals and simply deduce the higher-level facts underestimates the influence that novel empirical results have on our space of concepts. Relevantly, we can see this at work in consciousness studies. The phenomena of blindsight and the odd results of Libet effectively alter the theoretical landscape, and in doing so, potentially alter our concept of consciousness.¹

Still, Chalmers might respond that phenomenal consciousness just isn't a functional notion. Sure, if you want to change the subject, you can derive whatever you wish, but that's not the reductive explanation we were looking for. However, even ignoring our current criticism, *pace* Chalmers the non-functional analysis is not obvious. Our pretheoretic concept arguably fails to

license such an analysis. Indeed, we've found that many undergraduates do not possess qualophile intuitions, and must be *taught* that there is a hard problem of consciousness. This suggests that the nonfunctional claim is a theoretical extension of our folk concept, rather than its essential core.

Still, when we focus our analysis, we want to know facts about *what it's like* for a creature to undergo conscious states. Surely this characterization of consciousness delivers the goods in the antimaterialist argument. However, a good case can be made that it does not. Another gloss on how to pick out phenomenally conscious states—one concordant with common sense—holds that phenomenally conscious states are ones that *we are conscious of being in* (see Rosenthal, 2005; Lycan, 1996, 2001). To put it another way, if we are in no way conscious of being in a state, that state is not intuitively conscious.

Consider the following scenario. I am angry, but not consciously so. I storm around the house bashing into things and grumbling, but when asked, I snarl, "I'm not mad!" Later, my anger becomes conscious, and I see that my interlocutor was correct. I was angry, but the anger was nonconscious. Then I became *conscious of* the anger, and there was something it was like for me to be angry. Most folk will find this a plausible story, and certainly not one that is confused or contradictory. Thus, a reasonable clarification of "there's something it's like for the subject" is "the subject is conscious of being in a state."² But *being conscious of something* can plausibly be cashed out in functional terms. Thus, if we find the physical conditions that realize this state, we can reason, a priori, from the physical facts to the phenomenal facts.

This take on the "conscious of" locution is not the only way to paraphrase "what it's like" talk. Some hold that when we are in certain transparent representational states, there is something it is like to be us (see, e.g., Dretske, 1995; Harman, 1990). On such views, conscious states are states *with which* we are conscious and not necessarily, as Rosenthal and others would have it, states *of which* we are conscious. Yet others hold that when a state is accessible by a range of mental systems, the state is conscious.³ Even if such clarifications are seen as alterations in meaning, that does not mean we have thereby "changed the subject" illicitly. It is quite reasonable to paraphrase our folk talk in order to ease its coherence with scientific theory. Indeed, the use of paraphrasing to clarify our concepts is explicitly endorsed by Chalmers's ally and coauthor, Frank Jackson. He allows that we may alter our folk conception in light of theoretical considerations, noting that the we do not conclude that nothing is really solid just because the folk conception of solidity required the idea of being everywhere dense (Jackson 1994, 484).⁴

Chalmers's assertion that he can clearly recognize a change of subject in this context commits him to an analytic/synthetic (a/s) distinction. Quine's attack has made that distinction untenable (Quine 1951, 1960). Chalmers acknowledges that many so-called conceptual truths are actually revisable in the

face of sufficient empirical evidence (Chalmers 1996, 55). However, he argues that the supervenience conditionals employed by his model for fixing the intensions of terms and determining supervenience claims are immune to this problem. This is because “the facts specified in the antecedent of [these] conditionals effectively include all relevant empirical factors” (1996, 55). This empirical completeness incorporates all the revisionary factors, thus making them available to a priori reasoning. Thus, the conditionals that yield intensions safely deliver analytic claims.

