

Modality, semantics, and consciousness

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1 Introduction

The Character of Consciousness brings together most of the important papers that Chalmers has written on the topic of consciousness since (and a couple before) the publication of his book, *The Conscious Mind*. He covers such topics as the identification of neural correlates of consciousness, the modal argument against materialism, the “phenomenal concepts” strategy, representationalism and the nature of color experience, and the unity of consciousness. As I am in agreement with, or at least sympathetic to, a lot of what he has to say on these topics,¹ and since this is supposed to be a critical response to the book, I will limit my remarks to the principal area where we still differ: the modal argument against materialism.

Let me begin with a general characterization of how I see the disagreement between us, and then move to the details. Both Chalmers and I see a deep epistemic gap between physical (including functional, or computational) accounts of the mind/brain and ordinary descriptions of our phenomenally conscious experience. We both maintain that the “hard problem”, or “the explanatory gap” constitutes a serious challenge to materialism in the philosophy of mind. But we differ significantly on the nature of that challenge. I have in fact of late come closer to Chalmers in seeing the explanatory gap as a positive argument for non-materialism about consciousness, but where I see the argument as essentially abductive he sees it as demonstrative. I view the inference from the explanatory gap to non-materialism as basically an instance of inference to the best explanation; the best explanation of the epistemic gap is that there is a metaphysical gap (the nature of which I find obscure,

¹ This is especially true of his response to the “phenomenal concepts strategy”; he himself notes the strong convergence between his and my positions on this in our papers in Alter and Walter (2007).

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but that's another matter). Chalmers, however, believes he has a straightforward philosophical argument from the premise that zombies are conceivable (a corollary of the explanatory gap) to the conclusion that materialism is false. It is this argument, together with the semantic and metaphysical framework supporting it, that I continue to challenge.

2 The anti-(type B) materialism argument

“Type B” materialists are those who accept the conceivability of zombies but not their possibility.² Since materialism is committed to the claim that all mental facts supervene (at least) on the physical facts, if zombies are possible, then materialism is false. In order to support his argument that if zombies are conceivable then they are also possible, Chalmers appeals to a framework for connecting modal, epistemic, and semantic issues he dubs the “golden triangle”.³ The basic elements are “modal rationalism”, a neo-Fregean 2D semantics, and, what allegedly follows from them, the “a priori entailment” thesis (AE).

Let's start with AE. According to this doctrine, from a complete description of the world's basic facts any description of a non-basic fact will follow a priori.⁴ Let “M” stand for some non-basic macro-level fact, like the fact that the cup on the table in front of me contains water, and let “B” stand for the complete list of basic facts. On AE, the conditional “ $B \rightarrow M$ ” is a priori. Now, according to materialists, B includes all the fundamental physical facts, but not the phenomenal facts, since they allegedly supervene on the physical facts. Let “P” stand for this complete list of physical facts, and let “Q” stand for the phenomenal facts. If one holds both materialism and AE, the conditional “ $P \rightarrow Q$ ” should be a priori. But if “ $P \rightarrow Q$ ” is a priori, then zombies wouldn't be conceivable, since a zombie fits the description “ $P \ \& \ \text{not-}Q$ ”. Hence, materialists must either deny the conceivability of zombies or deny AE. Type B materialists, the ones that concern us here, must deny AE.

There are two sorts of arguments Chalmers presents in support of AE. On the one hand he appeals to the overall plausibility of his “golden triangle” framework, contrasting it with the implausibility of the commitment to the kind of “brute necessity” that follows from the rejection of AE.⁵ On the other hand, he points to what are considered to be the prime counter-examples to AE and claims to demonstrate that in fact, properly understood, these cases actually confirm it. If this

² So-called “type A” materialists deny even the conceivability of zombies. I will ignore this position for the purposes of this discussion.

³ I couldn't find a reference to this term in the present volume, but he uses it in Chalmers (2006).

⁴ By definition the non-basic facts metaphysically supervene on, and are thus necessitated by, the basic ones. For any given fact P, if it didn't supervene on the list of alleged basic facts, it would itself be basic. So the only question at issue is whether the relation between the two descriptions, the complete list of basic facts and the non-basic one at issue, is a priori as well as metaphysically necessary.

⁵ Chalmers uses the term “strong necessity”, which is defined in terms of his 2D semantics. I argue in Levine (2001) that not all “strong necessities” according to the technical definition are really “brute necessities” as I am using that term here.

is right, he argues, then the materialist's claim that psycho-physical identities (or the relevant supervenience conditionals) are themselves counter-examples to AE becomes an ad hoc maneuver on the part of materialists to save their doctrine from his modal argument.

