The Cambridge Companion to QUINE

Edited by
Roger F. Gibson Jr.
Washington University, St. Louis
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Carnap says,

Further, it is, in general, impossible to test even a singular hypothetical sentence. In the case of a single sentence of this kind, there are in general no suitable L-consequences of the form of protocol-sentences; hence for the deduction of sentences having the form of protocol-sentences the remaining hypotheses must be used. Thus the test applies, at bottom, not to a single hypothesis but to the whole system of physics as a system of hypotheses (Duham, Poincaré).

5. Creath, Dear Carnap, Dear Van, 456.
6. Ibid., 396.
7. Ibid., 224 ff.

3 Quine’s Meaning Holisms

Quine’s [historic] importance does... depend upon his being right in one central claim, a claim which he expressed by saying that there is no sensible distinction between analytic and synthetic truths but which he should have expressed by saying that there is no sensible distinction between a priori and a posteriori truths.

Putnam 1983

Erasing the line between the analytic and the synthetic saved philosophy of language as a serious subject by showing how it could be pursued without what there cannot be: determinate meanings.

Davidson 1986

Quine’s writings are the point of departure for the familiar doctrine that goes by the name ‘meaning holism’.

This doctrine contrasts with meaning atomism, according to which a linguistic expression e in a language L has its meaning ‘Auf Eigene Faust’ (viz., in and by itself) by virtue of a symbol-world relation independent of, and (metaphysically) prior to, whatever role e has in L. For meaning atomism, reference (however specified), then, is primitive, and the role of e in L is determined by, and derivative from, the meaning e acquires in virtue of that relation.

In opposition, according to meaning holism, a linguistic expression e in a language L has its meaning in virtue of its (however specified) relations with other expressions in L; that is, in virtue of its role in L. For meaning holism, since the role of e in L constitutes e’s meaning, reference becomes derivative from, and (metaphysically) posterior to, the role e plays in L.
The aims of this chapter are four. Section 1 sketches Quine’s argument for meaning holism. Section 2 places this argument within the context of Quine’s naturalism and verificationism about meaning. To do so vis-à-vis his naturalism permits us to illustrate the all too often neglected relation between Quine’s argument for meaning holism as presented in “Two Dogmas of Empiricism” and his speculation on radical translation. Retracing that connection is necessary in a discussion about Quine’s holism, since he himself refers to his meaning holism as the thesis of the indeterminacy of translation. Section 3 examines in more detail Quine’s argument for holism as presented in “Two Dogmas” and addresses whether Quine’s claim that the analytic-synthetic distinction is unintelligible requires a moderate or radical holism. Section 4 concludes by offering a sample of the debate “Two Dogmas” has generated and of the questions that remain open and worth pursuing as a result of Quine’s significant achievements.

1. QUINE’S ARGUMENT FOR MEANING HOLISM

Quine derives meaning holism from confirmation holism and verificationism about meaning. His confirmation holism is generally identified with Duhem’s thesis: “It is only the theory as a whole and not any one of the hypotheses that admits of evidence and counter-evidence in observation and experiment” (PL 5) – that is, empirical content does not belong to any individual statement of the theory in isolation from the other statements of the theory. Quine’s verificationism is the thesis that “the meaning of a statement is the method of empirically confirming or infirming it” (TDEb 37) – that is, its empirical content. Following the empiricist and positivist tradition, Quine identifies the concepts of meaning and evidence, so that to know the meaning of a sentence is to know how it could be recognized as true.

Quine’s intention to derive meaning holism from confirmation holism and verificationism is more or less explicit in many writings. Here are representative passages:

If we recognize with Peirce that the meaning of a sentence turns purely on what would count as evidence for its truth, and if we recognize with Duhem that theoretical sentences have their evidence not as single sentences but only as larger blocks of theory, then the indeterminacy of translation of theoretical sentences [or, mutatis mutandis, meaning holism] is the natural conclusion. (EN 80-1)

The verification theory of meaning, which has been conspicuous in the literature from Peirce onward, is that the meaning of a statement is the method of empirically confirming or infirming it… My countersuggestion [to the dogma of reductionism]… is that our statements about the external world face the tribunal of sense experience not individually but only as a corporate body [Duhem’s thesis]… 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 [or language]. (TDEb 41-2)

The indeterminacy of translation [meaning holism] follows from [confirmation] holism and the verification theory of meaning. (RG 185, see also RR 38)

It is, moreover, a common view in the critical tradition that, in “Two Dogmas” and elsewhere, Quine holds that verificationism together with confirmation holism [sometimes called the Quine-Duhem thesis] entails meaning holism.5

To summarize, Quine’s writings, and a conspicuous consensus in the critical tradition, suggest that his argument for meaning holism is as follows:

(P1) The meaning of a sentence consists in its (dis)confirming experiences [or empirical content] – that is, in what counts as evidence for its truth [verificationism about meaning].
(P2) Sentences of a scientific theory do not have their range of (dis)confirming experiences individually but have them only as a corporate body – that is, they lack empirical content in isolation from the other sentences of the theory [Duhem’s thesis].
(C) The sentences of a language do not have meaning individually but have it as a corporate body – that is, they lack meaning in isolation from the other sentences of the language [meaning holism].

If we assume with Quine that the meaning of a sentence consists in its method of empirical (dis)confirmation and that “the two roles of observations, their role in the support of theory and in the learning of language, are inseparable” (RR 38), the inference from (P1) and (P2) to (C) looks prima facie valid.6
Although "Two Dogmas" is generally considered to be Quine's manifesto on meaning holism, and his meaning holism is, more or less, identified with that essay's rejection of the analytic-synthetic distinction. Quine, as indicated by two of the passages just quoted, often refers to his meaning holism as 'the indeterminacy of translation'. So, before discussing Quine's holistic claims in detail, we present a brief discussion of the indeterminacy of translation and how it connects to his argument for meaning holism in "Two Dogmas.”

