

Centennial Celebration and Marker Dedication honoring Willard Van Orman Quine  
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## On Quine's Philosophy

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A central preoccupation of philosophy since its inception has been the nature of scientific knowledge. The most prominent philosophers in the Western tradition propounded general conditions — on the world, on us as rational knowers, and on the interaction of us and the world — that, they claimed, underlay the validity of the the mathematical and empirical sciences. Plato, seeking to show how it is that geometrical demonstrations give us information about spatial arrangements in the world, came up with his Theory of Forms, according to which basic reality is made up not of ordinary objects but of rather more abstract items, which shape how the world looks and with which our intellects have direct contact. Two thousand years later, Immanuel Kant sought to make the world safe for Newtonian physics, by building a complex metaphysical system according to which the world of things is shaped by our own minds, so that we can know *a priori*, that is, in advance of experience, the basic laws of that world, namely, the laws of space, time, and motion.

These examples exhibit the dominant, historical self-conception of the philosophical enterprise: to unearth general truths that give a foundation for the particular results of scientific inquiry; to lay bare the metaphysical presuppositions of scientific knowledge. On that conception, obviously, philosophy itself is not a science; rather, it is prior to science, prior to anything that is learned by experience or experiment. The pronouncements of philosophy are themselves *a priori*. This is the picture of First Philosophy.

Two advances in the early twentieth century shook this picture. First was the development of modern logic, and in particular the claim of *logicism*: that mathematical laws are nothing but logical laws, laws that govern all thinking, on any subject whatever. Second was Einstein's theory of relativity, which, in

superceding Newtonian physics, refuted Kant; and showed that what had always been taken as *a priori*, the mathematical structure of space and time, was itself an empirical matter, something to be learned from experience and experiment.

The deepest philosophical reaction to these developments was the anti-metaphysical movement known as logical positivism, or logical empiricism. Logicism provided the means to conciliate empiricism — the view that all substantial knowledge is a matter of experience — with the *a priori* nature of mathematics. According to logicism, mathematics is nothing but logic; and according to the positivists, logic is not a matter of laws about the world, but of how we talk about the world. (The law of noncontradiction, that it cannot be the case that both *p* and not-*p* are true, is not about things: it is true due to the meanings of “not” and “and”.) The theory of relativity is exemplary of how positivists saw knowledge as working: a language is set up, with appropriate definitions of concepts like “length” and “event”. Then, within that language factual claims can be made and tested against experience. There is no role for “philosophical foundations”, no “metaphysical presuppositions”.

I have, you may have noticed, slipped into talking of language. The heart of the positivist view is this linguistic turn. Central to their analysis of the way scientific knowledge works, and to their claimed dissolution of traditional philosophical problems, is the notion that some statements are true merely by dint of the way we represent the world, merely as a result of the linguistic system we use, merely as a matter of the meanings of our words. Such truths have no substantial content, and so pose no problem for the theory of knowledge. Rudolf Carnap, the greatest of the positivists, revived the old philosophical word “analytic” as a label for such truths-due-to-language, and the contrasting word “synthetic” for statements that are true due to the way the world is, the truths we find out by experience and experiment.

What then of philosophy itself? On this conception, philosophy becomes the logical analysis of the language of science; it is concerned with the analysis of linguistic structures in which the claims of science may be formulated and justified.

Thus philosophy itself becomes analytic, yielding no substantial facts, but only logical information about linguistic structures. It remains sharply distinguished from science, and in a sense still prior to it, but made into logic, it is stripped of its grandiose claims of discovering super-scientific facts.

It's an appealing picture, and Van Quine, at the beginning, believed it. After Oberlin he came to Harvard, and received his Ph.D. in two years. Then he travelled to Europe in 1932, where he met and worked with Carnap. By 1934 he was back at Harvard, propounding positivism in public lectures.

Not for long. Within two years Quine published his first criticism of Carnap. Before long he came to disbelieve *completely* the sharp distinction between truths-by-dint-of-language and truths-by-dint-of-facts. The paper laying out his grounds, "Two Dogmas of Empiricism" of 1951, is perhaps the most widely read philosophical paper of the last sixty years. Others too had doubts about this most central distinction of positivism; but what Quine saw was that, without it, the whole nature of the philosophical enterprise and its relation to science had to be rethought from the ground up. For it was only by invoking this distinction that philosophy could claim to analyze science from a position not dependent on the results of the science. Two thousand years ago the Greek mathematician Archimedes noted that, given a suitable point to stand on, with a lever one could move the world. Quine is fond of the metaphor: the analytic-synthetic distinction provided 20th century philosophy with its Archimedean point.

