

Quine and the Guiding Principles of Scientific Philosophy

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Science as a prejudice---

A "scientific" interpretation of the world . . . might yet be one of the most stupid of all possible interpretations of the world, in the sense that it would be one of the poorest in meaning. This thought is intended for the ears and consciences of our mechanists who nowadays like to pass as philosophers and insist that mechanics is the doctrine of the first and last laws on which all existence must be based as on a ground floor. But an essentially mechanical world would be an essentially meaningless world. Suppose that one estimated the value of a piece of music according to how much of it could be counted, calculated, and expressed in formulas: how absurd would such a "scientific" estimation of music be! What would one have comprehended, understood, grasped of it? Nothing, really nothing of what is "music" in it!

Friedrich Nietzsche
The Gay Science section 373

Of course Nietzsche was not opposed to science (Wissenschaft); he held an extremely high regard for it. The quotes surrounding the word 'scientific' in the passage indicate that it is a peculiar conception of science he is disparaging--one which construes the method of natural science as the supreme model for all knowledge-productive inquiries into the nature of human experience. Calling in Nietzsche from left field to hurl an objection at Quine may seem impertinent but is not as arbitrary as might first appear. For Nietzsche was among the first major thinkers to prescribe an investigation into the extent to which language seduces its users into holding beliefs of a scientifically dubious and metaphysical kind.¹

But--it must be admitted--the spirit in which Nietzsche called for such an analysis of language is not the spirit in which Quine conducts it. For at the heart of Nietzsche's comment above is the question of the value of science within the overall experience of

man, whereas Quine's attitude in this respect may safely be called dogmatic. The value of scientific inquiry is not a thing to be questioned for Quine; its pragmatic benefits are evident enough. Still, Nietzsche's questioning of the dogma might yet be regarded as truer to the traditional spirit of science.

These reflections do not imply a preference of one sense of scientific over another, nor need they oblige one to explicate what is meant by the word 'scientific'. The difference can be sufficiently accounted for by resorting to the traditional distinction between science and philosophy. Quine treats the distinction as only a matter of degree, the philosopher's task differing from that of the scientist only "in detail." Both are concerned "to save the eventual connections with nonverbal stimulation";² the philosopher merely does his job at a further remove, supporting the scientific enterprise the cutting edge of which is empirical science itself. Nietzsche sees empirical science as exemplifying certain presuppositions which, however valuable they may be to science itself, the seeker after knowledge cannot take for granted and must be prepared to question. Such a taking of accounts has traditionally been the business of philosophy.

What follows is an attempt to assess Quine's scientific conception of philosophy. Concern with dispositions to verbal behavior, "naturalized" epistemology, the primacy of sensory evidence, the guiding principles for theory, the need for a specialized notation, and the dispensability of intensional language are the chief features of Quine's program which place philosophy on a par with science and thereby relieve it of its formerly exalted duties. Whether Quine's reallocation of philosophy is legitimate depends upon the cogency with which he has emphasized these features.

But according to what criteria is one to be convinced? How exactly is one to judge of his theory's cogency? These questions already reach to the heart of the problem, for if we choose to be satisfied on the basis of the extent to which Quine's discussion meets the standards of scientific method and scientific efficacy, then we are already playing into his hands. This is because these are the very virtues which Quine has striven assiduously to realize in laying out his claims. Quine mentions these virtues time and again. Conformity to observation, simplicity or conceptual economy, conservatism or familiarity of principle, clarity, and predictability are the chief among them (Word and Object 18-21). Quine argues for behaviorism, naturalized epistemology, canonical notation, etc. on the strength of their individual and combined capacity to exemplify these guiding principles of science.

Thus, if an account contrary to Quine's is to be convincing at all, it must show either (1) that his

program does not actually exemplify these principles, or (2) that these principles are actually pernicious to the acquisition of knowledge, or (3) that there are additional considerations which should recommend a knowledge-producing activity to us.

Even if the first alternative is achievable, establishing it would constitute no substantial gain in preserving the traditional status of philosophy. For the crucial question is not whether Quine's program actually conforms to these guiding principles, but whether these principles are necessary and sufficient to satisfy the knowledge demands of human beings. The second alternative, on the face of it, anyone would be a fool to affirm. For it is hard to imagine how any rational inquiry would benefit by ignoring any of these precepts of method; no doubt philosophy has always been most effective when practiced in accordance with them. However, though it is plain one would be a fool not to see them as necessary, it is not at all clear that these guiding principles are sufficient. And this brings us to alternative number three: whether there are additional considerations which ought to be taken into account when deciding upon the adequacy of a theory of knowledge.