2. QUINE'S NATURALISM AS KEY TO HIS MEANING HOLISM

Quine is well known for his naturalism; he holds with Dewey that "knowledge, mind, and meaning are part of the same world they have to do with, and that they are to be studied in the same empirical spirit that animates natural science" (OR 26, emphasis added). For meaning to be investigated empirically, it must be made public. Meaning becomes a property of behavior, and "language is a social art which we acquire the evidence solely of other people's overt behavior under publicly recognizable circumstances" (OR 26). On Quine's view (as, barring differences, on Wittgenstein's and Dummett's), the requirement that meaning is essentially public and social in nature relates to the identification of meaning with evidence (or use), that is, to some sort of verificationism, which in Quine's case explicitly takes the form of behaviorism. In short, naturalism, verificationism, and behaviorism are deeply interrelated in Quine's philosophy. It is within this framework that Quine's meaning holism, in the shape of his thesis of the indeterminacy of translation, is best understood.

Given these assumptions about the nature of meaning, it is no surprise that Quine's speculation on meaning takes the form of a theory of radical translation. Since meaning must be publicly determinable, all there is to know about meaning is what a radical translator can learn about it. To illustrate how Quine's meaning holism is related to his theory of radical translation, we follow the vicissitudes of a field linguist trying to translate an entirely alien language into (say) English.

Since, by hypothesis, the language is alien, "All the objective data...[the radical translator] has to go on are the forces that he sees impinging on the native's surfaces and the observable behavior...of the speaker" (WO 28). Such data manifest native "meanings" only of the most objectively empirical or stimulus-linked kind, and yet, Quine continues, "the linguist...ends up with native 'meanings' in some quite unrestricted sense, purported translations...of all possible native sentences" (WO 28). Precisely in accounting for how a linguist comes to translate all possible native sentences on the basis of the only evidence available (i.e., meanings of the most objectively empirical and stimulus-linked kind), Quine concludes that translation (and hence meaning) is indeterminate. So how does a field linguist arrive at a translation manual for a foreign language?

Given the linguist's epistemic position, the native utterances "first and most surely translated" are utterances capable of being learned ostensively, that is, utterances "keyed to present events that are conspicuous to the linguist and his informant" (WO 29). For example, a rabbit scurries by, a native says, 'Gavagai', and the linguist writes down, as a tentative translation of 'Gavagai' (i.e., subject to further testing), the sentence 'Rabbit'. How can the linguist further test his translation? Once he identifies native expressions for assent and dissent, he can ask 'Gavagai?' in each of various stimulatory situations and note whether the native assents, dissects, or neither. In other words, once native expressions for assent and dissent are available, the linguist is positioned to accumulate inductive evidence for translating 'Gavagai' as 'Rabbit'. As Quine puts it, "The general law for which...[the linguist] is assembling instances is roughly that the native will assent to 'Gavagai' under just those stimulations under which we, if asked, would assent to 'Rabbit'" (WO 30); that is, working inductively, the linguist concludes that 'Gavagai' and 'Rabbit' have the same stimulus meaning.

A few words about stimulus meaning are in order, since, looking ahead, the question of whether observation sentences can indeed possess an independent stimulus meaning will be central to our discussion of whether Quine's holism is extreme or moderate. The stimulus meaning [or empirical meaning [see WO 32]] of a sentence for a subject "sums up his disposition to assent to or dissent from the sentence in response to present stimulation" (WO 34). And it is for observation sentences like 'Gavagai'—that is, sentences such that just about everyone in the speech community would assent to,
or dissent from, under appropriate circumstances\textsuperscript{11} – that stimulus meaning constitutes a reasonable notion of meaning. As we saw, approximate sameness of stimulus of meaning, or stimulus synonymy, accounts for the translation of sentences like ‘Gavagai’ as ‘Rabbit’. So at the level of observation sentences, stimulus meaning offers the linguist an objective criterion of translation into English.\textsuperscript{13}

However, the linguist’s task does not end here. In order to pass the bounds of observation sentences and stimulus meaning, the linguist segments heard utterances into short recurrent parts and thus (by essentially abstracting from the systematic role “words” play in learned sentences) compiles a list of native words. This too is no mean feat: The stimulus synonymy of the one-word sentences ‘Gavagai’ and ‘Rabbit’ does not guarantee that the words ‘gavagai’ and ‘rabbit’ are coextensive, because stimulus meaning is insufficient to decide among the possible translations of ‘gavagai’ as ‘rabbit’, ‘rabbit stage’, ‘rabbithood’, and so on [see WO 51–61]. Supplementary pointing alone is no help, since when one points to a rabbit, one points to a stage of a rabbit, to an integral part of a rabbit, and to where rabbithood is manifested. Only after developing a system of \textit{analytical hypotheses} as to how to translate our domestic apparatus of objective reference\textsuperscript{13} into the native language can the linguist translate ‘gavagai’ as either ‘rabbit’, ‘rabbit stage’, or ‘rabbithood’.

Crucial here is how the linguist arrives at his system of analytical hypotheses. Quine’s answer is that he does so by abstraction and hypothesis.\textsuperscript{14} But, he insists, it is only by outright projection of prior linguistic habits that the linguist can find general terms in the native language at all – or, having found them, match them with terms in his own, language – since stimulus meaning is insufficient to determine “even what words are terms, if any, much less what terms are coextensive” [WO 70]. In projecting those habits, the linguist imposes his own language and conceptual scheme upon the native language: “Terms and references are local to our conceptual scheme” [WO 53]. In other words, all observable data [i.e., the native’s disposition to speech behavior] \textit{underdetermine} the linguist’s analytical hypotheses, and on this basis translation of all further sentences depends.

Here enters the \textit{indeterminacy of translation}, for, although the formulation of a system of analytical hypotheses permits the linguist to assign ‘gavagai’ a determinate meaning relative to that system, his method of analytical hypothesis does not in principle settle indeterminacy among ‘rabbit’, ‘undetached rabbit part’, and ‘rabbithood’. In Quine’s own words,

[If one workable overall system of analytical hypotheses provides for translating a given native expression into ‘is the same as,’ perhaps another equally workable but systematically different system would translate that native expression rather into something like ‘belongs with.’ Then when in the native language we try to ask ‘Is this gavagai the same as that?’ we could as well be asking ‘Does this gavagai belong with that?’ Insofar, the native assent is no objective evidence for translating ‘gavagai’ as ‘rabbit’ rather than ‘undetached rabbit part’. [OR 33]

In short, since different systems of analytical hypotheses, by compensatorily juggling the translation of the apparatus of individuation, can specify mutually incompatible translation manuals still compatible with all possible evidence (the native’s disposition to speech behavior), indeterminacy of translation or meaning follows.\textsuperscript{15}

The indeterminacy of translation or meaning is a consequence of Quine’s naturalism. Since, for a naturalist, meanings are grist for the behaviorist mill, “we give up any assurance of determinacy” [OR 28]:

For naturalism the question whether two expressions are alike or unlike in meaning has no determinate answer, known or unknown, except insofar as the answer is settled in principle by people’s speech dispositions, known or unknown. If \textit{by these standards there are no determinate cases}, so much the worse for the terminology of meaning and likeness of meaning. [OR 29, emphasis added]

Since the \textit{Gedankenexperiment} of radical translation establishes\textsuperscript{16} indeterminate cases, traditional notions of meaning and meaning identity are, according to Quine, in trouble – which, in effect, amounts to saying that meaning holism follows.

