

Verificationism

The verification principle pt.2

1A Meaning

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Lecture plan



1. LOGICAL POSITIVISM
AND THE VERIFICATION
PRINCIPLE



2. MORE PROBLEMS
WITH THE VERIFICATION
PRINCIPLE



3. DUMMETT'S
VERIFICATIONISM



4. QUINE AND
VERIFICATION

- Logical Positivists set out to find a criterion according to which synthetic statements had to be empirically verifiable in order for them to be meaningful.
- **Strong versions** of this criterion demanded conclusive verification, but we found that this **ruled out many statements** the verificationists would want to call meaningful.
- This lecture, we evaluate weaker versions of the verification principle that don't require conclusive verification to see if they fare any better.

Recap





Verification
principle
scaffolding

A synthetic statement is meaningful iff it is
empirically verifiable

Today: ways of defining 'empirical verifiability'
that don't require conclusive verification.



Weaker formulation take 1

A synthetic statement S is meaningful iff S, by itself or in conjunction with certain further premises P, Q, R, ..., logically entails some observation statement O that is not entailed by P, Q, R, ... alone. [Ayer in LTaL pp.38-39]

In this version, it's not S that is entailed by a set of observation sentences, but S, in combination with other premises, entails them.

Weaker formulation take 1

A synthetic statement S is meaningful iff S, by itself or in conjunction with certain further premises P, Q, R, ..., logically entails some observation statement O that is not entailed by P, Q, R, ... alone.

Thought behind this principle:

S needs to make contribution to empirically testable prediction.



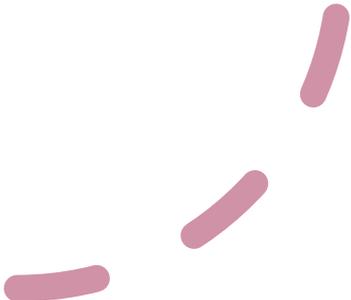
A problem
with
weaker
verification
principle

For any statement S , whose verifiability we want to ascertain, we pick an additional premise

If S then O

where O is an arbitrary observation statement. According to the principle then, S is weakly verifiable and therefore meaningful, whatever statement S actually is.

(Ayer LTaL pp.11-12 credits point to Isaiah Berlin)



Example

1. God is looking down on us
2. If God is looking down on us, then this room is cold.

This room is cold



An attempt at diagnosing the issue with weak Formulation 1

- For any sentence whatsoever, there'll always be a sentence in conjunction with which that sentence entails observation statements.
- Place additional requirements on additional premises in conjunction with which a sentence has entail additional observation statements in order for that sentence to be meaningful.



Last try:
another
version of
weak
verification

A synthetic statement S is meaningful iff it is either directly or indirectly verifiable

S is directly verifiable iff

- a) S is an observation statement;
- or
- b) S by itself, or in conjunctions with one or more observation statements P, Q, R, ..., logically entails an observation statement that is not entailed by P, Q, R,... alone.

S is indirectly verifiable iff

- a) S by itself, or in conjunction with other premises P, Q, R, ... logically entails a directly verifiable statement D that is not entailed by P, Q, R, ... alone; and
- b) The other premises are all either analytic, directly verifiable, or can be shown independently to be indirectly verifiable.

Some examples



This room is
cold



All dogs bark



God is looking down
on us



Church's objection

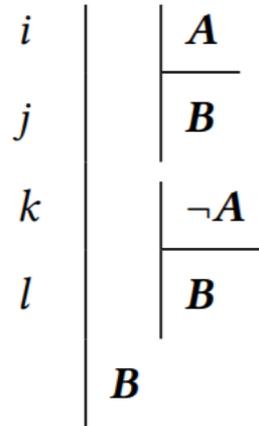
- Berlin's previous objection was that weak verificationists principle rendered every sentence meaningful
- Ayer tried to address this issue by placing additional requirements on the sentences in combination with which a sentence had to entail novel statements, or the latter statements themselves.
- Church: This doesn't work.

Note:
reconstruction
by Soames

Church's objection: the strategy

Conclusion: For every sentence, either it or its negation is meaningful

Application of no third way: assume N and $\neg N$ in separate subproofs. Prove M and O respectively. Bot also entail $M \vee O$. Since either N or $\neg N$, we have proved $M \vee O$



TND $i-j, k-l$

- Prove that for any S , either S or its negation is meaningful. Can be strengthened (see Soames paper) using and additional subproof to show that any S is meaningful.

- For any S , there's a sentence $((S \vee R) \rightarrow O)$ featuring observation sentences R and O , which do not, by themselves entail one another. In combination with S , $((S \vee R) \rightarrow O)$ logically entails O .

