"Brains in a Vat": Whose Brains? Which Vat?
Skeptical Thoughts on Reference and Knowledge

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Placed on this isthmus of a middle state,
A being darkly wise, and rudely great....

(Pope, *An Essay on Man*)

We have an impotence to prove which cannot be overcome by
any dogmatism. We have an idea of truth which cannot be
overcome by any pyrrhonism.

(Pascal, *Pensées*)

In memory of Tom Tymoczko,
a profoundly esteemed colleague

PREFACE

This peculiar essay has been the source of much pride and dismay on my part. Though I think it represents an important argument about a fundamental issue in philosophy, I've endured the painful rejection of this assessment by perhaps a dozen academic philosophical journals. This has led to the despairing conclusion that only private publication would allow for a slightly wider readership.

What allows for even this embarrassing gesture is the very strangely mixed reviews the essay has received from those evaluating it. There have been three quite distinct types of response, and they have come in roughly equal number: frank confessions of incomprehension (which hasn't always precluded a recommendation against publication); criticism of various features of the argument (usually hinging on the question of whether articulation of the 'logical entailments' of a possible situation entails a 'reference' to that situation); and highly enthusiastic endorsement of the arguments and importance of the essay.

It would have been a fortunate and time-saving coincidence if the favorable reviews had come from the same journal, but that was not to be the case. Time and again, the essay would receive one or more favorable readings, only to be knocked off by one that was distinctly not.

At the risk of seeming ungrateful, I must confess that I've not been helped in any obviously useful way by the criticism tendered by official readers. But I must hasten to add that this is not true of the extremely useful reading and criticism it received, in its earliest form, from Hillary Putnam, author of the now famous essay "Brains in a vat." In fact, it was an exchange between Professor Putnam and myself that allowed me to see the missing pieces in my skeptical argument.

Ironically, it was Putnam himself who supplied what I would need in order to challenge the largest conclusion of his fiendishly clever and disconcerting essay, *viz.* that we can—in some useful sense—*know* we are not brains in a vat. For despite all the science-fiction bizarreness of the hypothetical Putnam puts in place, he is working in the great Cartesian tradition of a search for radical epistemic certainty. Indeed, as my colleague Jack Wilson has suggested, he is stalking extraordinarily large philosophical game: a modern version of the Kantian synthetic *a priori*.

So, a successful skeptical challenge would be of some note. Putnam himself has seemed aware of this, urging those who won't accept his conclusions to produce precisely such a skeptical "refutation." Nowhere has Putnam been more explicit about this than at the symposium which served as the inspiration for my essay, a symposium which had the sad task of commemorating the life and philosophical career of Tom Tymoczko of the Philosophy Department at Smith College.

Shortly after Tom's death in the summer of 1996, Professor Putnam delivered a masterful reprise of his famous argument, deftly making it both a eulogy for his former student and a brilliant extemporaneous exposition and extension of his published essay. Delivered on October 25, 1996 as the first in a series of "Lectures in Honor of Thomas Tymoczko," the performance packed the Neilson Library Browsing Room at Smith College—and gave rise to a query that I posed to Putnam on the occasion, one that would haunt me until I had formulated it in the fashion in which it appears here.

Along the way I've received truly extraordinary help and encouragement from my colleagues at Smith College, and if there is a silver lining to private publication, it is that I'm afforded an opportunity to say fully how grateful I am to

Douglas Patey, Harold Skulsky, and Jack Wilson. Without their philosophical acuity serving as imprimatur, I would never have dared proceed with any effort at publication. They were unfailingly useful, resourceful, engaged, and extremely sharp-minded critics. Having passed muster with them, the essay—I was confident—deserved to be read.

Others, though, have been helpful as well, and in diverse ways. Trying among others things to honor Tom's beautifully Socratic presence among us, I especially welcome the chance to say how much I learned asking, and being asked about, various aspects of "brains in vats." Thanks, then, to Nalini Bhushan for conveying to me some of Tom's conversational thoughts about "brains in a vat"; to Susan Levin for a very suggestive remark about Greek skepticism; to Jim Henle for vetting my originally included mathematical examples; to Betty von Klemperer for her suggestions about Pascal; to Justina Gregory for looking with me at the Greek in a key passage from Plato; to Murray Kiteley for persuading me early on that my "nesting" metaphor needed better explanation; to a very encouraging Jay Garfield; and to John Connolly for a suggestion that led me to the particular passage from Wittgenstein's *On Certainty* I was looking for (without knowing it).

