

WHAT EXTERNALISTS SHOULD SAY ABOUT DRY EARTH*

Twin earths are counterfactual near-duplicates of earth. Externalism about mental content has come to be widely accepted on the basis of intuitions about twin earths. But there is one sort of twin earth, “dry earth,” that has been invoked in several arguments against externalism. Dry earth seems to its inhabitants (our intrinsic duplicates) just as earth seems to us, that is, it seems to them as though there are rivers and lakes and a clear, odorless liquid flowing from their faucets. But, in fact, this is an illusion; there is no such liquid anywhere on the planet.¹ There are a number of related objections to externalism concerning the nature of the concept that is expressed by the word ‘water’ in the mouths of the inhabitants of dry earth. I intend to answer two of them. The first, raised by Gabriel Segal, concerns the application conditions of this concept. The second, raised by Paul Boghossian, concerns the complexity of the concept.²

Externalism, as it is to be understood in what follows, is the thesis that (E1) for all natural kinds *K*, it is metaphysically impossible that *K* have instances that differ from actual instances of *K* with respect to their basic physical constitution, and (E2) one cannot possess natural-kind concepts or refer to natural kinds without having had causal interaction with instances of the relevant natural kind. A natural kind is to be understood throughout as a kind all of whose actual instances share a distinctive basic physical constitution. This statement of exter-

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¹ Please ignore various annoying features of this example, for instance, that there cannot truly be an intrinsic duplicate of one of us whose body contains no water.

² Boghossian’s argument appears in his “What the Externalist Can Know A Priori,” *Proceedings of the Aristotelian Society*, xcvi (1997): 161–75. Segal’s argument appears in his *A Slim Book about Narrow Content* (Cambridge: MIT, 2000). Here is one further dry-earth argument against externalism, also due to Segal (pp. 43–44). Even by externalist lights, concept possession presumably supervenes globally on the physical features of a world. Yet, as everything in the supervenience base on dry earth is duplicated on earth, it would follow (*pace* externalism) that we, on earth, must possess the very same concepts as the inhabitants of dry earth. Sarah Sawyer answers this objection in her “Sufficient Absences,” *Analysis*, LXIII (2003): 202–08.

nalism will be a bit strong for the tastes of many self-proclaimed “externalists,” but it will serve our present purposes: since, as we shall see, the arguments from dry earth fail to undermine even this crude version of externalism, they certainly fail to undermine the weaker versions of the thesis that self-proclaimed externalists would be willing to endorse.³

I. APPLICATION CONDITIONS AND DEFAULT CONDITIONALS

Before turning to Segal’s and Boghossian’s arguments, I shall make some general remarks about externalism and about what externalists are and are not antecedently committed to. This is because Segal and Boghossian each maintain that certain responses to their arguments from dry earth—responses that I wish to defend—constitute a departure from externalism. In particular, I shall be interested in what (if anything) externalists are committed to saying about cases in which what was believed to be a natural kind turns out not to be a natural kind at all.

Externalism is a thesis about natural kinds. We have excellent reasons for believing that water is uniformly composed of H_2O and is therefore a natural kind. If water indeed is uniformly composed of H_2O , then externalist thesis (E1) implies that it is metaphysically necessary that water contain H_2O . However, it might turn out that water is not uniformly composed of H_2O .⁴ Scientists might turn out to have been radically mistaken. Water might turn out to be uniformly composed of some other chemical substance, XYZ. In that case, (E1) implies that it is metaphysically necessary that water contain XYZ. Water might even turn out not to be a natural kind at all. Water might turn out to be jade-like, having one chemical composition in the northern hemisphere and another in the southern; water might turn out to be wildly disuniform, each body of water on the planet having its own unique chemical composition; or it may even turn out that

³ A more satisfactory statement of externalism would restrict (E2) to atomic natural-kind concepts and would allow interactions with one’s linguistic community to suffice (in a certain range of cases) for the acquisition of natural-kind concepts. Many self-proclaimed externalists will want to restrict (E1) as well (or, alternatively, the definition of ‘natural kind’) for, as it stands, (E1) has the absurd implication that if it turns out that all hats share some particular chemical composition, then it is impossible for there to have been hats made out of radically different material. Finally, some self-proclaimed externalists are interested in advocating only the austere thesis that individualism is false—that mental content does not supervene on the internal states of individuals—without advocating any particular account of where and why this supervenience failure occurs.

⁴ As is customary, I reserve the expression ‘it might turn out that’ for a familiar variety of epistemic possibility, one that is wholly compatible with metaphysical impossibility.

there never was any water to begin with, that we have been subject to a grand illusion at the hands of aliens or the government or what have you.

Should it turn out that in fact water is not a natural kind, (E1) implies nothing of interest about water, nor does (E2) for that matter. Externalists might nevertheless be interested in the application conditions of our concept water—that is, the extension of the concept in the actual world and in counterfactual scenarios—on the off chance that water turns out not to be a natural kind. But, since externalism itself renders no verdict on the application conditions of non-natural-kind concepts, how are externalists to settle the issue? I will suggest one way that externalists might go about it, which fits nicely with the standard externalist practice of consulting intuitions about twin earths.

