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Essay Title: Meaning (verification theory)

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ESSAY
MEANING (VERIFICATION THEORY)

SYNONYMS

Verifiability Theory of Meaning, Verificationist Theory of Meaning, Verification Principle, Verification Criterion, Verificationism

DEFINITIONS

The verification theory of meaning aims to characterise what it is for a sentence to be meaningful and also what kind of abstract object the [meaning](#) of a sentence is. A brief outline is given by Rudolph Carnap, one of the theory's most prominent defenders:

If we knew what it would be for a given sentence to be found true then we would know what its meaning is. [...] thus the meaning of a sentence is in a certain sense identical with the way we determine its truth or falsehood; and a sentence has meaning only if such a determination is possible. [4: 420]

In short, the verification theory of meaning claims that the meaning of a sentence is the method of its verification.

DESCRIPTION OF THE THEORY

Historical Background. Verificationism can only be fully appreciated in the larger context of the philosophical credo it emerged from, namely 20th century [logical empiricism](#) (also known as [logical positivism](#)) [2].

An empiricist subscribes at least to the following doctrine: no oracle, intuition, pure reasoning, etc., can reveal what the world is like. All *factual* [knowledge](#) has its sole source in sense experience. For example, if you want to understand how the human brain works there is no other way to knowledge than via observation, especially via empirical experiments.

This *epistemic* doctrine (see [epistemology](#)) about the nature and source of factual knowledge had already been put forward by the [classical empiricists](#) in the 17th and 18th century. The novelty of 20th century logical empiricism is a shift in focus from this doctrine about knowledge to a doctrine about (scientific) language. More exactly, the logical empiricists tried to underpin the validity of the doctrine about factual knowledge with a doctrine about sentence [meaning](#). This is where the verification theory of meaning has its place.

Suppose we stipulate that the meaning of a [statement](#) (a sentence, a [proposition](#)) is given by the actions performed to find out if it is true. Or stronger, that a sentence has to be discarded as meaningless unless one can offer a description of what fact or state of affairs has to be observable so that this sentence can be said to be true or false. That is precisely what the verification theory of meaning demands: "The meaning of a proposition is the method of its verification." [10: 148]

Suppose furthermore that all factual knowledge is expressed in meaningful sentences. Then, together with the verification theory of meaning, we arrive back at the epistemic doctrine from above: factual knowledge has its justification in observation. Thus, verificationism is a linguistic counterpart of the empiricists' doctrine about knowledge.

Both logical empiricism and the verification theory of meaning are, however, outdated theories. This is not because the general idea behind them—that empirical knowledge depends on sense experience—has been given up by philosophers. Rather,

verificationism faced a few unsolvable technical difficulties. A closer look at the verification theory of meaning as well as applications of the theory will unveil some of these problems.

Verificationism and the Hierarchy of Language. The verificationist theory of meaning has a by-product: logical empiricists perceive language to be hierarchically structured. Observational terms are at the basis of that structure and all other terms further down the hierarchy are translatable into terms of this basis. [Logic](#) and [conceptual analysis](#) is the central tool to arrive at such translations of non-observational terms to observational terms. What does this mean?

Take a sentence like "This apple is red". The verification theory of meaning claims that it is meaningful if and only if we can describe which state of affairs has to be observable so that the sentence can be said to be true. In this case, the task seems to be rather easy: "This apple is red" is, indeed, a meaningful sentence—it is true if the apple in front of us is really red, i.e., if, under normal light conditions, it appears red to us, and false if not.

However, not every sentence contains terms that refer to directly observable features of easily observable objects. For those sentences it is difficult to see how the verificationist criterion can be met. For example, what kind of observation verifies sentences like "This fluid has a temperature of 100°C" or, worse, "The electron's mass is $m_e = 9.11 \times 10^{-31} \text{kg}$ "?

For these sentences to meet the verificationist criterion of meaning an intermediate step seems unavoidable: scientific terms which do not refer themselves to directly observable features of the world have to be analysed or reduced to descriptive terms that do so (see [operationalism](#)). Those sentences that contain non-observational terms can, with the help of these analyses, be translated into sentences that are observational. Only then can the verification criterion of meaning be applied.