I suppose my greatest wish for this essay would be that it keep alive in some very small way something of what I discerned in Tom Tymoczko's brilliant and lively mind, a mind that seemed always to be looking for one more extension of a problem, one more way of apprehending things, one more question. If I could have secured his approval, then I could have been "sure" about my skeptical challenge.

"Brains in a Vat": Whose Brains? Which Vat?
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There is in Western thought and literature a vertiginous topos, perhaps most terrifyingly illustrated in Satan's despairing soliloquy of Book IV of *Paradise Lost*:

> Me miserable! which way shall I fly
> Infinite wrath, infinite despair?
> Which way I fly is Hell; myself am Hell;
> And in the lowest deep a lower deep
> Still threat'ning to devour me opens wide,
> To which the Hell I suffer seems a Heav'n. (ll. 73-78)

No matter how far Satan descends into the hell of despair, there is an incommensurably deeper hell--one so deep as to make the present hell of suffering "seem [...] a Heav'n." Versions of this *mise en abyme* are not always so unpleasant, or so paralyzingly infinite; but they are often as thought-provoking. Aquinas, for example, speaks in the *Summa Theologica* of a great hierarchy of angels, such that lower angels can receive enlightenment *from* higher angels, but cannot impart enlightenment *to* them (Part I, Question CVII, Second Article).[1] And Jonathan Swift's Gulliver, in a passage revealing of the recent 17th-century microscopic and telescopic extensions of our world, declares:

> Undoubtedly Philosophers are in the Right when they tell us, that nothing is great or little otherwise than by Comparison: it might have pleased Fortune to let the *Lilliputians* find some Nation, where the People were as diminutive with respect to them, as they were to me. And who knows but that even this prodigious Race of Mortals [the Brobdingnagians] might be equally

overmatched in some distant Part of the World, whereof we have yet no Discovery?   (Book 2, Chapter 1)

And in still another vein, the history of atomic and particle physics seems in the 20th century to be the story of ever-new "worlds" or entities being discovered further down the "chain of being," revealing parts in what were previously thought to be indivisible wholes.[2] I'll wish to return to this distinctive topos in more purely philosophical fashion shortly.

1.   In a recent reprise of his notorious essay "Brains in a vat" (see Preface), Hilary Putnam set out what he sees as the essential task for someone who thinks that the argument he mounts—essentially an argument about the nature of, and constraints upon, reference—is not persuasive. If one doubts its cogency, or the claims that he makes, Putnam has suggested, then challenge the premises—or show how conclusions other than his must follow. Much has been written in answer to the first form of challenge. But it is the latter that is my interest here, especially insofar as it is reminiscent of the Greek skeptical enterprise embodied in Pyrrhonism. And in the course of my effort to accept Putnam's challenge—to show that more follows from his argument than he wishes, or can control—I'll eventually have recourse to the characteristic vocabulary of skepticism, especially *ataraxia* (αταραξια) and *isosthenia* (ισοσθενεια)—terms which suggest, respectively, the attaining of peace of mind, equanimity, and the state of mental suspense, equilibrium, or equipoise.[3]

Such a skeptical tack would seem to provide a useful focus for the energies of those who have been made distinctly uneasy by the conclusions of the "brains in a vat" argument, since as Putnam acknowledges, those conclusions often produce the impression of trickery: for all the logical acuity of the piece, many readers have a sense of something not said, some qualification not acknowledged, some

skeptical possibility not confronted. There seems to be an enduring suspicion that the argument from self-refutation, which is adduced with such clinching force, must have been arrived at illegitimately—hence the intense focus on the premises of Putnam's argument (even on the apparently incontrovertible premise that "we can ask whether we are brains in a vat").

My strategy will not be to attack Putnam's premises. Though I, too, have shared the sense of "trickery," the problem seems not to be in the nature of the premises, or the inferences from them. My unease comes from the sense that something *else* does indeed need to be said beyond "if we are brains in a vat, then the sentence 'We are brains in a vat' says something false (if it says anything). In short, if we are brains in a vat, then 'We are brains in a vat' is false. So it is (necessarily) false" (Putnam 1981, p. 15).