(Actually, it is not crucial, for the purposes of the paper, that one take intuition to be the means by which we settle these issues. Some externalists may believe that it is by some other cognitive faculty or process that we determine the application conditions of the concept water. Ned Block and Robert Stalnaker, for instance, contend that, if it turns out that we are wrong about the actual composition of the water-like samples on earth, then the application conditions of the concept water are to be settled on the basis of a “decision that will be driven by empirical and theoretical considerations.”⁵ I have my doubts about whether anything other than intuition—least of all the results of a decision-driven process—can serve as *evidence* in favor of a particular specification of the application conditions of the concept water under alternative empirical suppositions. For the purposes of the paper, however, those externalists who do not think that intuition can play the requisite evidential role may substitute their preferred epistemic resources throughout.)

Let us remind ourselves how externalism was established in the first place. Having presupposed that all of the water on earth is uniformly composed of H₂O, most people have the intuition that a superficially water-like substance on a twin earth that contains no H₂O, but rather is uniformly made up of XYZ molecules, is not water. Externalists call upon this intuition as evidence that water necessarily contains H₂O and, furthermore, that the inhabitants of this twin earth—even though they are our duplicates in all intrinsic respects—do not share our concept water, have no beliefs about water, and use a word ‘water’

⁵ “Conceptual Analysis, Dualism, and the Explanatory Gap,” *Philosophical Review*, cviii (1999): 1–46, at p. 21. Cf. Laura Schroeter, “Against A Priori Reductions,” forthcoming.

that differs in meaning from our word 'water'. Finally, the best explanation for these differences appears to be that the inhabitants of this twin earth have had no causal interaction with water. It is in this way that externalists have determined the application conditions and acquisition conditions of the concept water, given the knowledge that water is uniformly composed of H_2O . Externalist theses (E1) and (E2) may then be obtained by generalizing upon these results.

Externalists may, in just the same way, determine what the application conditions of our concept water are, should it turn out that we are wrong about the actual composition of water. This can be done by suspending the supposition that the samples of water on earth are all H_2O and, instead, consulting one's intuitions about the relevant twin earths on alternative empirical suppositions. Many will already be familiar with this kind of procedure, having at some point humored a two-dimensionalist by "considering a world as actual."⁶ To see that water must be composed of XYZ if the water on earth turns out to be uniformly composed of XYZ, one need only consult one's intuitions about a twin earth on which the water-like samples are composed of something other than XYZ on the empirical supposition that the water on earth is all XYZ. On such a supposition, one has the intuition that samples of H_2O on this twin earth are not samples of water. That our intuitions fluctuate as we vary our suppositions concerning actual empirical facts should come as no surprise. Similarly, in order to determine the application conditions of the concept water on the off chance that water is compositionally highly disuniform, one consults one's intuitions about whether the XYZ on a twin earth is water on the supposition that (actually) each ocean, river, and lake on the planet has a distinct chemical composition: the Pacific Ocean is H_2O , the Atlantic is OPQ, the Mississippi River is RST, and so forth. Intuitively, the XYZ on a twin earth would be water if in fact water has a highly disuniform composition.⁷ This suggests that anything superficially water-like would count as water given that water is highly disuniform.

⁶ That said, one need not accept two-dimensionalism in order to accept all of what I have to say in this paper. One need not accept that these facts about the application conditions of the concept water are somehow parts or "aspects" of the concept water or of what is said in discourse about water. Nor need one accept that these facts about the application conditions of the concept water play any interesting role in determining what is conversationally asserted in discourse about water. One might, if one so chooses, represent some of the observations in the text on a two-dimensional grid—but that does not suffice to make this a two-dimensionalist theory.

⁷ I have no intention of "intuition-mongering" here or anywhere else in the paper. Some may not share this intuition (though I have found it to be very widely shared) and may believe that the concept water is necessarily vacuous if it turns out that actual water-

These intuitions may be systematized to obtain a series of “default conditionals,” which govern the semantics of the word ‘water’.⁸ For instance,

- (i) If water turns out to be compositionally uniform, then ‘water’ expresses a concept that applies to all and only samples of that compositional kind with respect to all counterfactual situations.
- (ii) If water turns out to have a highly disuniform composition, then ‘water’ expresses a concept that applies to all and only samples of superficially water-like kinds with respect to all counterfactual situations.⁹

One might expand this list by considering other ways in which we might turn out to be wrong about the constitution of water and consulting our intuitions about the relevant twin earths on the relevant empirical suppositions. For instance, one might suppose that water, like jade, divides into two natural kinds; or one might suppose that, despite appearances, there in fact is no water on earth, that it is all an illusion.

Of particular interest for what follows will be this last default conditional for the off chance that (despite appearances) there turns out to be no water on earth. As before, the content of this default conditional is to be identified by consulting our intuitions about the relevant hypothetical twin earth on the relevant empirical supposition. On the supposition that (despite appearances) there is no water on earth, consider a twin earth on which the clear, odorless, potable, ... liquid has some arbitrary chemical composition, XYZ. For purposes of illustration, let us suppose that that our intuition is that

like samples are compositionally disuniform. There is no need to convince them otherwise, since my main point in the present section is that no particular answer is either entailed by, or inconsistent with, externalism.

