External realism

- Last week, we saw that Putnam’s model-theoretic argument presents external realism with a serious problem.
- We characterised external realism with the Independence, Correspondence and Cartesianism principles:
  - **Independence** The world is (largely) made up of objects that are mind-, language-, and theory-independent.
  - **Correspondence** Truth involves some sort of correspondence relation between words or thought-signs and external things and sets of things.
  - **Cartesianism** Even an ideal theory might be radically false.
- We then formalised these principles using model theory.
The model-theoretic arguments

▶ If our best theory of the world is consistent, it has a model, \( W \).
▶ The domain of this model is a set \( W \), and can be permuted.
▶ But now the external realist is at a loss to explain why Correspondence works the way we think it does.
▶ Also, by completeness, any consistent, countable theory will have a numerical model.
▶ This week, we’ll consider how the external realist can reply. Our presentation will largely follow Tim Button’s.
▶ This will lead on to a discussion of Putnam’s Just More Theory reply to all of them.
▶ It is only then that we’ll really appreciate the power of the model-theoretic arguments.
The external realist may reply:

yes, we can permute models in any way we like, so that ‘square’ fails to refer to squares, and ‘triangle’ fails to refer to triangles. But these deviant models are all unintended. The intended model has a privileged status.

This response has much intuitive appeal, but the problem comes in spelling out why the intended model is privileged.

Let’s consider some popular suggestions.
Recall Kripke’s causal theory of reference: a necessary condition for term to refer to an object is that there is a chain of causation from an initial baptism to current usage.

Kripke never claimed that such causal chains are *sufficient*: we also need deference to prior usage.

The central thought is that *causation* is intimately involved in reference. An intended interpretation, we may think, should respect such causal connections.

There is a causal connection between squares and ‘square’ but not between squares and ‘triangle’. That’s why the intended interpretation is intended.

There are well-known problems for such theories: (i) how do we refer to causally inert objects like numbers? (ii) how does the account deal with reference change? (iii) what counts as the appropriate causal relation?
Lewisian sparse properties

- David Lewis holds that properties are sets of actual and possible objects. But not all properties are equal. Amongst these abundant properties are the sparse properties.
- The sparse properties are those that ground similarity and causal relations:

  *Sharing of [sparse properties] makes for qualitative similarity, they carve at the joints, they are intrinsic, they are highly specific, the sets of their instances are ipso facto not entirely miscellaneous, there are just enough of them to characterise things completely and without redundancy. (On the Plurality of World, p. 60)*
Lewisian sparse properties

- In model theory, we generally apply sets of objects to predicates.
- On Lewis’s view, properties are sets of objects, and sparse properties are a certain subset of these.
- Perhaps the intended interpretation of a predicate is a sparse property: it is more *magnetic* to reference.
- Once again, there are well-known problems for Lewis: (i) what justifies Lewis’s confidence in the existence of such a perfectly adequate set of sparse properties? (ii) sparse properties are defined (in part) by similarity: they make for qualitative similarity. But do we have any handle on what similarity amounts to in the mathematical case?
In the model-theoretic constructions that we have considered, every sentence of the language is given a truth-value.

The external realist could demand more: in order for the apparatus to be suitable, it must deliver not merely truth-values but truth-conditions.

Putnam thinks that model theory can deliver this. The truth-conditions of a sentence can be thought of as the possible worlds in which that sentence is true. Given that we have been treating the external world as a model, we can treat possible worlds as models.

But, Putnam thinks, we can play the same game all over again. These possible worlds are now treated model-theoretically, so their domains can be permuted.
McGee’s modal constraint

- However, Vann McGee believes that there is an important difference when we are permuting the domains of other worlds.
- The thought, again following Kripke, is that some names are rigid designators. These are names that denote the same object in all worlds in which that object exists. The intended interpretation must respect the fact that names are rigid.
- ‘Putnam’ is a rigid designator, if anything is. It refers to Putnam in every world in which Putnam exists, and we must respect that when permuting. So a permutation that maps ‘Putnam’ to, say, Kripke, is not respecting the modal constraints on reference.
- This response has a couple of obvious limitations: (i) some objects exist in exactly the same worlds, such as me and my singleton; (ii) mathematical objects exist in all worlds, so we can always permute them.
A limited response

- We have considered 3 possible constraints that the external realist can put forward, and seen some problems.
- But this style of argument is rather unsatisfactory: our criticisms have been rather brief and, no matter how many constraints we knock down, what confidence do we have that there won’t be another, more robust, constraint that we’ve missed?
- Fortunately, we needn’t worry about these limitations, since Putnam has provided a perfectly general argument that there cannot be any such constraint that limits our focus to the intended interpretation.
Our proposed constraints all have a common shape:

\[ C \ X \text{ fixes reference.} \]

Here, \( X \) is a variable ranging over constraints on reference. Instances include ‘Causation’ and ‘Rigid designation’.