To say something more about these remarkable sentences, however, I don't think we need to make either of the two errors Putnam specifies as likely to occasion our resistance to his conclusion: (1) "taking *physical possibility* too seriously" (I will posit only a peculiar extension and replication of the same set of physical possibilities that undergirds Putnam's argument); or (2) "unconsciously operating with a magical theory of reference" (for the sake of my argument, I will take Putnam's account of reference to be exactly right, at least for English, and as an adequate philosophical basis for denying the possibility of our world being *referred* to in "vat English").[4]

2.	Putnam's important thought-experiment may be most consequentially qualified if we consider the possibility that there exists a complex *nesting* of "English to 'vat English'" relations. By this I mean that the conclusion of his argument is "true" only in the situation (which is, most notably, *ours*) of "English vis-à-vis 'vat English'"—and that his argument can say nothing, other than perhaps

by means of speculative analogy, about the truth of English vis-à-vis a possible "supra English" (*which would be to English as English is to "vat English"*).

Why the metaphor of "nesting"[5]? We know that it is possible to imagine that those controlling Putnam's vat may manipulate the brains in it in such a way that those brains imagine *they* are conducting their own "brains in a vat" experiment—indeed, so that the vatted brains may imagine creating brains that, in turn, would imagine *they* are creating brains in a vat, and so on *ad infinitum*. I would claim that given the possibility of these infinitely extending nested, or interlocking, relationships—on the model of English-to-"vat-English"—we have no *logical* reason to suppose that the nesting of possibilities can't extend in *both* "directions": *down* to a nesting of "vat English," "vat/vat English," "vat/vat/vat English," etc., but also *up* to a nesting of English, "supra English," "supra/supra English," *ad infinitum*.[6]

What might follow from such nesting? We can't say any more, as "true," than Putnam says we can in his original chapter. And the argument from the logic of self-refutation endures. But we now face the question: is "truth" anything but "truth-as-a-causal-constraints-theory-of-reference-permits-at-our-point-in-the "…'vat-English' to English to 'supra English'... series"? What would it mean to think of such "truth" in any other sense? How would we know we had reached a vantage from which some other sense of the word could be made?
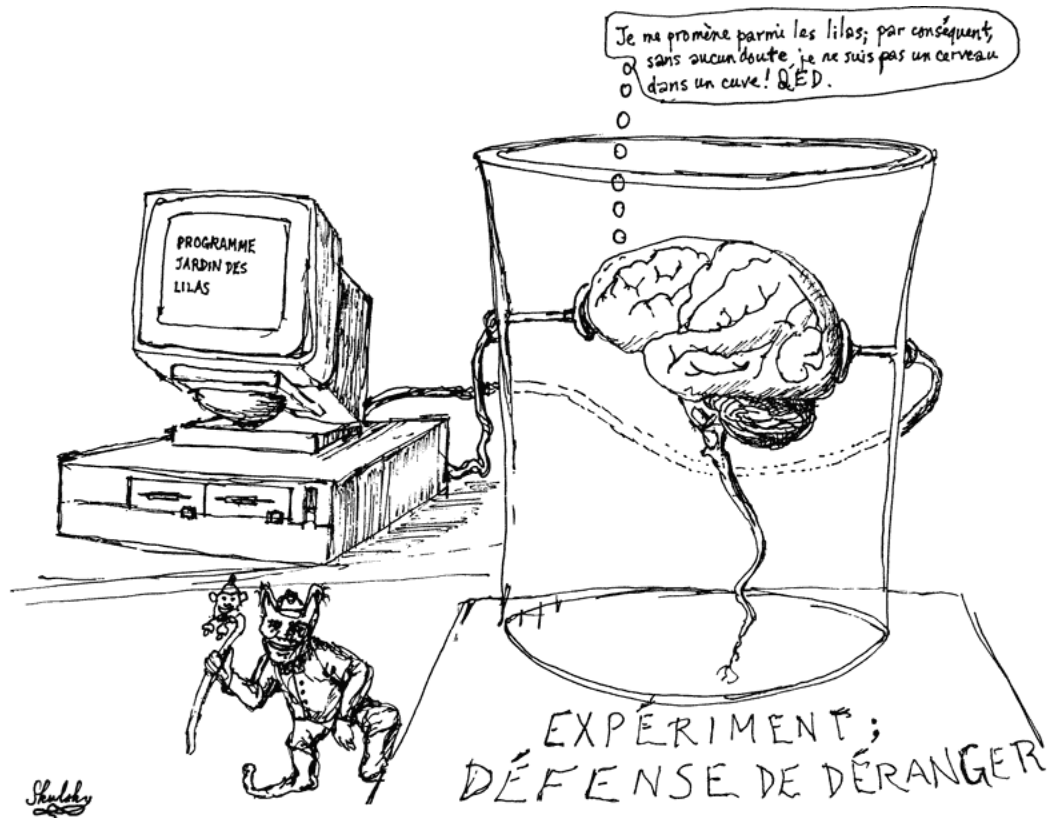
The upshot is that we can't know[7]—in any perspectival sense—where we are in the series; moreover, we can't know fully what it means not to know where we are in the series. Most important, we can't know we are *not* brains in a vat except insofar as we are (inevitably) speaking about a particular point in the series (which we might label the "English::'vat English' point"). We don't know that we aren't brains in a vat in any ultimate sense—only vis-à-vis the first stage of the brains-in-a-vat experiment that our language allows us to formulate, and which Putnam articulates so fully. This might account for why many readers experience the sense of "trickery," but also find that they can't avoid the conclusion that Putnam's argument is sound. I would suggest that there is a radically different meaning to that "trickiness," and a *context* for this "soundness."