So far, we have illustrated how Quine’s meaning holism, in the form of the indeterminacy of translation, is a consequence of the backbone of his philosophy, namely, his naturalism. What needs to be explained next is how all this relates to his argument for meaning holism as presented in “Two Dogmas” [outlined in §1 of this chapter]. The relation, though clear, is obfuscated by a common practice of discussing Quine’s holism and his theory of radical translation separately. First, the moral of Quine’s speculation on radical translation, according to which experience is relevant to sentences in
indirect ways through the mediation of associated sentences [WO 64], coincides with and/or finds support in Duhem's confirmation holism, according to which "no particular experiences are linked with any particular statements in the interior of the...[theory], except indirectly through considerations of equilibrium affecting the...[theory] as a whole" [TDEb 43]. Second, Quine's argument for his indeterminacy thesis [i.e., that mutually incompatible translation manuals can be made equally compatible with all the possible evidence by compensatorily juggling the translation of the apparatus of individuation] echoes his argument in "Two Dogmas" for meaning holism, on the basis of Duhem's confirmation holism [and the related rejection of the analytic-synthetic distinction].

In "Two Dogmas," the argument for meaning holism goes as follows:

(P1) "Our statements about the external world face the tribunal of experience not individually but only as a corporate body" [TDEb 41] [Duhem's confirmation holism].

The empiricist dogma of reductionism [i.e., the view that each synthetic statement "taken in isolation from [the other statements of the theory] can admit of confirmation or infirmation" [TDEb 41]] must be abandoned.

(P2) The dogma of reductionism and the analytic-synthetic distinction are "at root identical" [TDEb 41].

(C1) The analytic-synthetic distinction must also be abandoned.

(C2) Meaning holism is true.

That is, if confirmation holism is true,

it is misleading to speak of the empirical content of an individual statement—especially if it is a statement at all remote from the experiential periphery of the field. Furthermore, it becomes folly to seek a boundary between synthetic statements, which hold contingently on experience, and analytic statements, which hold come what may. Any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system. Even a statement very close to the periphery can be held true in the face of recalcitrant experience by pleading hallucination or by amending certain statements of the kind called logical laws. [TDEb 43, emphasis added]

So if sentences lack meaning individually, the translation of any sentence, even an observation sentence, can, at least in principle, be held fast "come what may" by compensatorily juggling the translation of the apparatus of individuation—which is the moral of the indeterminacy of translation.9

In conclusion, we have illustrated, how the indeterminacy of translation is equivalent to meaning holism in "Two Dogmas," on the grounds of Duhem's confirmation holism and the rejection of the analytic-synthetic distinction.10 Hence Quine's naturalism is the key to meaning holism. Here is an enriched version of the argument for meaning holism presented in §1 of this chapter:

(P1) Confirmation holism is true, as Duhem has argued and as Quine's own theory of language learning and radical translation suggests.21

(P2) The meaning of a sentence is its method of (dis)confirmation [Quine's verificationism about meaning, which is a corollary to his naturalism].

(C) Any sentence of a language lacks meaning in isolation from the other sentences of the language (meaning holism).

In short, Duhem's confirmation holism and Quine's speculation on radical translation establish the demise of the dogma of reductionism and hence the demise of the analytic-synthetic distinction and consequently establish the truth of meaning holism.

3. QUINE'S MEANING HOLISM: STRONG OR MODERATE?

We now move on to illustrate how Quine can be interpreted as defending a strong or a moderate holism depending on whether, and in what sense, he is interpreted as holding that the analytic-synthetic distinction is uninterpretable. We argue that understanding both what kind of analytic-synthetic distinction Quine deems uninterpretable in "Two Dogmas" and what kind of analytic-synthetic distinction he can reintroduce (compatible with the arguments of "Two Dogmas") in order to moderate his holism is essential for establishing what kind of meaning holism he endorses. We conclude by raising difficulties for his defense of a moderate holism.22 We first define 'strong holism' and 'moderate holism' in relation to the analytic-synthetic
distinction and then show that both versions can be located in Quine’s writings.

Those who concur with Quine that, as a consequence of confirmation holism, no sentences are true in virtue of the meaning of their component words alone and none have their truth grounded in experience in isolation from the other sentences of the language [i.e., there is no analytic-synthetic distinction] are inclined to interpret him as inferring a strong holism from verificationism and confirmation holism, in particular:

**Strong holism:** No sentence of the language has its meaning in isolation from every other; that is, the meaning of any sentence of the language is determined by its [evidential/inferential] relations to every other. The unit of meaning is the whole language.

Strong holism finds support in “Two Dogmas,” for Quine claims there that any statement, even an observation sentence, “can be held true come what may in the face of recalcitrant experience by pleading hallucination or by amending certain statements of the kind called logical laws” [i.e., there are no synthetic statements]. In consequence, he continues, nor are there analytic statements: “No statements are immune to revision” (TDEb 43). These claims together require that no sentence has meaning in isolation from the other sentences of the language [strong holism].

However, those who take Quine to continue to adhere to some sort of analytic-synthetic distinction [i.e., that there are both a class of sentences with individual empirical content independent of the rest of the language and a class of analytic sentences] are inclined to read him as endorsing a moderate holism of this form:

**Moderate holism:** The meaning of any sentence of a language is determined by its [evidential/inferential] relations to many other sentences. The units of meaning are fragments of the language.