But this is just to repeat the argument noted above. And the response is the same. We can’t comprehend the relevant antecedent without theory; therefore, we can’t be sure beforehand how the concepts will turn out. The conditionals are not immune to revision; therefore, Chalmers hasn’t avoided Quine’s critique of analyticity. And this is not to simply redefine “world peace” as “a ham sandwich” in order to make it easier to solve global problems, as Chalmers derides. While it may seem obvious that some changes in the use of a term represent a change of meaning, this is not the case here with the term “consciousness.” In the first place, “consciousness” lacks the everyday clarity of “ham sandwich” or even of “world peace.” Even though “consciousness” has a commonsense analysis implicit in folk-usage, it is a matter of considerable debate what the correct analysis amounts to. Second, the changes we are proposing (if they are changes) concern whether or not consciousness has the specific definition in terms of “what it’s like for the subject” claimed by Chalmers. Is that meant to be analytic? Must states like pains or color experiences (the paradigm cases of phenomenally conscious states, for Chalmers) always determine what it’s like for the subject, by definition? Are all the purported cases of nonconscious pains, nonconscious color sensations, etc. false *by definition*? This is much more contentious than claiming “world peace” couldn’t mean ham sandwich, despite Chalmers’s claims to the contrary. And it is central to Chalmers’s position that the two be on a par. If not, than “consciousness” may change its meaning in the face of new empirical evidence (not an unlikely scenario, given our limited understanding of the brain), or it may be that Chalmers’s analysis mischaracterizes the folk view, and so requires additional support. But no such support is given—the analysis is meant to be a priori and obvious. Thus, we can conclude that Chalmers’s argument against a reductive explanation of consciousness falls short. Type-Q materialism, bringing to bear the resources of Quine’s view, effectively disarms the hard problem of consciousness.

We turn now to examine a slightly different strategy dualists might try to protect themselves from the Quinean assault.

§3 Taking Consciousness Seriously Can't Save Dualism from Duhem-Quine

Dualists have a strategy of insulating qualia from the kinds of considerations most naturalists use to justify physicalistic ontologies. This insulation strategy is given by Chalmers the innocuous name “taking consciousness seriously”. Despite its name, we think the strategy is anything but innocuous. We also think its untenability can be shown by Quinean (more specifically, Duhemian-Quinean) considerations.

§3.1. What's taking consciousness seriously?

Suppose that you propounded a theory of consciousness and someone objected that you weren't “taking consciousness seriously”. This would sound like a pretty *serious* objection. It would seem to imply that you didn't *care* about the phenomenon you purport to have a theory of. Chalmers takes explicit care to announce that he is “taking consciousness seriously” and to spell out what this amounts to. Close examination of Chalmers on Chalmers reveals that there's more to “taking consciousness seriously” than simply caring about consciousness.

Chalmers is quite explicit about what “taking consciousness seriously” amounts to. For instance, he writes:

Throughout the book, I have assumed that consciousness exists, and that to redefine the problem as that of explaining how certain cognitive and behavioral functions are performed is unacceptable. This is what I mean by taking consciousness seriously. (1996a, p. xii)

A longer and more revealing statement appears in Chalmers's “Reply to Mulhauser's Review of *The Conscious Mind*”. There, Chalmers presents the quotation above and follows it immediately with the following:

That is, the premise is simply that there is a phenomenon to be explained, and that the problems of explaining such functions as discrimination, integration, self-monitoring, reportability, and so on do not exhaust all the problems in the vicinity. The deepest problem of consciousness, as I understand it, is not the problem of how all these functions are performed, but rather the problem of explaining how and why all this activity supports states of subjective experience.

This isn't to make any assumptions about the nature of the solution: plenty of people agree with the premise but still think that one way or another they can get a cognitive or materialist theory of consciousness to work. Of course, I do go on to *argue* that if the premise is granted, it turns out that such theories will always be incomplete.

Like many people (materialists and dualists alike), I find this premise obvious, although I can no more “prove” it than I can prove that I am conscious. At the very

least, to deny this premise would require extraordinarily strong arguments, of a type that I have never seen. In my experience the large majority of people find it obvious; but certainly there are some that deny it, and arguments over whether the premise is true or false rapidly descend into table-pounding. Wishing to avoid that dead end, I prefer to simply state the assumption up front. ... I do argue for it where I can, but there is no denying that such arguments - on either side - ultimately come down to a bedrock of intuition at some point. The result, as I also say up front, is that the minority of people who don't see a "hard problem" aren't going to find the book of more than intellectual interest. (1996b, <http://psyche.cs.monash.edu.au/v2/psyche-2-35-chalmers.html>)

The above quoted passage presents Chalmers's key claim in relatively modest terms: as something that he makes as an assumption that he happens to find quite intuitive. Elsewhere, however, the claim is presented in stronger terms, namely, one to which Chalmers attaches a high degree of certainty and of which he claims enjoys a very special kind of justification (so special as to be *sui generis*).