Even so, Putnam might still wish to claim that there exists some version of "causal constraints upon reference" at every point, "up" or "down," in the series.

But it's not clear what non-tautological meaning such a claim might have for "supra English," or that we can usefully say anything about what it *might* mean, or that we can specify what might make it meaningful. (One feels at this moment a peculiar proximity to the conclusion of Wittgenstein's *Tractatus*). Putnam might also wish to argue that the argument from self-refutation obtains at every point in the series; but again it's not clear what non-tautological meaning such a claim might have. If it is impossible for us to imagine a language "above," or more "powerful," than ours in which the argument from self-refutation does not obtain, this is because the very idea of any such language and the argument from self-refutation are logically co-extensive. It makes no sense to say that "supra English," or some version of it, is any way distinguished—or is somehow specifically *referred* to—by virtue of our being able to say that argument from self-refutation obtains: there is no other logical possibility imaginable.

If I'm right that both the conclusion and "rightness of argument" in Putnam's chapter have a *context*, then two possibilities follow: (1) that other speculative conclusions might interestingly be drawn from this line of thinking; (2) that no conclusions might be drawn, except that we can become aware of this weird way of thinking about what we can know about the possibility of our being brains in a vat.

If the first of these is the case, we might be inclined to speculate about what, if anything, could be said about "supra English" (beyond the logical condition of the argument from self-refutation necessarily obtaining). Whatever speculative possibilities we entertain, however, we must emphasize again that we cannot *refer* to "supra English," only to the logical possibility created by our reversing (on the basis of logic alone) "direction" in thinking about the "...English to 'vat English,' 'vat English' to 'vat/vat English'..." series.[8] This claim is crucial, for Putnam

would argue that if we can *refer* to "supra English," then we have already begun, in some sense, to speak of the "referents" of "supra English," thereby creating a powerful disanalogy between the relation of "vat English" to English and English to "supra English." To be sure, there is a disanalogy, an asymmetry, at issue here, but it needs to be perceived in a different sense: the disanalogy is precisely in our inability (*contra* the case with "vat English" from the perspective of English) to *refer* in any meaningful sense to "supra English." Thus perhaps what we should say first is that any speculation about "supra English" (or some higher version of it) would be asymmetrical with (*potentially* referential) knowledge about "vat English" (or some lower version of it). We can look "down" from the perspective of "original manipulators"; but we can't look "up" in anything like the same way if we have been the "manipulated." It seems, in other words, utterly incoherent to speak *referentially* of "supra English" (conclusion [2] above). If we presume to speak of "supra English," we do so only in terms of logical possibility.

