

# Hilary Putnam's Semantic Scientism: A Critique

Gregory R. Warner

There are two mutually exclusive hypotheses inherent to Putnam's doctrine of meaning. On the one hand Putnam privileges a form of scientific realism in determining the correct application of our use of natural-kind terms. On the other hand Putnam offers a Wittgensteinian externalist hypothesis, claiming that "[o]ur talk of apples and fields is intimately connected with our *non-verbal* transactions with apples and fields."<sup>1</sup> The first hypothesis I will dub Putnam's 'Semantic Scientism' hypothesis; the second as his externalism hypothesis.

It is my intention in this paper to illustrate the tension between these two hypotheses, and ultimately, to assert that without the externalism hypothesis Putnam's semantic theory is grossly incomplete. With the externalism hypothesis, Putnam cannot hold to what I have called his 'Semantic Scientism'. Though I have given a novel name to Putnam's first thesis (the 'Semantic Scientism' hypothesis), I am far from the first to discuss the thesis. A similar thesis was attributed to Putnam by Gregory McCulloch in his book *The Mind and Its World*. McCulloch calls this thesis the doctrine that the 'understanding tracks real-essence'. Although I disagree with the explanation McCulloch gives for this phenomenon, I do believe that Putnam

---

A recent graduate of Wilfrid Laurier University in Waterloo, Canada, Gregory is now undergoing firsthand experience of radical interpretation while teaching English as a second language just outside of Seoul in South Korea. Before venturing off to the Asia Pacific, in 2006 he was awarded funding by the Arts Students Advancement Program at Wilfrid Laurier University, to present "Hilary Putnam's Semantic Scientism: A Critique" at the 8th Annual Rocky Mountain Philosophy Conference in Boulder, Colorado. Gregory plans to continue his studies in philosophy by attending graduate school and specializing in questions surrounding mental content, and epistemological issues surrounding ascriptions of mental content.

---



---

holds to some form of this doctrine. Thus, in order to introduce what I take to be Putnam's theory of meaning, I will summarize the main points McCulloch highlights concerning Putnam's semantic doctrine.

The "understanding tracks real essence" doctrine that McCulloch employs the Lockean distinction between *real* and *nominal* essence in an effort to characterize Putnam's semantic doctrine, and I will follow suit. For Locke, the nominal essence of, say, lead, "is the cluster of superficial qualities by which we typically recognize something to be lead."<sup>2</sup> Lockean real essence, on the other hand, "is the hidden structure which causes samples of lead to have the superficial qualities they do have."<sup>3</sup> Locke invokes a gap between the mind's idea about a substance and the real essence of a substance. Under a Lockean account, "what makes something a sample of a particular substance *is that it should answer to the substance's nominal essence*."<sup>4</sup> That is, we do not

rank and sort things...by their real essences, because... our faculties carry us no further towards the knowledge and distinctions of substances than a collection of those sensible *ideas* which we observe in them.<sup>5</sup>

Thus, for Locke, we rank and sort things according to what is sensible to us, namely, our ideas of their nominal essence. There is, however, a problem with such a conception once we examine what our understanding of a substance-term is supposed to include. On Locke's account we are limited to our ideas of nominal essence to rank, sort, and understand substance-terms, when what a substance's essence *really* includes is something beyond our grasp. McCulloch characterizes the problem for Locke as not depending the fact that a substance's *real essence* is *unknown* to us, but rather in the fact that our understanding of a substance-term is "self-contained" with respect to its real essence:

in the precise sense that the facts about the under-

---



---

standing (the entertaining of ideas of the nominal essence) can remain the way they are in themselves whatever the facts about real essence, and even, indeed, if there are no real essences at all.<sup>6</sup>

Thus for Locke, only ideas before one's mind, ideas constituting a substance's nominal essence, can contribute to one's understanding of a substance-term. In Putnam's terms, only our *stereotype* determines or contributes to our understanding of a substance-term.