Before suggesting what these other considerations might be, a closer look at Quine's recommendations for the proper method of philosophy will spotlight certain aspects of his theory against which the question of adequacy can be raised. For the moment it is enough to assert that the adequacy of a theory of knowledge must be determined not only by the extent to which it conforms to Quine's precepts of guidance in science and by its ability to tell us what knowledge is and how it is acquired, but also because it accounts for the role and function which knowledge plays in human experience as a whole.

II

Quine is known for trenchant criticisms of empiricism, but his misgivings about it go only so deep. Two cardinal tenets of empiricism he considers impervious: (1) all evidence for science is sensory evidence and (2) all learning of meanings of words rests ultimately on sensory evidence.' An additional tenet which Quine takes to be just as solid is more controversial: "words mean only as their use in sentences is conditioned to sensory stimuli, verbal and otherwise. Any realistic theory of evidence must be inseparable from the psychology of stimulus and response applied to sentences" (see Word and Object 17).

This is just Quine's formulation of behaviorism as applied to human beings. The unique aspect of human beings concerning the behavioral scientist is language; language and the meaning conveyed by language appear to

the behaviorist as natural phenomena not fundamentally different as objects of study from any other element in nature, and thus are to be studied in the same sort of way. So what human beings mean by what they say is tantamount to the totality of their dispositions to verbal behavior. The philosopher, then, insofar as he is a behaviorist, is not concerned with studying some preternatural subject matter, some noumenon such as a mind, but verbal behavior as conditioned by sensory stimuli.

A major problem for the philosopher here is to explain why language is much more than a mere reporting of sensory stimulation; how is it that complex patterns of communication take place? Quine sees that the retention in memory of past experiences is central here. But these experiences are retained less as traces of past sensations than as traces of past "conceptualizations" (Word and Object 10). Conceptualization Quine holds to be inseparable from language, but he is not clear as to just what a conceptualization is. Presumably, it must be an association of various stimuli retained together as a conditioned response to certain situations and which is itself associated loosely enough with other situations so as to apply to any number of them. This latter association is possible only because of a verbal network of theory which links one uttered conceptualization as a stimulus to other conceptualizations as possible responses. This network of theory Quine calls the "interanimation of sentences."

Quine's talk of conceptualizations may perhaps best be understood in a manner somewhat similar to Hume's account of abstract ideas. The point is not that Quine thinks of conceptualizations as Humean ideas exactly, but rather that a conceptualization is conditioned according to the same sort of mechanism which Hume says leads us to think that some ideas are abstract. For Hume all general ideas are nothing but particular ones annexed to a common term which gives them a more extensive significance because the hearing of this term stimulates our power to recall any particular idea associated with that term. Thus, Hume says, these ideas (and, I am suggesting, Quine's conceptualizations) are not present to the mind actually but "only in power."

In any event, this "custom" of itself would allow no more than repetition of past conceptualizations were it not for the intervening network of sentences which enables us to "exploit" them--i.e., to use them in intelligently complicated ways. One might be inclined to infer that the connections between the sentences composing this network would be first and foremost logical and that this logical dimension would hold the network together. But this would be rather like crediting the effectiveness with which a lifeguard performed his job to his suntan. According to Quine those logical con-

nections, though they look impressive, are incidental and due (like every other connection) to the conditioning of sentences as responses to sentences as stimuli. Connections are logical only in the sense that they refer to so-called logical laws which are themselves sentences within the network.

This may be consistent, but is it satisfying? How could stimulus-response conditioning alone give the force of logic to these connections? One need not be enamored of logic to think that its existence is remarkable, too remarkable to allow that stimulus-response conditioning alone can account for it. Just as easily would one believe Hume had truly explained all thought processes in terms of resemblance, contiguity, and causation.

But the point here is not to give Quine a demerit for failing to answer an extremely difficult question, rather it is to emphasize that he has ignored it. In general, the behaviorist program affords the philosopher the luxury of dispensing with traditionally recalcitrant problems. Quine is aware of this. Regarding propositional attitudes he has said that to clear them away "is not to have made scientific sense of them" (Word and Object 216). Even less is it to make philosophical sense of them. This is because the behaviorist point of view is, at bottom, only quasi-philosophical. Insofar as a problem can be neatly excised from that perspective it is no longer a legitimate (i.e., scientific) problem at all. The scientific philosopher touts this as a great boon for knowledge and thereby often makes ignorance a virtue.