Here is an example: "object O has temperature T" can be analysed into the phrase "if a mercury thermometer is placed into or near by object O the mercury will rise (or fall) to mark T". With the help of this analysis we can translate "This fluid has a temperature of 100°C" into "if a mercury thermometer is placed into this fluid the mercury will rise (or fall) to mark 100". The latter sentence clearly indicates which possible observation would verify it. Hence, according to verificationism, the sentence has meaning.

The actual reduction of all terms (or sentences) to observational terms (or sentences) is, of course, a utopian dream. In any case, the general possibility of such a reduction would suffice to support the empiricists' credo. Attempts to prove the general possibility have indeed been given [5].

Verificationism and Metaphysics. It is easy to see how both the conceptual analysis of terms and the verificationist doctrine about sentence meaning could be used as a tool to criticise or even ridicule metaphysical philosophy. Indeed, to show that metaphysics does not make any sense at all was part of the empiricists' programme. Terms like *god*, *nothingness*, or *meaning of life* are not suitable for analysis into observational terms and are, hence, not apt to figure in meaningful, verifiable sentences and philosophical research in general. They can, at best, be used to express a general attitude towards life, a *Lebensgefühl*, but they have no factual content [3].

Verificationism and Behaviourism. There is a close relation between verificationism and behaviourism (see [behaviourism, logical](#)). The aforementioned idea of a reduction of all scientific terms and sentences to observable terms and sentences means, too, that

psychological terms, i.e., terms concerning the human [mind](#), have to be translatable into observational language. This is precisely what behaviourism asks for: attributions of mental states to people (like "Agnes is happy") must be translated into statements about their observable behaviour or, at least, their dispositions to behave.

Take the sentences "Alfons desires a good bottle of wine". Such an ascriptions of a mental state to a person can only be admitted into scientific language if we can, according to the verificationist theory of meaning, describe the way we determine its truth or falsehood in observable terms. Hence, in order to give the meaning of that sentence we would have to say something along the following lines: "Alfons loves wine" is true if and only if (1) Alfons reaches for a bottle of wine when he sees one standing on the table, (2) Alfons utters the words "Yes, please!" when someone offers him a glass of claret, (3) Alfons seeks a wine shop when he has got the money and time, etc. This list amounts to a catalogue of observable stimulus and response connections (see [testability](#)). It offers thereby testing conditions and so gives the meaning of the initial sentence. In this way, statements about mental states are generally thought to be reduced to sentences about behaviour (or dispositions to behave).

Problems with Behaviourism and Verificationism. There are, however, severe problems for behaviourism and consequently for verificationism. For a start note that the list given above seems to be endless. Wine lovers do various other things additional to those listed above. Yet, when can we stop and be sure to have reached the full meaning of the sentence which is to be analysed? Is it not rather doubtful that there is a comprehensive catalogue of stimulus response entries?

Furthermore, some wine lovers might not always be disposed to do the things listed: they might have interfering wishes, other preferences or they might obey certain prohibitions. Alfons could be a wine lover but he might not touch any alcohol for religious reasons. Hence, some sort of proviso will have to be added to the stimuli conditions: if Alfons sees a bottle of wine *and* no other wish or desire or prohibition or promise etc. prevents him from poring himself a glass then he will do so. However, the verificationist is still not off the hook since the word *preventing* which occurs in the proviso clause is again an unobservable mental [predicate](#) (we were not talking about Alfons being observably chained to the chair but about other desires preventing him). In trying to reduce a statement about one mental state to observational language we have again to use non-observational mental terms and it is questionable whether we can ever escape. This vicious regress is also a danger when it comes to non-mental non-observational terms.

