

Putnam on Meaning

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Syntax and Semantics

- Great advances are being made in linguistics in our understanding of the basic syntax of language.
- But semantics lags far behind.
- The reason is that the pre-scientific concept of meaning is “in much worse shape” (216) than the pre-scientific concept of syntax.
- The problem with the pre-scientific concept of meaning is not clarified by nominalism or skepticism about whether meanings exist.
- It lies in fundamental misconceptions about what meaning is.
- The investigation of the problem will take place at the level of word-meaning rather than sentence-meaning.

Intension and Extension

- It has been customary in semantics since the Middle Ages to claim that there is an ambiguity in the ordinary concept of meaning.
 - Extension,
 - Intension
- The extension of a term (e.g., ‘rabbit’) is supposed to be the set of all things to which ‘rabbit’ truly applies.
- This notion of extension is actually too precise, due to ambiguity, vagueness, etc.
- If extension is the same as meaning, then there must be another sense of meaning to distinguish the meanings of co-extensive terms, perhaps:
 - Creature with a heart,
 - Creature with a kidney.
- The feature beyond the extension that distinguishes them is called the intension.

Two Traditional Assumptions About Meanings

- Extension is taken to be a kind of meaning because it can be made precise, while intension cannot.
- The problem with intension is that it is understood in terms of concepts, which was thought by traditional semanticists to imply that they are mental entities.
- Frege and Carnap reject this psychologism, holding that concepts are public and graspable by more than one person.
- The first assumption is that, since grasping a concept is a mental act, understanding a word comes down to being in a certain psychological state.
- A second assumption about meaning is that the same intension always carries with it the same extension.
- Putnam's argument will be that no notion, let alone a notion of meaning, satisfies these two conditions.

Psychological States

- In science, a state is a property of a thing in terms of some branch of science.
 - Being five feet tall, from the standpoint of physics,
 - Being in pain, from the standpoint of mentalistic psychology,
 - Knowing the alphabet, (perhaps) from the standpoint of cognitive psychology.
- *Knowing the meaning of the word 'water'* is a psychological state in this (wide) sense, but not in the traditional sense.
- The traditional (narrow) sense of "psychological state" is based on the assumption of methodological solipsism, under which the state requires nothing more than a mind in order to exist.
- The mentalistic program assuming methodological solipsism is a failure, which casts doubt on the usefulness of the narrow sense of a psychological state.

A Consequence of the Two Traditional Assumptions

- Given the first assumption, *knowing the meaning of A* and *knowing the meaning of B* are narrow psychological states.
- More specifically, the psychological states are of *knowing what the intension of A is* and of *knowing what the intension of B is* are narrow on the first assumption.
- Given the second assumption, the extensions of *A* and *B* follow from the intensions of *A* and *B*.

- So, if the extensions of *A* and *B* are different, then the intensions of *A* and *B* are different.
- So, the narrow psychological state of *knowing what the intension of A is* is different from the state of *knowing what the intension of B is*.
- So, the narrow psychological state of *knowing the meaning of A* is different from that of *knowing the meaning of B*.

Putnam's Thesis

- The consequence that meanings of terms with different extensions requires different narrow psychological states will be rejected by Putnam.
- Speakers in two possible worlds can be in the same psychological state with respect to a term *A* which has distinct extensions at those worlds.
- "Extension is *not* determined by psychological state" (222).
- This requires the rejection of one of the two assumptions.
 - The narrow psychological state determines intension,
 - Intension determines extension.
- These two alternatives will be considered later.

Twin Earth

- Putnam will give "science-fiction" examples involving Earth and a "twin" planet somewhere else in the Milky Way.
- Twin Earth is very much like Earth, including the fact that its speakers speak English.
- One difference between the two is that what is called 'water' is not H₂O, but a different chemical whose composition will be abbreviated as 'XYZ.'
- XYZ is perceptually and behaviorally indistinguishable from water.

Same State, Different Meaning

- A traveler from Earth, upon investigation, would report that on Twin Earth 'water' means (i.e., has the extension) XYZ.
- Conversely, a traveler from (to us) Twin Earth would report that on (to him) Twin Earth 'water' means H₂O.
- In 1750, before the advent of modern chemistry (on both planets), the Earthian Oscar₁ and his counterpart the Twin Earthian Oscar₂ have exactly the same experiences of and beliefs about water.

- Although they have the same narrow psychological state, the extension of ‘water’ is different, in a way that they were in no position to discover.
- So, “the extension of the term ‘water’ . . . is *not* a function of the psychological state of the speaker by itself.”

A Division of Linguistic Labor

- The key point in the preceding case is that someone can know the meaning of a term without being able to fix the extension of the term.
- Putnam hypothesizes that the role of determining the extension in developed languages is left up to experts.
- This accounts for the fact that meaning of a term is not “in the head” (at least of the average user).
- Meaning is a function of social interaction between average persons and experts (such as chemists) who are able to determine extensions.
- Language has been thought of as if it were a tool that can be used by a single person (a hammer) rather than one that requires social co-operation (a steam engine).

Stereotypes

- There are two obvious ways of telling what someone using a natural kind term like ‘water’ means:
 - “Ostensive definition,” pointing at an instance and saying, “*This* is water,”
 - Giving a description.
- A description consists of two elements:
 - A marker, which says what type of thing it is (liquid),
 - A cluster of stereotypical features in addition to the marker.
- The stereotypical features sometimes are not sufficient for distinguishing one kind from another.
 - An elm is a common deciduous tree, as is a beech.
- The connection is that the ostensive definition is the basis for determining the stereotype.