Here is where Putnam and Locke first differ: Putnam claims that something's fitting the stereotype (nominal essence) of a substance is neither *necessary* nor *sufficient* for being a sample of that substance. Given that we could have atypical samples of a given substance which do not fit the stereotype (but are still the same substance), and different substances that fit the same stereotype, it seems we cannot rely on the stereotype to determine what substance a given sample is. According to Putnam, what determines whether something is a sample of a given substance is its *real essence*. Putnam claims that "what we understand, say, 'water' to apply to" is that which has water's *real essence*.<sup>7</sup> Thus, we understand something to be water "if and only if it has water's real essence", not if it has the same nominal essence, or stereotype as water.<sup>8</sup> McCulloch characterizes this part of Putnam's program by saying that "*the understanding tracks real essence.*"<sup>9</sup>

To flesh out the rest of Putnam's program we need to examine his influential 'Twin Earth' thought experiment. McCulloch claims that this thought experiment is supposed to illustrate that something's "fitting the stereotype [of a given substance] is not sufficient to be a sample of [that] substance... because what happen to be *different* substances may have the *same* stereotype."<sup>10</sup> Putnam's thought experiment may indeed illustrate this point. His thought experiment does not illustrate why we should privilege scientific classifications in determining what we *mean* by our use of a given term. It is my contention that we are given no support for what I have dubbed his

---



---

‘Semantic Scientism’ hypothesis.

### The Meaning of ‘Meaning’

The crux of the Twin Earth thought experiment presents us with a dilemma. We are asked to consider someone using the term ‘water’ in an attempt to speak about a substance that superficially resembles (or has the same nominal essence as) a glass of water, but in this imagined case the substance in the glass is micro-chemically distinct from the substance that we call ‘water’. Putnam claims that the use of the term ‘water’ in this case would be incorrect. Instead of our old, familiar  $H_2O$ , Putnam has us imagine a substance (twater) with a vastly different chemical structure (abbreviated as ‘XYZ’) which fills the role on Twin Earth that water plays here on Earth. According to Putnam, we ought to sweep superficial similarities aside and adopt the view that someone from our planet visiting Twin Earth would *mean* and *understand* something different than Twin Earthians by the term ‘water’. Putnam presents his program succinctly in the following passage:

My ‘ostensive definition’ of water has the following empirical presupposition: 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<sub>L</sub> as y*) to most of the stuff I and other speakers in my linguistic community have on other occasions called ‘water.’<sup>11</sup>

The mere fact that Twin Earthians use a word that superficially resembles our term ‘water’ to speak about a substance that superficially resembles  $H_2O$  is not enough to constitute the Twin Earth term ‘water’ as referring to actual water. Putnam drives home this point about ‘resemblance’ in “brains in a vat” with his discussion of an ant tracing lines in the sand that resemble a caricature of Winston Churchill. But, he states, “[t]he mere fact that the ‘picture’ bears a ‘resemblance’ to Churchill does not make it into a real picture, nor does it make it a representation of Chur-

---

chill.”<sup>12</sup> Resemblance to a representation is not sufficient for representation. Or, in Putnam's terminology, “qualitative similarity to something which represents an object...does not make a thing a representation all by itself.”<sup>13</sup>

At this point it may seem as though what accounts for how a substance term refers to a given substance's real essence is *intention*.<sup>14</sup> McCulloch perpetuates this idea when summarizing Putnam's position as follows,

[A]ccording to Putnam, we *intend* our substance-words to make classifications which are sensitive to the regularities exhibited by these underlying [real essence] factors...[n]ot that we (or anyone) need know what these are.<sup>15</sup>

McCulloch traces the different understandings of ‘water’ for Earthians and Twin Earthians to a difference in the intentions of language users in our two worlds. Or as McCulloch puts it, “Our intentions concerning the word ‘water; exclude XYZ and include H<sub>2</sub>O, theirs do the opposite.”<sup>16</sup>

But Putnam does not claim this, as for obvious reasons it seems impossible that one could *intend* something without being able to think *about* it. As Putnam states:

to have the intention that *anything*, even private language (even the words ‘Winston Churchill’ spoken in my mind and not out loud), should *represent* Churchill, I must have been able to *think about* Churchill in the first place.<sup>17</sup>

In short, what propositional attitudes like intentions ‘track’ depends on what our thoughts represent. What our thoughts represent depends on what the words specifying those thoughts represent. So what those words represent cannot depend on what our intentions track without circularity. The dependence must go the other way around.