3 The golden triangle and the rejection of brute necessity

To reject AE, according to Chalmers, is to affirm the existence of brute necessity. On AE there is an inherent link between modal notions and epistemic ones, so that at bottom what's necessary coincides with what's a priori. Chalmers calls the doctrine that there is such an inherent link "modal rationalism". Brute necessity is necessity that breaks this link, treating what's necessary as independent of what's a priori. Why should one reject brute necessity in favor of modal rationalism? Chalmers basically argues that the very idea of brute necessity ought to strike one as deeply implausible, maybe even as downright incoherent. One way to see this is to note that brute necessity turns modal facts into basic, inexplicable ones, where modal rationalism grounds them in the a priori; we understand why a statement is necessary if we can know it's true a priori. While it makes perfect sense that there should be a level of brute inexplicable facts concerning the world as it actually is⁶—how it just happens to be—it is much more suspect to posit brute inexplicability concerning the space of all possible worlds. Why, given our notion of the possible, shouldn't it extend ultimately to whatever we can coherently conceive? Where could such limits as brute necessity imposes come from?

But how exactly is this inherent link between the modal and the epistemic to be maintained, according to Chalmers? This is where the third point of the golden triangle, semantics, comes into play. The a priority of necessity largely derives from the semantic analysis of the relevant terms, or concepts. Of course this was the traditional, pre-Kripkean picture, and it is Chalmers's position that it is largely correct. By incorporating certain insights gleaned from the Kripke–Putnam account of natural kinds and proper names into a basically Fregean framework, Chalmers argues we can maintain the links among the vertices of the golden triangle in a way that is compatible with the existence of so-called a posteriori necessities.

The way this is accomplished is through his epistemic version of 2D semantics. For my purposes here, though, the details of the 2D framework are not crucial; so, to simplify the discussion, I am going to characterize Chalmers's semantic program as follows. Assume we have a relatively restricted set of primitive, or basic concepts. These might include logical concepts, the concept of causation, and maybe the fundamental concepts of physics, but definitely phenomenal concepts—the concepts we ordinarily apply to phenomenal experiences. All other concepts are definable in terms of these primitives in the sense that in order for something to count as the referent of one of these definable concepts it must be the entity (object, property, or

⁶ I have in mind here the bruteness of its most fundamental laws and, perhaps, its initial conditions.

whatever) that in the actual world satisfies the definition. In other words, we have a Fregean descriptivist account where the relevant descriptions are rigidified.⁷

On this view, a posteriori necessities are still grounded in a priori analyses of the relevant concepts. For instance, that water is necessarily H₂O is grounded in the a priori accessible conditions that anything must meet in order to count as water—call this “satisfying the water role”—together with the empirical fact that it is H₂O that happens to satisfy these conditions. I hope all this is familiar enough and so I won’t belabor it further.

Opposed to this Fregean conception of meaning is the non-Fregean direct reference theory.⁸ On this view, what determines the reference of a concept is not some condition (or set of conditions) cognitively grasped by the subject and applied to the actual world, but rather some non-cognitive relation the subject’s entertaining of the concept bears to what it’s a concept of. Causal/historical theories as well as nomic-covariational theories fall into this camp.⁹ It’s crucial that on this view there are no a priori analyses of concepts, and one might as well treat almost all concepts as primitive, or basic (those expressed by morphemically simple expressions, that is).¹⁰

The direct reference theory seems to remove the third point of the triangle, since on this view there is no inherent connection between the semantic and the epistemic. Given that, according to Chalmers, the crucial link between the modal and the epistemic—what allows us to reject brute necessity—is sustained by a route through the semantic, as described above, it seems that abandoning this element of the golden triangle commits us to the existence of brute necessity, with the threat of incoherence that brings with it. But once the golden triangle is restored, commitment to AE comes along for the ride, and now we have our refutation of (type B) materialism. So it seems that we are faced with the following choice: accept brute necessity or give up materialism. Chalmers clearly opts for the second alternative.

I have two principal objections to this account. First, I don’t believe it’s necessary to adopt the Fregean semantic framework in order to preserve the kind of link between the modal and the epistemic that provides a barrier to an objectionable version of brute necessity. Second, it seems to me that even if we do adopt the Fregean framework Chalmers proposes, it doesn’t have AE as a consequence, and therefore it cannot be used against the materialist.

