

BOOK REVIEWS

correct insofar as he thinks Humeanism is committed to *object transubstantiation*. If the *individual essences* of objects are constituted only by intrinsic categorical properties, and it is possible for their dispositional properties to change without accompanying changes in their intrinsic categorical properties, then it would be possible for a particular object to remain the very same object even if its dispositions to behave changed radically. It is not clear, however, that scientific essentialism *per se* is not also committed to *object transubstantiation*. Scientific essentialism would preclude object transubstantiation if the kinds instantiated by an object were part of the individual essence of the object; for instance, if being a member of the substance kind *human* were essential to the individual *Nixon*. But Ellis specifically denies this claim; he asserts that “individual essences would seem to have very little to do with kind essences” (238–39). So once *object transubstantiation* is distinguished from *kind transubstantiation*, it is not clear how embarrassed the Humean should be. Neither scientific essentialism nor Humeanism *per se* is committed to kind transubstantiation. And though Humeanism is committed to object transubstantiation, scientific essentialism *per se* does not preclude object transubstantiation.

LENNY CLAPP

Illinois Wesleyan University

Bibliography

Bigelow, John, and Pargetter, Robert. 1990. *Science and Necessity*. Cambridge: Cambridge University Press.

The Philosophical Review, Vol. 111, No. 4 (October 2002)

Joseph Levine, *Purple Haze: The Puzzle of Consciousness*. New York: Oxford University Press, 2001. Pp. 204.

This much-anticipated book is a detailed elaboration and defense of Levine’s influential claim that there is an “explanatory gap” between the mental (specifically, consciousness) and the physical.

Chapter 1 argues for materialism on the ground that it “is required if we are to make sense of the causal efficacy of the mental” (26). Chapter 2 replies to the conceivability argument against materialism, namely that “zombies” (creatures physically identical to conscious creatures but who lack consciousness) are conceivable, hence possible. The objection is not to the premise that zombies are conceivable, but rather to the inference to the conclusion that they are possible. Chapter 3 is the core of the book, making the case for the explanatory gap: although “we have excellent reasons for thinking” that materialism is true, “there is still an important sense in which we can’t really understand *how it could*

be true" (68). The case for the gap uses the undisputed premise from the conceivability argument, that zombies are conceivable (more on this in a moment). Chapter 4 argues that various attempts to bridge the gap (including higher-order thought theories and representationalism) don't work. Chapter 5 rejects a number of more-or-less eliminativist views about consciousness, including Dennett's and Rey's. The final chapter examines some arguments that zombies are not in fact conceivable—if sound, they would spoil the case for the gap. A short "coda" concludes: "I hope to have established that, at least with respect to traditional attempts to understand the place of conscious experience in the natural world, we really do continue to face a genuine puzzle. The mind-body problem is still a problem" (177).

Purple Haze is a thoughtful, insightful, and unrelentingly honest book that will inevitably be the topic of much discussion. This review concentrates, albeit much too briefly, on Levine's argument for the explanatory gap. Some background about rival views is needed first.

In David Chalmers's terminology, type-A materialists hold that the fact that such-and-such creature is conscious (is in pain, believes that snow is white, etc.) follows *a priori* from premises concerning the creature's physical state. Type-B materialists deny this. If we say (with Levine) that a proposition *p* is conceivable if and only if not-*p* is not *a priori*, then type-B materialists, unlike type-A materialists, hold that zombies are conceivable. (More exactly, they hold that the proposition that there is a creature that is ϕ but that is not conscious (where ' ϕ ' is replaced with a physically complete description of some actual conscious creature) is metaphysically impossible yet conceivable.) Type-B materialists, then, hold that a proposition *p* may be conceivable yet impossible. Levine makes a useful distinction between type-B theorists, the "exceptionalists" (or "E-type") and the "non-exceptionalists" or ("NE-type"). E-type theorists hold that certain propositions about experience constitute exceptions to the general rule that if *p* is conceivable then it is possible, such exceptions usually being traced to the special nature of "phenomenal concepts." NE-type theorists, of whom Levine is one, find exceptions across the board: "the *a priori* is quite thin, exhausted (almost) by whatever is formally necessary. ...The water facts are not *a priori* derivable from the microphysical facts, and thus zombie- H_2O [H_2O that isn't water, in a world microphysically exactly like the actual world] is conceptually possible" (54).