So governed, we may speculate that, at the very least, "reference" in "supra English" must also be determined, in some sense, by some version of what we call "causal constraints"; but of course we could not know anything of the nature of such "causal constraints," or the manner of their constraining, or even whether or not they are a function of manipulation (electronic or otherwise). "Supra English" may, or may not, be a language in which the "brains in a vat" question can be philosophically (as opposed to referentially) posed[9]; again, we simply cannot know, or speak about how we could know. We might at least *imagine* that there is a last step "*up*" the "supra English" series; indeed, we seem obliged to say (though without being able to do so referentially) that, finally, there must be something outside the vat. But we might also imagine, as we (speculatively) "step outside the vat," that manipulations aren't actually made by conscious beings at all, but are (as Putnam has suggested) part of an unconscious process. We could even speculate that at some "upward" point in the "supra English" series causal constraints upon

reference turn out to be an amalgam of "referential" and "manipulated" knowledge. In other words, constraints might be analogous to those that would be produced if a real ("English-speaking") brain, with knowledge derived from our ("English-speaking") real world—our familiarity with actual objects and experiences from our world (e.g., "cabbages," "sex," "chemistry labs," "philosophy books," "autumn")—were put in a vat and *then* hooked up and manipulated. (Such manipulation—including possibly inducing in the newly vatted brains amnesia about the possibly unpleasant vatting process—would, of course, still have to come from outside the vat, the "world" in which the now vatted brains gained their referential knowledge.)

These are mere speculative possibilities, and in their very peculiarity suggest the absence of referential constraint. That such possibilities induce a strong sense of cognitive vertigo seems another argument against the appropriateness of "knowledge," in particular *referential* "knowledge," as the term for defining what we might say of "supra English." Finally, all we can do is *imagine* analogies. And however interesting imagined analogies may be, they are revealing only of mere possibility—there is nothing referential about them.

We can put this point inversely: for us to know that we are *not* brains in a vat—for the original form and import of Putnam's argument to hold—we would have to know that a purely logical possibility (as opposed to one in some way dependent on causally constrained reference) for a relation between English and "supra English" does not and cannot exist, at least a relation on the model of "vat English" to English. But how could we know this? In other words, how is a (causally constrained) *reference* to "supra English" involved or implicated in this *logical* derivation of the possibility of "supra English"? It would seem that on Putnam's terms, if we are to *know* that we are not brains in a vat, then a "logical possibility" and a "causally constrained reference" must be identified with one

another. But at this point, it is not at all clear what wheels the phrase "causal constraints" (theory of reference) is turning. Indeed, in not distinguishing between a logically derived possibility and a causally constrained reference, Putnam seems implicitly committed to what he himself calls a "magical" theory of reference and representation.[10]

As I suggested at the beginning of this essay, the Greek skeptics had several quasi-therapeutic terms for the consequences of their skepticism, including *isosthenia*—a kind of intellectual equilibrium, equanimity, equipoise (useful in eliminating intellectual anxiety, and producing *ataraxia* (αταραξια). Well aware of the argument from self-refutation, Greek skepticism at its best could not be drawn into a commitment to the proposition "we can have no knowledge about the truth of a statement" (if such a proposition is 'true,' it is false). Rather, in pointing out difficulties in the claims of others to knowledge, they implicitly suggested the futility of such claims, indeed precisely those of the sort, "we *know* we are not brains in a vat." Thus my argument against Putnam constitutes a modern version of Greek skeptical isosthenia (ισοσθεηεια). One can't, of course, argue someone into such a state. One can only offer examples, point out the implications of assumptions, elucidate contradictions, much as Greek skeptics typically said, in effect: "you might want to consider this—it seems not to confirm what you say," or "this doesn't seem to square with what you claim," or "given your premises, couldn't one also argue that...?" Insofar as philosophers are able to work themselves into some anxiety or confusion (Greek *tarache* [ταραχηε][11] over whether or not they are brains in a vat, my comments on Putnam's argument might put them exactly at the point of a very odd equipoise:

> ...looking "*down*," they might believe that for them (and for others who seem to be in their world) brains exist in a vat only if someone (or something) in *their* "world"—a world the knowing of which they can

understand only by means of a causal constraints theory of reference—put the brains there; *and* they would know that one significant question that can be entertained philosophically in English (whether or not *their* brains had been put in a vat) has an answer: no!

...looking "*up*," at least thinking about what it might mean to look "up" in the sense of entertaining the *logical* possibility that I've outlined here for a series of the "'vat English' to English to 'supra English'" sort, they can't be sure, can't "philosophize" (in a Putnam-like sense), can't refer, can't do more than entertain interesting imaginative analogies.