⁷ It’s important that this is not really Chalmers’s account, since he isn’t committed to anyone’s being able to articulate definitions of the relevant sort. Rather, the knowledge of the relevant descriptive condition is embodied in the pattern of judgments a subject would make under idealized conditions concerning the extension of the concept in each possible scenario, where a scenario is a maximal description of a world couched in the primitive vocabulary. This pattern of judgments constitutes a concept’s epistemic, or primary intension. None of my critical remarks depend in any way on the differences between the official 2D view and my oversimplified descriptivist account.

⁸ I don’t claim that everyone uses the term “direct reference” in this way, so consider this my own technical use; though I believe it’s at least one common understanding of the term.

⁹ So long as the causal theory doesn’t pick out the referent by virtue of the subject’s employing it as a descriptive condition to be satisfied.

¹⁰ Fodor’s atomism is the paradigm of this sort of account. See Fodor (1998).

4 The golden line segment

As I have argued elsewhere (Levine 2001), I basically agree with Chalmers's distaste for brute necessity, and largely for the reasons he presents. However, I don't think we require the detour through the Fregean semantic vertex in order to maintain the crucial connection between the modal and the epistemic: there is a direct line segment that links the two. It all comes down to the fact that the necessity of identity is itself a priori.

Obviously one way of reading Kripke's challenge to positivist orthodoxy takes him to support a view of the relation between metaphysical and epistemic status that yields brute necessity as a consequence. However, I don't think we need to read him this way, and it's not necessary to resurrect (quasi)descriptivism in order to block that reading. The basic idea behind the necessity of identity is simple. When an identity statement, like "Mark Twain = Samuel Clemens" or "Water = H₂O", is true, this entails that we have one item here, not two: a person in the former case and a substance kind in the latter. It's a priori that everything is self-identical, that nothing could possibly fail to be itself, and so the facts expressed by these statements are necessarily true (if true at all). For this insight we don't need any semantic analysis; it's a matter of the a priori nature of logic, including the logic of identity.¹¹

Of course the statements mentioned above are not themselves a priori, as both the Fregean and the direct reference theorist must both acknowledge; and their a posteriority must be accommodated by both views. But I see no reason why the account the direct reference theorist gives of the role for empirical discovery here must commit her to brute necessity any more than it does the Fregean. Take "Mark Twain = Samuel Clemens". We discover on empirical grounds that these two names refer to the same person, which means that the fact being expressed here—the singular proposition, if you will—is a matter of self-identity. Well, self-identity facts, we know a priori, are necessary. End of story. How does it help if we add a descriptive mode of presentation to the names flanking the identity sign?

Now one line of thought that might lead to the descriptivist model goes like this. First, we find some correlation between the referents of the two terms in question (say "Mark Twain" and "Samuel Clemens"). The question then arises whether or not to accept the identity claim, going beyond the evidence constituted by the discovered correlation. We realize (based on our a priori understanding of the nature of identity, as per above) that identity claims must be necessary in order even to be true. So now we feel we must certify the necessity before we can claim the factual identity. But how do we do that? Here comes Fregean semantics to the rescue, by delivering two epistemic necessities of the form "Mark Twain = whoever actually satisfies the MT role" and "Samuel Clemens = whoever actually satisfies the SC role". Since we know a priori that no one can count as MT (SC) without satisfying the MT (SC) role, and we have the empirical discovery that one and the same person

¹¹ I'm not going to take a stand on what makes logic a priori, but it certainly can't be anything having to do with the analysis of non-logical concepts, which is what's at issue here.

happens to satisfy both, we have the grounding for the necessity we sought. Now we can make the identity claim.

It seems to me that the direct reference theorist can reply as follows. Accepting the identity claim does not need to go through a stage of certifying the necessity in any way. It's a completely empirical process. We have lots of evidence from both MT and SC sightings that in fact there is only one person involved here, and so we have strong evidence for thinking there is in fact only one person picked out by these two names. Once the identity claim is accepted, then the necessity comes along for free, as we know a priori that identities are necessary. If this is right, then the direct reference theorist is not committed to brute necessity, and the link between the modal and the epistemic can bypass semantics; the golden line segment can replace the golden triangle.

5 Golden triangle without AE¹²

As I set up the dialectic in Sect. 3, it appears that once one accepts the framework of the golden triangle one is committed to AE. Commitment to AE, in turn, entails the rejection of (type B) materialism. But now I want to question the first inference, from the Fregean semantics underlying the golden triangle to AE. I will argue that AE only follows from the semantic theory if one accepts at least one of two assumptions, one of which blatantly begs the question against the materialist and the other of which has no independent plausibility.

