

Figure 1: Quine and Synonyms

The two dogmas are

1. reductionism
2. analytic-synthetic division “the temptation to suppose in general that the truth of a statement is somehow analyzable into a linguistic component and a factual component”

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Core argument

No purely analytic statement is possible in natural language.

The dogma of reductionism survives in the supposition that each statement, taken in isolation from its fellows, can admit of confirmation or infirmation at all. My countersuggestion, issuing essentially from Carnap’s doctrine of the physical world in the Aufbau, is that our statements about the external world face the tribunal of sense experience not individually but only as a corporate body

But what I am urging is that even in taking the statement as unit we have drawn our grid too finely. The unit of empirical significance is the whole of science.

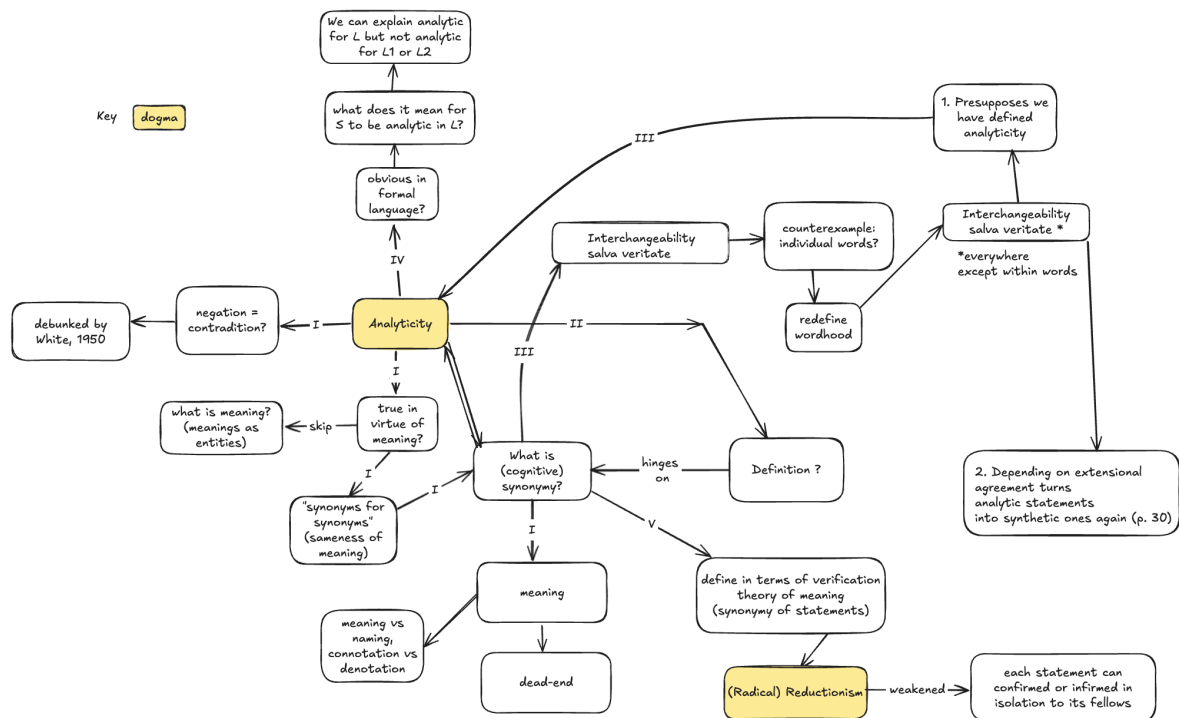


Figure 2: Outline of the Argument

Glossary

Carnap's ("radical") reductionism the belief that "each meaningful statement is equivalent to some logical construct upon terms which refer to immediate experience".

extension the class of all entities of which a general term is true

meaning the forerunner was *Aristotelian essence*. Necessary to understand analyticity in virtue of (2).

naming

analytic (1) denial leads to contradiction (2) true in virtue of meaning.

distinction between meaning and naming

contrast between meaning and extension (connotation vs denotation)

doctrine of meaning

synonymy insofar as synonymy is used to explain analyticity (in def 2 above) it is in need of clarification. It is the sort of synonymy "merely such that any analytic statement could be turned into a logical truth by putting synonyms for synonyms".

attempted definitions of synonymy A. Definition, B. Interchangeability.

extralogical sensory.

verification theory of meaning

Russel's concept of *definition in use*

law of the excluded middle P or not P is analytically true

physical objects allow us to simplify our treatment of experience:

metaphysics (according to Quine) Science is an extension of common sense, and "it continues the common-sense expedient of swelling ontology to simplify theory". Metaphysics is just the result of this "swelling of ontology"

underdetermination just like observation underdetermines theory, so too the algebra of rational numbers underdetermines the algebra of rational and irrational numbers.