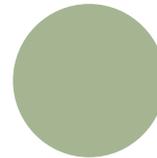
- Either:

- $((S \vee R) \rightarrow O)$ itself entails O

Or

- $((S \vee R) \rightarrow O)$ doesn't already entail O

Church's objection



The proof

Subproof 1:

$((S \vee R) \rightarrow O) \neq O$



S is indirectly verifiable



$\neg S$ entails $\neg S \vee S$. So if S indirectly verifiable and hence meaningful, then $\neg S$ or S is meaningful

Subproof 2:

$((S \vee R) \rightarrow O) \models O$



$\neg S$ is directly verifiable



$\neg S$ entails $\neg S \vee S$. So if $\neg S$ directly verifiable and hence meaningful, then $\neg S$ or S is meaningful

Subproof 1

- If O is not logically entailed by $((S \vee R) \rightarrow O)$ alone, then S is meaningful
 - The combination of S with $((S \vee R) \rightarrow O)$ logically entails O
 - $((S \vee R) \rightarrow O)$ is directly verifiable because it together with R , which is an observation sentence and thereby directly verifiable, entails O , which is not in turn entailed by R alone.
 - But then S is indirectly verifiable, because it, in conjunction with $((S \vee R) \rightarrow O)$, which we now know is directly verifiable, entails O , which in turn isn't already entailed by $((S \vee R) \rightarrow O)$ alone.
- So, S is meaningful, therefore **S or $\neg S$ is meaningful**

S is indirectly verifiable iff

- S by itself, or in conjunction with other premises P, Q, R, \dots logically entails a directly verifiable statement D that is not entailed by P, Q, R, \dots alone; and
- The other premises are all either analytic, directly verifiable, or can be shown independently to be indirectly verifiable.

Subproof 2

- If O is logically entailed by $((S \vee R) \rightarrow O)$ alone, then $\neg S$ is meaningful.
- $((S \vee R) \rightarrow O)$ is logically equivalent to $(\neg(S \vee R)) \vee O$
- In that case O is logically entailed by $\neg(S \vee R)$, because any disjunct entails whatever the whole disjunct entails
- $\neg(S \vee R)$ is logically equivalent to $\neg S \ \& \ \neg R$, so that entails O
- So $\neg S$, together with $\neg R$, a premise that doesn't itself entail O and is directly verifiable, entails O , which makes it directly verifiable and hence meaningful.
- So, $\neg S$ is meaningful, therefore **S or $\neg S$ is meaningful**

S is **directly verifiable** iff

a) S is an observation statement;

or

b) S by itself, or in conjunctions with one or more observation statements P, Q, R, \dots , logically entails an observation statement that is not entailed by P, Q, R, \dots alone.



Strengthened version of Church objection

- Soames shows, following Hempel, that if $\neg S$ is meaningful, then its negation, $\neg \neg S$ is also meaningful. But, $\neg \neg S$ is equivalent to S , so for any S , S is meaningful. The latest version of the verification principle has failed to rule out any statements whatsoever as meaningless.
- Even if non-strengthened version it's still pretty bad that for any statement whatsoever, either it nor its negation is meaningful. Usually if you think that a statement is meaningless, you'd want to say that so is its negation. In fact, this asymmetry is something that came up as a problem when we discussed conclusive verification of universal generalisations.

Death of Verificationism?

- “For all intents and purposes, the collapse of Ayer’s final formulation signaled the end of attempts to formulate the empiricist criterion of meaning in terms of either strong or weak verifiability. A few attempts were made to reformulate Ayer’s criterion to save it from objections like the ones just considered. However, none proved successful. Either obviously meaningful sentences of science were wrongly characterized as meaningless, or obviously meaningless sentences were classified as meaningful. In this situation, it seemed clear that another approach was needed.” p.291



Recap

Strong verification

- Requires that a sentence be entailed by observation sentences
- rules out too many statements as meaningless including paradigmatically meaningful ones

Weak verification

- Requires that a sentence (in combination with some others) entails observations sentences
- rules out too few (potentially none)





Or maybe not?

- Possible way out: question the set up, i.e. that for any S , either S or $\neg S$. And in fact, this is something that some verificationists, including Dummett who we will discuss in the next lecture can resist for principled reasons.
- Next two lectures: Dummett and Quine
- Dummett provided systematic theory of verificationism rooted in theory of meaning. Before we go into really deep criticism by Quine, look at systematic, well-worked out version of verificationists theory of meaning.

Reading

For reconstruction of the objections covered in this lecture:

- Ayer, Alfred Jules (1936). *Language, Truth, and Logic*. Dover Publications.
- Berlin, Isaiah (1938-39). Verification. *Proceedings of the Aristotelian Society*, 39: 225-48. Available at: <http://www.jstor.org/stable/4544328>.
- Church, Alonzo (1949). Review: Alfred Jules Ayer, *Language, Truth and Logic*. *Journal of Symbolic Logic* 14 (1):52-53. <https://doi.org/10.2307/2268980>
- Soames, Scott, *Philosophical Analysis in the Twentieth Century*. Vol. 1. *The Dawn of Analysis* (Princeton, NJ: Princeton University Press, 2003), ch. 13. Available at <https://www.degruyter.com/view/product/458905>