The philosophical clarity of "looking down" is balanced by the philosophical impossibility of "looking up": *isosthenia*, of a sort.

3.   If this commentary is effective in the skeptic's sense, it suggests that the implications of Putnam's larger argument about the nature of representation and reference need significant contextualization, and that his apparently bedrock conclusion deriving from that argument has been shaken. If we no longer have a modern equivalent of the certainty of the Cartesian "cogito"—a certainty that has for over three centuries affected Western epistemological aspiration—then the nature of present philosophical enterprises may look rather different, with certain questions becoming newly exigent.[12] What does the logical possibility of an infinite nesting of "vat English" to English (and English to "supra English") suggest for our thoughts about, and our speaking of, our being? what ultimate knowledge of our "vat status," our being in the world, can we have? Are traditional philosophical questions about ontology and epistemology indeed reinvigorated by my skeptical challenge? And what does all this suggest about the viability of skepticism on Pyrrho's/Sextus's model in modern philosophy? Even if skepticism surrenders its original "therapeutic" ambitions, does it continue to have

a consequential, and indeed defining, role in the history of philosophy?   Must, for example, the pragmatists' wish for an end to "Philosophy" continue to be unrealized? And finally, does the formalism of my discussion here suggest that mathematics can be of greater service or suggestiveness in philosophical inquiry? Perhaps the relation of the Löwenheim-Skolem Paradox to the "brains in a vat" question, articulated brilliantly by the late and much missed Thomas Tymoczko, is deeper than we have heretofore realized.

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FOOTNOTES

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[1]See *The "Summa Theologica" of St. Thomas Aquinas*, Part I, QQ. CIII.-CXIX., literally (*sic*) translated by the Fathers of the English Dominican Province (London: Burns Oates & Washbourne, 1922), p. 61.

[2]There are any number of other versions of this topos. Pascal, for example, reverses the commonplace query about other possible worlds to ask, "Combien de royaumes nous ignorent!" ("How many worlds know us not?"), a question which-- when combined with the notion that there are worlds *we* do not know   of-- implicitly suggests an infinite continuum of unknowing. (Pascal also, strikingly, speaks of "rêve souvant qu'on rêve," and "entassant un songe sur l'autre" ["dreams within dreams," and "the piling of dream upon dream"] [*Oeuvres de Blaise Pascal*, XIII (Paris: Librairie Hachette, 1925), pp. 127, 343]). One might also argue that with Leibniz's articulation and defense of the infinitesimal calculus, there is in the 17th century a newly perspicuous notion of infinitely small numbers

(numbers which Leibniz argued are not *real* but *fictitious*). It is suggestive that many examples of the topos come within roughly a century of Descartes' deeply symptomatic pursuit of radical epistemic certainty.

[3]I am indebted here to Arne Naess's splendid account of Greek skepticism, *Scepticism* (London: Routledge and Kegan Paul), 1968.

[4]Many, of course, would not be so generous in assessing Putnam's account of a causal constraints theory of reference. See, for example, David Lewis's powerful objection in the concluding pages of "Putnam's Paradox," *Australasian Journal of Philosophy* (Volume 62, No. 3, 1984), 233-236. But since my interest here is in the *form* of Putnam's argument, I wish to grant as much as possible of that argument, as well as the stipulations and generalizations that attend it.

[5]This metaphor is, of course, central to all that follows, and it may reasonably be wondered how adequate it is, and whether what we need is a metaphor at all. (Some may think that what is required is more a detailed specification of an *analogy*.) The problem may not seem so exigent when looking (as I go on to say) "down" the series of relations (English to "vat English," "vat English" to "vat/vat English," "vat/vat English" to "vat/vat/vat English"). But since it is only on the basis of looking "down" that we can say anything about looking "up," this characterization must decide the issue. "Nesting" as a metaphor captures my sense that the pairings in the series I suggest are always "inside" (another, prepositional metaphor) two other relationships. E.g., the relation of "vat English" to "vat/vat English" is "inside" (not merely "between") the relations of "vat/vat English" to "vat/vat/vat English" and English to "vat English"— "inside" in the sense that its meaning is complexly governed by the meaning of these two other relations, and in turn, *their* relations to the pairings which they are inside of...*ad infinitum*.

