Hilary Putnam - Meaning and Reference

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Meaning and Reference

- Is the meaning of a term a concept?
- If it is, is it a mental or an abstract entity?
- Terms can have different intensions while having the same extension. But can terms that have the *same* intension have different extensions?
Two unchallenged assumptions in the theory of meaning:

1 – Knowing the meaning of a term is *only* a matter of being in a certain psychological state.

2 – The meaning of a term - its intension - determines its extension.
Are meanings in the head?

• Putnam proposes a thought experiment:
  ▫ Suppose there exists a Twin Earth that is physically identical to Earth, except that their ‘water’ is made of XYZ rather than H$_2$O.
  ▫ Suppose it is the year 1750, before the chemical structure of water was discovered. At that time, there is no belief that the Earthian Oscar$_1$ has about water that the Twin-Earthian Oscar$_2$ does not. Psychologically, they are identical.
Are meanings in the head?

• But the term ‘water’ on Earth and the same term ‘water’ on Twin Earth have different extensions, even in 1750.
• Therefore, Oscar\textsubscript{1} and Oscar\textsubscript{2} understood the term ‘water’ differently, although they were in the same psychological state; but it would take science another 50 years or so to discover that the two Oscars understood ‘water’ differently.

• Conclusion: the extension of a word is not a function of the psychological state of the speaker \textit{by itself}. Assumption #1 is false.
Are meanings in the head?

• One might object that water and water have different extensions.

• But when I say “this is water” while pointing to a glass of clear liquid, I am positing a theoretical relation “same\textsubscript{L}\textsuperscript{\textsubscript{1}}“ (same liquid as) between this liquid and the liquids that the linguistic community calls “water”.

• This relation is theoretical in the sense that its truth depends on scientific investigation; this example indicates that water and water have the same extension.
Are meanings in the head?

• If I found out that I’m pointing to gin (e.g. by taking a sip), I will correct myself. By the same token, if I found out I’m pointing to XYZ (by other forms of analysis), I will also correct myself.
• The meaning of water did not change for the average speaker (i.e. their psychological state when they refer to water) from 1750 to 1950. What did change is the linguistic community’s knowledge that same does not hold between XYZ and water
Are meanings in the head?

- Another example: Aluminum/Molybdenum
- If I land on Twin-Earth and I tell my doppelganger to hand me the “aluminum pot”, he will hand me a molybdenum pot; our different extensions for “aluminum” and “molybdenum” resulted in a miscommunication in this case.
- What accounts for this miscommunication is not a concept difference between me and my doppelganger; neither of us can tell an aluminum from a molybdenum pot. So there is a difference in meaning without a difference in concepts.
- Conclusion: meanings aren’t in the head!
A Sociolinguistic Hypothesis

• Not everyone to whom a given distinction is important has to be able to make that distinction

• There is a division of linguistic labor; the extension of a general name is fixed by the linguistic community as a collective body, with different members knowing the full meanings of different words.

• In case of doubt, a “layman” speaker will rely on the judgment of an expert speaker for any particular situation.
Hypothesis of the universality of the division of linguistic labor: “Every linguistic community exemplifies the sort of division of linguistic labor just described; that is, it possesses at least some terms whose associated “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 subsets” – page 706
A Sociolinguistic Hypothesis

• The average speaker who acquires a term does not acquire anything that fixes its extension; a fortiori, his psychological state doesn’t fix the extension of the term.

• Only the sociolinguistic state of the collective linguistic body fixes the extension of the speaker’s terms.

• The function of words as a tool requires the cooperative activity of many individuals, rather than the action of one individual – page 706
Indexicality and Rigidity

• Let $W_1$ and $W_2$ be two possible worlds in which I give a meaning explanation by pointing to this glass and saying “this is water”. In $W_1$, the glass is full of $\text{H}_2\text{O}$, while in $W_2$ it is full of XYZ. Suppose $W_1$ is the *actual* world, and that XYZ is called “water” in $W_2$. 
Indexicality and Rigidity

Two theories concerning the meaning of water:

- Theory 1: Water is world-relative but constant in meaning. That is, water means the same in W1 and W2; the fact that they have different chemical structures is irrelevant to their meaning.

- Theory 2: Water is H₂O in all possible worlds; “water” doesn’t have the same meaning in W1 and W2.
Indexicality and Rigidity

- Symbolizing the difference between the theories as a “scope” difference:

  ▫ **Theory 1:**
  - (For every world W) (For every x in W) (x is water \( \equiv \) x bears same\(_L\) to the entity referred to as “this” in W)

  ▫ **Theory 2:**
  - (For every world W) (For every x in W) (x is water \( \equiv \) x bears same\(_L\) to the entity referred to as “this” in the actual world W\(_1\))

It is a “scope” difference because in Theory 1, the entity referred to as “this” is within the scope of every possible world W. In Theory 2, the corresponding entity’s scope is only W\(_1\).
Indexicality and Rigidity

• The force of “this is water” as a meaning explanation comes from the rigidity of the designator “this”. That is, “water” is whatever bears the relation $\text{same}_L$ to the sample of liquid (i.e. $\text{H}_2\text{O}$) referred to as “this” in the actual world. Otherwise, “this is water” makes no sense.

• Therefore, Theory 2 is correct.
Indexicality and Rigidity

• This theory of meaning has consequences for the theory of necessary truth
  ▫ A two-term relation $R$ is called cross-world when its extension is a set of ordered pairs of individuals not in the same possible world.
  ▫ Theory 2: an entity $x$ in an arbitrary possible world is *water* if and only if it bears a cross-world relation $\text{same}_L$ to the stuff *we* call “water” in the actual world.
Indexicality and Rigidity

- If I agree that a liquid with the superficial properties of “water” but a different microstructure isn’t *really* water, then my ways of recognizing water cannot be regarded as an analytic specification of what *it is to be* water.
- Suppose I haven’t discovered what the microstructure of water is yet. I will have some operational definition of what water is, but I recognize that this is not a sufficient condition to determine what water is.
Indexicality and Rigidity

- Suppose that we have discovered the microstructure of water: water is $\text{H}_2\text{O}$
- A possible world where people drink XYZ is no longer a world where “water is XYZ”. It is simply a world where XYZ plays the role that $\text{H}_2\text{O}$ – water - plays in this world.
- That is, once we’ve discovered the nature of water, *nothing* counts as a possible world in which water isn’t $\text{H}_2\text{O}$
Indexicality and Rigidity

• Words like “here”, “now” or “this” are indexical; their extension varies from context to context. Intension in this case doesn’t determine extension.

• Natural-kind words like “water” have an indexical component: “water” is what bears same $L$ to the water *around here*.

• Saying that natural-kind terms have an indexical component does not mean that “intension determines extension” is false for these terms.
Indexicality and Rigidity

- If Twin Earth called XYZ “quaxel” rather than “water”, it is counterintuitive to say that our term “water” and their term “quaxel” have the same meaning. Remember, they refer to different liquids!
- Kripke’s doctrine that natural-kind words are rigid designators and Putnam’s doctrine that they are indexical are two ways of making the same point.
Conclusion: Indexicality and Rigidity

- Extension of a term is determined *socially* as well as *indexically*, and this means that the extension of a term is certainly not fixed by an individual speaker’s concept of a term.
- Traditional semantic theory leaves out two contributions to the determination of reference: that of society, and that of the real world. A better semantic theory must encompass both.