But our favourite instance of \( C \) will be part of our best theory of the world.

If this sentence is in our theory, however, then it has failed to fix a reference for, say, ‘causation’.

There will be many interpretations of ‘causation’, ‘fixes’ and ‘reference’ which make the sentence ‘causation fixes reference’ true, and we once again have indeterminacy.

In Putnam’s slogan, the instance of \( C \) is Just More Theory, and so susceptible to model-theoretic treatment.
Begging the question

- The standard response to the JMT manoeuvre is to accuse Putnam of begging the question against external realism.
- The worry is that, in its sweeping generality, the JMT manoeuvre has ignored what is essential to the various candidate responses.
- Putnam has failed to say anything, for example, about causation or rigid designation or sparse properties.
- He has merely discussed ‘causation’, ‘rigid designation’ and ‘sparse properties’. But it is not the *words* that fix reference, but the concepts they express. Putnam has been silent on these.
- Let’s try to get this worry in sharper focus.
The Cartesian principle again

- We can imagine the external realist replying as follows:

  The model-theoretic argument has presented us with sceptical scenarios, e.g. scenarios in which my word ‘triangle’ refers to squares. The JMT manoeuvre has then convinced me that nothing can constrain reference.

  But this isn’t really so bad. I am an external realist and so accept the Cartesian principle. I entertain the possibility that sceptical hypotheses obtain, e.g. that I am a BIV. I don’t believe that I am a BIV, of course, but I accept the possibility.

  All that Putnam has achieved is demonstrating that my scepticism should extend further, in particular to my semantics. I should entertain the possibility that my words don’t behave as I think they do. I don’t believe this, of course, but I should accept the possibility.
The *reductio*

- This speech is a *total disaster*.
- The Cartesian principle essentially captures the worry that appearances may deceive.
- But scepticism about semantics seems rather different. If we embrace scepticism about our semantics, then we entertain the idea that we are hopelessly wrong about what our words refer to.
- But the latter sort of scepticism is rather more troubling. How can we worry that our words don’t refer? If you really worry that your word ‘triangle’ doesn’t refer to triangles, how could you even express your worry?
- You may say:
  - ‘Triangle’ does not refer to triangles.
- But, if you entertain semantic scepticism, * has not expressed your thought, since we have no confidence that the last word picks out triangles.
- Semantic scepticism, then, is self-refuting.
Let’s use a familiar case to illustrate the point.

Famously, Putnam argued that another sceptical hypothesis that cannot be correct is the BIV hypothesis: that everyone, always and everywhere, is a permanently envatted brain.

He argues against this scenario as follows:

1. The BIV word ‘brain’ doesn’t refer to brains.
2. My word ‘brain’ refers to brains.

\[ \therefore 3 \text{ I am not a BIV} \]

The argument is valid: 3 follows from 1 and 2 by Leibniz’s Law.

Is it sound?
1 The BIV word ‘brain’ doesn’t refer to brains.
   ▶ Premise 1 is defended as follows: reference is a complex business, but it is at least constrained by factors such as causation.
   ▶ A necessary condition for someone’s word ‘brain’ to refer to brains is for there to be a chain of causation between their usage and brains.
   ▶ But, by hypothesis, a BIV has never causally interacted with brains. So their word cannot refer to brains.
Defending premise 2

2 My word ‘brain’ refers to brains.
   ▶ Premise 2 is defended as follows: if it were false, then we would have no idea what 2 means.
   ▶ If the BIV sceptic tries to knock down premise 2, they are entertaining an incoherent form of scepticism.
Conclusion

- Let’s review where we’ve got to.
- The external realist accepts the Cartesian, Independence and Correspondence principles.
- The Cartesian principle embodies the thought that appearances may deceive.
- But the model-theoretic argument, along with the JMT manoeuvre, show that the Cartesian principle entails semantic scepticism.
- But semantic scepticism cannot even be formulated. It is self-stultifying. It is incoherent.
- External realism entails something incoherent, so external realism is false.
- In weeks 5 and 6, we’ll see what we can salvage of external realism.
- Next week, we’ll consider another possibility: antirealism.