[6]"Infinite" in a peculiar, but quite crucial sense; for of course there is—at least for the purposes of my argument—only *one* vat and only *one* extra-vat source of manipulation. But what goes on <u>in</u> the vat is of potentially infinite complexity, including a nesting of infinite linguistic possibilities. In other words, I might say that there are only two possibilities: we're either *in* the vat or we're *not*; but again, the simplicity of this formulation should not obscure, as I will argue, its undecidability. And it is important to recognize that there is no point in trying to understand what lies "above" a possible "supra English" (e.g., "supra/supra English," "supra/supra/supra English"). These are mere "place holders" in the logical sequence that I create by reversing the "vat English," "vat/vat English" series (whose intelligibility is potentially referential). Once we begin speaking of the possibility of "supra English"—the language of those who manipulate our English-speaking brains, if ours are indeed in a vat—then we've created the only possibility we need for skeptical purposes, i.e., for showing that Putnam's argument does not hold. (If one were to demand of me an explanation for what, say, "supra/supra English" *means*, I could only say that, heuristically, one must imagine it as occupying the "supra English" point on the series, which in turn entails displacing by one—*down*—all other terms below it: "supra English" becomes English; English becomes "vat English," and so on. But this seems pointless bookkeeping; again, all terms above "supra English"—the key logical possibility I wish to establish—are irrelevant to my argument.)

[7]By the phrase "can't know" I mean always to have the following qualification understood as governing (this so as to avoid the trap of self-refutation often laid for skeptics [see p. 9 below]): "can't know" insofar as our basis for knowledge consists of the premises and forms of argument presently being discussed; no universal claim for the impossibility of knowledge on this, or any other score, is being made; the operative terms are simply those of Putnam's chapter.

[8]This is an extremely important point, and marks what may be the crucial disagreement between Putnam and myself. I am grateful to Professor Putnam for responding to an early version of my argument, and clarifying our differences. He believes I am committed by my line of argument to *referring* to "supra English." I wish, on the contrary, to argue that we *cannot*, except in a generalized and purely heuristic fashion, *refer* to "supra English." For "supra English" is not a specific designation, does not uniquely refer, but rather (speaking metaphorically) is a kind of generic "pronoun," the antecedent for which is the logical conditions I've specified. Perhaps a mathematical example may be illustrative here: we may feel the need to speak about properties which define a possible transfinite number; we may even specify this possible number as "x." But in speaking about "x" we are not referring to a specific number, for "x" is merely a "fragment" of an existential generalization about a potential feature of a class of numbers deriving from the set of transfinite numbers. To return to "supra English," what I wish to say is that the logic of the argument I articulate suggests that there are innumerably many *possible* versions of "supra English"; but none of these possible versions is constrained in any *particular* way, either in form or content, by either the logic of my argument, or *a fortiori*, by a causal constraints theory of reference. It makes no sense at all to say that we can refer to "supra English" as we refer to cabbages in our world (of English speaking).

[9]That is, there may be in "supra English" no cognitively, intellectually, or logically more powerful or radical consideration of the problem, or some form of the problem, with which Putnam and this essay are concerned—merely a complacent reprise of, or reference to, what we call in English the "philosophical" problem of whether or not we are "brains in a vat."

[xi] Putnam speaks of a magical theory of *representation* (and reference) as one in which a word has "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" (Putnam 1981, p. 5).

[11]In the *Republic* (602 D) Plato has Socrates offer the following epistemically troubling (though for my topos, quite interesting) phenomena: "the same objects look both bent and straight depending on whether we look at them when they're in water or out of it, and both concave and convex because sights get misled by colouring. Our mind [*psyche* (ψυχη)] obviously contains the potential for every single kind of confusion [*tarache* (ταραχη)] like this." (Plato, *Republic*, trans. Robin Waterfield [Oxford: Oxford UP, 1993], p. 355.)

[12]I can only gesture toward Wittgenstein's fascinating inquiry into some of these problems in *On Certainty* (ed. G.E.M. Anscombe and G.H. von Wright, [London: Blackwell, 1969]) and his deep meditations on the problem of his title. Unsurprisingly, Wittgenstein's implicit critique of Cartesian certainty is both powerful and unsettling. Particularly suggestive is his comment that "One doubts on specific grounds. The question is this: how is doubt introduced into the language-game?" (§458). The argument I present here in response to the language-game of Putnam's chapter might be understood as an elaborate answer to Wittgenstein's question.