⁸ George Bealer discusses default conditionals in his “A Theory of Concepts and Concept Possession,” in Enrique Villanueva, ed., *Concepts* (Atascadero, CA: Ridgeview, 1998), pp. 261–301, at pp. 294–95, and his “Modal Epistemology and the Rationalist Renaissance,” in Tamar Szabó Gendler and John Hawthorne, eds., *Conceivability and Possibility* (New York: Oxford, 2002), pp. 71–125, at pp. 108–10. David Chalmers and Frank Jackson discuss such conditionals (under the heading “application conditionals”) in their “Conceptual Analysis and Reductive Explanation,” *Philosophical Review*, cx (2001): 315–60, at p. 325f.

⁹ These default conditionals may need to be modified in light of further intuitions concerning, for example, whether H₂O in the form of ice or a black tar would be water on the relevant suppositions. By design, the resultant default conditionals would exactly track our intuitions (indeterminacies allowed) as we tailor the default conditionals to accommodate more and more detailed and complex variations on the familiar twin-earth scenario.

this liquid *is* water.¹⁰ Then we have reason to accept the following further default conditional:

- (iii) If in fact there is no water, then ‘water’ expresses a concept that applies, with respect to all counterfactual situations, to all and only samples with the superficial features that water was believed to have.

Some externalists (either on the basis of their intuitions, or despite their intuitions) may disagree, maintaining that if there is no water, then ‘water’ expresses a necessarily vacuous concept. I address this concern in the following section.

Is the conjunction of (i), (ii), and (iii) in any way at odds with externalism? If it is, I cannot see how. Externalist thesis (E1) requires that if water is a natural kind, then all counterfactual samples of water must share its chemical composition. Default conditional (i), by itself, ensures that this condition is satisfied; and (E1) has no bearing whatsoever on (ii) and (iii), since these concern only what would be the case if water turns out *not* to be a natural kind. Externalist thesis (E2) requires that if water is a natural kind, then one must interact with water in order to acquire the concept water or to refer to water. This is consistent with (though not entailed by) default conditional (i) and, like (E1), is entirely irrelevant to (ii) and (iii).¹¹

Is there any way of filling in the default conditionals that would be at odds with externalism? Yes. If the consequent of default conditional (i) were to say that ‘water’ expresses a concept that applies to all and only superficially water-like kinds with respect to all counterfactual situations, this would run afoul of (E1). But it is difficult to see how any particular way of filling in the consequents of default conditionals (ii) or (iii) could be in conflict with externalism—or, for that matter, could even be more or less true to the “spirit” of externalism. These default conditionals can only be more or less true to our intuitions about twin earths. Externalism is a thesis about natural kinds and commits one to a substantive thesis about water in particular only if water turns out to be a natural kind.

¹⁰ This, for what it is worth, is my intuition about the case. Even if it turns out that there is no water, surely there at least could have been. For suppose that there is no water on earth; that our hallucination were to wane; and that, years later, a liquid with all of the superficial features that we took water to have were to start raining down on earth. Would it be water? Would the word ‘water’ apply to this rain when we exclaim: “For the first time in history, there is real water in my tub”? Surely it would.

¹¹ Cf. Brian McLaughlin and Michael Tye, “Externalism, Twin Earth, and Self-Knowledge,” in Barry C. Smith and Cynthia Macdonald, eds., *Knowing Our Own Minds: Essays on Self-Knowledge* (New York: Oxford, 1998), pp. 285–320, at p. 305.

It may be helpful to think of these default conditionals as semantic (or perhaps “metasemantic”) principles that reflect our tacit semantic intentions with regard to the content of our word ‘water’.¹² There is a sense in which our semantic intentions determine which concept is expressed by our word ‘water’: they ensure that it expresses a concept that applies only to H₂O if water is actually H₂O, a concept that applies to anything water-like if water turns out to be highly disuniform, and so forth. But there is another sense in which our semantic intentions do not, by themselves, determine the content of ‘water’. They leave it up to the environment to determine which of the default conditionals is the operative default conditional, that is, which has its antecedent satisfied. This is what makes the indicated default-conditional profile for ‘water’ a characteristically externalist profile. An internalist profile would not allow environmental variations to affect the content of ‘water’; the consequent of each default conditional in its profile would be exactly the same, regardless of the antecedents.

These points generalize. For each kind term, there is a default conditional truth that specifies the nature of the concept that is expressed by the term if it turns out that the term fails to denote. In each case, the content of this default conditional is determined by our semantic intentions, and in each case its content can be discovered by means of a priori reflection. These default conditionals for the vacuous case may, in principle, differ fundamentally from one kind term to the next—but, evidently, there is no way that those default conditionals can turn out so as to be inconsistent with externalism, either in letter or spirit.