Carnap's doctrine of the physical world in the Aufbau

Outline

I. Background for analyticity

Singular Terms

Quine rejects definition (1), leaning mainly on Gordon White's discussion¹ and says (2) depends on defining *meaning*. Things can *name* the same things but have different meaning, otherwise 'Evening Star' = 'Morning Star' would be an analytic statement (it is clearly a matter of fact)

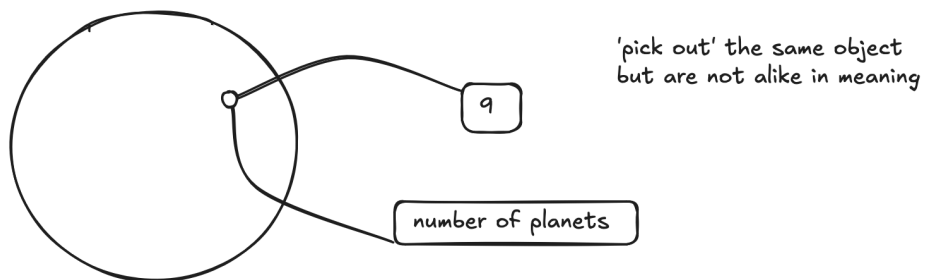


Figure 3: Meaning vs naming

Predicates

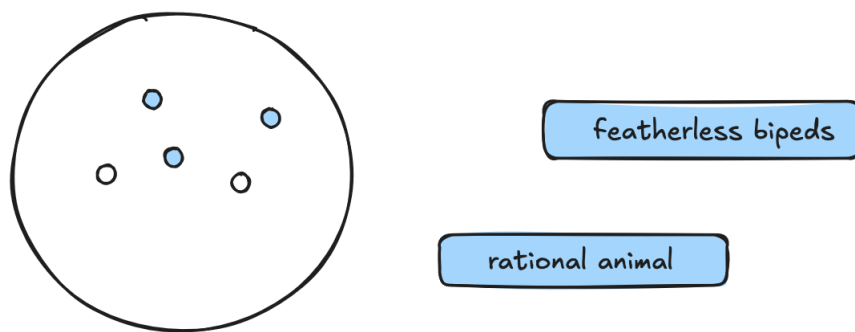


Figure 4: Meaning vs extension. Two predicates can have the same extension but have different meaning.

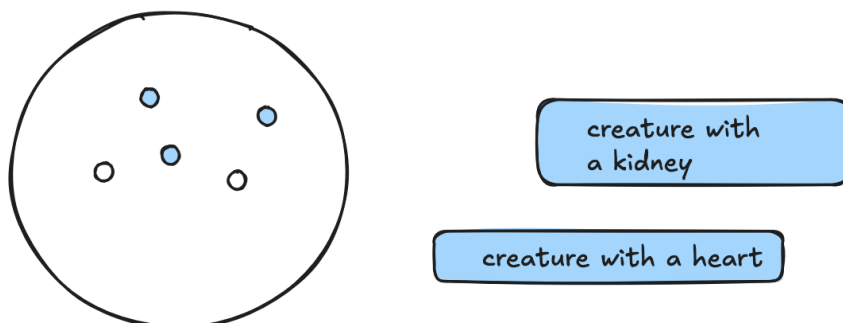


Figure 5: Meaning vs extension. Two predicates can have the same extension but have different meaning.

¹White, 1950

- Difference between ‘meaning’ and the aristotelian notion of essences: words have meaning, things have essences.

