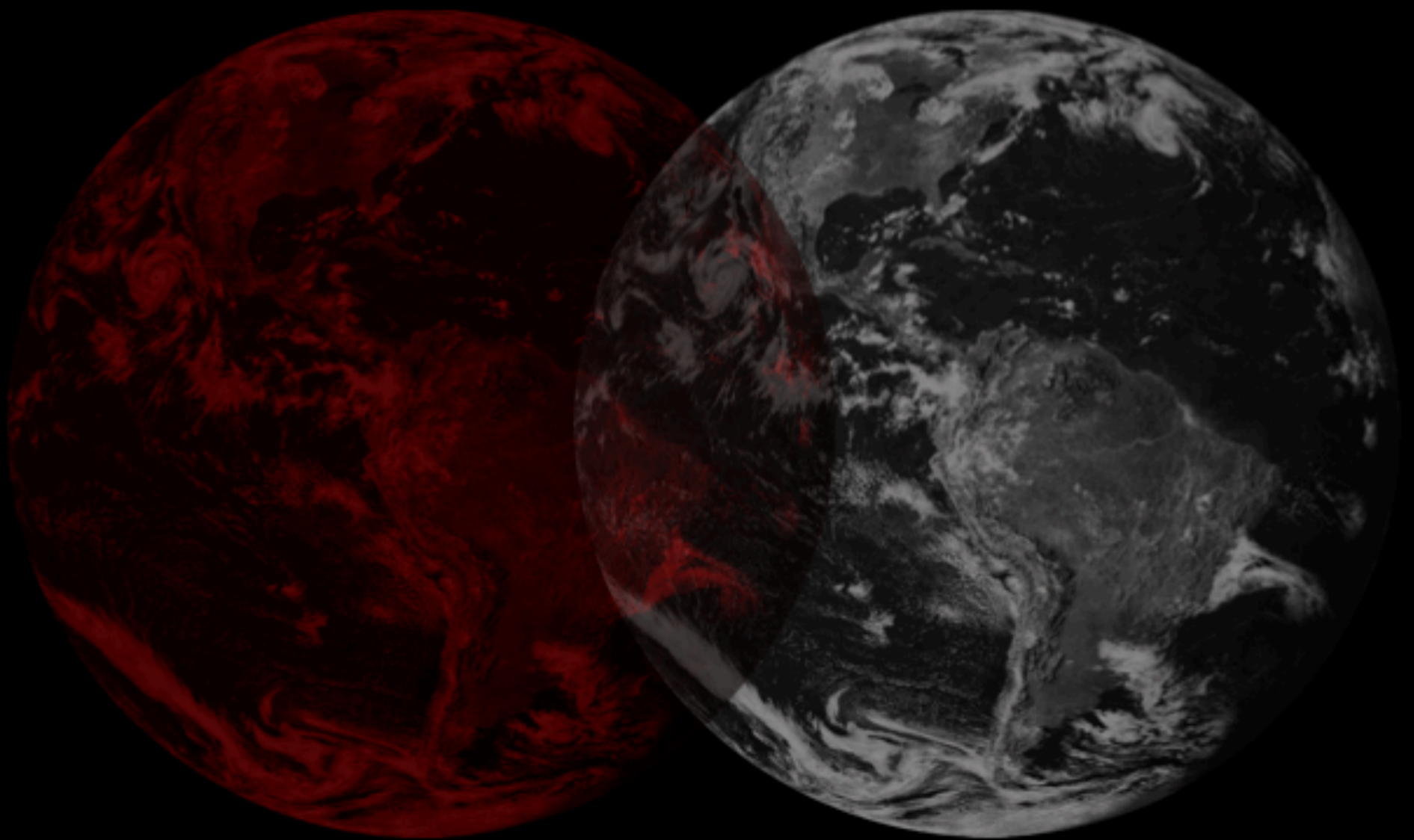


**Baptizing 'Water': A
Conventionalist
Challenge for Putnam's
Twin Earth
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In the “The Meaning of ‘Meaning’,” Hilary Putnam (1975) uses his Twin Earth thought experiment to argue that “‘meanings’ just ain’t in the head” (p. 141). In this paper, I argue that Putnam’s argument is invalid; moreover, strengthening the premises to make the argument valid renders it unsound. The stronger premises required imply that members of baptizing communities can be wrong in a way that conventionalists about meaning—Putnam among them—cannot accept.