II. SEGAL’S DILEMMA

We are now in a position to see how an externalist might respond to Segal’s argument from dry earth. Segal argues that the externalist can provide no plausible account of the application conditions of the concept expressed by the Dry English word ‘water’ (hereafter: the concept *dwater*). The argument takes the form of a dilemma: the concept *dwater* either has motley application conditions—where a concept has motley application conditions just in case it applies, actually and counterfactually, to substances on the basis of their exemplifying some special cluster of superficial properties—or else the

¹²The particular default conditionals mentioned in the text evidently cannot themselves serve as content-fixing intentions, since the word ‘water’ (whose semantic properties are to be fixed by these intentions) appears in the conditionals. But closely related conditionals can do the job, where ‘water’ is replaced by some expression along the lines of ‘these samples’ or ‘clear, odorless, potable, . . . liquid’.

concept is necessarily vacuous (*op. cit.*, pp. 54–56).¹³ Segal argues that neither horn is available to the externalist. I will consider each in turn.

First Horn. On the first horn of Segal's dilemma, the externalist contends that the concept *dwater* has motley application conditions. This is the verdict that, according to Segal, accords with our intuitions about the concept *dwater* (*op. cit.*, p. 55). But he maintains that externalists cannot occupy this horn of the dilemma, for the following reason:

The trouble is that it would be ad hoc for an externalist to allow this. It is the [second horn] that conservatively extends the normal externalist line on nonempty concepts to empty ones (*op. cit.*, p. 55).

Segal claims that a conservative extension of “the normal externalist line on nonempty concepts” must take the concept *dwater* to be necessarily vacuous. The trouble with Segal's objection is that there is no normal externalist line on nonempty concepts. While there is a normal externalist line on natural-kind concepts, externalism is silent with regard to non-natural-kind concepts. Externalists, for instance, are free to hold that such non-natural-kind concepts as food and shelter are motley concepts, which intrinsic duplicates cannot fail to share. Surely Segal does not expect externalists to extend the normal externalist line on natural-kind concepts to *all* non-natural-kind concepts. Empty concepts are themselves non-natural-kind concepts. Natural kinds, recall, are kinds, all of whose actual instances share some distinctive basic physical constitution; so empty concepts trivially fail to qualify as natural-kind concepts. Segal's insistence on a conservative extension of the normal externalist line on natural-kind concepts to all empty concepts seems no more compulsory than an extension of the normal externalist line on natural-kind concepts to all nonempty concepts.

(Notice also that, just as there is no single “externalist line” on nonempty concepts, there need be no unified treatment of empty concepts either. Many externalists have the intuition that it is metaphysically impossible that there be unicorns (given that there are none) and conclude, reasonably enough, that the concept unicorn is necessarily vacuous. But it is not a *consequence* of externalism that this

¹³ These options do not exhaust the possible responses open to the externalist, but it is unlikely that he will opt for an alternative answer. For instance, the response that the concept *dwater* necessarily applies only to things of some one natural kind not only lacks *prima facie* plausibility but also evidently runs afoul of externalist thesis (E2). Externalists can, perhaps, respond that it is indeterminate whether the dry earth concept has motley or nonmotley application conditions. I shall not pursue this line of response here.

concept is necessarily vacuous, nor that any other concept with an empty extension is necessarily vacuous. Furthermore, the intuition that it is impossible that there be unicorns gives one little reason to believe that it is impossible that there be (say) hoverboards, particularly if one additionally has the intuition that it is possible that hoverboards exist.¹⁴ There is no more reason for externalists to treat all empty concepts as nonmotley than there is to treat all nonempty concepts as nonmotley. Nothing internal to externalism prevents externalists from honoring all of our intuitions about the application conditions of empty concepts, case by case.)

Those sympathetic with Segal may still feel uneasy about the disparate treatment of the concept water and the concept dwater, and they may contend that it is ad hoc for externalists to hold that the concept dwater has motley application conditions while maintaining that the concept water has nonmotley application conditions. We have seen that the “normal externalist line” does not require one to deny that the concept dwater is motley; but what reason can the externalist have for *affirming* that the concept is motley? I shall show that this horn can be independently motivated on the basis of the intuition that ‘water’ expresses a motley concept if (despite appearances) there is no water. Not everyone shares this intuition, and I address this intuitional conflict below in my discussion of the second horn of Segal’s dilemma. For now, let us suppose that the intuitional conflict is settled in Segal’s favor, that is, in favor of the claim that ‘water’ expresses a motley concept if there is no water. As we shall see, Segal’s argument fails no matter how the intuitional conflict is resolved.

Recall that the inhabitants of dry earth are our intrinsic duplicates. Since water is a natural kind, and since there is no water on dry earth, externalist thesis (E2) entails that the inhabitants of dry earth do not have the concept water and, accordingly, do not have any beliefs or other mental states about water. But they do nevertheless have counterparts of these mental states. We believe that water is a liquid, and they believe that dwater is a liquid. When one of us is thinking that water is compositionally uniform, his duplicate on dry earth is having the thought that dwater is compositionally uniform. The same holds for our default-conditional beliefs and intuitions. We believe and intuit that if water is compositionally uniform then the concept expressed by our word ‘water’ necessarily applies only to substances

¹⁴Notice that Kripke’s reasons for denying that there could have been unicorns (*Naming and Necessity* (Cambridge: Harvard, 1980), at pp. 156–58) seem not to extend to fictional artifactual kinds.

that have that composition. Our dry-earth counterparts believe and intuit the counterpart of this default conditional: that if dwater is compositionally uniform then the concept expressed by the (Dry English) word 'water' necessarily applies only to substances that have that composition.

