

# Verificationism and Truth Conditional Semantics

## Philosophy of Language

*Where we're at:*

So far we have looked in depth at the relation between meaning and reference. For the most part, we've focused on the meanings of specific expressions in the language: in particular, *descriptions, names, and natural kind terms*.

But any complete theory of meaning should extend beyond specific expressions. It should extend to entire sentences, as well as larger discourses that are composed of such sentences.

**Q:** What does the meaning of a sentence consist in? Or to put it slightly differently, what does a speaker learn when they understand the meaning of a sentence?

While the material we've covered bears on Q,<sup>1</sup> we have not tackled this question directly. This is what we'll be doing in the current unit: we'll be looking at some attempts to give a general theory of the meaning of a sentence. Along the way, we'll discuss how the meaning of a sentence relates to its more general role in communication.

We'll start with a theory that was extremely popular in the early days of the 20<sup>th</sup> C, but has since fallen largely out of favor: *verificationism*.

### 1 Verificationism

Verificationism is a theory of meaning that was promoted by the Vienna Circle—a philosophy club of sorts that flourished in the 20s—40s.

- The basic idea behind verificationism is that the meaning of a sentence is closely bound up with the observations that would tell you whether the sentence is true.

To illustrate, take a meaningful sentence like:

- (1) It will rain in Singapore on June 5, 2019.

We cannot currently verify whether this sentence is true. But we have an implicit grasp on what it would take to verify this sentence:

**Verification Condition for (1):** The experience of being in Singapore on June 5, 2019 and seeing rain.

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<sup>1</sup>Consider, for example, Frege on how the senses of individual expressions determine the thought expressed by a sentence as a whole.

Moreover, it's natural to think that the verification condition for (1) is closely connected to the meaning of (1). What's the nature of this connection?

Verificationists propose a simple answer:

**The meaning of (1) just is its verification condition.**

Or, to put it another way, to grasp the meaning of (1) is to understand the circumstances that would count as verifying it. More generally:

**Verificationist Conception of Meaning:** The meaning of a sentence *S* is its verification condition: that is, the set of possible observations/experiences that would verify *S*.

### Advantages of Verificationism

1. *Provides a non-circular theory of meaning*  
Verificationism characterizes the meaning of a sentence in terms that do not presuppose meaning (or more generally semantic notions such as *reference*). Rather, it reduces meaning to epistemology: the meaning of a sentence is a way of confirming it.
2. *Enables us to distinguish sense from nonsense*  
One of the main motivations for verificationism—and one of the main reasons why it was such an exciting and controversial theory—was that it offered to provide a clean way of demarcating genuinely meaningful sentences from nonsensical sentences like:

(2) Twas brillig, and the slithy toves  
Did gyre and gimble in the wabe<sup>2</sup>

According to the verificationist criterion, a sentence is only meaningful if it is verifiable—that is, if there is some possible experiences or observations that could show it to be true. A sentence like (2) doesn't have any verification condition; hence it is nonsense.

Wielding this criterion as a cudgel, verificationists proclaimed that much of philosophy—in particular, much of metaphysics—was meaningless. Verificationists liked to pick examples such as:

(3) The Absolute enters into, but is itself incapable of, evolution and progress.<sup>3</sup>  
(4) The Nothing nothings.<sup>4</sup>

What possible set of experiences could show these sentences to be true? If none, then, verificationists claimed, we should relegate such talk to the dustbin of nonsense.

3. *Rule out skeptical scenarios as meaningless*  
Another motivation for verificationism was epistemological: it offered to neatly solve longstanding skeptical puzzles. Take a skeptical hypothesis like:

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<sup>2</sup>-Lewis Carroll, "Jabberwocky"

<sup>3</sup>This quote is Ayer's slight adaptation of a passage from Bradley, who was one of the leading British idealists.

<sup>4</sup>This is a quote from Heidegger that Carnap, another verificationists, liked to trot out as an example of metaphysical nonsense.

- (5) You are hallucinating all of the experiences in your life.

What possible set of experiences could show this to be true? If none—as verificationists claim—then this hypothesis turns out to be nonsense. But if the skeptical hypotheses are nonsensical, then we don't need to bother refuting them!<sup>5</sup>

## Problems for Verificationism

1. *Pronounces as meaningless certain claims that are apparently meaningful*  
The third apparent virtue—ruling out skeptical scenarios—is a bit of a double-edged sword. Many people seem to find skeptical scenarios (e.g., the brain in a vat scenario, Descartes' evil demon hypothesis) perfectly intelligible. This raises the worry that verificationism proves too much: it classifies as meaningless some sentences that seem perfectly meaningful.

(One way of seeing the point: compare (2) with (5). (2) seems to be truly meaningless, whereas (5) does not.)

2. *Non-declarative Language*  
Ordinary language contains questions (*Is it going to rain?*), imperatives (*Close the door!*), and performatives (*I hereby pronounce you...*). These claims seem to be perfectly meaningful. But do they have verification conditions?

Ayer briefly addressed the topic of questions, suggesting that the meaning of a question is the set of observations that would provide an answer to it. But can we similarly extend the verificationist account to other non-declarative bits of language?

3. *Self-Applicability*  
The Verificationist Conception of Meaning claims that all meaningful sentences are verifiable. But is this claim itself verifiable?
  - On the face of it, it is hard to see how it could be verified. What set of observations would show a particular conception of meaning to be true?
  - Suppose, then, that the Verificationist Conception of Meaning is not verifiable. But then, by its own lights, it is itself meaningless!

*Possible Reply:* Some verificationists allowed a special exception for analytic claims, which are true by definition. Perhaps then the Verificationist Conception of Meaning is an analytic truth.