We see the connection to certainty by going back to Chalmers's (1996a) introduction of to find the following:

Some say that consciousness is an "illusion", but I have little idea what this could even mean. It seems to me that we are surer of the existence of conscious experience than we are of anything else in the world. I have tried hard at times to convince myself that there is really nothing there, that conscious experience is empty, an illusion. There is something seductive about this notion, which philosophers throughout the ages have exploited, but in the end it is utterly unsatisfying. I find myself absorbed in an orange sensation, and *something is going on*. There is something that needs explaining, even after we have explained the process of discrimination and action: there is the *experience*.

True, I cannot *prove* that there is a further problem, any more than I can prove that consciousness exists. We know about consciousness more directly than we know about anything else, so "proof" is inappropriate. The best I can do is to provide arguments wherever possible, while rebutting arguments from the other side. There is no denying that this involves an appeal to intuition at some point; but all arguments involve intuition somewhere, and I have tried to be clear about the intuitions involved in mine. (1996a, xii-xiii)

The question arises, of course, of what justifies Chalmers's claims. One thing should be clear: for reasons we discussed earlier, Chalmers can't lean on considerations of theoretical utility to justify his claim that he is conscious. So what does justify the knowledge claim central to "taking consciousness seriously"? Chalmers says that his basis for his knowledge that he has conscious experience is the experience itself:

From the first-person point of view, my zombie twin and I are very different: I have experiences, and he does not. Because of that, I have evidence for my belief and he does not. Despite the fact that he says the same things I do, I know that I am not him (though *you* might not be sure) because of my direct first-person acquaintance with my

experiences. This may sound somewhat paradoxical at first, but really it is simply saying the obvious: our experience of consciousness enables us to know that we are conscious (1996a, 199)

Central to the Chalmersian ambition of “taking consciousness seriously” is a pretty strong knowledge-claim concerning consciousness. We turn now to spell out the core of Quinean resistance to such a claim.

§3.2. The Duhem-Quine Thesis

Central to our Quinean case against the Chalmersian claim that “direct first-person acquaintance” with one’s own experience can underwrite the kinds of knowledge claims constitutive of “taking consciousness seriously” is what has come to be known as the Duhem-Quine thesis. Named after Pierre Duhem and, of course, Quine, the thesis is, for our purposes at least, well captured as follows. As Gibson (1982, 79) describes the thesis, it is the thesis that “...statements are not separately vulnerable to adverse observations, because it is only jointly as a theory that such statements imply their observable consequences.” Quine writes: “...theoretical sentences have their evidence not as single sentences but only as larger blocks of theory...” (Quine 1969, 80–81). And Gibson again: “Any one of the statements of the theory can be adhered to in the face of adverse observations by revising other statements in the theory” (1982, 79).

The Duhem-Quine thesis is, of course, central to Quine’s case against the phenomenal-reductionist dogma of the famous two dogmas of empiricism. What we would like to do now is pit the Duhem-Quine thesis against Chalmers’s claim that experience supplies, via “direct acquaintance,” knowledge of consciousness.

§3.3. How do you Duhem-Quine a Chalmers?

In order to pit the Chalmersian knowledge claim against Duhem-Quine, it will be necessary to formulate the Chalmersian claim as a single sentence of which we can ask the Duhemian-Quinean question of whether this sentence is supported by experience by itself or whether its support or defeat by experience depends on what other sentences are accepted.

What would be a good target sentence? Maybe it would be something like “qualia exist” or “consciousness exists”. Looking at the quotations from Chalmers about what it is that he claims to be taking seriously yields candidates like

1. There is conscious experience
2. I am conscious

3. I am undergoing an orange sensation
4. I undergo conscious experiences
5. I undergo orange sensations

Call the above “the list of five phenomenal beliefs”.

What would it mean to Duhem-Quine such beliefs? It would mean that given various alterations of other beliefs, we could find ourselves rejecting the statement, e.g. “there is conscious experience”. This would serve to show that there is no evidential situation that, without appeal to theory, alone serves to justify any of the five phenomenal beliefs.