I proceed as follows. First, I reconstruct Putnam’s argument, deeming the original to be invalid; then I will show that while Putnam’s argument can be made valid, it cannot be made sound. Second, I offer a thought experiment on baptizing communities to serve as a counterexample to Putnam. Third, I will discuss where Putnam deviates from conventionalism making the counterexample possible. Fourth, I will consider Sterelny’s (1983) defense of Putnam, showing it too suffers from the same counterexample. Lastly, I will conclude by considering and replying to objections.

Putnam’s Argument

Putnam asks us to imagine a Twin Earth, *very much* like Earth except that on Twin Earth, the liquid that English-speaking Twin Earthers call ‘water’ has a complicated chemical structure abbreviated as ‘XYZ’. For the average person the liquid that Twin Earthers call ‘water’ is indistinguishable from what on Earth we call ‘water’, even though on Earth what we call ‘water’ has the chemical composition H_2O . Where Earth’s lakes and snow are called ‘water’ and are H_2O , on Twin Earth, their lakes and snow are called ‘water’ but are XYZ.

Let the language spoken on Twin Earth be called ‘Twin English’. The only difference between the languages is that in English ‘water’ means H_2O , while in Twin English ‘water’ means XYZ. Putnam (1975) asks us to consider the “typical Earthian speaker of English” and his Twin Earth counterpart” (p. 701). We will call the typical Earthian ‘Oscar’ and his counterpart on Twin Earth ‘Twoscar’. Putnam explains: if we asked Oscar for water, he would bring H_2O , whereas Twoscar would bring XYZ.

Now, consider Earth and Twin Earth in 1750—before either substances’ chemical composition is discovered. No one on Earth knew their streams flowed with H_2O ; no one on Twin Earth knew they steeped their tea with XYZ. Putnam asks us to suppose this:

- (1) Oscar and Twoscar have the same psychological state as it relates to 'water' in 1750.

That is, Oscar and Twoscar had identical beliefs associated with 'water', identical dispositions associated with 'water', identical internal deliberations associated with 'water'. He then asserts:

- (2) The extension of the term 'water' was just as much H₂O on Earth in 1750 as in 1950 (p. 141).
- (3) The extension of the term 'water' was just as much XYZ on Twin Earth in 1750 in 1950 (p. 141).

From (2) and (3), Putnam reasons:

- (4) Oscar and Twoscar unbeknownst to them "understood the term 'water' differently in 1750" (p. 141).

Finally, from (1) and (4), he concludes:

- (C) The extension of the term 'water' is not a function of the psychological state of the speaker by itself (p. 141).

Call this the 'Original Argument'. Anticipating objections to (2) and (3), Putnam asks us to suppose that he points to a glass of water and says, "This liquid is called 'water'." He says that this ostensive definition of water presupposes that "the body of liquid I am pointing to bears a certain sameness relation (say, *x is the same liquid as y*, or *x is the same_L as y*) to most of the stuff I and other speakers in my linguistic community have on other occasions called 'water'" (p. 141). Putnam is right to say this is the presupposition of such statements uttered today and likely in 1750 as well. H₂O dominates "most of the stuff" that Oscar and his linguistic community (other English speakers on Earth) call 'water'. This means if Oscar points at a glass of XYZ on Twin Earth and utters "this liquid is called water," Oscar would be wrong.

Nonetheless, the inference from premises (1) and (4) to the conclusion is invalid. These steps, including their premises, speak only of Oscar and Twoscar in 1750, while the conclusion generalizes to 'water' writ large and an unspecified "speaker." Admittedly, Putnam could be using Oscar and Twoscar as individuals whose properties can be generalized without loss; however, despite this not being at all obvious, he never makes this explicit. Thus, everything Putnam says in the premises about Oscar and Twoscar in 1750 could be true, while there still are other cases where the extension of the term 'water' is (in part) a function of *a* speaker's psychological state.