One may be tempted to reconsider the half-hearted suggestion made earlier that Quine's list of guiding principles for scientific philosophy could be detrimental to the pursuit of knowledge. This seemed highly unlikely since each of these precepts seemed necessary to any rational inquiry. But what if these principles are nevertheless insufficient? What if the set of precepts which guide the search for knowledge must, because they reflect human concerns which are not addressed satisfactorily by science, include some tenets which are not merely expedient and pragmatic? One result of neglecting these further concerns appears to be that certain traditionally important problems may no longer be counted as problems. Such a radical consequence should at least be regarded with caution, because if it is a mistake, then the principles of a purely scientific philosophy, when taken as sufficient to satisfy the interests human beings have in acquiring knowledge, may actually have counterproductive effects.

III

Quine's attitude toward ordinary language is mixed. Ordinary language is indispensable, but for the scien-

tific philosopher it is too seriously flawed to use in constructing theory. Though the resources for inquiry are present in it, the philosopher must mine it and refine it so as to make it suitable for the work of science. The sort of refinement needed is not a matter of replacing ordinary language but rather of extending it to a scientific level. Science's ontological commitment requires that it deal with empirical facts, and this can be done only through purely extensional language. Thus, what is needed is to modify ordinary language so as to remove vagueness, ambiguity, and opacity as regards mechanisms of reference when these affect sentences whose truth values hinge on such confusions.

Quine's main point against the view that ordinary language can serve the purposes of science is that this view is blind to one of language's most significant traits: its disposition to evolve. Quine's conception of linguistic evolution is central, for he sees its significance not in a blind progression of usage of ordinary language itself but in its tractability--its disposition to be fashioned to suit human purposes such as science. "Scientific neologism is itself just linguistic evolution gone self-conscious, as science is self-conscious common sense" (Word and Object 3). To fashion a language appropriate to science is not a matter of reduction but evolution; a continuity between ordinary language and the canonical language is sustained. The difference between ordinary language and the technical language is a matter of "regimentation," where the latter is a conscious reformulation or paraphrase of the former designed to realize some preconceived aim.

If it is asked what this aim is we find Quine consistently resorting to the guiding principles of science already mentioned. In particular he cites the central motive as "simplification of theory." Simplification proceeds by paraphrasing ordinary language into an artificial notation so as not to burden theory with quirks of usage. The paraphrase is not claimed as synonymous, however. "If we paraphrase a sentence to resolve ambiguity, what we seek is not a synonymous sentence, but one that is more informative by dint of resisting some alternative interpretations" (Word and Object 159). Ideally the original speaker would do his own paraphrasing, thereby streamlining and clarifying his own position.

But to describe this process as evolution is misleading. It connotes that the manner in which Quine proposes to regiment ordinary language is the natural one. One should not forget that this evolution is a deliberate reworking of ordinary language with an eye toward a specific end: the adoption in practice of the guiding principles which constitute Quine's conception of science and philosophy. Quine believes that this

involves no compromise of freedom; after all the only objective here is economy and clarity (Word and Object 161-62). But this is not as innocuous as it appears, because a great deal depends upon what Quine's conception of clarity is. What may be perfectly clear to the platonist is often obscure to the positivist. Is it really so easy or so wise to treat the concept of clarity as unproblematic? Whatever can be said for the clarity of the notion of clarity as regards science, the situation is different in philosophy. Insofar as a philosopher unwittingly accepts Quine's program of canonical notation he tacitly adopts Quine's conception of what constitutes a clear exposition and, accordingly, compromises his freedom. Philosophical controversies are not to be settled by regulations governing peoples' choice of words. A school of thought which advocates this sort of conformity is, at least implicitly, less concerned with freedom of thought than with serving its own ends.

IV

A major consequence of Quine's regimentation is the prohibition of the use of intensional language in framing theories. Two problems with intensional language make its use especially undesirable. The conditions for identifying certain abstract objects make an empirical study of them virtually impossible. More generally, the methods used when employing intensional idioms go against the grain of objective science.