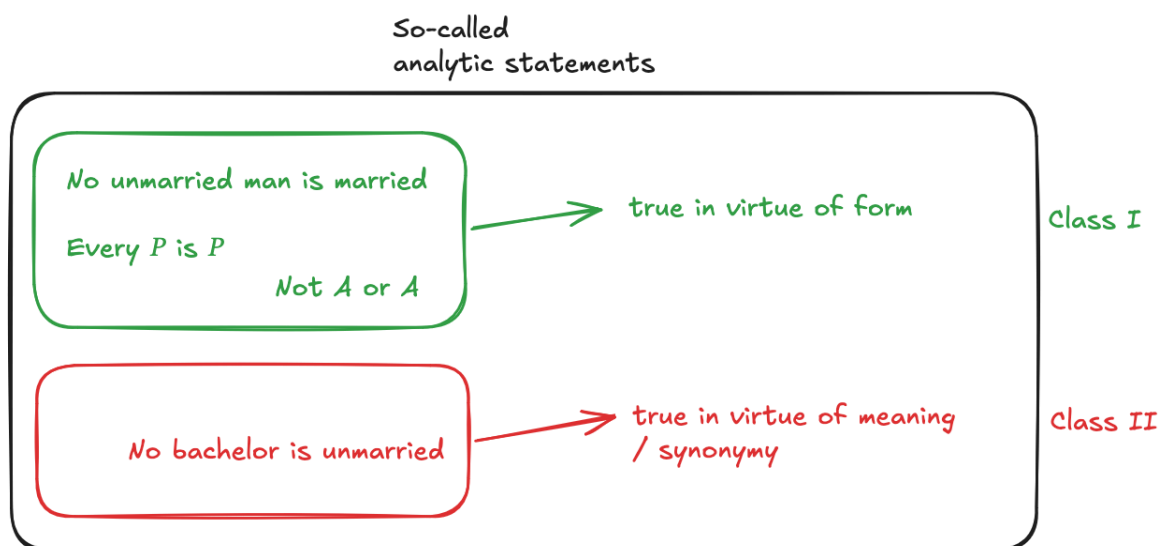


Figure 6: Two kinds of analytic statements. White (1950) makes the same distinction.

II. Definition

- definition appeals to “observed synonymy”, which still has to be clarified.
- two types of economy
 - economy in message lengths
 - economy in grammar and vocabulary.

III. Interchangeability

Two problems with this one

First, by defining synonymy by virtue of the adverb “necessarily” we are already presupposing we understand analyticity (but we wanted to define synonymy in order to define analyticity...)

(3). “All and only bachelors are unmarried men”

Second, if we have an extensional language in which “bachelor” and “unmarried man” are interchangeable *salva veritate*. Quine concedes that the statement (3) would be shown to be true, but not that it is analytic. By attempting to define analyticity through synonymy, and then synonymy through interchangeability, we end up with synonymy resting on accidental matter of fact, which is not what we want.

