

Quine on Empiricism

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Reaction to Logical Empiricism

- Logical empiricism was not widely embraced in Britain or the United States.
 - British philosophers were more attracted to ordinary-language philosophy.
 - American philosophers (such as Lewis) tended toward pragmatism.
- There were several main criticisms of logical empiricism.
 - Its verifiability principle is meaningless on its own terms because it is not itself verifiable.
 - It unduly circumscribes the field of philosophy (Lewis's criticism).
 - Its attempted reductions seem to be failures.
- The American logician and pragmatist Willard Van Orman Quine attacked logical empiricism from a different angle.

Two Dogmas of Empiricism

- According to Quine, "modern" (i.e. "logical") empiricism is in the grip of two dogmas.
 - A distinction between "analytic" truths grounded in logic and meaning and "synthetic" truths grounded in extra-semantic fact.
 - The reductionist thesis that "each meaningful statement is equivalent to some logical construct upon terms which refer to immediate experience" (20).
- Quine argues against both the dogmas, with two consequences:
 - A blurring of the distinction between natural science and metaphysics,
 - A turn toward pragmatism.

Two Kinds of Analytic Statements

- It is generally held that there are two kinds of analytic statements:
 - Those that are true by virtue of their purely logical form, such as “No unmarried man is married,”
 - Those that are true by virtue of the meanings of the terms they contain, such as “No bachelor is married.”
- The analyticity of the first kind of statement can be understood.
 - A true statement is analytic if and only if it is true under any substitution of its non-logical components.
 - “No unsaddled horse is saddled.”
- The alleged second kind of analytic statements might be understood if we could find the right class of terms whose substitution preserves truth.

Analyticity and Self-Contradiction

- There are many ways in which philosophers classically have tried to distinguish analytic truths from synthetic truths.
- It is of no help to say that analytic truths are such that their denials are self-contradictory, while the denials of synthetic truths are self-consistent.
 - No bachelor is married.
 - “Some bachelor is married” is self-contradictory.
- What is the basis of the contradiction?
- To give a systematic account of the alleged contradiction is just as broad a task as to give an account of analyticity itself.
- “The two notions are the two sides of a single dubious coin” (20).

Analyticity and Meaning

- Kant used a notion of analyticity which indicates that a statement is analytic when it is true by virtue of meaning, independently of the facts.
- But what are meanings?
- They are dubious entities, hangovers from Aristotelian essences, and steeped in a confusion between meaning and reference.
- Meanings as such can be dispensed with in favor of synonymy (sameness of meaning) and analyticity.
- In that case, meanings would be of no use in explaining analyticity.

Analyticity and State-Descriptions

- Carnap understood analytic statements as those that are true in all state-descriptions.
- A state-description is an exhaustive set of atomic sentences (in a logical language) that can be true simultaneously.
- But this does not help us understand analyticity.
- If “No bachelors are married” is analytic, then the two sentences “John is a bachelor” and “John is married” cannot be part of a single state description.
- But why would we make this restriction unless we already thought that “No bachelors are married” is analytic?
- So (as Carnap recognized), state-descriptions can at best be used to define analytic truths of the first kind (“logical truths”).

Analyticity and Definition

- We might wish to hold that a statement is analytic in the second way just in case truth is preserved when terms which are definitionally equivalent are substituted.
 - “Bachelor” is defined as “unmarried man.”
 - No bachelor is married.
 - No unmarried man is married.
- The problem with this account is that definitions are mere reports of the synonymy of terms.
- The only exception is with stipulative definitions, “the explicitly conventional introduction of novel notations for purposes of sheer abbreviation” (26).
- A clearly-understood kind of analytic truths of the second kind is one which reduces to an analytic truth of the first time by substitution of stipulatively defined synonyms.

Synonymy and Interchangeability

- At this point, it seems that some notion of synonymy must first be understood if analyticity is to be understood.
- Perhaps two terms are synonymous if and only if the substitution of one for the other in a true statement preserves truth.
 - The two synonymous terms are interchangeable *salva veritate*, as Leibniz put it.
- This proposal must be restricted to certain contexts.

- “Sharon received a bachelor of arts degree,” “Sharon received an unmarried man of arts degree.”
- “‘Bachelor’ has less than ten letters, “‘Unmarried man’ has less than ten letters.”
- The notion of synonymy at issue here is “cognitive,” and not “psychological.”
- We could define cognitive synonymy in terms of analyticity, but this would not help us understand analyticity.

Synonymy and Necessity

- Interchangeability *salva veritate* is not sufficient for the cognitive synonymy of terms unless the language is sufficiently rich.
- An *extensional* language is (at a minimum) one in which predicates are interpreted as signifying classes of objects, and there are no modal operators such as “necessarily.”
- In such a language two terms signifying the same class are interchangeable *salva veritate*.
 - The class of animals with hearts is identical to the class of animals with kidneys.
 - But “cordate” and “renate” are not cognitively synonymous.
- What is needed is an intensional language containing “necessarily,” so that we can make this kind of substitution:
 - Necessarily, all bachelors are bachelors (analytic),
 - Necessarily, all bachelors are unmarried men (remains true).