Finally, since they are our intrinsic duplicates, they will believe the counterpart of default conditional (iii) as well. They will believe that if (despite appearances) there is no dwater, then anything with the superficial qualities that they took dwater to have would be dwater. They would have the intuition that, if (despite appearances) there is no dwater, then the XYZ on a twin earth would be dwater. This all points toward their having a tacit semantic intention that their word 'water' behave in this way. And since there indeed is no dwater on dry earth, we would then have good reason to believe that their word 'water' does express a motley concept—for there is no reason to think that their semantic intentions are any less efficacious than our own.

Second Horn. On the second horn, the externalist contends that the concept dwater is necessarily vacuous.¹⁵ Segal claims that this response is "plainly counterintuitive" (*op. cit.*, p. 55). (He adds that "[a]lthough there are no ghosts, there might have been." But, as we have seen, the concession that some empty concepts are unsatisfiable does not require the externalist to hold that all empty concepts (for example, hoverboard) are unsatisfiable. So Segal's observation that there could have been ghosts has no immediate bearing on the application conditions of the concept dwater.) There are two ways in which externalists might respond to the charge that this is counterintuitive.

First, externalists might concede that, intuitively, the concept dwater is satisfiable, but deny the evidential force of intuitions that tell against the necessary vacuity of this concept. This strategy threatens to leave externalists in a dialectically unstable position, since the whole of their evidence for externalism comes from twin-earth intuitions of just this sort. Those externalists who take intuition seriously are therefore best advised not to pursue this line of response. However, those externalists who hold that there is something other than intuitions that can justify our beliefs about twin earth will not be moved by this worry. Nor will those who accept a cost-benefit

¹⁵ See, for instance, Tom Stoneham, "Boghossian on Empty Natural Kind Concepts," *Proceedings of the Aristotelian Society*, xcix (1999): 119–22, and Sanford Goldberg, "An Anti-Individualist Semantics for Empty Natural Kind Terms," *Grazer Philosophische Studien*, lxx (2006): 55–76.

methodology on which one who relies evidentially on intuition is entitled to ignore those intuitions that tell against one's view so long as the theoretical payoffs of the view are sufficiently high.

Second, externalists might respond that, intuitively, the concept dwater is necessarily vacuous. They might contend that, intuitively, if (despite appearances) there is no water on earth, then a sample of XYZ on a twin earth would not be water. And they can then exploit the same reasoning I used above to argue that the inhabitants of dry earth intend for their word 'water' to express a necessarily vacuous concept should it turn out that in fact there is no clear, odorless, potable, ... liquid anywhere on their planet. They might insist that Segal simply has aberrant intuitions. Such *prima facie* intuitional conflicts are old hat to externalists. Saul Kripke showed how, in related cases, intuitional conflicts may be explained away as confusions of a certain sort. But, until the externalist produces a satisfactory rephrasal strategy (or some other account of intuitional error) that successfully deflates the competing intuitions, he remains in a stalemate with Segal, whose intuition is that the dry-earth concept applies to all water-like substances.¹⁶

I wish to take no stand on the outcome of the stalemate, except to announce my optimism that it can be resolved. If the stalemate is resolved in favor of the intuition that the concept dwater is necessarily vacuous, then there is a straightforward answer to Segal's dilemma, for Segal's only objection to adopting the second horn of the dilemma is that it is counterintuitive. If, on the other hand, the stalemate is resolved in favor of the intuition that the concept has motley application conditions, then (as we saw above) this intuition can be used to establish that the inhabitants of dry earth intend for their word 'water' to express a motley concept given their circumstances, which provides the externalist with the leverage to answer Segal's argument against adopting the first horn of the dilemma. Very little rides on just whose intuitions turn out to be correct; either way, Segal's dilemma fails.

III. BOGHOSSIAN'S DILEMMA

We come now to Boghossian's dry-earth argument against externalism. The concept dwater must either be atomic or complex; but, argues Boghossian, neither option is open to the externalist. I will again examine both horns of the dilemma and argue that there is

¹⁶ See George Bealer, "The Origins of Modal Error," *Dialectica*, LVIII (2004): 11–42, at pp. 23–31, and my "Law Necessitarianism and the Importance of Being Intuitive," *Philosophical Quarterly*, LV (2005): 649–57, at pp. 654–55 for discussion of the constraints on satisfactory rephrasal strategies.

nothing, in principle, to prevent the externalist from occupying the horn of his choice.

First Horn. Externalists who have the intuition that ‘water’ expresses a complex concept if (despite appearances) it turns out that there is no water on earth may opt for the “compound option,” according to which the concept water is an atomic concept while the concept dwater is complex. Here is Boghossian’s argument that externalists cannot accept the compound option:

The compound option requires the externalist to say that one and the same word, with one and the same functional role, may express an atomic concept under one set of external circumstances and a compound decompositional concept under another set of external circumstances.... But it is hard to see how the *compositionality* of a concept could be a function of its external circumstances in this way. Compositionality, as I understand it, can only be a function of the internal syntax of a concept; it can’t supervene on external circumstances in the way that the compound proposal would require (*op. cit.*, pp. 172–73).