IV. Semantic Rules

V. The verification theory and reductionism

VI Empiricism without the dogmas

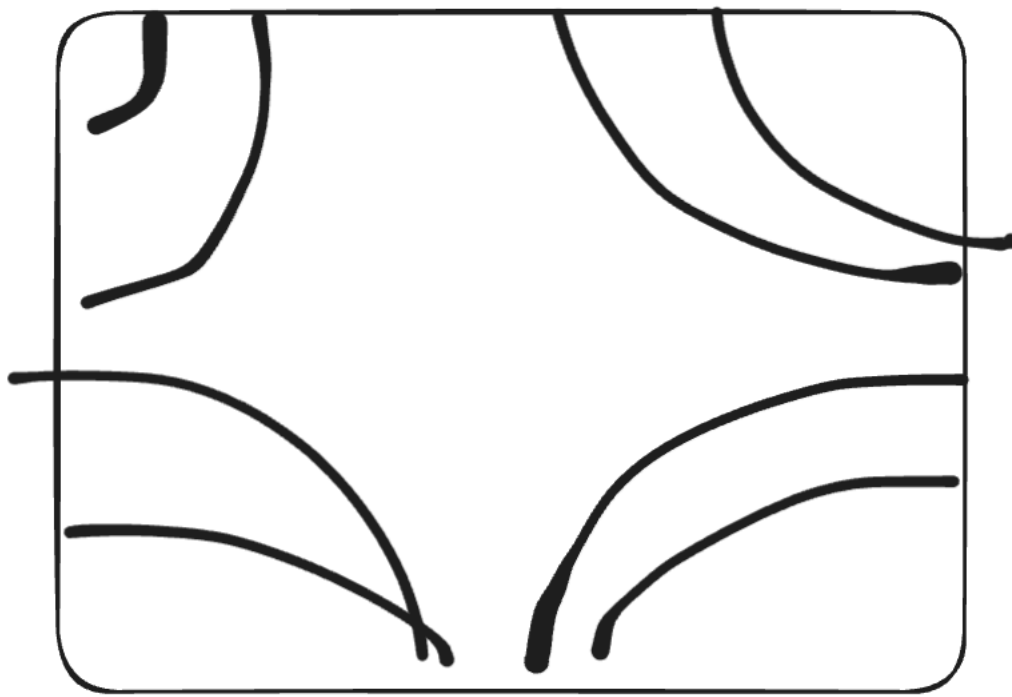


Figure 7: Science as a field of force whose boundary conditions are experience

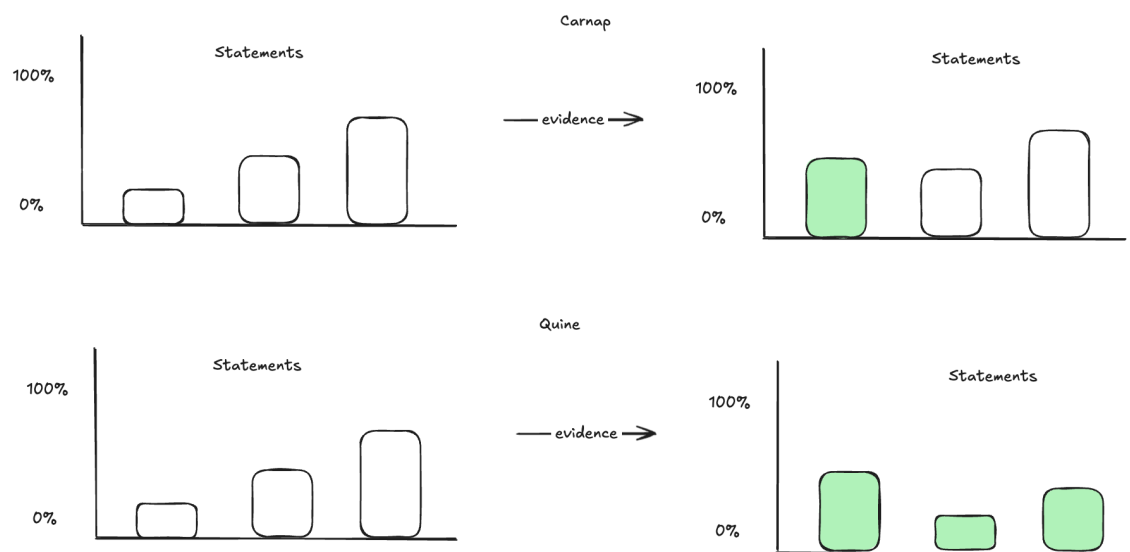


Figure 8: Carnap holds that a statement can be tested in isolation. Quine doesn't.

- parallelism between irrational numbers and “physical objects” in general in science. They allow us to simplify the treatment of our experience
- metaphysics becomes respectable again. We swell ontology to simplify theory. The same happens in mathematics (logicism failed, remember!)
- Then what is synthetic/analytic?
 - Quine: it is a spectrum - “varying distances from a sensory periphery”. There is a relative likelihood of us changing one rather than another in the event of recalcitrant experience.

Questions:

Q. p. 22 “If a standard of synonymy should be arrived at, we may reasonably expect that the appeal to meanings as entities will not have played a very useful part in the enterprise “ - is this because the notion of *meaning* is too fuzzy, according to Quine? A. It is also because he started off by seeing if we can define analyticity in terms of synonymy, and synonymy in terms of meaning, but then discovers that meaning is so slippery that we are more likely to get an operational notion of synonymy without meaning.

Q. (p. 23). there are two types of analytic statement. (1) No unmarried man is married. Is this the equivalent of White’s (1950) “Every P is P”?

Q. So I don’t really understand Carnap’s analyticity criterion. A statement is supposed to be analytic if it is “true in all possible state-descriptions”, whereas a synthetic truth is, presumably, true in just our own state-description. There are two questions here. First, how can there be more than one state description? Is this an appeal to “possible worlds” or do all state-descriptions refer to our current world? Second, how can an analytic statement such as “All Bachelors are unmarried” be “true in all possible state descriptions” when it depends on the meaning of “bachelor” and “unmarried”. I can think of a world where “bachelor” means “goat”, and then “All goats are unmarried” is synthetic, and wrong. I suspect that the answer to the First question is that, indeed, a different state-description describes a *different world* in the Leibnizian sense.

Q. Quine makes the following argument against Carnap’s analyticity criterion: if the atomic statements of the language are mutually dependent (like the statement “John is a Bachelor” and “John is a Goat”), then statements like “All bachelors are unmarried” turn out to be synthetic on Carnap’s criterion. Now, as far as I understand it, Carnap’s criterion is that statements which are “true under all possible state descriptions” are analytic, whereas statements “true in our own state-description” are synthetic. So, why does the existence of extra-logical synonym pairs in the atomic sentences, or, in other words, how does the mutual dependence of the constitutive atomic sentences render the overall sentence synthetic, and therefore “not true in all possible worlds”? Is Quine’s point simply that “All bachelors are unmarried” is not true in a world where “bachelor” means “goat”? That seems like a trivial point.

Q. Is Quine’s argument that “As soon as “meaning” becomes important in evaluating the truth of a sentence, it is synthetic” ?