---

---

### Semantic Scientism, Scientific Realism, and Linguistic Communities

So what, according to Putnam, accounts for the supposed fact that our understanding tracks real essence? This is not at all clear.

McCulloch and Putnam seem to conflate two independent points. McCulloch states that according to Putnam what determines whether something is a *sample* of a given substance is its real essence. McCulloch then commits a *non-sequitor*, and counts this claim as implying that “what...we *understand* ‘water’ to apply to” is only samples with water’s real essence.<sup>18</sup> Even if we grant Putnam and McCulloch the claim that something’s fitting the stereotype (having the same nominal essence) of a given substance is neither necessary nor sufficient for that something to be a sample of a substance, and we grant the supposition that to be a sample of a given substance, that sample must have the same real essence as the given substance, *it does not follow that we would understand ‘water’ to apply only to samples with the real essence H<sub>2</sub>O*. Putnam concedes that “A and B can be syntactically and phonetically the same word in two different languages (or in two different dialects or idiolects of the *same* language) and yet have different reference.”<sup>19</sup> This isn’t to reduce the debate to the level of syntax or phonetics, but to elucidate the point Putnam conceded earlier: resemblance to a representation is not sufficient for representation.

Why are we committed to scientific realism to determine the meaning (and correct application) of our terms? Perhaps in matters where scientific classification is relevant for determining what things *are*, we can rely on science. But science has no authority in terms of classification when we are speaking of manufactured (or social) kinds, i.e. chairs, and gloves. Rather, chairs have no real essence; only a nominal essence. What does understanding track in the case of manufactured kinds? I am assuming here that Putnam’s externalist theory of understanding must accommodate kinds other than natural-kinds, as it seems that later in his work, he requires the adoption of this assumption – ‘vats’ are not a natural-kind, but his argument for why “I am a

---



---

brain in a vat" is self-defeating applies his externalism to the word 'vat.'<sup>20</sup>

To elucidate the contrast between Putnam's semantic approach to social-kind terms and natural-kind terms, consider two examples from *Representation and Reality*: the terms 'bonnet' and 'robin'. Putnam considers both terms as used in British English and American English. 'Bonnet', Putnam states,

is phonetically (and in spelling) the same words in American English and in British English, but in British English 'bonnet' can denote the hood of a car, whereas it cannot in American English.<sup>21</sup>

The situation is similar in the case of 'robin', where the term "does not refer to the same species of bird in England and in the United States."<sup>22</sup> In this latter case, presumably the reason why 'robin' as uttered on the lips of an Englishman does not refer to the same species as when the same term is uttered on the lips of an American, is because there are different species of bird in England and the United States which are called by the same term: 'robin'. All of this is simply to reiterate Putnam's earlier point that phonetic and syntactic similarity of terms (or even in this case where the terms are identical phonetically and syntactically) is not sufficient for co-extension.

What is interesting is the explanation as to how the terms 'robin' and 'bonnet' as uttered in the United States and in Britain are supposed to have different (respective) extensions. In the case of 'robin', Putnam can (in his explanation of its reference) default to his linguistic division of labour. Putnam claims that we can rely on "experts" in our linguistic community to be able to understand natural-kind terms, such that my use of a natural-kind term like 'water' means H<sub>2</sub>O and not XYZ, even though I might not know water's real essence. In this vein, Putnam claims that his use of the terms 'beech' and 'elm' have different meanings in his linguistic community (and he claims he understands the term) even if he cannot tell the difference between the two types of tree. Putnam characterizes the program succinctly in the

---

---

following passage.