This “internal syntax” presumably is meant to be something that is duplicated in intrinsic duplicates (for example, some neurophysiological feature). So we may understand Boghossian as rejecting the compound option on the grounds that it violates the principle that the compositionality of one’s concepts supervenes on one’s intrinsic properties—that is, necessarily, if two individuals share all of their intrinsic properties, then the concept that the first employs at some time *t* is atomic (complex) iff the concept that the second employs at *t* is atomic (complex).

Boghossian’s supervenience principle should not be confused with the more familiar internalist supervenience principle that the content of one’s mental states supervenes on one’s intrinsic properties. Like this more familiar supervenience principle, Boghossian’s supervenience principle enjoys a high degree of initial plausibility. Also like this more familiar principle, Boghossian’s supervenience principle appears to be open to counterexamples. I will give two.

The first counterexample is a variant of Tyler Burge’s famous arthritis example.¹⁷ The concept H₂O is a complex concept.¹⁸ Suppose that Oscar acquires the word ‘H₂O’, understanding that it is a name for water, but without realizing its complexity (hearing it, perhaps, as

¹⁷ I owe this example to Derek Ball. For Burge’s original arthritis example, see his “Individualism and the Mental,” *Midwest Studies in Philosophy*, iv (1979): 73–121, at pp. 77–79.

¹⁸ Specifically, it is the complex concept of being dihydrogen monoxide.

“aichtuwo”). For the very same reasons that led us to conclude that Burge’s arthritis-man has (but misunderstands) the concept arthritis, as opposed to having an idiosyncratic concept, we ought to conclude that Oscar nonetheless shares our (complex) concept H_2O . Twoscar—Oscar’s intrinsic duplicate—is a member of a very different linguistic community in which ‘ H_2O ’ expresses an atomic concept: the experts, let us suppose, do not treat the ‘H’, ‘2’, and ‘O’ as individually meaningful.¹⁹ So, although they are intrinsic duplicates, ‘ H_2O ’ expresses a complex concept in Oscar’s mouth and an atomic concept in the mouth of his duplicate. Hence, the complexity of one’s concepts does not supervene on one’s intrinsic properties alone.²⁰ One might object that this begs the question against Boghossian, since he would reject the social externalism that I take for granted in setting out the counterexample. But that is a mistake: this counterexample is no less dialectically appropriate than Burge’s own counterexamples to individualism about mental content.

Here is the second counterexample. Suppose that my duplicate and I each introduce a word ‘*F*’ with the following stipulation: Let ‘*F*’ express the atomic concept *two* iff there are aliens and the complex concept *the even prime* iff there are no aliens. In the actual world (let us suppose) there are aliens. My duplicate inhabits a world otherwise identical to the actual world except that there are no aliens. It would be a mistake to think that we now express one and the same concept when we say ‘*F*’—to think, for instance, that we both express the concept *two iff there are aliens and the even prime iff there are not*. On the contrary, the nature of the stipulation guarantees that different concepts are expressed: ‘*F*’ expresses the atomic concept *two* in my mouth and the complex concept *the even prime* in the mouth of my duplicate. Hence, the complexity of one’s concepts does not supervene on one’s intrinsic properties alone.²¹

¹⁹ We may suppose that the experts in Twoscar’s world have not yet discovered the periodic table and do not have a systematic nomenclature for chemical kinds. They introduce words like ‘ H_2O ’ to sound smart.

²⁰ Boghossian can (but presumably will not, given what he says about external circumstances) avoid the counterexample by abandoning the original supervenience principle and reverting to a weaker principle according to which individuals cannot differ with regard to the complexity of their concepts without some difference with regard to their intrinsic states *or* with regard to their respective linguistic communities. The compound option also runs afoul of this global supervenience principle, to which the Oscar case cannot serve as a counterexample. The second counterexample, however, is designed to refute both the local and the global version of the supervenience principle (for we can suppose that the entire community is present for the indicated baptism).

²¹ This counterexample, like the first, crucially involves individuals who evidently do not fully understand the concepts that they employ. Both counterexamples can

The kind of content-fixing stipulation at work in this counterexample might raise some eyebrows, even among externalists.²² But if Kripke is right that I can successfully fix the semantic properties of a name for some unfamiliar mineral simply by saying “Let ‘*G*’ refer to stuff like this,” I should likewise be able to fix its semantic properties with a more explicit baptism: “If this stuff is all SiO_2 then let ‘*G*’ express a concept that applies only to SiO_2 , and if this stuff is all Fe_2O_3 then let ‘*G*’ express a concept that applies only to Fe_2O_3 , and if ...” I see no reason for taking the baptism of *F* to be any less legitimate than this explicit baptism of *G*—if anything, the former is more secure, for more is known about the nature of *F* at the time of the baptism than about the nature of *G*.