There are two options moving forward to save the argument's validity: either weaken the conclusion or strengthen premises. To consider those options it will be helpful in either case when reconstructing the arguments to have time-flexible Oscars and Twoscars. We need to be able to speak of two people (one on Earth, the other on Twin Earth) who have the same psychological state as it relates to 'water' at their time. Let 'Oscar_{*t*}' name Oscar at time *t* and let 'Twoscar_{*t*}' name Twoscar at time *t*. Thus, in the Original Argument, Putnam is speaking of Oscar₁₇₅₀ and Twoscar₁₇₅₀. To avoid confusion with technicalities, consider the only details that matter: Oscar_{*t*} is a person on Earth at time *t*, Twoscar_{*t*} is a person on Twin Earth at time *t*, and Oscar_{*t*} and Twoscar_{*t*} have the same psychological state as it relates to 'water' at the same time *t*. This will allow us to narrowly tailor our weakened conclusion to the temporal context Putnam's original premises pertains to. As for the option to pursue stronger premises, this notation will allow us to talk about Putnam's premises beyond the 1750 to 1950 comparison and instead consider different time scales, all while maintaining the structure of his argument.

Let us now examine that first option: a weaker conclusion. As mentioned before, the premises of the Original Argument only pertain to Oscar₁₇₅₀ and Twoscar₁₇₅₀. Thus, we can only infer from those premises to the new, weaker conclusion:

(C'') The extension of the term 'water' is *not* a function of the psychological states of Oscar₁₇₅₀ and Twoscar₁₇₅₀ by themselves.

This conclusion seems plausible. (I accept it under certain circumstances discussed in the Objections and Replies.) There is no question Putnam would accept this weaker conclusion; however, he needs the original conclusion to reach his claim that "cut the pie any way you like, 'meanings' just ain't in the *head!*" (p. 141). Thus, we need the stronger premises.

Let us now examine that second option: stronger premises. Since the conclusion of the Original Argument concerns a generalized "speaker," the premises must broaden to support such a generalization, as follows:

(1') For all times *t*, Oscar_{*t*} and Twoscar_{*t*} have the same psychological state as it relates to 'water'.

- (2') For all times t , the extension of the term 'water' was just as much H_2O on Earth at t as in 1950.
- (3') For all times t , the extension of the term 'water' was just as much XYZ on Twin Earth at t in 1950.
- (4') For all times t , $Oscar_t$ and $Twoscar_t$ understand the term 'water' differently.
- (C) The extension of the term 'water' is not a function of the psychological state of the speaker by itself.

Call this the 'Strong Argument'. I argue: while—contrary to the Original Argument—the Strong Argument *is* valid, it is not sound. I reject (2') and (3'). Since the arguments against (2') on Earth and (3') on Twin Earth are similar, I will focus on (2') to avoid repetition. For (2') to be false, there must be a time t , where the extension of the term 'water' was not H_2O on Earth.

Baptizing 'Water'

Premise (2') has certain unpalatable consequences.

To simplify matters, suppose modern English has been spoken on Earth ever since the beginning of human language. (To complicate matters, suppose that modern English is one link in a chain of languages tracing to the first human language spoken on Earth.) English is not spoken by all first linguistic communities but is spoken by at least one. This English-speaking community is also causally connected to the English-speaking communities we know of today. The language has been passed on to new peoples all the way to those today who speak English. The very first form of this English is not exactly the same as the English spoken today in that some words were not yet coined. We have the word 'automobile', while they did not. Nevertheless, they have all of the terms the actual first linguistic communities had, but in a modern English dialect.

Now, let us consider this English-speaking community when they begin coining terms like 'water'. Imagine that this community baptizes objects as 'water' in a descriptivist manner. Instead of "Let 'water' be *this*!" they pronounce: "Let 'water' be an odorless, colorless, tasteless, potable liquid!" The original baptizing community was certainly unaware of and likely unconcerned with the essence of what they baptize as 'water'—much less a chemical essence.

If while still on Earth the original baptizers were presented a sample of XYZ transported from Putnam's Twin Earth, they would consider their baptism as follows. Is it odorless? Yes. Colorless? Yes. Tasteless? Yes. Potable? Yes. A liquid? Yes. They would conclude, "Why, yes, this is water!"

Despite the baptism of these English-speaking Earthians, Putnam's modified (2') requires that when members of the original Earthian baptizing community gesture towards a sample of XYZ and state "this is water" they are flat-out wrong. Putnam's conclusion requires that those who *coin the term* 'water' be wrong in this way. This is the unpalatable consequence of Putnam's view.

You may say: surely the original baptizers can be wrong in their use of the term they have coined. I agree. Certainly, if one of the original baptizers was in a low visibility environment and were unable to check a sample's colorless-ness and went ahead and called a substance 'water' that did not satisfy their baptism, they indeed would be wrong. To say the baptizers are wrong in this attribution seems perfectly acceptable consequence for a theory of language. Similarly, if a baptizer were to believe themselves to have checked all the conditions of their baptism for 'water' and yet was experiencing a lapse in their sense of smell and taste, then they could misattribute the name 'water' to something else. It would be permissible for a theory to say that the original baptizers are wrong in these cases. Note, however: none of the ways for the original baptizers to be wrong hinge on the essences of anything. They hinge simply on the application of their descriptivist baptism.