Concerning the first problem, Quine shows, for example, that the very question of conditions of identity for such things as propositions is utterly wrongheaded. For even when one construes a proposition in behavioral terms as an eternal sentence its identity will still rest on whether the proposition expressed by that sentence has a meaning which can be shared by other eternal sentences. The search for a suitable account of synonymy which could settle the matter however is fruitless. The reason is that any behavioral test for synonymy in contexts of propositional attitude is inscrutable. There is no proposition objectively related to languages such that one could identify it independently of language. However one decides to translate the proposition expressed by some sentence so as to indicate its synonymy with another proposition will depend on some arbitrary set of "analytical hypotheses." These are arbitrary because there may be many sets of analytical hypotheses which could be used to frame a translation which are all compatible with the totality of dispositions to verbal behavior. So propositions, as objects of propositional attitudes, are impractical for any genuinely scientific enterprise. It is worth noting that this is all of a piece with Quine's doctrine of inscrutability of reference

regarding terms generally. The reference of a term, like identity of propositions, is not an empirical question. There is neither term synonymy nor term identity in the sense of there being some determinate objective thing to which a term "really" refers.

The second, more general problem with intensional locutions is that their method of employment is not conducive to objective science. Quine's treatments of modality, indirect discourse, and irreducibility of intensional idioms illustrate this. The difficulty with modal constructions is that they cannot be fitted into the technical notation that would help to clarify their significance. The reason is that modal contexts are referentially opaque and thereby resist any consistent attempt to quantify into them. Quine's analysis on this point is very impressive and worth a brief explanation.

Quine shows that trying to reinterpret a modal expression as predicating analyticity of a sentence is unavailing for at least two reasons. First, the use of quotation marks as a means of mentioning the sentence has the consequence of failing to preserve truth value.⁵ Second, Quine's reflections have led him to hold that the notion of analyticity itself is of dubious integrity.⁶ But even if one tries a different tack and construes a modal construction such as necessity as a logical operator, the principle of substitutivity, as Quine calls it, is violated; i.e., an object may be specifiable by more than one term such that some traits entailed by one specification of the object are not entailed by another, in which case these specifications fail of necessary equivalence and cannot be substituted one for another. Further, if through desperation one attempts to narrow the universe of objects so as to exclude objects whose specifications fail of necessary equivalence, one is met by another difficulty: modal distinctions collapse altogether. The problem here, ultimately, is that the conception of substitutivity which trades on the notion of equivalent descriptions such that each description uniquely determines one and the same object simply does not capture the logical sense of necessity. Now since the premium Quine places on transparency of reference is the highest, modal contexts pose a seemingly insoluble problem as regards regimentation; fortunately for Quine, however, scientific philosophy doesn't need them.

Indirect quotation is probably the most candid example of Quine's complaint that intensional idioms are in direct contrast with the spirit of objective science. Indirect quotation is unabashedly inexact and, as Quine would have it, "essentially dramatic." Indeed, propositional attitudes as a whole partake primarily of drama. What is involved in all of them is "something like quotation of one's own imagined verbal response to an imagined situation" (Word and Object

219). Thus, ascriptions of beliefs, wishes, and strivings, no matter how conscientiously utilized, remain inassimilable into scientific discourse at its best. Indirect quotation can figure only as better or worse, as more or less faithful, and there is no fixed standard of allowable deviation in one's report of the antecedent physical incident.

Of course, eschewing the use of such intensional idioms does not prevent a strictly scientific reporting of the behavior that underlies imputations of propositional attitudes. One may wonder, however, what philosophical scope and relevance such reportings would have. There are, after all, some facts which would seem to be irreducible to behaviorist terms unless they were to lose the very properties which constitute their status as facts. Searle's "institutional facts" are of this sort.⁷ To account for every aspect of human behavior in strictly scientific terms with respect to "nerve hits" and "surface irritations" would be ludicrous. With some irony one could paraphrase Hume: "Though the chain of arguments which conduct to it were ever so logical, there must arise a strong suspicion, if not an absolute assurance, that it has carried us quite beyond the point of reasonableness when it leads to conclusions so extraordinary and so remote from common life and experience. We are got into fairy land long ere we have reached the last steps of our theory."⁸

In any case, to have bypassed intensional vocabulary by implementing a more scientifically favorable means of expression is not to have explained the intensional dimension in these terms. Quine realizes that there is no reducibility of intensional idioms to physical or behavioral criteria. But this just means that intensional language, as far as scientific philosophy is concerned, must be renounced.