The failure of this supervenience principle opens the door for the externalist to defend the compound option in much the same way that the first horn of Segal’s dilemma was defended above. Just as an externalist is free to hold that it is built right into the default conditionals that external conditions are able to affect whether a motley or nonmotley concept is expressed, an externalist may likewise hold that the default conditionals encode different conceptual complexities on different empirical suppositions: if it turns out that water is compositionally uniform then ‘water’ expresses an atomic concept, whereas if it turns out that there is no water then ‘water’ expresses a complex concept. If this is right then, by exploiting the reasoning employed in section II, he can establish that the semantic intentions of the inhabitants of dry earth guarantee that their word

therefore be blocked by restricting the original supervenience principle to concepts that are fully understood by the individuals in question: for intrinsic duplicates *A* and *B*, if *A* fully understands *c* and *B* fully understands the counterpart concept *c'*, then *c* is atomic iff *c'* is atomic. But the compound option does not run afoul of this new principle. For suppose that the compound option is correct, and suppose (as seems plausible) that one cannot fully understand a concept unless one knows, or is in a position to know, its complexity. Since we know that water has a uniform chemical composition, we are in a position to know that the concept water is atomic. We fully understand our concept water. But our duplicates on dry earth are not in a position to know that their concept *dwater* is complex, for they are under the mistaken impression that *dwater* is a natural kind. So they do not fully understand their concept *dwater*. Since they do not fully understand the concept, the compound option is consistent with the revised supervenience principle.

²² See, for instance, Scott Soames, *Philosophical Analysis in the Twentieth Century*, Volume 2 (Princeton: University Press, 2003), at pp. 410–13. There are many moving parts in Soames’s argument, and a proper discussion would take us too far afield. See Robin Jeshion, “Soames on Descriptive Reference-Fixing,” *Philosophical Issues*, xvi (2006): 120–40, for a critical discussion of Soames’s argument.

'water' expresses a complex concept should it turn out that there is no dwater.

I suspect that externalists will prefer the second horn for, among other things, many externalists (myself included) lack the intuition that 'water' expresses a complex concept if there is no water, in which case there is no independent reason to accept the compound option. But as far as I can see, the compound option has not been refuted.

Second Horn. On the second horn, the externalist maintains that the concept dwater is an atomic concept. Boghossian argues that the atomic option is unavailable to externalists because externalists lack the resources to say *which* atomic concept is expressed by the Dry English word 'water'. According to Boghossian, externalists cannot supply satisfactory answers the following two questions: (1) "What are the satisfaction conditions for 'water' on Dry Earth, to what sorts of liquid does it apply?" and (2) "What proposition...is expressed by sentences of the form 'Water is wet'... as uttered on Dry Earth?" (*op. cit.*, p. 173). But these questions can be answered.

Concerning the first question, externalism is silent with regard to the satisfaction conditions (that is, application conditions) of non-natural-kind concepts—so externalists may, consistently with externalism, say either that the concept dwater has motley satisfaction conditions or, alternatively, that it is necessarily vacuous.²³ Concerning the second question, the proposition expressed by the Dry English sentence 'Water is wet' is the proposition that dwater is wet. Finally, following Boghossian in taking propositions to be "composed of" the referents of the terms that occur in sentences that express them, the proposition that dwater is wet is "composed of" the property of being dwater, the property of being wet, and the instantiation relation.²⁴

Why was the externalist supposed to be unable to answer these questions? Boghossian claims that externalists have "an overriding commitment to individuating a concept in terms of its referent" (*op. cit.*, p. 173), from which it is supposed to follow that "[s]ince there is no natural kind at the end of the relevant causal chain leading up to uses of 'water' on Dry Earth, there is no fact of the matter what the referent of 'water' is" (*op. cit.*, p. 174). But externalists need not—and, as far as I know, do not—accept that concepts are all individuated in

²³ The concept dwater, if it is an atomic concept, may nevertheless be intensionally equivalent to the complex concept of being a clear, odorless, potable, ... liquid. Intensional equivalence plainly does not suffice for sameness of complexity: the atomic concept water, after all, is intensionally equivalent to the complex concept of being the actual clear, odorless, potable, ... liquid.

²⁴ See McLaughlin and Tye (pp. 308–09) for further development of this line of response.

terms of their referents. As I have stressed throughout, externalism is silent with regard to non-natural-kind concepts, such as jade, food, and dwater. It is thus open to the externalist to hold that non-natural-kind concepts, and in particular empty concepts, are individuated in some entirely different way from natural-kind concepts.

IV. APPLICATIONS

Privileged Access. One immediate result of my treatment of dry earth is that it blocks Boghossian's argument that externalism is incompatible with privileged access. The argument runs as follows: If externalism is correct then, if there is no water (that is, if earth is dry earth), then one cannot have the concept water, for it can be neither an atomic concept nor a nonatomic concept. So externalists must hold that it can be known a priori that, if one has the concept water, then water exists. Since one can know by introspection alone that one has the concept water, it follows that one can come to know that water exists by means of introspection and a priori reflection alone. But this cannot be known by means of introspection and a priori reflection alone. So externalists must deny that one can know by introspection alone whether one has the concept water.²⁵

I have shown that Boghossian's argument fails: it is open to externalists to hold that one can possess the concept water even if there turns out not to be any water. Consequently, one cannot rule out the possibility that there is no water given only the introspective knowledge that one has the concept water. The argument for the incompatibility of externalism and privileged access can therefore be blocked. This is not a new solution to Boghossian's incompatibility argument—Brian McLaughlin and Michael Tye (*op. cit.*) and Sanford Goldberg (*op. cit.*) have argued that externalists are free to hold that the Dry English word 'water' expresses an atomic concept. My contribution has been to show that this account of the complexity of the concept is not mandatory (nor for that matter is any particular account of the application conditions of the concept) and to show how our semantic intentions and the default conditionals that encode them might underwrite various externalist accounts of the application conditions and complexity of this concept.