The E-type theorist can give the following account of the "explanatory gap." Suppose *p* is some fact necessitated by the facts expressible in the austere language of a complete fundamental physics (for example, that there is water, that there are conscious creatures). One important sort of explanation of *p* consists in an (*a priori*) derivation of *p* from the physical facts—such a derivation explains *p* in entirely physical terms, and removes any puzzlement about why *p* must obtain, given that the physical facts are thus-and-so. Second, facts about consciousness are unique, in that although they are necessitated by the physi-

cal facts, there is no such derivation. Therefore, unlike any other phenomenon, consciousness does not yield to this sort of explanation, and thus there is an explanatory gap between consciousness and the physical facts.

Levine rejects this account, because he thinks facts about consciousness are far from unique in not being derivable from the physical facts. So why is there an explanatory gap, on his view? The crucial third chapter first presents “the case in a fairly intuitive way”:

It seems to make sense that a creature could instantiate the same physiological states as me and yet have different qualia, or none at all. The fact that we cannot derive that a creature has qualia, or some particular quale, from the claim that it satisfies the realizing physical states is a manifestation of our not having an explanation of how these states realize qualia, or that quale. ... The conceivability of zombies is thus the principal manifestation of the explanatory gap. (79)

But, of course, this “intuitive way” has to be immediately qualified, because:

... zombie-H₂O [is] conceptually possible. If all the conceivability of zombies amounts to is the conceptual possibility of statements like [there is a creature that is ϕ but that is not conscious], then there doesn't seem to be a genuine contrast between the qualia case and the water case. After all, we can't derive the water facts from the physical facts either, and yet there isn't any explanatory gap here. So the conceivability of zombies must amount to something more than mere conceptual possibility. (80)

What more does it amount to? Levine's answer involves “two grades of conceivability” (87). *Thin* conceivability is what was previously simply called “conceivability.” So zombies and zombie-H₂O are (according to Levine) both thinly conceivable. However, the other grade of conceivability—*thick* conceivability—applies only to zombies. The idea may be illustrated by comparing the following two derivations:

1. There is H₂O
2. Water = H₂O
- Hence
3. There is water

- 1'. Something is in brain state B
- 2'. B = Quale R
- Hence
- 3'. Something has R (and so something is conscious)

(2) and (2') are “bridge principles”, premises that are expressed in a mixture of both austere physical vocabulary ('H₂O', 'B') and “higher-level” vocabulary ('water', 'R'). Neither (2) nor (2') is a priori, so these derivations are consistent with Levine's claim that both zombies and zombie-H₂O are thinly conceivable. However, according to Levine, there is an important difference between (2) and (2'). (2) is an identity that “stands in no need of further explanation itself” (65), in “sharp epistemic contrast” to “the case of an identity claim like ... R=B [i.e., (2')]. With the standard cases, once all the relevant empirical information

BOOK REVIEWS

is supplied, any request for explanation of the identities is quite unintelligible. ... In the case of [(2')], however, it still seems quite intelligible to wonder how it could be true, or what explains it, even after the relevant physical and functional facts are filled in" (81–82). And this is why zombies are *thickly* conceivable: a derivation from the physical facts to the conclusion that a creature has qualia will use a "gappy identity" like (2') as a premise. Zombie-H₂O, on the other hand, is not thickly conceivable, because the conclusion that there is water can be derived from the fact that there is H₂O and the "non-gappy" identity (2).

Levine's case for the gap, then, stands or falls with his claim that while "theoretical identities" in general do not need explanation, those identifying qualia with physical properties do. However, as Levine recognizes, his own arguments have left him with very little room to maneuver. Chapter 2 plausibly observes (with David Papineau and others) that theoretical identities do not have or need explanations, and notes that sometimes an apparent request for explanation is better construed as a request for evidence. If the point about explanation and identities is any good at all, it is hard to see how it might have exceptions.

Levine is of course aware that he needs to say more about why identities like (2) need explanation, and his answer is given in superficially varying terms throughout the book. Identities like (2) are gappy because: "the modes of presentation by which we come into cognitive content with qualia are substantive and determinate" (8); "there is real content to our idea of a quale" (84); "My idea of [R] ... has a substantial content that is present to me in a way that my idea of water is not" (151).

One might think that Levine is saying that our ideas of qualia have "substantial content" in the sense that they reveal the essence of qualia, but that would be a misinterpretation. On Levine's view, that's precisely what our ideas of qualia *don't* do, because he thinks that qualia have a physical essence, and our ideas of qualia certainly don't reveal *that*. As far as I can see, Levine does not sufficiently clarify the claim about "substantial content"; the main argument of the book is therefore hardly conclusive. But it is highly suggestive—and that is achievement enough.

ALEX BYRNE

Massachusetts Institute of Technology