We turn now to review two thought experiments, due to John Hawthorne (2007) and Michael Lynch (2006), respectively, that, though designed for slightly different purposes, will help show that no item on the list of five phenomenal beliefs faces the tribunal of experience individually. Each item’s support by experience will instead depend on additional sentences that serve to rule out the kinds of skeptical scenarios envisioned in Hawthorne’s and Lynch’s thought experiments.

§3.4. Gods, Demons, and Pick Pockets

Both Hawthorne’s and Lynch’s thought experiments involve hypothetical supernatural interventions the contemplation of which raise skeptical doubts about the veracity of one’s own introspective access to conscious experience. In Hawthorne’s thought experiment, we are to imagine Fred and Twin Fred, both of whom, initially at least, have visual fields filled with expanses of phenomenal redness. Both are attending to the qualia on their respective right and left fields and asked to judge whether the qualia are the same on the right and on the left. They formulate judgments expressible in English by “thus is thus” where the first “thus” refers to whatever quale is present in the left visual field and the second “thus” refers to whatever quale is present in the right visual field. The content of such judgments concerns the sameness of the qualia appearing on left and right. Both Fred and Twin Fred are told that though it won’t be apparent, their qualia will “dance”—rapidly alternate between a red quale and a blue quale—three or four times during a five minute interval. Such dancing is stipulated to be unnoticed dancing. While no differences are *apparent* to either Fred or Twin Fred, Fred is lied to about whether any dancing takes place—in reality both left and right sides are occupied by constant red qualia throughout the duration of the five minutes. Twin Fred, however, is told truthfully—by God, we may suppose—that even though it isn’t apparent to him, his qualia do indeed dance (Hawthorne 2007, 197–198).

A Hawthorne style thought experiment serves to cast doubt on statements like item #3 from the list of five phenomenal beliefs, “I am undergoing an orange sensation”. If the notion of experience relevant is one wherein what is experienced is what is apparent, then what is apparent alone does not suffice for one to know, for instance, whether one has a red quale on the right side of one’s own visual field. One needs, additionally, to rule out the skeptical hypothesis that maybe one’s visual field houses unnoticed dancing qualia. The kind of skeptical hypothesis described by Hawthorne serves to undermine items such as #3 on the list of five phenomenal beliefs. But what about other items like #2, “I am conscious”, or #4, “I am undergoing conscious experiences”? Here we may rely on Lynch.

Lynch’s thought experiment involves a demon who, in addition to being all powerful, is a kleptomaniac who covets the phenomenal experiences of others. Lynch’s demonic phenomenal pickpocket, like earthly pickpockets, exploits the inattentiveness and distractibility of his victims. As Lynch describes the case:

Specifically, we can imagine that the demon can distract me from any particular conscious experience that I believe I am having, e.g., when tasting wine. The demon might arrange for loud noises, or false expectations, or simply ensure that I become wrapped up in philosophical argument. At the very instant I am distracted, it removes that particular conscious experience (the taste of the wine) from my mind but leaves the belief that I am having that experience intact. Further, it does not replace that experience with any other. This also could be done in a variety of ways. For example, the demon could prevent me from having an experience of x by fiddling with conditions very far “downstream” from consciousness. It might change the physical structure of the relevant objects, or fiddle with my neural processing, therefore removing my ability to have the experience in question. More directly still, the demon may simply eliminate or remove the qualia themselves. At the end of the day the exact method the demon employs is irrelevant. As with Cartesian skepticism about the external world, we don’t need to know how the demon accomplishes its task, just that it can. So post- pick pocketing, I will still believe that I am having the experience in question. Only now that belief is false, for I won’t be having that experience at all. Intuitively, my belief hasn’t changed; but its truth- value has. I just don’t notice that fact. (2006, 43)

Lynch builds on the thought experiment, developing a “spectrum of experience-removal” to cast doubt on not only the claim that any one of a person’s phenomenal beliefs might be mistaken, but that *all* of them may be. As Lynch describes this further case:

Here, we imagine not that the demon steals a single phenomenal experience, but that he deftly removes them one at a time, until gradually all are gone. In this way the spectrum helps us to correctly conceptualize turning into a zombie via phenomenal pick pocketing. At each point on that spectrum, as my experiences are gradually removed, I will continue to believe as I would have believed had those experiences remained untouched. ... So throughout the process, I will continue to not only retain

my belief that e.g., the wine tastes fine, but I will also have the second-order belief that my experience is roughly the same as it was a moment ago. From that second-order standpoint, I simply won't recognize any moment along the spectrum when my experience becomes suddenly different. Therefore, I will never detect a difference between any one point on the spectrum of experience-removal from any other point; so I will not detect a difference between being fully conscious and being without any conscious experience whatsoever (2006, 44).