In more recent writings, Quine defends moderate holism over strong holism; in *Word and Object*, for example, he claims that observation sentences are an exception to the interconnectedness of sentences of the language because they carry meaning [stimulus meaning] independently of the rest of the language. In “Epistemology

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Quine’s Meaning Holisms

Naturalized,” to mention one other of many examples, he writes that observation sentences are “the repository of evidence for scientific hypotheses” [EN 88] [on pain of purchasing epistemological nihilism] and are “the cornerstone of semantics” [EN 89] since they are essential to the language-learning process. Whereas theoretical sentences confront the tribunal of experience in more or less inclusive aggregates, an observation sentence has “an empirical content all its own and bears it on its sleeve” [EN 89].

Michael Dummett insists on an internal tension within the corpus of Quine’s writings between strong and moderate holism. He observes that the very metaphor of a language as an articulated structure whose sentences lie at differing depths from the periphery [offered at the end of “Two Dogmas”] [TDEb 43] suggests a moderate holism at odds with the strong holism implied by what is explicitly claimed there. The metaphor of language as an articulated structure making contact with reality only at its periphery [and whose peripheral sentences are observation sentences primarily verified or falsified by experience and whose theoretical sentences can be confirmed only as a result of inference via links with other sentences in that structure] “in no way represents an essentially holistic view of language [read: strong holism and indeed accords rather badly with such a view]” [Dummett 1963b, 33]. Rather, Dummett (1991) argues, this picture contains “the apparatus for quite precise definitions of ‘analytic’ and ‘synthetic’” [p. 242].

However, Dummett (1973) notices that Quine, in “Two Dogmas,” advances two further theses whose consequences “lead to the destruction of the image of the language he presented” [p. 591]. These theses are that even an observation sentence can be held true in the face of recalcitrant experience and that no statement, not even a logical law, is immune to revision [i.e., Quine’s claim that there is no principled analytic-synthetic distinction]. A consequence of the first thesis, Dummett observes, is “to subvert the metaphor of periphery and interior altogether.” If alternative revisions are always possible, in particular, revisions that leave the periphery intact, then the metaphor of a multilayered structure that impinges on experience only at the periphery no longer makes sense. Since language confronts experience as a monolithic whole, as a single-storied complex, “there is no periphery and no interior” [p. 594]. A consequence of the second thesis, Dummett notices, is to dissolve the internal structure.
of the language/theory, consisting of the interconnections of sentences with one another (p. 597). To make sense of the distinction between sentences whose meanings are determined by their direct relation with experience (i.e., the sentences at the periphery) and sentences whose meanings are determined by inferential connections to other sentences, "we have to have some way of understanding in what the inferential connections between sentences consist" (p. 596). But since rules of inference (as well as logical laws) are not immune to revision, according to Quine's claim that there are no analytic statements, "there is nothing for the inferential links to consist in."

As a result, Dummett concludes, "Quine's original model of language is transformed into a theory quite rightly characterized as holism [read: strong holism]." However, we mustn't forget that "Two Dogmas" was published in 1951, and though Quine never recanted the arguments for meaning holism he offered there, his later writings present a holism he himself described as moderate, and he referred to the strong holism suggested by "Two Dogmas" as "pure legalism."

In "Reply to Jules Vuillemin," Quine defends a moderate holism by weakening the two theses of "Two Dogmas" that commit him to strong holism: "The holism for which I declared in broad lines [in "Two Dogmas"] exceeded what was needed in controversy [of the two dogmas of empiricism]" (RJV 619). The thesis that no single statement [not even an observation sentence] has its separable empirical meaning far exceeded what was needed to reject the empiricist dogma of reductionism. All that needed to be claimed (against reductionism) was that "many scientific sentences inseparably share empirical content" (RJV 619). The version of strong holism that holds that language as a whole confronts experience is defensible, Quine claims, only in legalistic terms. In practice, more modest chunks of the language "can be ascribed their independent empirical meaning" (FME 71); that is, in practice, moderate holism holds, not strong holism.

Moderate holism, as anticipated above, leaves room for a class of sentences [viz., observation sentences] with their "own separate empirical content" (RJV 620). Rather interestingly, in many places Quine ascribes to observation sentences a peculiar double status: They are both theory-free (and hence have independent empirical content) and theory-laden (and hence have theory-relative or immanent empirical content). "Seen holosophically," Quine explains, "as conditioned to stimulatory situations, the [observation] sentence is theory-free, seen analytically, word by word, it is theory-laden" (PTb 7) since it shares much of the vocabulary of theoretical statements. This is why, according to Quine, Duhem's thesis both does and does not hold for observation sentences. It does not, because, holosophically, observation sentences have independent, theory-transcendent empirical meaning. But since observation sentences are also theory-laden, "the Duhem thesis still holds in a somewhat literalistic way, even...[for them]. For the scientist does occasionally revoke even an observation statement, when it conflicts with a well-attested body of theory" (EES 314). The thesis holds, however, only legalistically, because, in practice, recanting an observation sentence in light of the rest of the theory "is an extreme case and happily not characteristic" (FME 71).

Quine makes similar remarks about his claim in "Two Dogmas" that no sentences are immune to revision — or, mutatis mutandis, that no statements are analytic. "Even a truth of logic or mathematics could be abandoned in order to hold fast some causal statement of ephemeral fact," observes Quine, "but would [it] be...? In principle...vulnerability is universal;...in practice, it comes in degrees. It is at a minimum in logic and mathematics because disruptions here would reverberate so widely through science" (RJV 619–20). He repeats the point often: In Pursuit of Truth, he writes that, in accommodating a failed observation categorical deduced by a given hypothesis, a scientist heeds the maxim of minimum mutilation in choosing which of the sentences [composing the fragment of scientific theory that, together with the hypothesis, implies the observation categorical] to rescind. "The maxim constrains us...to safeguard any purely mathematical truth, for mathematics infiltrates all branches of our system of the world, and its disruption would reverberate intolerably" (PTa 15). The necessity [and analyticity] of mathematics is then explained "by our unstated policy of shielding mathematics by exercising our freedom to reject other beliefs instead" (PTa 15).