Every linguistic community...possesses at least some terms whose acquainted 'criteria' are known only to a subset of the speakers who acquire the terms, and whose use by the other speakers depends upon a structured cooperation between them and the speakers in the relevant subset... In case of doubt, other speakers would rely on the judgment of these 'expert' speakers.<sup>23</sup>

Though 'robin' could presumably be considered a natural-kind term, in the case of 'bonnet', all we have to fix the reference of the term in our respective communities is the linguistic doings of others in our linguistic communities. We cannot default to real essence (or experts acquainted with real essence) to fix the reference of a term like 'bonnet', as the reference for such a term is constituted by the use to which others in one's linguistic community give to it. But here it seems as though Putnam's scientific realism is not doing any work in determining the meaning of our terms; the work is done by the linguistic practices of others whether or not those others speak the language of science, and whether or not they are speaking of scientific (natural) kinds or manufactured kinds.

This produces a strange problem. To be clear, Putnam is claiming that we can rely on a special subclass of speakers within our linguistic community to fix the meaning of a natural-kind term to a particular substance's real essence, and for manufactured kinds, the meaning of our terms is determined by the "the use of a word by other speakers" in our community.<sup>24</sup> My question is this: how do we differentiate between those people who are members of our linguistic community but who consistently use a term incorrectly, and those who are speaking a different language or dialect, (and so, presumably belong to a different linguistic community)? Wittgenstein claimed that there was no difference between these two options, which thus spawned certain rule-following problems. A relevant criticism of Putnam



---



---

arises once we realize that we fail to make any real distinction here. Where do we draw the boundary surrounding our linguistic community?<sup>25</sup>

Furthermore, Putnam expresses his externalism with the Wittgensteinian claim that "[o]ur talk of apples and fields is intimately connected with our *non-verbal* transactions with apples and fields."<sup>26</sup> Why should we assume that Putnam's non-verbal transactions with beeches and elms are *different transactions*, when he can't tell the difference between the two? Given that Putnam cannot tell the difference between elms and beeches, we must assume that his non-verbal transactions with beeches are no different than his non-verbal transactions with elms. It would seem that if we held Putnam to this Wittgensteinian claim, then his use of the terms 'elm' and 'beech' would have *the same extension*. Understanding, in the case of Putnam's understanding of 'elm' and 'beech', does not track real essence.

At this point it might be objected that if it is the case that Putnam's use of 'elm' and 'beech' have the same extension, this is not due to the fact that the understanding does not track real essence. Putnam's use of 'elm' and 'beech' having the same extension, while holding to Semantic Scientism, is *ipso facto* reason to deny that Putnam understands the terms 'elm' and 'beech'. What we have here, as the objection might be presented, is a case of *misunderstanding*, and what the understanding tracks in the case of misunderstanding is irrelevant to Putnam's Semantic Scientism hypothesis.

However, the contrast between using the terms "with understanding" and "misunderstanding" the terms simply reinstates the contrast between correct and incorrect usage of the terms. We cannot adjudicate between a speaker's correct and incorrect uses by appeal to the verbal practices of a linguistic community without first assigning that speaker to the right linguistic community. The point of my objection is that Putnam has no criterion for making such assignments, and so no basis for a contrast between *misspeaking* and using a word with a *different* meaning. He certainly has no criterion that compels us to assign him to the same linguistic community as those botanical experts

---



---

who – by his own admission – use their words “beech” and “elm” so very differently than Putnam uses his words “beech” and “elm”. Putnam’s view that meaning is determined by our nonverbal transactions with objects is thus in tension with his Semantic Scientism, which supposes the role that our own uses of words has in determining their meanings is to be over-ridden by the uses of the same-sounding words by others.

### Putnam’s ‘Beech-Elm’

Putnam assumes a fixed meaning within his linguistic community for ‘elm’ and ‘beech’, such that his being a member of that community guarantees that his use of ‘elm’ means elm and not beech. But this assumption is in tension with his Wittgensteinian claim that “talk of [elms and beeches] is intimately connected with our non-verbal transactions with” elms and beeches.<sup>27</sup> Putnam resolves this tension by relying on the non-verbal transactions with elms and beeches of other people in his linguistic community to fix the meaning of the terms ‘elm’ and ‘beech’. But to assume a fixed meaning for the terms, Putnam is required to assume that his conception of a linguistic community is coherent – something which has not demonstrated.