Summarizing, Lynch writes:

[T]he case of the phenomenal pickpocket shows that it is logically possible for any one of my phenomenal beliefs to be mistaken. The spectrum of experience-removal shows that it is logically possible that all of my phenomenal beliefs are mistaken...It shows that if it is possible to make an unnoticed mistake in one's phenomenal beliefs, then it is possible to imagine a continual series of such mistakes due to demonic intervention. If I can imagine the phenomenal pickpocket slowly stealing all of my qualia, then, *prima facie*, *I can't rule out the possibility that this has already happened.*" (2006, 46, emphasis in original).

The kinds of skeptical hypotheses discussed by Hawthorne and Lynch serve to show in a relatively concise way how even the sorts of claims central to "taking consciousness seriously" are vulnerable to the kind of insight encoded in the Duhem-Quine thesis. Any item of the list of five phenomenal beliefs is one in which one's belief may be undermined if one accept certain other beliefs, namely the ones that would involve believing the skeptical hypotheses. Thus, whatever degree of certainty attaches to any of the five phenomenal beliefs cannot, *pace* Chalmers, come from the experience by itself. It must additionally come in the form of additional beliefs that involve denying the truth of the skeptical hypotheses.

In other words, any particular experience one has is alone insufficient to justify any of the items on the list of five phenomenal beliefs. If one has *separate considerations* that serve to rule out the Hawthorne-Lynch skeptical hypotheses, then those considerations *plus* a particular experience would serve to justify a phenomenal belief. And if one lacks such considerations, then no amount of "taking consciousness seriously" will release one from the epistemic obligation to take seriously the possibility that unbeknownst to a conscious subject, the subject's qualia have danced, or departed the field altogether in the clutches of a demonic pickpocket. Thus, however strongly it may *seem* to the subject that he or she has conscious experiences; he or she may very well be mistaken.

It is worth mentioning that the dualist cannot refuse to take seriously the above skeptical hypotheses on the grounds that they involve contemplation of ontological extravagances like demons. Ontological extravagances are the bread and butter of dualist argumentation, involving as it does the contemplation of hypothetical ideal reasoners, inverted spectra, and zombies. One cannot consort with zombies and refuse the company of demons.

Another move unavailable to the Chalmersian is to insulate the phenomenal beliefs from falsification by defining the truth maker of a phenomenal belief as the belief itself. On such a view, having the belief suffices for the belief to be true. However, this would collapse into a kind of reductive functionalism of the sort that Chalmers is explicit about wanting to avoid (See Chalmers 1996a, 189–191).

§4 Quining Chalmers’s Alphabet Soup

§4.1 Chalmers’s ABCs

In the course of isolating his “hard problem” of consciousness, Chalmers distinguishes a number of possible materialist responses to his challenge (1996a, 2003a). The distinctions between these various responses turn on modal claims, on whether certain scenarios are conceivable, possible, necessary, and so on. According to Chalmers, “type-A” materialists hold that zombies are inconceivable, while “type-B” materialists hold that zombies are conceivable, but not possible. “Type-C” materialists hold that while zombies are conceivable and sure seem possible, there must be some as-yet undiscovered solution to the hard problem, perhaps one that will only become apparent upon a “radical revision” of our concepts by some future “Einstein of the mind.” It seems that Chalmers has clearly identified a problem, and mapped out the theoretical space so that all the possible moves for materialists are anticipated. If a materialist is to play the game, she must play on the field laid out by Chalmers.

But considerations from Quine show that this playing field is illicitly tilted. A critique of the modal methods introduced by Chalmers to delineate his materialist response-types reopens the explanatory space. This does not result in a magic solution or dissolution to the problem of explaining consciousness; rather, it becomes a tractable scientific problem, not one posed or solved from the armchair. The relevance of the conceivability or possibility of zombies fades, and the usual challenge of developing the theory with the most explanatory and predictive utility moves to the fore.