Nevertheless, there are clear cases where it would be unacceptable for a theory to count a baptizer wrong in the attribution of their word. Consider one of the initial baptizers. If they baptize in the descriptivist manner above and they have a justified, true belief (and whatever other properties might be required for knowledge) that a particular thing satisfies their description, they simply *cannot* be wrong (in a truth-bearing way) in ascribing the name to that thing. Baptisms are stipulations; they are vacuously true. When the baptizers above pronounce "Let 'water' be an odorless, colorless, tasteless, potable liquid!", they are simply setting out a linguistic convention. In this way the strengthened (2') has this unpalatable consequence; applying (2'), the baptizer is wrong in ascribing 'water' to XYZ.

Therefore, (2') is incompatible with conventionalism about linguistic meaning. This is the well-accepted view that the connection between words and reality is by convention. Putnam (1981) himself takes this position elsewhere saying: a system of representation does "not have an *intrinsic*,

built-in, magical connection with what it represents—a connection independent of how it was caused and what the dispositions of the speaker or thinker are” (p. 5).

Accepting conventionalism, we can reject (2') and also the original conclusion, which requires it for support. The extension of the term 'water' does seem to be a function of the psychological state of the baptizer. And insofar as baptizers are also speakers, the extension of the term 'water' can be the function of the psychological state of a *speaker*. This is one way to cut the pie!

Where Putnam Goes Astray

Where does Putnam go astray? Let us consider where the conflict between Putnam's view and conventionalism actually lies. After offering the Original Argument Putnam (1975) “leans heavily on the work of Saul Kripke” and his notion of rigid designation (p. 148):

Words like “water” have an unnoticed indexical component: “water” is stuff that bears a certain similarity relation to the water *around here*. Water at another time or in another place or even in another possible world has to bear the relation same_L to *our* “water” *in order to be water*. (Putnam 1975, p. 152)

To be clear: conventionalism does not eliminate the possibility for rigid designators. It is up to the baptizers, however. The original baptizers from above very well could have instead asserted something like: “Let 'water' be everything bearing the relation same_L to *this* in every possible world!” while gesturing towards a sample of Earth's H₂O. Setting aside skepticism for the essential properties of natural-kinds for now, let us grant that this sameness relation does, in fact, tag the sample's chemical essence—namely, H₂O. If this is the baptism set out by the original baptizing community, then this use of 'water' does rigidly designate H₂O.

However, Putnam does not engage with (or seem to care for) any historical analysis of baptizing communities and simply insists that 'water' rigidly refers to H₂O. Since the *kind* of baptism is irrelevant to his view of rigid designation, it seems: even if the baptizers did say, “Let 'water' be an odorless, colorless, tasteless, potable liquid!,” Putnam would still maintain that 'water' rigidly designates H₂O. Thus, Putnam's view makes it possible for 'water' to rigidly designate H₂O *unknownst* to the original baptizing community. Even if the original baptizers were descriptivist in their baptism of 'water', Putnam must insist that the meaning of 'water' is rigid to H₂O. This commits

Putnam to something beyond linguistic convention constraining baptizers *contra* conventionalism about linguistic meaning.

We more clearly see Putnam's tension with conventionalism when he considers the application of his view to other natural-kind terms like 'gold'. In "Meaning of 'Meaning'," Putnam (1975) says:

On the view I am advocating, when Archimedes asserted that something was gold (χρυσός) he was not just saying that it had the superficial characteristics of gold ...; he was saying that it had the same general *hidden structure* (the same "essence," so to speak) as any normal piece of local gold. (p. 153)

On the view I am advocating, what Archimedes means by 'χρυσός' is going to hinge on a further examination of the relevant conventions and baptisms. If Archimedes used 'χρυσός' in accordance with a rigid designator baptism, then what Putnam has to say afterwards does seem to follow. If, however, Archimedes used (and meant) the term in accordance with a descriptivist baptism, then he *was* referring to only "superficial characteristics" and *not* "hidden structure"—whether rigid or not.