Q. I see a bit of an issue with Quine’s notion of analyticity as “putting in synonyms for synonyms”. Supposedly, “All bachelors are unmarried” can be put into the logical form “All Ps are Ps” by putting in synonyms (“bachelor” for “unmarried man”), and then the resulting statement will be true in virtue of its *form*, not meaning: i.e “All unmarried men are unmarried”. Supposedly this last statement is true no matter what “married” means. I think it is only true once we have properly formalized the language in which “All unmarried men are unmarried” is uttered in.

Q. What does Quine mean by extralogical (p. 29)?

Q. In what sense is the adverb “necessarily” an “intentional” adverb?

Q. (p. 32): the artificial language L introduced here - surely all statements in L are analytic once it is a formal language? Because the truth value of all valid statements in L depends on their form? I don't really understand what Quine means by saying “I don't understand what analytic means” in the context of “all analytic statements in L_0 ” - surely it is simply all valid sentences in L_0 ? We assume that L_0 has been defined rigorously.

Q. Can we construct an argument that applies to the truth/falsity dichotomy as much as the synthetic/analytic dichotomy?

Q. I don't really understand the term “analytic statements of an artificial language”? (p. 34) I am assuming that artificial languages are formalized, and therefore all statements in this artificial language are analytic?

Q. What is a *feu follet par excellence*?

Q. What does Quine mean (on page 37) by the statement “it provides no indication, not even the sketchiest, of how a statement of the form ‘Quality q is at x, y, z, t ’ could be translated into Carnap's initial language of sense data and logic. Is the point that the meaning of “Quality” and such terms are left unclear? Because it seems to me that this is a protocol sentence out of which all the other sentences are derived.

A. Indeed, as well as ‘is at’ being an undefined connective;

Comments

avoiding metaphysics becomes a matter of judgment for Quine, not of definition (Carnap, Schlick)

Key: Explaining why the Problem of Description is so Hard

Quine's suggestion that it is impossible, even in principle, to test a synthetic statement in isolation also explains the difficulty of solving the problem of description. If the problem of description is “how do past observations $O_1, O_2 \dots$ increase our degree of belief in statement S_1 about the world”, then the difficulty of solving the problem of description is the mistake that we can treat S_1 in isolation of all the other statements in our knowledge. But then, the problem of description, on Quine's account, seems to be intractable, as it would entail a full description of how every single statement in our knowledge has been modified by the past observations. It seems impossible even to list all the statements in natural science, let alone to describe how an observation affects all of them. Certainly, the way we adjust the truth values of all individual statements is not unique

Key: What is the connection between the two dogmas?

The two dogmas are clearly connected but I struggled for a long time to understand why. I was enlightened on page 38. At first, it seemed reasonable to me hold that A) A statement such as “all bachelors are unmarried” can be testable in isolation and B) calling a statement “purely analytic” or “purely synthetic” is meaningless - in the sense that all statements

At first I struggled to understand what the relationship was between the analytic-synthetic division and the notion that each statement can be confirmed or infirmed in isolation. Can we confirm a statement S against experience in isolation, without worrying about all the other statements $S_1, S_2 \dots$ in language L ? But in reality, the only way we can be sure that we are only testing S_1 and not the other statements is if we perform some “radical reduction” along the lines of Carnap, creating some “logical construct upon terms which refer to immediate experience”. This reduction may start out by replacing “synonyms for synonyms” (already highly problematic for Quine) and end with basic protocol sentences. The point is that the reduction into terms which are directly verifiable

presupposes an analytic/synthetic distinction. This is because the direct observation sentences are judged to be synthetic (directly confirmable by experience) and the other logical atomic sentences are not synthetic.

p. 38 cleared this up for me. Quine contends that the isolability of statements is a vestige from “radical reductionism”, which has now been debunked. Reductionism is “the belief that “each meaningful statement is equivalent to some logical construct upon terms which refer to immediate experience”. The most basic elements of these logical construct are either purely analytic or purely synthetic. i.e in order to perform the reduction, one has to make the synthetic/analytic distinction. Casting doubt on the analytic-synthetic distinction allows Quine to cast doubt on radical reductionism, and therefore remove the key reason why it is held that it is in principle possible to evaluate a single statement against experience in isolation.

Lock: Does Quine believe in that a valid statement S in a formal language L is analytic?

On the one hand - first statement - distinction between two kinds of analytic statements, and also White

On the other hand - whole discussion about “same problem occurs in “

Further reading

White, “The Analytic and the Synthetic: An Untenable Dualism” (1950)

Charles Sanders Peirce (verification theory of meaning)