Without an Archimedean point, there is no First Philosophy. Quine's work is a systematic working-out of what philosophy is, when it no longer seeks *a priori* principles of justification that can be applied to scientific knowledge, and hence when it no longer avoids using scientific knowledge itself. The very terms of what we are looking for have to be reexamined; the task philosophy sets for itself has to be reconceived. For now we are viewing ourselves as beings in the natural world. Science tells us how we gain information about the world, and so provides the terms in which to formulate whatever problem there may be in the theory of knowledge. On Quine's analysis, we are creatures whose various nerves endings — optical, auditory,

tactile, and so on — are stimulated by impingements from the outside world. This is our input. And we are creatures who come up with theories about what the outside world is like; this is our output. What is the relation between the input and output? As he put it:

The stimulation of sensory receptors is all the evidence anybody has had to go on, ultimately, in arriving at his picture of the world. Why not just see how this construction really proceeds? Why not settle for psychology? Such a surrender of the epistemological burden to psychology is a move that was disallowed in earlier times as circular reasoning. If the epistemologist's goal is validation of the grounds of empirical science, he defeats his purpose by using psychology or empirical science in the validation. However, such scruples against circularity have little point...if we are out simply to understand the link between observation and science[.] We are well advised to use any available information, including that provided by the very science whose link with observation we are seeking to understand. ("Epistemology Naturalized", pp. 76-77).

In a celebrated image from the same paper, Quine speaks of the relation between science and the theory of knowledge as "reciprocal containment": theory of knowledge is contained in science, since it is just a branch of scientific theorizing; but it is theorizing about theorizing, and in that sense contains science. In another celebrated image, adapted from the positivist Otto Neurath, Quine likens the ongoing intermingled effort of science and epistemology to the effort of sailors rebuilding their boat while on the open sea — there is no drydock in which the boat as a whole may be redone.

Quine's call for a "naturalized epistemology" has been enormously influential, and has significantly reshaped the way theory of knowledge is pursued in America. But no one has come close to Quine in the rigor and penetration with which he has followed out the ramifications and implications of this new vision of the relation of philosophy and science.

I shall not be able here to go on about a part of his work that is very dear to him (as it is to me), namely, the enormous clarification he has brought to matters of logical theory. Quine has given far sharper formulations of the nature of logic than

his positivist predecessors, and created a new, more precise but also more usable model for how the subject should be taught. (Nor do I have time to explain Quine's contributions to mathematics, both to its most abstract branch, set theory, and to one of its most concrete, theory of algorithms, which is used in computer science.)

But let me try to summarize what Quine's naturalism takes to be the nature of scientific theorizing. Without the Archimedean point, without a category of *a priori* knowledge, no general philosophical distinctions of types of knowledge can be made. A body of knowledge, that is, a theory, stands or falls as a whole. Our statements "face the tribunal of experience corporately", as Quine put it. If experience contradicts our theory, we may amend the theory in many ways; no part of the theory is sacrosanct: no statement is immune to revision. This is in direct opposition to much philosophical tradition, which holds that certain subjects (logic and mathematics, usually) are certain, firm, and unshakable. For Quine, they may appear so, but only for pragmatic reasons: it would be less convenient to amend them than other parts of our theory. No distinctive philosophical status accrues to them.

In speaking of theories here, I am not thinking solely of scientific examples like quantum mechanics or molecular genetics. From Quine's naturalistic standpoint, even our ordinary beliefs, about things like tables, shoes, and bread amount to a theory: for even talk of tables, shoes and bread goes beyond the input as naturalistically conceived. (That input, recall, is just the stimulations of nerves of our perceptual systems.) In talk of tables, shoes, and bread we are positing objects beyond what is perceived. To call something a posit is not to patronize it, Quine pointed out. But it is to put it on a continuum, which goes from ordinary objects all the way to the most arcane items of contemporary physics. In this way the naturalistic viewpoint supports the idea that we have no more reason to doubt the existence of quarks and bosons than we do the existence of tables, shoes, and bread. In a sense, Quine's epistemology gives us no choice but to be philosophical realists: if this be metaphysics (as he agreed it is) it is a metaphysics within science, not prior to it.