In Roots of Reference, Quine offers an account of analyticity in the light of how speakers learn their native tongue. According to this characterization of analyticity, a sentence is analytic for a native speaker if he learns its truth by learning the use of one or more of
its words. This would render ‘No bachelor is married’ analytic, since it seems that we all learned ‘bachelor’ uniformly, by learning that our elders are disposed to assert it in just the circumstances where they will assert to ‘unmarried man’ [RR 80]. Accordingly, elementary logical truths are analytic, since “anyone who goes counter to modus ponens, or who affirms a conjunction and denies one of its components, is simply flouting what he learned in learning to use ‘if’ and ‘and’” [TDR 270].¹²

To sum up, Quine defends moderate holism against strong holism as follows: In principle, being vulnerable is a universal test of observation; in practice, it comes in degrees. Being vulnerable to the test of observation is at a minimum in mathematics and logic (hence their analytic status); vulnerability to the test of observation is maximal with observation sentences (hence their synthetic status). But what explains the difference in degree of vulnerability between analytic and synthetic statements? Or, mutatis mutandis, what kind of analytic-synthetic distinction is Quine reintroducing? Quine replies that, although he showed in “Two Dogmas” that there is no principled (or language-transcendent) analytic-synthetic distinction, an arbitrary (or language-immanent) analytic-synthetic distinction is still available to temper strong holism. To evaluate Quine’s claim, we must reconsider what sort of analytic-synthetic distinction did he show unintelligible in “Two Dogmas.”

Quine, in “Two Dogmas,” regarded as untenable the distinction between analytic, or a priori, truths, and synthetic, or a posteriori, truths. If analytic truths exist, we do not know them a priori.¹³ What Duhem’s thesis establishes, Quine claims, is that, contrary to the traditional verificationist assumption that analyticity and confirmation are transcendent (or language-independent) notions, they are immanent (or language-dependent) notions. Analyticity is only domestically definable,¹⁴ and theory-independent facts do not determine whether an observation confirms a statement.¹⁵

The analytic-synthetic distinction reintroduced to moderate his holism is no longer epistemologically significant (but rather arbitrary and epistemologically insignificant).¹⁶ Even with this present account of analyticity,

we have no such radical [emphasis added; read: absolute or principled] cleavage between analytic and synthetic sentences as was called for by Carnap and other epistemologists. In learning our language each of us learns to count certain sentences, outright, as true; there are sentences whose truth is learned in that way by many of us, and there are sentences whose truth is learned in that way by few or none of us. The former sentences are more nearly analytic than the latter. The analytic sentences are the ones whose truth is learned in that way by all of us, and these extreme cases do not differ notably from their neighbors, nor can we always say which ones they are. [RR 80, emphasis added]

In “Two Dogmas in Retrospect,” Quine writes,

[M]y reservations over analyticity are the same as ever, and they concern the tracing of any demarcation . . . across the domain of sentences in general. The crude criterion in Roots of Reference, based on word learning, is no help; we don’t in general know how we learned a word . . . . In short, I recognize the notion of analyticity in its obvious and useful but epistemologically insignificant applications. [TDR 271, emphasis added]

We conclude this section by assessing Quine’s effort to temper the strong holism of “Two Dogmas” by reintroducing both a class of sentences – namely, observation sentences – that have independent empirical content and an epistemologically insignificant (or arbitrary) notion of analyticity. The issue is whether his new analytic-synthetic distinction permits Quine to cleave to moderate holism instead of strong holism.

We begin by discussing the first horn of Quine’s strategy, that is, whether observation sentences have independent empirical content. At least two problems confront Quine’s account of observation sentences. The first concerns their double life: being the repository of the empirical evidence of the theory [viz., they afford the theory empirical content] and being in a [dis]confirmation relation with the theory. On the one hand, if observation sentences are the independent empirical content of the theory [or, mutatis mutandis, the given that grounds the theory and anchors it to the world], then they cannot be theory relative [i.e., they must be theory independent or we will be driven toward epistemological nihilism or coherentialism].¹⁷ On the other hand, if observation sentences must enter in confirmation relations with other statements of the theory (and thus discharge the purpose for which they were introduced, to provide empirical evidence for the theory), then they enter into a confirmation relation with all statements of the theory, since [as Quine claimed in “Two
Dogmas" and never later denied] there is no principled way to distinguish confirmation relations that depend on the meaning of the words from those that depend on what the world is like. And if an observation sentence is confirmationally related to the whole theory, its empirical content cannot be theory-independent (i.e., observation sentences lack independent empirical content). Such was the conclusion of "Two Dogmas": Confirmation is immanent (not transcendent). Further, since Quine concedes that observation sentences are in a confirmation relation with the rest of the theory, they cannot have independent empirical content. So, we face the following dilemma: Either observation sentences are theory-free and hence have independent empirical content but confirm nothing except themselves or they are theory-laden and hence (dis)confirm the theory but lack independent empirical content.

Quine might try to resolve this dilemma by appeal to the double status of observation sentences: They are both theory-laden (taken analytically) and theory-free (taken holophrastically). This double status affords them a privileged position as a link between the outside and the inside of the theory. However, this dilemma is not so easily resolved. First, how can observation sentences both be the empirical content (and hence lack the rational relation with the rest of the theory) and at the same time be what (dis)confirms the theory (and hence be in a rational relation with the rest of the theory)? How does the stimulation of sensory surfaces to which observation sentences (holophrastically taken) are conditioned get translated into the rational evidence that (analytically taken) observation sentences express? Do these double-faced sentences have an interface?

Second, even if we can make sense of the dual status of observation sentences, how is Quine's revised position essentially different from his position in "Two Dogmas"? There Quine claimed that, since no principled or "epistemologically significant" analytic-synthetic distinction is available, the possibility of revoking an observation sentence always exists. Quine did not disown this possibility in his later writings. Since he never recanted the unintelligibility of a confirmation-based analytic-synthetic distinction, and since he always admitted that, although only legalistically, Duhem's thesis holds for observation statements, dual status for observation sentences does not prevent the in-principle possibility of revoking an observation statement when it conflicts with a well-attested body of theory. That in practice we do not usually revoke observation statements is insufficient to prevent the possibility of our doing so in principle. Admitting a legalistic possibility of revising an observation sentence is all one needs to deny that observation sentences have their content independently of the theory and hence to infer strong holism.