Nevertheless, Putnam seems unconcerned with this nuance, suggesting he would still demand an understanding of Archimedes' idiolect of 'gold' as a rigid designator and referring to a hidden structure rather than superficial properties, regardless of which convention Archimedes was following.

Sterelny's Grounding Defense of Putnam

Sterelny (1983) seeks to clarify and defend Putnam's theory against common objections like those of Zemach (1976) by focusing on the role of original baptizing communities (or grounders, as he calls them). Thus, insofar as my objection to Putnam pertains to original baptizers Sterelny's project is of utmost relevance. I worry, however, that Sterelny's defense continues Putnam's transgressions against conventionalism.

Consider Sterelny's view of natural-kind terms (NKTs). Sterelny treats ostensive baptisms, e.g., "Let 'water' be *this!*," as paradigm cases but believes there are ways of strengthening (or constraining) those cases to avoid objections. According to Sterelny, NKTs are grounded in relation to their causal powers. In order to ground (or baptize) an NKT one must have some "knowledge about the causal powers of the kind" and "typically ... a cluster of beliefs" (Sterelny 1983, p. 104). The simplest formulation of Sterelny's (1983) view is this:

A predicate “F,” grounded in object *a* with respect to a set of causal powers P1, applies to all objects with the *same structure* as that in *a* responsible for *a*’s having P1 (or most of P1). (p. 112)

Applied to H₂O, the grounders of ‘water’ grounded the term in a sample (or samples) of liquids on Earth believing the substance they were dubbing ‘water’ to have a certain set of causal powers, “a certain causal role, a role in virtue of which water boils at 100°C, is colorless, etc.” (Sterelny 1983, p. 112). How, then, does ‘water’ not refer to XYZ as well since it too bears all those same properties? For Sterelny, ‘water’ tags everything with those properties owing to the same underlying structure as the sample(s) *a*. The extent to which XYZ manifests these properties is due to a *different* underlying molecular structure than H₂O. Since we are only “connect[ed] systematically” with samples of H₂O, ‘water’ tags the underlying structure of H₂O.

How well, then, does Sterelny defend Putnam against the conventionalist critique I have levied? Reconsider the hypothetical original baptizers from the first counterexample. They said: “Let ‘water’ be an odorless, colorless, tasteless, potable liquid!” Fitting into Sterelny’s picture, these original grounders are associating ‘water’ with the set of causal powers P1 = {lacking odor, lacking color, lacking taste, potability}. Presumably, they too have samples of *a*—in this case, H₂O—that they appropriately associate with P1. In this case, the grounders do not make explicit Sterelny’s point about ‘water’ tagging the underlying structure of *a*. Rather for these grounders the extension of ‘water’ picks out odorless, colorless, tasteless potable liquids, without regard to underlying structures. Would Sterelny, then, still insist that their grounding of ‘water’ tag *a*’s underlying structure? Would Sterelny (like Putnam) insist that *unknownst* to the baptizers their term ‘water’ refers to objects in the world differently from what their baptism makes explicit? To the extent that this is the case Sterelny (like Putnam) is committed to something beyond linguistic convention constraining grounders *contra* conventionalism about linguistic meaning.

The grounding in my thought experiment does pick out XYZ as part of the extension of ‘water’ since it lacks the caveat about structural sameness. As shown before, due to conventionalism these original grounders cannot be wrong in using ‘water’ to describe XYZ since it is in accordance with their baptism. Thus, Sterelny still leaves Putnam defenseless against the original baptizers

counterexample motivated by conventionalism. Sterelny makes the same error as Putnam just with greater detail.

Sterelny (1983) notably empowers baptizers more than Putnam, saying “our semantic theory links P1 to ‘F’ because the grounder did” and later, “P1 ... only [includes] the powers those who ground the term link with F-ness” (p. 105). Nevertheless, the original baptizers counterexample still affects Sterelny. Where, then, does Sterelny go astray? All while being deferential to original baptizers, Sterelny never clarifies to what extent grounders are cognizant of the full *scope* of their grounding. While Sterelny’s view does clearly require grounders to be cognizant of the batch of casual powers P1 they associate with “F,” it does not require that grounders be cognizant that their grounding is tagging the *structure* that brings about P1 in the substances they have contact with. This is precisely the gap the conventionalist critique is able to exploit.