Verificationism and Physics: Further Problems. Aside from the realm of the mental, verificationism has difficulties with statements from the very [science](#) which should cause the least problems, namely physics. Consider a law hypothesis like "All masses attract each other". Which kind of observation would conclusively establish this sentence's truth and hence its meaning? No doubt, this difficulty relates back to the traditional problems of [induction](#) of how to conclude from some observed events to all of them (including unobserved ones). In the guise of a puzzle about meaning, the problem of induction is, however, aggravated: not only is it difficult to define what would provide conclusive evidence for "All masses attract each other". For verificationism the lack of such a characterisation would mean that law hypotheses do not form meaningful sentences. Hence, they should be dropped from scientific language. And yet, this is unacceptable for they are, arguably, central to any scientific enterprise. Note that similar problems arise from sentences about past events for which observations are in principle impossible.

There have been attempts to reformulate verificationism in weaker forms to avoid these consequences: now, observations should only be *somehow relevant* to the determination of the truth or falsehood of sentences [8], [1: 18-19]. However, instead of going further into detail of those reformulations (which have been unsuccessful in the end) it is worth turning to problems on a more abstract level. The first concerns the status of the verificationist doctrine itself. The second challenges tacit presuppositions of verificationism which turned out to be untenable.

Verificationsim applied to itself. Ironically, the verificationist doctrine itself falls short of its own high demands. Take the statement: "Sentences have meaning only in so far as they are empirically verifiable". Are there possible observations which could prove the truth of this very sentence? It seems not. But then the doctrine itself lacks meaning, i.e., it is a statement like metaphysical claims without any sensible content. The logical empiricists' response to this charge was to claim that the verification criterion is prescriptive rather than descriptive in character. It is meant to be a recommendation to scientists of what is best to be counted as proper scientific language; it is not meant to be a factual statement. Note that a similar answer has been offered for other indispensable non-factual claims, like mathematical or logical statements, or sentences which state conceptual truths. (See [necessity](#); [necessity, conceptual](#).)

Verificationism and Meaning Holism. Still more problematic for verificationism is a thesis called *meaning holism*. Take again the sentence "if a mercury thermometer is placed into this fluid the mercury will raise (or fall) to mark 100". Suppose your observation speaks against its truth. The mercury does not move at all. Unsurprisingly, it is possible to make adjustments at various other points in our belief-system such that we could, in principle, nonetheless stick to the sentence: we could, for example, doubt that liquids always expand when the temperature rises and the pressure remains constant; we could suppose that the thermometer is broken; we could claim that thermometer's scale has been wrongly calibrated, etc.

The upshot of this [thought experiment](#) is that the verificationists' assumption that isolated sentences alone face the tribunal of observational evidence is not justified. It is always a whole bunch of interrelated sentences—a whole belief system—which is tested by observation. This is a thesis which came to be known as meaning [holism](#) and was argued for by W. V. Quine [9]. Single sentences are too small a unit to be verifiable by experience. Instead "the unit of empirical significance is the whole of science." [9: 42]. But if this is so the verification theory of meaning which is defined for single sentences is false from the outset.

Verificationsim rejected. The *prima facie* attractive verificationist doctrine proves to be untenable for various reasons: (1) It turned out to be difficult if not impossible to apply the verificationist theory of meaning in a concrete case: this has been shown in the example from behaviourism. Endless lists and regresses threaten the success of an analysis. (2) It was necessary to rewrite the verificationist doctrine several times, as underlined by the example of law statements which would otherwise have to be discarded as being nonsense. (3) The self-application of the doctrine reveals its own non-empirical status; and finally, (4), the hidden presupposition that sentences are the units of observational verification had to be dropped and so verificationism as a whole.

The Remnants of Verificationism. It should be mentioned that some verificationist ideas still live on and are indeed worth pursuing. For philosophical theories of sentence

meaning it is essential to hold on to the strong link between truth and meaning: some philosophers claim that giving the truth conditions of a sentence (not the *verification conditions* for its truth, though) is giving the meaning of that sentence [6]. The philosopher Michael Dummett even revived a verificationism which is, in some respects, akin to the logical empiricist's doctrine. As a result, Dummett had to adopt anti-realist positions (compare [realism](#)) when it comes, for example, to statements about laws of nature or the past: he claims that statements whose truth cannot decisively be verified are neither true nor false [7].

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