According to Chalmers, the problem of consciousness arises because qualia cannot be given a functional role analysis.⁵ Or so it seems. One may deny this claim, despite intuitions to the contrary. Chalmers calls this position “type-A” materialism. Such a view, Chalmers contends, must deny the very conceivability of zombies. If zombies are conceivable, then no functional role analysis is possible. Such an analysis would render zombies inconceivable in the same way that a male vixen or a married bachelor is inconceivable. For Chalmers, male vixens and married bachelors are “logically impossible”—we can discover from the armchair an incoherence in the very idea of the thing.

Chalmers finds a view denying the conceivability of zombies unpromising. He writes

I confess that the logical possibility of zombies seems... obvious to me. A zombie is just something physically identical to me, but which has no conscious experience—all is dark inside. While this is probably empirically impossible, it certainly seems that a coherent situation is described; I can discern no contradiction in the description (1996a, 96).

Who could defend such a view?

The next move open to materialists on Chalmers theoretical roadmap is to accept the conceivability of zombies, but deny their possibility, in the metaphysical sense. That is, one can accept that there is a coherent description of zombies, but deny that this description corresponds to a metaphysically possible world. There are a wide range of maneuvers open to materialists adopting this “type-B” strategy (see Loar 1997, Papineau 2002, Perry 2001, etc.), but we will not canvass them here. Suffice to say, Chalmers attempts to seal off this escape route as well, with heady forays into the grand space of possible worlds. He concludes that the only reasonable conclusion for the type-B materialist is to say that consciousness is linked to physical or functional reality by way of a basic or “brute” necessity. The oddness and desperation of this position, contends Chalmers, leaves little to recommend it beyond an unswerving, dogmatic allegiance to a materialist world view. If that’s the solution, one wonders what the problem was!

Finally, a materialist might throw up her hands and follow Thomas Nagel or Joseph Levine in professing support for materialism, but holding that we are faced with an explanatory mystery, whose solution requires radical conceptual revolutions (Nagel 1974; Levine 2001). This is not to embrace the brute necessities of type-B, but to admit the shortcomings of the present materialist situation, and hold out for better days. Again, this seems less a solution than an embrace of a problem, but perhaps it is more open-minded than the previous two views. Why claim desperately to have solved a problem when the problem is so very hard? We should just admit that there are limits to science and human understanding, and live with that.

§4.2 The Real Difference between A, B, C

But all this turns on accepting Chalmers’ setup of the problem and the solution space that follows. But this is not forced upon us, and indeed, once we properly acknowledge certain Quinean constraints, the situation for the materialist seems much brighter. We are left only with the ordinary “easy” problems of science. And that is work enough.

What then, is the real difference between types-A, B, and C? These differences are mapped out in terms of conceivability and possibility intuitions,

which rest ultimately upon the deliverances of armchair conceptual analysis. According to Chalmers, type-A materialists conceptually analyze the concept of consciousness into functional terms. Type-B and -C materialists reject this analysis; that is, they analyze the concept of consciousness as a nonfunctional concept, one not specifiable in functional-role terms, broadly construed. David Lewis and David Armstrong, for example, hold that a causal-functional analysis of the mind is a complete analysis, with no remainder (Lewis 1972, 1994; Armstrong 1968, 1980). This approach, termed “analytic functionalism” by Ned Block, is the paradigm case of type-A materialism.

Other materialists hold that conscious qualitative aspects of the mind cannot be given a functional analysis. Brian Loar gives a representative statement of this view:

Antiphysicalist arguments and intuitions take off from a sound intuition about concepts. Phenomenal concepts are conceptually irreducible in this sense: they neither a priori imply, nor are implied by, physical-functional concepts. Although that is denied by analytic functionalists ..., many other physicalists, including me find it intuitively appealing (Loar 1997, 597).

Here, “phenomenal concepts” pick out just those features of experience that allegedly cause all the trouble: qualia. Loar goes on to give perhaps the classic example of a type-B defense of materialism, employing a dualism of concepts to fend off a dualism of properties. In doing so, he accepts the conceivability of zombies and tries to block their metaphysical possibility.

Finally, Thomas Nagel, in his famous 1974 “Bat” paper, provides a clear example of a type-C materialist view. He begins by making claims about analyses:

The subjective character of experience... is not captured by any of the familiar recently devised reductive analyses of the mental, for all of them are logically compatible with its absence. It is not analyzable in terms of any explanatory system of functional states, or intentional states, since these could be ascribed to robots or automata that behaved like people though they experienced nothing (Nagel 1974 xx).