It would seem that Putnam’s Semantic Scientism hypothesis has a number of problems. His Twin Earth thought experiment is supposed to push us towards the intuition that, given the discovery that what we Earthians call ‘water’ is chemically different from what the Twin Earthians call ‘water’, we *ought* to say that our two cultures mean different things by ‘water’. But why would we not at this point of discovery say that ‘water’ is actually two substances: XYZ and H<sub>2</sub>O? Putnam does not seem to provide a relevant reason for rejecting this equally plausible option.

I accept Putnam’s Wittgensteinian claim that what the term ‘water’ means is intimately connected with our non-verbal transactions with water. Holding to this claim, why should we assume that the meaning of a natural-kind term is any different than any other term used *outside the practice of science*? While ‘water’ may be correctly applied within the practice of science to

---

samples of H<sub>2</sub>O only, someone using the term 'water' outside of the practice of science isn't held to the semantic standards set by those in the practice of science. Chemists may be experts concerning the chemistry of water, but their usage of the term has no privileged status *vis-à-vis* the meaning of "water". Recall Putnam's discussion of an ant tracing lines in the sand, where he states, "qualitative similarity to something which represents [a substance] does not make that thing a representation all by itself."<sup>28</sup> Why should we assume that qualitative similarity to a representation employed in science constitutes a term as being a representation of the same thing?

---

### Notes

1. Hilary Putnam, *Reason, Truth and History* (Cambridge: Cambridge University Press, 1981), 11.
2. Gregory McCulloch, *The Mind and its World* (London: Routledge, 1995), 159.
3. *Ibid.*, 159.
4. *Ibid.*, 160.
5. *Ibid.*, 165.
6. *Ibid.*
7. *Ibid.*, 162.
8. *Ibid.*
9. *Ibid.*, 163.
10. *Ibid.*, 161.
11. Hilary Putnam, *Mind, Language, and Reality: Philosophical Papers, Volume 2* (Cambridge: Cambridge University Press, 1975), 225.
12. Putnam, *Reason*, 3.
13. *Ibid.*, 13.
14. In earlier work Putnam seems to endorse a view that attributes intention as a key factor in the explanation of how we can refer. In "Explanation and Reference", while speaking of 'electricity', he states that "[e]ven if I use the term so often that I forget when I first learned it, the intention to refer to the same magnitude that I referred to in the past by using word links my present uses to those earlier uses" [Hilary Putnam, *Mind*, 200].
15. Gregory McCulloch, 162.

- 
- 
16. Ibid.
  17. Putnam, *Reason*, 2.
  18. McCulloch, 162 : My emphasis.
  19. Putnam, *Reason*, 20.
  20. See "Brains in a Vat" in *Reason, Truth, and History*.
  21. Putnam, *Reason*, 20.
  22. Ibid., 22.
  23. Hilary Putnam, *Mind, Language and Reality: Philosophical Papers, Volume 2* (Cambridge, Cambridge University Press, 1975), 228
  24. McCulloch, 180.
  25. This is a big question that hinges on a large body of literature. For a discussion of social externalism and individualist externalism see Davidson's "The Social Aspect of Language", and Dummett's "Reply to Davidson". Both can be found in *The Philosophy of Michael Dummett*.
  26. Putnam, *Reason*, 11.
  27. Ibid.
  28. Hilary Putnam, *Representation and Reality* (Cambridge: Massachusetts Institute of Technology Press, 1988), 13.

### Works Cited

- McGuinness, Brian, and Oliveri, Gianluigi., eds. *The Philosophy of Michael Dummett*. Synthese Library, Vol. 239, London: Kluwer Academic Press.
- McCulloch, Gregory. *The Mind and its World*. London: Routledge, 1995.
- Putnam, Hilary. *Mind, Language and Reality: Philosophical Papers, Volume 2*. Cambridge: Cambridge University Press, 1975.
- Putnam, Hilary. *Reason, Truth and History*. Cambridge: Cambridge University Press, 1981.
- Putnam, Hilary. *Representation and Reality*. Cambridge: Massachusetts Institute of Technology Press, 1988.