AE, remember, is the doctrine that from a description of the complete list of basic facts at a world (or scenario) it is possible to derive a priori descriptions of the non-basic facts. According to Chalmers, if materialism is true, then a complete description of the basic facts can be summarized by the conjunction of P (as above, the list of fundamental physical facts, including the laws), T (a statement to the effect that there are no other basic facts), and I (a marker to determine the indexical facts). If, as before, we let "Q" stand for the phenomenal facts, then, argues Chalmers, AE would commit materialists to the claim that the conditional "PTI \rightarrow Q" is a priori. Since they admit it isn't a priori, as zombies are conceivable, they must admit that PTI does not capture all of the basic facts; the Q facts must also be included, which refutes materialism.

Obviously (type B) materialists must deny AE. Also, obviously, it would be question-begging on the part of the materialist to object to AE on the basis that PTI clearly captures all of the basic facts at our world and yet "PTI \rightarrow Q" isn't a priori. So the argument over AE has moved to the arena of more mundane macro-level facts, like the fact that water is H₂O, or just the fact that there's water in the cup on the table in front of me right now. Let's call all such facts "M". The question then is

¹² The discussion in this section briefly recapitulates the argument in Levine (2010). In a footnote on page 208 of the present volume Chalmers responds to my argument by claiming that I have misconstrued the dialectical situation. I don't see that, but it's possible by basing my discussion there on the particular dispute with Block and Stalnaker (1999) I left myself open to that objection. I hope the presentation here avoids that pitfall.

whether or not complete descriptions of the world's basic facts a priori entail the M facts. If it can be shown that that plausibly is the case, then AE is to that extent well-supported, and that's bad for the materialist. If it can be shown that it's not plausibly the case, then AE is undermined, and the materialist escapes the modal argument.

One way to block the a priori inference from the complete list of basic facts to the M facts (call this " $B \rightarrow M$ ") is to just deny the Fregean semantics on which it's based. If there are no conceptual analyses of the sort Chalmers's semantics supports, then there can't be an a priori inference of the sort AE demands. After all, you need the analyses¹³ in order to establish the bridge principles from the vocabulary in which B is expressed to that in which M is expressed. But suppose we concede now, for the sake of argument, that such analyses exist. Can we still make it work?

Well, on Chalmers's semantic theory, how would such an inference go? He tells us quite explicitly in Chap. 7 of this volume (co-authored with Frank Jackson). In that article, Chalmers and Jackson make a strong case that if one were presented with a complete description of a world/scenario in terms of the relevant basic vocabulary, the vocabulary mandated by their semantic theory, then one would be in an epistemic position to determine the truth values of all of the M facts, such as whether or not there is water in the cup on the table. Whether one ought ultimately to accept their argument, and how much support it provides the semantic theory if we do accept it, I leave aside here. I want to see what follows if we accept both their argument and the semantic theory on which it is based. Does it yield commitment to AE?

The way their argument goes is as follows. They describe a complete scenario description as consisting of the conjunction PQTI (as defined above). Remember from Sect. 3 that the vocabulary employed in PQTI is precisely the semantically basic vocabulary in terms of which all other concepts are defined. Thus it makes perfect sense to ask, as a test of the semantic theory, whether M follows a priori from PQTI. They claim to show that it does (or, that it's highly plausible that it does, since there are unrealizable idealizations involved one can't literally provide the demonstration). Again, let's accept that claim.

So let's suppose, given the argument of Chap. 7, that " $PQTI \rightarrow M$ " is a priori. Does this confirm AE? Well, interestingly, it depends on who you ask: Chalmers or the materialist. For Chalmers, the property dualist, the Q facts are included among the metaphysically basic facts, and so therefore PQTI counts as fulfilling the requisite condition for counting as an instance of AE. AE says that from a complete list of the basic facts (and only that) all non-basic facts can be a priori derived. PQTI is such a complete (and minimal) list of the basic facts, and, by hypothesis, M is derivable from it.

But the materialist claims that the Q facts are not among the metaphysically basic facts. Rather, it is PTI that counts as the minimally complete list of basic facts from which M should be derived. Chalmers and Jackson don't claim to show that PTI alone a priori entails M. In fact, once you think about what would naturally be

¹³ Or the judgments embodied in the concept's epistemic intension, which comes to the same thing for our purposes; see note 6 above.

included in any specification of, say, a water role, it's hard to see how it could possibly perform its semantic function of determining reference at a world (considered, as they say, as actual) without including such information as how the stuff in question looks, feels, tastes, etc. In their argument, Chalmers and Jackson naturally place great emphasis on the role that a specification of the Q facts plays in supporting the inference from PQTI to M.

