

## PHIL 202 Philosophy of Language Essay

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According to intensional semantics, “the meaning of a declarative sentence is given by its intensionally conceived truth-conditions”. Explain why truth conditions are often taken to be central to a theory of meaning, and say what “intensionally conceived truth-conditions” are supposed to be. What, in your view, are the main problems confronting an intensional semantics, and how serious do you take them to be?

The importance of truth conditions to semantic theory precedes intensional semantics, going back to the intriguing result of a basic extensional theory, that the meaning of a declarative sentence is exactly its truth value. This essay will attempt to show that the complication of this rather neat finding, the expansion of extensional theory to intensional, is useful not only because it solves certain problems with the original theory but because it comes closer to an intuitional understanding of what the meaning of a declarative sentence is.

The claim that extensional semantics makes, that the meaning of a declarative sentence is just its truth value, is striking: it is not obvious in the least. When asked what the meaning of a given sentence be, a lay person is likely to struggle perhaps to rephrase the sentence or else fall back to the blunt, “The sentence ‘*x*’ means that *x*” defence; but he or she is not likely to say that the sentence *means* “true” or *means* “false”.

And yet to philosophers, because of their familiarity with formal logic, this claim was quite attractive. Until fairly recently in the history of philosophy the study of language itself had been relatively untreated, usually only serving as a digression from another topic for the purpose of, for example, clarifying important definitions or distinctions. When it came to seem that language could be explained in terms of logic, a topic considered in great depth right from the birth of philosophy, there was a great incentive to make the extensional theory work: one might not know how exactly to deal with this funny thing called *meaning*, but if there is a correspondence between meaning and *truth values* a philosopher is much more at home, and can tell you all sorts of things, such as how the meanings of complex sentences are built up from smaller atoms, relying on a well-understood theory of classical logic.

Fortunately for the lay person’s intuitional objection, the logical consequences of this claim throw up an objection which only the most stubborn enthusiast for extensional theory is able to ignore: if the meaning of a declarative sentence is just its truth value then every true sentence “means the same thing” as every other true sentence, likewise every false sentence. It is to adopt a very simple view of meaning to say that “The earth revolves around the sun” and “Spiders have eight legs” mean the same thing. To some degree it is true that all such sentences have a similar meaning, and it is desirable to keep the mechanism which generates this finding, but such a theory of meaning does not address the nuances of meaning which tell the lay person that these two sentences mean quite different things.

Hence intensional semantics. Previously the relationship between meaning and truth value was as follows: given a declarative sentence, the meaning of that sentence was its truth value; one checked the world, and if it agreed with the sentence, as determined by a set of rules used to determine referents of words and phrases, the meaning of the sentence was “true”, otherwise “false”. Intensional semantics introduces the notion of possible worlds, a new layer of abstraction on top of the useful-up-to-a-point extensional theory. Now, given a sentence, each possible world would either agree or disagree, still according to the same set of rules, with that sentence: in each possible world a sentence would have a truth value. However, across worlds this truth value would vary (at least for most sentences). “The earth revolves around the sun”, for example, would yield true in our own world, but false in another, easily imagined, possible world, where the sun revolved around the earth.

This new layer of abstraction neatly solved the problem with extensional semantics: “The earth revolves around the sun” and “Spiders have eight legs” would both evaluate as true in our world, but in the

possible world just described, where the sun revolves around the earth but, let us say, spiders still have eight legs, one would evaluate as true, the other false. Since a basic intensional theory calls meaning the function for a sentence which maps possible worlds onto truth values, and since these two sentences have differing truth values in one world but congruent truth values in another, under this theory the two sentences have the desired trait of expressing differing meanings.

But intensional semantics represents more than just a clever twist of logic, for it incorporates into the theory the notion of truth *conditions*. If meanings are referents, and the referent of a declarative sentence is a truth value, then in order to determine the meaning of a sentence one must look to the situation in the real world and ascertain whether it agrees with the sentence. This is another problem with an extensional theory: it seems that a person can comprehend the meaning of a sentence without knowing whether that sentence represents the true state of the world or not. Intensional theory calls for an understanding of truth conditions: what it takes for a possible world to yield true under the intensional function of a sentence. This solves this last problem with intentional semantics: one need not know the state of the world in order to know what a sentence means, rather one must be able to imagine what kind of possible worlds that sentence would be true in and in what kind false.

What distinguishes the set of possible worlds where a sentence is false and the set of worlds where it is true are the “intensionally conceived truth-conditions” which under an intensional theory of meaning are exactly the meaning of that sentence.