We move now to the second horn of Quine's strategy: introducing an arbitrary, or immanent, notion of analyticity. How does this position differ essentially from the one in "Two Dogmas"? There the denial of a principled criterion for analyticity in terms of apriority led Quine to impugn analytic truths (or statements immune to revision). However, reintroducing an arbitrary and domestic notion of analyticity (which, by Quine's own admission, does not reintroduce a principle, or "radical," analytic-synthetic distinction) does not prevent the in-principle revisability of even analytic statements. And in-principle revisability of analytic statements is all that one needs to infer strong holism.

In conclusion, introducing an arbitrary and immanent analytic-synthetic distinction does not moderate the strong holism of "Two Dogmas" because the claim in that essay that a principled or epistemologically significant analytic-synthetic distinction is unintelligible amounts to, or at least is compatible with, Quine's concession that there could be an immanent and arbitrary analytic-synthetic distinction. If Quine's strong holism in "Two Dogmas" is compatible with (and indeed equivalent to) the claim that confirmation and analyticity can only be immanent or arbitrary notions, appeal to them cannot do the work they were introduced for, namely, to moderate strong holism: Only an epistemological significant (or absolute) analytic-synthetic distinction can achieve this end.

Put differently, it is debatable whether Quine could have moderated his holism by introducing an arbitrary or immanent analytic-synthetic distinction. The main problem is his verificationalism, that is, his view that what there is to meaning must be reconstructed in terms of verification or confirmation conditions. The strong holism implied by "Two Dogmas" results from Quine's argument that the analytic-synthetic distinction is untenable by verificationist standards – it lacks clarity according to a verificationist confirmationist criterion. However, Quine did hold a verificationist view of meaning and never recanted the unintelligibility of a confirmation-based
analytic-synthetic distinction. It follows that if Quine had wanted to hold fast to his verificationism, he could have blocked the inference from verificationism to strong holism only by reintroducing an epistemologically significant, or confirmation-based, analytic-synthetic distinction. In other words, a domestic, language-immanent, analytic-synthetic distinction could not have done the work.

The purpose of these comments is to sensitize the reader to concerns about Quine’s effort to temper the strong holism of “Two Dogmas.” Although the literature tends to just take Quine’s word for it and attribute a moderate holism to him, his move to moderate holism is not unproblematic.41

4. QUINE’S GAMBIT

The last section concluded that if Quine had wanted to hold fast to verificationism,42 it is debatable whether he could have blocked the inference from confirmation holism to strong holism, despite what he claimed. Gibson (1988) once remarked that the only hope of overturning the position in “Two Dogmas” “must reside with the hope of overturning his behavioristic orientation towards language” (p. 101). This is also definitively a tendency in the literature.

Fodor and Lepore (1992) argue that one quick way to overturn Quine’s strong holism in “Two Dogmas” is to reject his verificationist or behavioristic views on meaning (p. 43). Moreover, they argue that, since Quine, in “Two Dogmas,” rejects only an epistemologically based analytic-synthetic distinction, he rejects in that essay only the conjunction of the claims that some inferential relations are constitutive of semantic relations and that what they are can be determined by applying an epistemic criterion, such as apriority. However, meaning holism does not follow from the negation of this conjunction, unless one is verificationist about meaning (Fodor and Lepore 1992, 35–8). Quine only showed that meaning cannot be reduced to the inferences one is prepared to accept, and hence he leaves open the possibility of accounting for semantic facts, synonymy, and analyticity nonepistemically.43

Putnam (1986) endorses Quine’s meaning holism (at the level of meaning that “is in the head”) insofar as the character of our decision of synonymy is “informal (and unformalizable)” (Putnam 1986, 424) — or insofar as “the sameness of meaning is the reasonableness of ignoring the difference in the psychological processes” [p. 419, emphasis added]. However, because of his aversion to verificationism, Putnam does not infer meaning holism tout court from this meaning holism.44 Putnam writes that “when two words have exactly the same extension we’ll treat them as synonyms” (p. 419).

This antiverificationist wave, along with the search for a nonepistemic criterion of meaning identity, is motivated by the view that Quine has shown it is impossible to provide a criterion of meaning identity if meaning is epistemic (e.g., if meaning is identified with verification conditions) — or, mutatis mutandis, by the view that Quine is endorsing a strong holism. But this is not the sole reaction Quine’s arguments have generated. Philosophers who are sympathetic to some kind of verificationism (or who identify meaning with use)45 accept Quine’s claim that the analytic-synthetic distinction is untenable but argue, in different ways, that, although there is no principled analytic-synthetic distinction, a denatured distinction, one somehow graded or contextually relativized, is not precluded by Quine’s arguments.46 The strategy is to block an inference from an epistemic conception of meaning (e.g., meaning as conceptual role) to strong holism by appeal to this denatured analytic-synthetic distinction. Problems remain, however, in articulating an analytic-synthetic distinction of this type.47

Our aim in this section has been minimal: namely, to provide a rough idea of the kind of discussion Quine’s work has generated in the contemporary literature in semantics, though we have not provided anything like an exhaustive catalogue of Quine’s influence in so many areas and among so many philosophers. We agree with Putnam that Quine was a philosopher of historic importance and that his work will continue to be the source of inspiration for generations of philosophers to come.

NOTES

2. Meaning atomism has a long history. Exponents of some version or another range from Plato and Aristotle to the British empiricists and the
positivists up to contemporary informational semanticists like Fodor. What unites exponents is the common view that, so to speak, we must start with the simple and build up, that is, we must begin with a non-linguistic characterization of reference and then explain the meaning of more complex expressions. What differentiates exponents is how they 'specify the reference relation.

3. In defining 'meaning holism', we are deliberately unspecific. Holistic claims about meaning vary in kind (depending on the theorist's conception of meaning) and/or degree of strength (depending on the theorist's degree of commitment to and interpretation of the demise of the analytic-synthetic distinction). In particular, in between meaning atomism and strong versions of meaning holism lie moderate positions. We touch on the complications of this disjunctive picture - meaning atomism or meaning holism - and clarify what we mean by 'strong holism' as opposed to 'moderate holism' in §3, where we address the question whether Quine is to be interpreted as a moderate or strong meaning holist.

4. This text is considered Quine's manifesto of meaning holism.


6. As we mention in §4, this inference has been contested by Fodor and Lepore 1992.

7. Introducing Quine's holism from the more comprehensive context of his speculation on meaning and translation is good preparation for the later discussion of whether his holism should be interpreted as extreme or moderate.