Where we've come to is this. That "PQTI \rightarrow M" is a priori confirms AE only if the Q facts are metaphysically basic facts. In the context of this discussion, I can think of only two ways to ground the claim that the Q facts are basic: first, through the modal argument itself, or second, through an inference from the fact that (as we are conceding for the moment) the Q concepts are semantically basic. As mentioned above, the first blatantly begs the question against the materialist, and the second lacks independent plausibility.

That the first way of supporting the claim that the Q facts are basic begs the question in the context of the current argument should be obvious. After all, the argument that the Q facts are basic is supposed to be the conclusion one reaches from both AE and the conceivability of zombies. So clearly you can't assume the Q facts are basic in order to establish AE. Materialists can maintain that only if one could show that "PTI \rightarrow M" is a priori would there be non-question-begging support for AE, since they do accept that PTI constitutes a complete set of basic facts. But this Chalmers and Jackson don't do, and, as mentioned above, it wouldn't really fit with their semantic theory to make this claim anyway.

Chalmers might reply that there is still something ad hoc about the materialist's position on AE.¹⁴ After all, the only place where there seems to be a bar to making the requisite bottom-up derivations is between PTI and Q. Once you include Q all the rest of the non-basic facts, the M facts, come along (a priori) for the ride. So doesn't this fact alone show that there is something suspicious here, and that maybe it's because the Q facts are really metaphysically basic after all?

But the materialist has a ready reply here. We're accepting that PQTI a priori entails M for the sake of argument, and this means also accepting Chalmers's semantic framework. But once we do this, we have a ready explanation for why Q plays the special role it does, and it doesn't involve its representing a domain of metaphysically basic fact. Rather, since the Q concepts are semantically basic, and are among those in terms of which all the concepts employed in M are defined, it's no wonder that Q is needed in order to provide a sufficiently rich description from which M can be derived a priori.

This leads directly to my second point. The materialist reply just described wouldn't work if there were good reason to infer from a concept's being semantically basic to the property it's a concept of being metaphysically basic. This is a substantive assumption that needs independent support, unless one just equivocates on "basic". On the semantic theory we've provisionally accepted, there is a stock of basic concepts (the ones used to construct scenario descriptions on the

¹⁴ This is my interpretation of his emphasis in Chap. 7 on the "special epistemic gap" between the physical facts and the phenomenal facts.

2D version) in terms of which all others are definable (modulo the rigidification necessary to accommodate a posteriori necessities). But is there in fact any independent reason for thinking, in general, that from the fact that a concept is basic, or primitive for a subject, that the property it represents is also metaphysically basic, that it stands for the properties that are part of the ultimate building blocks out of which the world is constructed? Sure, we use the term “basic” for both the semantic and the metaphysical, but I see no reason to think that the one sort of fundamentality should map neatly onto the other. In fact, it strikes me quite the contrary; it would be quite surprising if what are primitive concepts for us, given the metaphysical level at which our mind operates, would correspond to ultimate building blocks of nature. I’m not denying that it might turn out that way. I just claim that one can’t infer that the phenomenal facts are basic merely from the fact that phenomenal concepts are primitive. But without that link, support for AE, and thus the modal argument against materialism, collapses.

6 Conclusion

At the start I said that I’m increasingly inclined to accept some version of non-materialism. My reasoning is that it seems the best explanation of our epistemic position with regard to phenomenal experience. Thus I end up in a very similar place as the one Chalmers occupies, but it seems to me that I get there somewhat differently. Obviously, if I’m right that the best explanation of the explanatory gap (and other aspects of our epistemic situation with regard to phenomenal experience, which I can’t go into here), then there would be independent ground for thinking that the Q facts are basic, and then we would have reason again to accept AE.

However, while my argument in Sect. 5 granted, for the sake of argument, the semantic theory underlying Chalmers’s argument, I don’t in fact accept it, and therefore don’t accept AE. As the argument in Sect. 4 establishes, the semantic theory isn’t needed to avoid brute necessity, though there may be other reasons to adopt it. At any rate, if the route to AE comes by way of first establishing the fundamentality of phenomenal facts through an inference to the best explanation, then it turns out that the modal argument is not the terrain on which to fight the battle with materialism after all.

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