Q: Is it plausible that the Verificationist Conception of Meaning is true in virtue of the very definition of "meaning"?

4. *What is Verifiability?*  
A further difficulty for verificationism comes when we ask how to define verifiability. One option:

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<sup>5</sup>Here verificationism bears some comparison with Putnam on brains in vats. Of course, Putnam's approach was not itself verificationist; it relied on semantic externalism instead. But both approaches try to use theories of meaning to try to solve—or dissolve—the problem of skepticism.

**Strong Verifiability:** A sentence  $S$  is strongly verifiable iff there is some set of possible observations  $O$  that entail  $S$  (that is,  $O$  logically implies  $S$ ).

The problem with this, as Ayer notes, is that it seems way too strong. Consider sentences that state general laws like:

- (6) Arsenic is poisonous.
- (7) All humans are mortal.

It's not clear that any observations could directly entail their truth. (Other problem cases come from sentences about entities that are not directly observable, such as electrons. Do any set of observations entail that electrons exist?)

Perhaps then, we could propose a weaker conception of verifiability? Ayer went precisely this route, proposing that  $S$  is verifiable iff  $S$  entails some observation when conjoined with some further premises that do not, on their own, entail the observation:

**Weak Verifiability:**  $S$  is weakly verifiable iff there is some further premises  $P_1 \dots P_n$  and some possible set of observations  $O$ , such that both:

- (a)  $O$  follows from  $P_1 \dots P_n$  together with  $S$ .
- (b)  $O$  doesn't follow from  $P_1 \dots P_n$  alone.

Problem: this criterion is too weak! Consider a paradigmatic example of a nonsensical sentence, such as:

- (8) The Absolute is lazy.

Now here is a further premise we could combine with (8):

- (9) If the Absolute is lazy, then I observe a book on my desk.

(8), together with (9), entails  $O$ : *I observe a book on my desk*. So (8) is weakly verifiable. But then every sentence is meaningful, even paradigmatic cases of nonsense!

The challenge facing verificationists is to spell out a notion of verifiability that is neither too strong nor too weak. This has proven remarkably hard to do.

- *Question for Consideration:* Are these objections decisive? Is there any way of getting around the problems facing verificationism?

## 2 From Verification Conditions to Truth Conditions

These problems have led many to abandon verificationism. What should we put in its place?

One popular approach—arguably, the most prevalent approach in contemporary philosophy of language and linguistics—is to replace verification conditions with *truth conditions*. The truth conditions for a sentence  $S$  are the circumstances under which  $S$  is true. This gives us:

**Truth Conditional Semantics** The meaning of a sentence is its truth conditions—the set of possible circumstances under which it is true.

In contemporary linguistics and philosophy of language, the most popular way of understanding ‘truth conditions’ is in terms of *possible worlds*. That is, the conditions under which a sentence *S* is true are the possible worlds in which *S* is true. This leads to what is known as ‘possible worlds semantics’:

**Possible Worlds Semantics** The meaning of a sentence *S* is the set of worlds in which *S* is true.

(Thus possible worlds semantics can be thought of as one way of developing truth conditional semantics.)

### How does this differ from verificationism?

To see how the two approaches differ, note that truth conditional semantics does not demand that we can tell—even as a matter of principle—whether a meaningful sentence is true. All it demands is that there *is* a set of circumstances in which a meaningful sentence is true (regardless of whether we could ever know that these circumstances obtain).

- An example: Recall (5) (*You are hallucinating all of the experiences in your life*). According to truth conditional semantics, this sentence is perfectly meaningful, since there is a set of possible worlds in which it is true that you are hallucinating all of the experiences in your life.

*Important Questions to Consider:*

- Does truth conditional semantics share some (or all) of the advantages of verificationism? If so, which ones?
- Does truth conditional semantics avoid some (or all) of the problems facing verificationism? If so, which ones?

### Further Advantages of Truth Conditional Semantics

One advantage of truth conditional semantics lies in its (perceived) ability to overcome at least some of the hurdles facing verificationism.

Another advantage comes from its ability to explain the meanings of logically complex sentences in terms of the meanings of their parts. Consider, for example:

(10) Grass is green and the earth orbits the sun.

Compositionality tells us that the meaning of this sentence depends on the meanings of its conjuncts (*Grass is green*; *The earth orbits the sun*). Possible worlds semantics has a natural way of capturing this dependence using the resources of set theory. According to possible worlds semantics:

- The meaning of *Grass is green* is the set of worlds where it is true that grass is green (that is,  $\{w \mid \text{grass is green at } w\}$ ).

- The meaning of *The earth orbits the sun* is the set of worlds it is true that the earth orbits the sun (that is,  $\{w \mid \text{the earth orbits the sun at } w\}$ ).
- Possible worlds semantics says that the meaning of the conjunction (10) is the intersection of the meanings of its conjuncts.
  - Here the intersection of two sets  $A$  and  $B$  is the set of elements that  $A$  and  $B$  have in common.
  - So the meaning of (10) will be the set of worlds where it is true that *both* grass is green and the earth orbits the sun.

Q: Think about this approach can be extended to other logical connectives, such as *or*.

### Problems for Truth Conditional Semantics

Truth conditional semantics is not without problems. We'll be discussing some objections and limitations over the next couple of weeks. For now, I'll mention two related challenges:

1. Consider the sentences:

(11)  $2 + 2 = 4$

(12) water is  $H_2O$ .

(13) bachelors are unmarried.

Intuitively, these sentences mean different things. Why is this a problem for truth conditional semantics?

2. Consider the sentences:

(14) Superman flies.

(15) Clark Kent flies.

Intuitively, these sentences mean different things. But can truth conditional semantics capture this intuition? (Assume here that the names "Superman" and "Clark Kent" are rigid designators.)