9. This is the setting for "radical translation," which is "the task of the linguist, unaided by any interpreter, to understand and translate a language hitherto unknown" (WO 28).

10. In Quine's jargon, the native expression 'Gavagai' is first interpreted holistically (as one-word sentence) and then analytically (word by word).

11. This defines Quine's notion of observation sentence. It is a social notion (see WO 45); i.e., the degree of observability of a sentence is, in turn, defined in terms of agreement or disagreement on the part of well-placed observers. What renders an (occasion) sentence high in degree of observability (i.e., what makes it an observation sentence) is the similarity in stimulus meaning (i.e., similarity in assent or dissent on the part of well-placed observers) what makes it low in observability is "wide intersubjective variability of stimulus meaning" (WO 45).

12. In Word and Object, Quine writes,

   We were impressed... with the interdependence of sentences. We may well have begun to wonder whether meanings ever of whole sentences... could reasonably be talked of at all, except relative to the other sentences of an inclusive theory. Such relativity would be awkward, since, conversely, the individual component sentences offer the only way into the theory. Now the notion of stimulus meaning partially resolves the predicament. It isolates a sort of a direct empirical import of each of various single sentences without regard to the containing theory, even though without loss of what the sentence owes to that containing theory. It is a device... for exploring the fabric of interlocking sentences, a sentence at a time. (WO 34-5, emphasis added)

   On p. 72, he refers to observation sentences as "independently translatable sentences," i.e., as sentences translatable by independent evidence of stimulatory occasions. So Quine, in Word and Object claims that observation sentences have theory-independent (or language-independent) empirical content. As we will see later in the chapter, this claim has its problems and conflicts with Quine's claims in "Two Dogmas."

13. That is, our devices of individuation, such as plural endings, pronouns, numerals, the 'is' of identity, and its adaptations 'same' and 'other' (see WO 52-3 and OR 32-3).

14. See "Ontological Relativity": "[The radical translator abstracts] native particles and constructions from observed native sentences and tries associating these variously with English particles and constructions" (OR 33). See also WO 70.

15. As is well known, Quine holds that radical translation shows that meaning is indeterminate, not only at the intensional level but at the extensional level as well. Indeterminacy of meaning (in any intuitive sense of 'meaning' different from reference) is on a par with the inescapability of reference (or ontological relativity). As Quine likes to put it, the indeterminacy of translation "cuts across extension and intension alike... Reference itself proves behaviorally inescapable" (OR 35), since the words 'rabbit' and 'undetached rabbit part' not only differ in meaning but are also true of different things in the world.

16. It is worth reminding the reader that according to Quine the 'gavagai' example, although artificial, illustrates real linguistic phenomena (e.g., the case of the Japanese classifiers; see OR 36). Moreover, according to Quine, radical translation begins at home (OR 47-8).

17. For an example of how Quine's speculation on radical translation comes together with his rejection of the analytic-synthetic distinction in "Two Dogmas" (Quine's manifesto on meaning holism), see pp. 61-8 of 'Word
and Object. There Quine ties together his speculations and conclusions
on stimulus synonymy with those of analytic sentences and the
analytic-synthetic distinction in "Two Dogmas."
18. The dogma of the analytic-synthetic distinction is that there is a fun-
damental distinction between analytic sentences [statements true in
virtue of the meanings of their component words alone, i.e., independ-
ently of experience] and synthetic statements [statements whose truth
is grounded in experience]. According to Quine, the two dogmas are
at root one because as long as it is taken to be significant to speak of
the confirmation and infirmation of one statement in isolation from all
the others, it seems significant to speak also of a limiting kind of statement
confirmed come what may.
19. We are aware that one may disagree with both our points – that the moral
of Quine’s speculation on radical translation coincides with, or finds
support in, Duhem’s confirmation holism and that Quine’s writings on
translation echo “Two Dogmas” – because Quine, in Word and Object,
grants observation sentences a special status that is denied them in
“Two Dogmas,” which suggests a more moderate confirmation holism
than Duhem’s. However, as we argue in §3, since we are doubtful that
observation sentences can be consistently given such a special status, we
don’t see any essential difference between “Two Dogmas” and Quine’s
writings on translation.
20. Although indeterminacy of meaning, meaning holism, and rejection of
the analytic-synthetic distinction are essentially correlated in Quine’s
view, they need not be correlated. Their interdependence seems to be
inevitable for philosophers who, like Quine, cleave to an epistemic con-
ception of meaning, but a realist about meaning can accept Quine’s re-
jection of the analytic-synthetic distinction without ipso facto buying
into the indeterminacy of meaning or into meaning holism.
21. Gibson (1982) notes, correctly in our view, that if pressed to support
confirmation holism “beyond merely appealing to Duhem…, Quine
would call attention to the way [theoretical] language is learned” [p.
106] and that Quine views the situation of a radical translator learning
the native’s (theoretical) language as the same [from an epistemic point
of view] as that of a child learning the theoretical language.
22. Since accepting meaning holism is often seen to follow from agree-
ing with Quine about the analytic-synthetic distinction, assessing what
brand of holism his arguments support is important not only as a matter
of exegesis but also for assessing the fortune of the doctrine itself. If, on
the one hand, we take seriously Quine’s claim that there is no prin-
cipled analytic-synthetic distinction, strong holism seems to follow, and
with it the deleterious consequences it implies. For such consequences,
see Fodor and Lepore 1992 and Dummett 1991, 1993b, and 1993c. If,
on the other hand, we interpret Quine as still committed to some kind
of analytic-synthetic distinction, a moderate holism follows that can
circumvent difficulties raised by a strong version of holism.
23. “The relativity of observation sentences to the rest of the language
would be odd indeed” since the empirical meaning of observation sen-
tences is a “device…for exploring the fabric of interlocking sentences”
[WO 35].
24. We presently discuss in greater detail Quine’s defense of moderate
holism.
25. A moderate holism much along the lines of Dummett’s own molecular-
ism. See Dummett 1993c, 44–5.
26. Dummett explains as follows: “[A]n analytic sentence will be one the
assignment to which of the value true will be untouched by any admis-
sible revision made in response to a recalcitrant experience; a synthetic
sentence will be one the assignment to which of the value true will be
overturned by any admissible revision made in response to certain
possible experiences” [Dummett 1993c, 44–5]. See Dummett 1973, 592;
1993c, 71.
27. This theory “quite rightly characterized as holism” is the “Global
Holism” Dummett identifies with the Quine-Duhem thesis and harshly
criticizes in Chapter 10 of The Logical Basis of Metaphysics [Dummett
1991]. For a considerate account of Dummett’s interpretation of Quine’s
holism see Shish 1997.
28. See, e.g., EES, FME, RHB, RGH, RRN, RHP, RJV, PTA, and TDR.
29. See, e.g., RHP, PTA, and POS.
30. By ‘observation categorical’ Quine means a generalization of the form
‘Whenever this, that’, where ‘this’ and ‘that’ are observation sentences.
See PTA 9–11.
31. See, also, TDR on this.
32. See, also, R78, RHB 94–5, and RGH.
33. Putnam (1983) makes this point. See also Fodor and Lepore 1992, Gibson
1988, and Lepore 1993. See, also, RGH, where Quine writes that the
dogma of reductionism “creates a need for analyticity as a key notion of
epistemology, and that the need lapses when we heed Duhem” [p. 207].
34. That is, ‘is analytic’ has a clear use only as ‘analytic in English’ or ‘ana-
litic in Italian’ but not across languages. See TDR and Lepore 1995. This
clarifies why many criticisms of Quine’s attack on analyticity miss his
point in “Two Dogmas.” Searle 1969, Grice and Strawson 1972, and
Putnam 1975 all argue against Quine that ‘analyticity’ is clear because
users agree on its application. But Quine never denied that ‘analyticity’
is intelligible in its domestic/immanent/arbitrary sense. For a criticism