Some may worry that the objection I have raised makes the same mistake Sterelny (1983) alleges against Zemach: ‘water’ “ceases to be an NKT” (p. 100). The worry goes: original grounders ought to be restricted in their ability to set conventions regarding NKTs. If ‘water’ is an NKT, then the term better refer to things that satisfy our conception of natural kinds. There is no general violation of conventionalism; NKTs are a special type of term, so they are reasonably constrained.

I concede that last point, but this does not mean our theory of NKTs can simply ignore conventionalism. It seems true that if ‘water’ picked out both H₂O and XYZ, it would no longer be an NKT. Nevertheless, if there were descriptivist baptisms that had this consequence because they made no reference to underlying structure, these baptisms would still clearly be related to and connected to our use of ‘water’ today as an NKT. While Sterelny’s view seems well-equipped to account for the coinage of contemporary NKTs, it nevertheless has limitations when it comes to terms with longer histories prior to modern science. A more robust view of NKTs informed by conventionalism ought to have a smoother picture accommodating such imperfect transitions. All of this said, a full response to this worry (and Sterelny generally) may involve a further examination of NKTs that is beyond the scope of this paper.

Conclusion

So far it has been argued that Putnam's Original Argument is logically insufficient in reaching its conclusion; it is invalid. Some of the premises of the valid Strong Argument, however, have implications which counter conventionalism about linguistic meaning. Putnam insists on rigid and essentialist baptisms in a way that constrains the ability of baptizers to set out linguistic conventions in accordance with conventionalism. Furthermore, attempts to defend and clarify Putnam by Sterelny fail the conventionalist challenge. I now close by considering a couple of general objections.

First, one of the great virtues of Putnam's view is the rigidity it provides our scientific terms. "One of the advantages of a causal theory is its ability to give an account of reference stability through theory change and belief change" (Sterelny 1983, p. 106). Pinning scientific terms, such as 'water', to an essence has great benefits. As science advances, old hypotheses are replaced by new hypotheses; old descriptions are replaced by new descriptions. If our scientific terms mapped onto descriptions, we would be out of luck! The very meaning of our words would unhelpfully fluctuate with scientific progress.

I concede (and surely accept) all of this. Nevertheless, I do not think we are forced to choose between rigid scientific terms and conventionalism. As discussed before, the conventions themselves in some cases may be rigid. One can set out a rigid baptism using a description, since a baptizer may say, while gesturing at a glass of H₂O, "Let 'water' be all the liquids with the same (chemical) essence as this liquid!" Applying this convention, the term 'water' is rigid and fixed as Putnam suggests to a chemical essence. We would now only need to be clear which convention we are following.

This is precisely why I am comfortable accepting the premises of the Original Argument and the narrowed conclusion (C'') under *certain* circumstances. If Oscar and Twoscar understand 'water' as marking an essence, rather than a bundle of descriptions, they are likely using something like the rigid convention laid out immediately above, rather than the descriptivist convention of the first linguistic communities. This is true even if they are unaware of the *particular* chemical essences in question.

Second, some may worry the thought experiment concerning original baptizing communities is particularly detached from history and reality in such a way that it ought to have no bearing on our

philosophy of language. Actual baptizers are far more likely to be ambiguous in their baptisms. They do not rattle off descriptivist properties, but instead say “Let *this* be called ‘water’!” while gesturing towards a sample. They baptize ambiguously and demonstratively.

For starters, I would contend that our thought experiments need not conform to history or reality in order to expose flaws in a view by exploiting conceptual gaps. Philosophers (and certainly Putnam among them) should be no stranger to obscure thought experiments. A descriptivist baptism is most certainly logically possible; thus, the unpalatable consequence—a rejection of conventionalism—stands to bear.

Further, the objection depends on a strictly empirical question. How were these early baptisms performed? Were they descriptivist or referentialist, were they essentialist or not, were they Sterelnyian in spirit? While I do not have the answer, it is worth noting that early baptizers in question would have lived millennia before modern science and chemistry. Nevertheless, philosophically informed research in historic linguistics and the history of science is ultimately required to evaluate these questions. Such a research program would investigate the history of essentialism well before, not only the development of modern chemistry, but also our earliest philosophical texts on essentialism.

Finally, the ambiguous, demonstrative baptism, i.e., “Let *this* be called ‘water’!”, requires further interrogation outside this paper. While I do not think Putnam’s (nor Sterelny’s) analysis works perfectly for the ambiguous case, such an issue requires closer attention that is beyond the scope of this paper. Nevertheless, as defended above the logical possibility of the descriptivist baptism is sufficient in resisting Putnam (and his defenders).

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