Indexicality

- Natural kind terms like ‘water’ function as what Kripke called “rigid designators.”
- The extension of the term ‘water’ as used by inhabitants of Earth is determined by their relation to a liquid to which they can point on their planet.
- If that liquid turns out to be H_2O , then nothing that is not H_2O can be in the extension of ‘water.’
- Thus the extension of natural kind terms is determined in the same way as the extension of “indexical” terms such as ‘I.’
- Once ‘I’ is used to indicate myself, then nothing else that might be called ‘I’ by another is in the extension of ‘I.’
- Given the assumption that intensions determine extensions, natural kind terms, like indexicals, do not have intensions independently of the context in which their references are fixed.

Realism and Anti-Realism in Semantics

- In “operationalist” semantics, the meaning of a term is given by an “operational definition” or set of conditions for determining whether something is in its extension.
- Suppose that we understand the nature of gold in terms of a molecular structure of a kind that could not have been known by Archimedes in ancient Greece.
- If Archimedes applied an operational definition of ‘*chrusos*’ to a metal that does not have that property, that metal is not gold because it lacks the nature of gold.
- The operationalist might object to this claim on the grounds that nobody has the right to say that Archimedes was wrong.
- But such anti-realism undermines the notion of truth and along with it the notion of extension (that of which a term is true).

Hidden Structure

- Natural kind terms, like ‘water,’ typically have a number of senses.
 - Chemically pure water, vs. impure water,
 - Being H_2O , vs. being used in a certain way,
 - Being liquid, vs. being a single molecule of H_2O .
- Which sense we use in a given context depends on what is important to our interests.

- Normally, the hidden structure of a thing (its elemental materials and their arrangement) are the most important, but there can be variations.
- In cases like that of 'jade,' the superficial characteristics are indispensable, since it applies to two different minerals (jadeite and nephrite) with the same appearance.
- With 'water,' there is only one structure, and it determines what is the extension of the term in all possible worlds.

Fixing the Extension

- The extension of a term is not fixed by a concept that someone has in his head.
- Rather, it is fixed by the actual nature of particular things which serve as paradigms.
 - The nature of water determines the extension of 'water.'
- Generally, the nature is a hidden structure that ordinarily is not fully known to the speaker (and therefore not 'in his head' when he uses the term).
- If an individual speaker's concept (which is based on stereotypes) is the meaning of a given term, then meaning does not determine extension.

Why Meaning Determines Extension

- In the case of absolutely indexical words like 'I,' it is reasonable to give up the thesis that meaning determines extension.
 - We know what 'I' means, but its extension varies depending on who uses it.
- The extensions of natural kind terms do not vary in this way.
- What determines the meaning of the terms is the ostensive relation of speakers to objects in its extension.
 - The meaning of 'elm' (on Earth), including its stereotype, comes to be in a social context of pointing out specific trees.
- So meaning determines extension, "by construction, so to speak" (270).

The Components of Meaning

- Putnam's theory of meaning contains four components, illustrated by the example of 'water.'
 - Syntactic markers, having to do with the role the word plays in language (mass noun, concrete),

- Semantic markers, central to stereotypes, very hard to give up (natural kind, liquid),
 - Stereotypes, typical features (colorless, transparent, tasteless, thirst-quenching),
 - Extension, the set of things to which the term refers (the scattered object composed of H₂O).
- Linguistic competence is based only on the first three components, due to the fact that determining the extension often requires expertise beyond the recognition of stereotypes.

Meaning and Analyticity

- Quine's arguments against the view that some sentences are analytic, true by virtue of meaning, do not threaten Putnam's account of meaning.
- In fact, Quine has done a good thing in exploding claims to analyticity, because they merely cover up philosophers' failures to show why the 'analytic' sentences are true.
- On Putnam's view, it is possible for some feature of a stereotype to be part of the meaning of a natural kind term without that term's being analytic.
 - Being striped is part of the meaning of 'tiger,' as it is one of the stereotypical features of tigers.
 - But this feature could be dropped, say if through mutation all tigers were to become albinos.
 - Even 'All tigers are animals' could be rejected if, say, it were discovered that tigers have always been robots.
- "Analyticity" is a confused way of describing "centrality."

"California Semantics"

- Carnap, who at the time was a professor at UCLA, had a formal approach to semantical theory, which will be called more generally "California semantics."
- The meaning of a term is identified with the intension.
- The intension is then identified with a formal object, such as a function from possible worlds to sets of objects at those worlds.
- Then the extension of a term at a world is determined by the intension.
- A term has meaning for a speaker just in case the speaker associates it with an intension.

Criticism of “California Semantics”

- It is not realistic to suppose that in understanding the meaning of a term, a speaker associates it with a formal object such as a function.
- This doctrine may be a vestige of verificationism: to “grasp” an intension is to be able to verify whether an entity in a possible world belongs to the value of the function in that world.
- But this claim implies that meaning is “in the head,” a thesis that has already been discredited.
- Further, the account of intensions disregards the indexical and social character of meaning.

The Utility of “California Semantics”

- It might still be held that “California semantics” correctly describes meaning in an ideal language.
- There would be no need for a division of linguistic labor, in that everyone would be an expert who could determine the extension from the intension.
- Putnam questions what relevance such an ideal language has to human language, when it lacks one of its defining features.
- There is some hope, though, since indexical and social features might be built into the definition of an intension.
- David Lewis does this in a way that intension does not determine extension.
- Such formal models may be of value, but the criticism above is directed at “the philosophy of language underlying the earlier versions of the view” (266).