35. To the objection that Quine believes observation sentences, taken holistically, transcend theory-relative confirmation, we note the following: (1) Quine introduced holistically construed observation sentences that wear their empirical content on their sleeve after "two dogmas" in order to moderate the strong holism suggested by "two dogmas," and (2) it is not clear whether observation sentences holistically construed can really do what they are introduced to do: that is, moderate strong holism by introducing a language-independent notion of empirical content by which language is anchored to the world. We discuss (2) presently.

36. The epistemological insignificance of the analytic-synthetic distinction explains why this move is compatible with Quine's claims in "two dogmas" and hence why he never recanted that essay's arguments for meaning holism.

37. That Quine distinguishes his view from epistemological nihilism is clear in "Epistemology naturalized," and he distances himself from coherentism in "Reply to Herbert G. Bohnert."

38. As he puts it, analytically taken, observation sentences are theory-laden.

39. Quine implicitly admits this by saying that "Duhem's thesis still holds [for observation sentences] in a somewhat literalistic way" (EES 374).

40. The problem of how Quine can account for a concept of experience (or empirical content) that rationally justifies a system of beliefs while remaining outside the order of justification has been emphasized by McDowell 1994 and is already implicit in Davidson's 1984 and 1986 criticisms of Quine's commitment to a third dogma of empiricism.

41. Quine's interpreters disagree on whether Quine held a strong holism or a moderate holism. Putnam 1986, Fodor and Lepore 1992, and Lepore 1995, for example, characterize Quine's holism as strong. Dummett, as we have seen, acknowledges the tension within the corpus of Quine's writings between strong and moderate holism. However, Dummett 1991 attributes to Quine the profession of an "inextricability thesis," which has nothing to do with [strong] holism (pp. 242–4). Davidson's attribution of moderate holism to Quine (in Davidson 1984 and 1986) is implicit in his regarding Quine as committed to the third dogma of empiricism (the dualism of language and empirical content). Note, however, that the incoherence of Quine's moderate holism (and of any endorsement of a dualism that separates language and empirical content) is pointed out by Davidson in both Davidson 1984 and 1986.

42. And he did, since his verificationism is directly related to his nativism. See §2.

43. A third line of attack on Quine's strong holism does not have to with the assumption of verificationism. For the sake of argument, Fodor and Lepore 1992 grant the truth of verificationism and attack instead the validity of Quine's argument for meaning holism as presented "two dogmas." In particular, they claim that "even the conjunction of confirmation holism and verificationism is compatible with the initial [meaning] holism" (p. 43) since meaning holism does not follow from the truth of the premises owing to an unavoidable equivocality in the word 'statement' in the premises (see pp. 41–54). For a response to the Fodor and Lepore 1992 criticism that Quine's defense of meaning holism in "two dogmas" is fallacious, see Harrell 1996 and Okasha 1999.

44. Putnam departs from Quine by not buying into the inscrutability of reference thesis.

45. We have in mind, in particular, conceptual role semanticists.

46. See, e.g., Block 1994, 95: "Without an analytic-synthetic distinction we would have to move to a scientific conception of meaning that departs entirely from the crude dichotomy of same/different meaning in favor of a multidimensional gradient of similarity of meaning."

47. See Fodor and Lepore 1992, chaps. 1 and 6.

REFERENCES


4 Underdetermination of Physical Theory

INTRODUCTION

Our theories of the world are related in various ways to experience. We construct theories partly in order to account for what we have observed and partly in order to systematize and support our expectations for future experience. But what we experience is not sufficient to determine our theories. Different theories may account for our observations equally well. This, roughly speaking, is the thesis that the physical theory is underdetermined. W. V. Quine has formulated the idea in different ways in different contexts.

However, before we consider Quine’s formulations, let us look at the following passage from an address delivered by Albert Einstein on the occasion of Max Planck’s sixtieth birthday in 1918:

The supreme task of the physicist is to arrive at those universal elements of laws from which the cosmos can be built up by pure deduction. There is no logical path to these laws; only intuition, resting on sympathetic understanding of experience, can reach them. In this methodological uncertain one might suppose that there were any number of possible systems of theoretical physics all equally well justified, and this opinion is no doubt correct theoretically. But the development of physics has shown that at any given moment, out of all conceivable constructions, a single one has always proven itself decidedly superior to all the rest. Nobody who has gone deeply into the matter will deny that in practice the world of phenomena uniquely determines the theoretical system, in spite of the fact that there is no logical bridge between phenomena and their theoretical principals.

In the first half of this passage, Einstein seems to say that physical theory is underdetermined by experience or observational evidence; in the second half, he seems to say that physical theory