A “Closed Curve in Space”

- By itself, interchangeability *salva veritate* in sentences governed by “necessarily” does not guarantee cognitive synonymy.
- The notion of necessity must be rich enough to exclude unwanted examples.
- Suppose it is physically necessary that the class of animals with hearts and the class of animals with kidneys is the same.
- Then “renate” and “cordate” can be interchanged *salva veritate*, but they remain not synonymous.
- To remedy this problem we are tempted to say that we need a notion of necessity just strong enough to make all *analytic* sentences necessarily true.
- But then we need to have an understanding of “analytic,” which is what we invoked synonymy (and necessity) to explain.

Analyticity and Semantical Rules

- It might be thought that the problem in explaining analyticity is due to the vagueness of ordinary language.
- Then the proposal would be that we can understand analyticity for a precise artificial language.
- Perhaps a semantical rule could be introduced which would identify the sentences of the language which are analytic.
- But the use of such a rule does not explain what “analytic” means.
- We might alternatively appeal to semantical rules which determine a range of true sentences in the language.
- But then the notion of a semantical rule needs to be clarified, and there is the danger of circularity, in that the semantical rules are designed to capture the analytic truths.

Synonymy and Verification

- Quine concludes that the doctrine of analyticity is reasonable in itself but remains “an unempirical dogma of empiricists, a metaphysical article of faith” (37).
- In the course of his arguments, Quine had claimed that analyticity cannot be explained by meanings, which he dismissed rather cursorily.
- The verification theory of meaning is a “catchword” of logical empiricism, and it should be looked at scientifically in criticizing that brand of philosophy.
- The meaning of a statement is the method of confirming or disconfirming (“infirming”) it.
- Without appeal to meanings as such, the verification theory holds that statements are synonymous just in case they are confirmed or disconfirmed in the same way.
- This gives new hope for a way of understanding analyticity in terms of synonymy.

Verification and Reductionism

- If the verification theory itself is to be understood, it must explain the relation between a statement and the means of confirming or disconfirming it.
- The most naïve form of the relation is *radical reductionism*.
 - If a statement is meaningful, it can be translated into a statement about immediate experience.

- To effect such translations was Carnap's project in *The Logical Construction of the World*.
- But this project was a failure.
- Others have advocated weaker forms of reductionism, such as those which associate with a statement a set of possible sensory events that would make the statement more likely to be true and a set that would make it less likely to be true.
- But little progress has been made in understanding what confirmation is.

Holism

- The root of the dogma of reductionism is that statements are meaningful in isolation from one another.
- Quine makes the "countersuggestion" is a holistic thesis found in Duhem:
 - "Our statements about the external world face the tribunal of sense experience not individually but only as a corporate body" (41).
- Quine's argument for this thesis (if there is one) is indirect.
- He claims that the dogma of reductionism is identical to the dogma of analyticity, so that if the latter is untenable, so is the former.

The Identity of the Dogmas

- The dogma of reductionism supports the dogma of analyticity.
- An analytic statement is at the limit of confirmation: it is confirmed by any experience at all.
- The dogma of analyticity is based on the belief that the truth of a statement can be resolved into linguistic and extra-linguistic facts.
- The extra-linguistic facts, for empiricists, consists of "a range of confirmatory experiences."
- The problem underlying this two-headed dogma is that meaning is attached to statement taken one-by-one.
- "The unit of empirical significance is the whole of science."

Empiricism Without the Dogmas

- “Empiricism without the dogmas” must relate the statements which make up the system of beliefs that is science to experience, without an analytic/synthetic distinction and without reduction.
- Experience lies at the “periphery” of our system of beliefs.
- When an experience conflicts with the body (a “recalcitrant” experience), the system as a whole must be re-adjusted so as to preserve consistency.
- The system may be re-adjusted in many different ways, and “no statement is immune to revision” (45).
- Those statements which are most easily adjusted, which lie closest to the periphery, are those of which have the most “empirical content.”
- Those statements which are most central and less easily adjusted are “highly theoretical statements of physics or logic or ontology” (44).

Physical Objects

- In a way, all statements in our body of beliefs are theoretical, even statements about physical objects.
- Quine regards “the conceptual scheme of science” (which supports the best body of beliefs) as a predictive tool.
- As a “lay physicist,” Quine believes in physical objects as does science.
- But they are only “irreducible posits,” that can be compared to the gods in Homer’s system of beliefs.
- Their credibility is a matter of degree, as both act as “cultural posits” and indeed are “myths.”
- Other notable posits are atomic and sub-atomic particles, forces, and classes.
- The aim of these posits is simplicity of laws which make sense of experience.

Ontology and Natural Science

- Carnap separated ontological questions (about what kinds of things “really exist”) from scientific hypotheses.
- He claimed that because ontological questions have no empirical content, answering them is simply a matter of convenience.
- But Quine has tried to show that “empirical content” is a matter of degree, and so kinds of posits cannot be distinguished on that basis.

- So the answers we give to all theoretical questions are merely a matter of convenience.
- Exploding the dogmas of empiricism turns the empiricist into a more thoroughgoing pragmatist.