Again, besides neatly addressing several problems with extensional theory, intensional semantics also better approaches an intuitional understanding of meaning. When asked whether two sentences mean the same thing, one entertains possibilities of difference, and if there are none, declares the sentences mean the same. That is, if there is no possible world where the two sentences do not have as their extension the same truth value, then the two sentences mean the same. It seems more natural to accept that the meaning of a declarative sentence is not merely either “true” or “false” but *what it takes* for a sentence to be either true or false.

But intensional semantics is not without its drawbacks. A similar result to the issue of all true sentences having the same meaning under extensional semantics also occurs in intensional semantics: it seems likely that there are some sentences which are true in *every* possible world, and so these will therefore all have the same meaning as each other. Just as in extensional semantics, this is probably not a desirable result. Take two such sentences; they are usually things like logical truths or falsities, statements that are true or false by definition, or mathematical truths, but not other scientific truths such as laws of physics, since a world where the physics are quite different can easily be imagined: take “It is raining and it is not raining” and “This triangle has four sides”. The first is a logical falsity:  $p \ \& \ \sim p$  is always false; the second is always false, by definition, since a triangle is defined as a two-dimensional figure with just three sides (well, three angles, which implies as much). Since a possible world cannot be imagined where these two sentences do not both yield “false”, under intensional semantics, they both have the same meaning. But, as with the similar case in extensional theory, it does not seem that this ought to be the case: the sentences seem to have quite different meanings.

How serious a problem this is for intensional semantics depends on a few things. Firstly it must be noted that this is a subset of the original problem. Such problem sentences under intensional semantics were also problem sentences under extensional semantics. So the intensional approach has at least succeeded in narrowing the problem down. And from this it may be supposed that the problem may be further diminished or indeed eliminated by a trick similar to that taken in the move from intensional to extensional semantics, that is, by introducing a further layer of abstraction into the theory of meaning. Such an approach has been taken up, with some success, but it is also a concern that with each layer of abstraction and each exception to or tweaking of a rule the theory as a whole becomes fuzzier, less powerful. The more effort it takes to make a theory linking truth values to the meanings of declarative sentences, the more one begins to wonder whether that link is actually there at all.

Another issue with accepting an extensional theory of meaning is the fact that such a theory relies on the proposition of possible worlds. This proposition has its own pro- and opponents, and so it may be asked that if the one supporting theory fails whether the other also fails. In answering this it may be noted that extensional theory does not insist upon the existence of possible worlds, and so it is at least the case that it does not need the most outrageous (to some) flavor of the theory upon which it relies. Rather, extensional theory asks one to *imagine* possible worlds, for the purpose of thus building up the truth conditions which

allow one to grasp the meaning of a sentence. An extensional theory of meaning posits that one must be able to imagine a world where a sentence is true and one where it is false, in order to be able to say that one knows the meaning of a sentence; it does not insist that those worlds exist. Or, since understanding meaning is often understood to be a passive rather than active process, one understands the meaning of a declarative sentence when if one were given a possible world, one would be able to judge whether that sentence was true in that world.

In fact, one of the problems with extensional semantics is only a corollary of possible worlds theory: it is assumed that all possible worlds are consistent, and hence all logical truths hold in all possible worlds, resulting in the unintended consequence for extensional theory, that all sentences expressing logical truths have the same meaning. Without going into the implications for possible worlds theory, if inconsistent possible worlds are allowed then this problem is solved: a world would be able to be imagined where “It is raining and it is not raining” is true.

Whether this gels with the possibilities of the imagination is questionable, but the principle of explosion allows a better approximation of the intuition that anything ought to be able to be described by language. “It is raining and it is not raining” is still undeniably a sentence and it is still desirable to say that its meaning differs with that of the same sentence replacing the word “raining” with “snowing”. If it is still true to say that “The sun revolves around the earth” and “Spiders have nine legs” mean different things even though they are both false right now, why should it not be also true to say that “It is raining and it is not raining” and “It is snowing and it is not snowing” mean different things, even though both will forever be false?

While it may be difficult to imagine a world where it is both raining and not raining, it is still possible to say *what it takes* for such a world to exist, and this, tying meaning to intensionally conceived truth-conditions, is what makes intensional semantics such a powerful theory and a better approximation to an intuitional understanding of what meaning is.

Rather, what is a much more important problem with the theory than any problems with possible worlds or sentences expressing logical truths is the fact that the same sentence can, under intensional semantics, when uttered by a different person or in different circumstances, mean quite different things. This is a problem because it is still desirable to say that there is some immutable meaning for any given sentence, but possible worlds/intensionally conceived truth-conditions cannot by themselves answer this problem.

And since indexicals are largely a problem concerning referents of pronouns and adverbs, not referents of sentences; since this problem is dealt with quite neatly by Kaplan and his *Contexts and Character*; since this is the topic of another essay, answered by perhaps a full one third of my fellows: here I end.