There is, however, a related thesis that externalists are committed to denying, if they are to accept the default conditionals specified in section 1. For, in that case, one is not always in a position to know,

²⁵ Some externalists may be willing to bite the bullet here and deny that one can know by introspection alone whether one has the concept water; see, for example, Andrew Cullison, "Privileged Access, Externalism, and Ways of Believing," *Philosophical Studies*, forthcoming.

solely on the basis of introspection and a priori reflection, whether a given concept has motley or nonmotley application conditions. Whether one is employing a motley or nonmotley concept will depend, in part, upon whether the kind in question is a natural kind, which is an empirical matter. Likewise, if one opts for the first horn of Boghossian's dilemma, then one will have to abandon the thesis that one is always in a position to know, solely on the basis of introspection and a priori reflection, whether a given concept is atomic or complex. Abandoning these particular privileged access theses is, however, entirely compatible with retaining the most basic privileged access thesis that, for all concepts c (and thoughts that p) if one has concept c (or thinks that p), then one can know that one has concept c (thinks that p) on the basis of introspection alone. And externalists have long ago abandoned the thought that all of a concept's properties (for example, its application conditions) can be known solely on a priori and introspective grounds.

Language of Thought. Proponents of the Language of Thought hypothesis hold that concepts are symbols in a mental language. They standardly also accept the auxiliary thesis that facts about the (syntactic) complexity of the symbols that one tokens supervene on physical features of those tokens—features that do not vary across intrinsic duplicates. In section III, I presented two arguments that intrinsic duplicates can differ with respect to the complexity of the concepts that they employ. If either of those arguments is successful, then proponents of the Language of Thought hypothesis must abandon this auxiliary, individualistic assumption.

Empty Names. Peter Ludlow has recently defended a mixed theory of names on which ordinary proper names refer directly while fictional names have descriptive content.²⁶ This view promises to secure all of the advantages of both the Millian treatment of ordinary proper names and the Russellian treatment of empty names. Perhaps the familiar Kripkean arguments against descriptivism can be adapted to show that fictional names lack descriptive content and that the mixed view is therefore untenable.²⁷ But there are various other arguments against the mixed view that can be answered in light of the points raised above about the semantics of natural-kind terms.

²⁶ See his "Externalism, Logical Form, and Linguistic Intentions," in Alex Barber, ed., *The Epistemology of Language* (New York: Oxford, 2003), pp. 399–414, on pp. 404–09.

²⁷ It does not seem possible to Gödel-Schmidt Santa Claus. The modal arguments, however, appear to retain much of their force. For further criticism of the mixed view, see Marga Reimer, "A 'Meinongian' Solution to a Millian Problem," *American Philosophical Quarterly*, xxxviii (2001): 233–48, and David Braun, "Empty Names," *Nous*, xxviii (1993): 449–69.

First, one might object to the mixed view on the grounds that it permits intrinsic duplicates to differ with respect to the complexity of their concepts. For instance, I have a duplicate in a world in which (unbeknownst to him) the counterparts of our Sherlock Holmes stories document the activities of a real individual. Accordingly, on the mixed view, my name 'Sherlock Holmes' has a descriptive sense while my duplicate's sound-alike name refers directly. The counterexamples to Boghossian's supervenience principle in section III can be adapted to provide independent support for the possibility of this kind of divergence. For instance, 'Princess Diana' is a partially descriptive name; even direct reference theorists will agree that it is semantically associated with a descriptive property.²⁸ I have a duplicate in a world in which Diana's counterpart is not a princess, but in which she adopts the name 'Princess Diana' as a stage name (like 'Queen Latifah'). My duplicate, like myself, wields his term 'Princess Diana' deferentially; and since, by Millian lights, 'Princess Diana' lacks descriptive content in the mouths of those to whom he defers, it lacks descriptive content in his own mouth as well. So, despite being intrinsic duplicates, it is not the case that his terms have descriptive content just in case mine do.

Second, one might object to the mixed view on the grounds that it provides a disuniform account of the semantics of names. But, as we saw in the case of natural-kind terms, even when our semantic intentions underwrite disuniformities in the application conditions or complexities of the associated concepts, uniformity reemerges at the level of the default conditionals. Suppose, for instance, that a priori reflection reveals that if in fact there is no water, then 'water' expresses a complex concept with motley application conditions. In that case, despite their semantic differences, the English and Dry English words 'water' are both meant to express an atomic nonmotley concept if it turns out that the relevant substance is a natural kind and are both meant to express a complex motley concept if it turns out that there is no such substance. Likewise, although 'George Washington' and 'Sherlock Holmes' are assigned fundamentally different semantic values on the mixed view, uniformity is secured at a deeper level insofar as both are intended to directly refer if an appropriate individual stands at the end of the relevant naming chain, and to have a descriptive sense otherwise.

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²⁸ See Soames, *Beyond Rigidity* (New York: Oxford, 2002), at pp. 110–30.