Nagel concludes his paper by holding out hope for an “objective phenomenology” to somehow characterize qualia in terms amenable to reduction. But he is not optimistic: the mind-body problem seems as intractable as ever to him after his bat-inspired reflections.

§4.3 Back to School

But at the heart of all three views is a claim of conceptual analysis. Each analyzes the concept of consciousness and arrives at some conclusion about the mind and the prospect for psychological explanation. Type-A materialists hold that consciousness can be analyzed functionally, and type-B and -C materialists

hold that it cannot. But Quine has given us good reason to be skeptical about the deliverances of armchair analyses. If we take Quine's position seriously here, the differences between the views lose their grand metaphysical import, and retreat to mere statements of pretheoretic intuition, based on an entrenched and largely implicit folk theory. The differences in conceivability intuitions do not represent major epistemic and metaphysical divides; rather, they indicate who among us watched more science fiction as children, and who felt special sympathy or disdain for the robots.

Let's consider the impact of Quine's views in more detail. Since all concepts are open to revision in the face of empirical data, we cannot conclude that a given scenario is necessary or impossible simply by consulting our intuitions about concepts and their applications (Quine 1951, 1960). It may be that empirical results in the brain sciences will alter our naïve conception of consciousness, and in the future, folks will not find the "zombie hunch" appealing in the least.⁶ It may even be that the best fit of theory and data recommends the adoption of one or another *current* theory of consciousness. In the elementary schools of the future, that view will be taught, and the children will find a functional notion of qualia as natural as the idea that gravity makes the eraser fall to floor or that water is made of H₂O molecules too small to be seen with the naked eye.

But more to the point for current research, the industry of modal intuition-mongering loses its reason for being. It is of little interest if zombies are conceivable. They are, in that nothing can be ruled out from the armchair. We cannot tell today where empirical results will drive us tomorrow. And whether zombies are possible or not depends strictly upon what our best theory says. And that is a matter for science to determine. Maybe qualia can be captured in a functional theory of the mind; maybe they cannot. That is for science to decide, not a priori philosophizing.

So what of our ABCs? The differences become ones of emphasis rather than metaphysical principle. But we are of the opinion that there is little to recommend qualia as "traditionally conceived." It is hard to see how to find room in science for something that cannot be tested for or confirmed (or falsified, for that matter), that cannot play a functional role or make a causal difference, that cannot even be confidently ascertained from our own points-of-view (are you *sure* you're not a zombie? That you haven't been phenomenally pick-pocketed? That's just what a *zombie* would say!). Thus, we are confident that conscious experience will be fully and satisfyingly explained by science, without remainder. The theoretical virtues of simplicity, prediction, explanation, conservatism, fruitfulness, etc. all tend away from qualia and towards a neuro-functional theory. That theory has the burden of explaining why people *thought* zombies were a problem, why Mary in her room seemed to fail to grasp all she should, and so on. But that is an easy problem, in Chalmers's parlance,

one that even a philosopher could do, perhaps. It is not that we think qualia are impossible or inconceivable. For all we know, qualia might be irreducibly intrinsic, nonfunctional features of reality. We can't rule it out a priori. But that's just because we can't rule out anything a priori.

This may seem to suggest that we are just type-A materialists in disguise, covering our tracks in Quinean rhetoric. But that is not the case. Quine's considerations remove the compass rose and boundaries from Chalmers's map of the explanatory space. We cannot draw the lines between theories in the way Chalmers demands without endorsing a priori conceptual analysis, an analytic/synthetic distinction, and a range of discredited doctrines in epistemology. Type-Q materialism places the problem of explaining the conscious mind on all-fours with other scientific problems. We accept that zombies are conceivable. We just don't care. Now let's do some science.

Notes

- ¹ On blindsight, see Weiskrantz (1986, 1997); For Libet's results, see Libet (1985) and commentaries.
- ² See Rosenthal (2002) for a detailed defense of this claim.
- ³ Such a claim could be based on Baars' (1988) "global workspace" hypothesis.
- ⁴ See also Jackson (1998, 44–6).
- ⁵ See §2.1 above.
- ⁶ See Dennett (2005, chap. 1).

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