Seen in this light science appears as a truly charmed vocation, free to dispense with those refractory elements of human experience which fail of accommodation to its precepts. One should ask, however, whether these are things which philosophy, too, may be allowed to ignore. According to Quine the answer is yes; philosophy, as well as science, is guided by pragmatic aims. One may note as a not so very strange coincidence that the moment philosophers envision their task on the model of empirical science and try to fashion it according to that idea, they see the starting points and the ends of philosophy as constrained by that selfsame point of view. Philosophy begins with sense perception as the sole basis for evidence and it ends as an activity with aims even more pragmatic than science itself--it becomes a handmaiden.

A question raised earlier in this paper concerned the problem of assessing the adequacy of a theory of knowledge. No systematic attempt will be made to solve this problem here, but one may wonder whether it is a problem which scientific philosophy is competent to answer at all. When Quine approaches it he immediately becomes dogmatic. "Epistemology is concerned with the foundations of science," and thus, "natural knowledge is to be based somehow on sense experience." On his view epistemology boils down to a matter of understanding the link between observation and science, and the guiding principles of science furnish the criteria according to which this understanding is to be gained. For Quine then the issue of assessing the adequacy of a theory of knowledge has relevance only within the domain of science itself. He could see no other sensible way of handling the problem.

We are left alone then with the question what other considerations are pertinent to assessing the adequacy of a theory of knowledge. Among other things a theory of knowledge should account for the role and function of knowledge in human experience as a whole. But this cannot be done if the evidence for human experience is limited to stimulus and response. Understanding human behavior must include a further basis for evidence which takes account of "intentions". This is because intentions express a dimension of human experience which cannot be reached (let alone reduced) by the methods of strict empirical science.

Now human experience cannot claim this complexity just because it is constituted by a "web of meanings."¹⁰ Anything is, for purposes of being inquired into, constituted by a web of meanings. But the point is that not all objects of study stand in the same relation to the constellation of meanings that supports them. A fossil, for example, is experientially indifferent to its existence; it carries within itself no meanings, no concerns by which it relates itself to the world or expresses an existential outlook. This is not to deny that a particular fossil may, in some metaphysical sense, enjoy some unique point of view, but even so, this unique perspective is of no conscious concern to the fossil. The meanings which constitute a fossil are given to it. People would not look to a fossil in order to discover what it might mean to be self-conscious or to help them understand themselves.

Yet people do desire knowledge of this kind; human beings have a real interest in self-understanding. Beyond the merely practical usefulness of such knowledge it enables them to become free to discover further what they do not yet fully know: what it can possibly or ultimately mean to be thinking beings in a seemingly

irrational and indifferent universe. They have an interest in realizing this potential if only because knowing what their real interests are depends on their capacity to acquire self-knowledge.

It follows that the methods and guiding principles of scientific philosophy are not sufficient to satisfy in its entirety the demand human beings make on knowledge. One should not, on that count, belittle science; only a mind too long lain fallow could doubt the importance and intellectual force of scientific method. But one must not equate philosophical method with scientific. Such a move may be expedient, but it obscures what philosophy is. To some it may yet be a comforting reminder that science is, historically, the child of philosophy, engendered by an activity which partakes of human experience as a whole.

NOTES

¹See, for example, Beyond Good and Evil, sections 16 and 20; The Gay Science, section 354; Twilight of the Idols, section 5 of "Reason in Philosophy"; and Philosophy and Truth (Humanities Press, 1979), chapter IV "On Truth and Lies in a Nonmoral Sense."

²W.V.O. Quine, Word and Object (Cambridge: M.I.T. Press, 1960), 3-4, 275.

³W.V.O. Quine, Ontological Relativity and Other Essays (New York: Columbia University Press, 1969), 75.

⁴David Hume, A Treatise of Human Nature, ed. Selby-Bigge, 2nd edition (Oxford: Clarendon Press, 1978), 17-24.

⁵W.V.O. Quine, "Reference and Modality," in From A Logical Point of View (Cambridge: Harvard University Press, 1953).

⁶W.V.O. Quine, "Two dogmas of Empiricism," From A Logical Point of View.

⁷John R. Searle, Speech Acts (New York: Cambridge University Press, 1969), 51.

⁸David Hume, An Enquiry Concerning Human Understanding (Indianapolis: Hackett Publishing Co., 1977), 48.

⁹See Ontological Relativity, 69-71.

¹⁰I am borrowing the phrase (and the "fossil") from Richard Rorty, "Method, Social Science, and Social Hope" in Consequences of Pragmatism (University of Minnesota Press: Minneapolis, 1982), 199.