But it was in the study of language that Quine's naturalistic approach led to the most dramatic conclusions. When we view ourselves as natural objects, it seems clear, what matters about language is the use we make of it. That is, if we do not start with some pre-set notion of "meaning" (and in particular if we do not start with the myth that what we think as we use language will determine what we mean), then all that is relevant will lie in our behavior with and using language. Here Quine invoked a nice image: think of topiary; two bushes can be trimmed to outwardly the same, yet the actual configurations of the branches might be very different. Similarly, people can be conditioned to agree in their use of language, although the mechanisms (in the brain) involved in this might well be different. Indeed, we should *expect* the mechanisms to be different, given that our trainings are not identical (you and I learnt the word "dog" in contact with different dogs). Now, armed with this basic viewpoint, Quine set up a notable thought experiment in order to analyze communication. This is the scenario of the linguist encountering a group with a hitherto unknown language. In order to understand the natives, the linguist would have to arrive at a translation of their language. Reflecting on all the evidence that could be relevant to this radical translation project, Quine came to the startling conclusion that all evidence, indeed all relevant facts, underdetermine the translation. There can always be grossly different translations that do an equally adequate job of fitting all the facts of language use. We are not speaking here of the usual practical difficulties in translation, of capturing tone and nuance, that can lead to variants. We are talking of translations so different that according to one the native is speaking of rabbits and according to another the native is speaking of numbers. Nothing in the relevant facts will settle matters; it is just a question of our freely choosing one translation scheme rather than another. This is Quine's *thesis of the indeterminacy of translation*.

(Let me give an example of what the thesis contradicts. It has been claimed that all human languages obey certain constraints, so-called linguistic universals, which should then be seen as revealing something about the structure of the mind. An example that has been proposed is this: all languages use short words to refer to

medium-sized physical objects (chairs, shoes, bread, again). The indeterminacy thesis implies that this “fact” is not a fact; it is an imposition. For reasons of convenience, we choose to translate in such a way that this comes out true; but there is nothing in the nature of language use which forces us to do so.)

The indeterminacy thesis applies not just to radical translation; the point of Quine’s thought experiment is to elicit reflection on what our understanding each other comes to. My understanding you *is* translation of your-talk into mine. Ordinarily I do this homophonically, your syllables by the same ones in my-talk (although sometimes I depart from this to make better sense of you: I would translate your calling a party “awesome” into my words “great fun”) — but the blend of a standard translation and one that departs in order to be charitable in the ascription of plausible belief to you is badly underdetermined by all the relevant facts. It isn’t that there is something further to capture in a “correct” translation; it is that there is nothing more to “correctness”. It makes no sense to say what objects you are talking about, what objects you believe to exist, what beliefs you have generally, beyond saying how to interpret your words in mine, before *choosing* (subject to constraint, but not determining constraint) how to interpret your words in mine.

The indeterminacy thesis is Quine’s most sophisticated argument to support his scepticism about the scientific viability of any notion of linguistic meaning. It is thus of a piece with his early doubts about the notion of truth-by-dint-of-meaning. We may view it this way: Quine’s naturalism is an austere naturalism; it characterizes our rational activities by means only of concepts and categories that come from the mature sciences. The question Quine can be seen as asking is: to what extent does this provide us with a basis for the concepts of commonsense, everyday psychology, where we talk about meaning, belief, and so on? Quine’s challenging answer is: to a much lesser extent than we might have thought. Trenchantly argued, and based on a comprehensive view of logic and the nature of scientific theorizing, his work presents both a powerful and systematic conception of our rational activity, and a serious challenge to the unreflective adoption of semantic

and mental notions in what perhaps we should call the immature sciences, particularly linguistics and psychology. Van Quine's challenge has not yet been answered: not by a reply to his arguments, not by methodological reflections of any depth, and (to my mind, at least) not by any unquestionable empirical success in the so-called sciences of meaning and mind.

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