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# QUINE

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## 1 Introduction

Willard Van Orman Quine (1908–2000) is considered by many to have been the greatest analytic philosopher of the postwar period. He was born, raised, and educated, through to graduation, in Ohio. He did his graduate work at Harvard University, where he wrote a dissertation in formal logic. Most of his early work was likewise in formal logic,

though the dissertation provided an indication of broader philosophical concerns that would stay with him throughout his career. In 1932 he was awarded a traveling fellowship to Europe. This gave him an opportunity to attend meetings of the Vienna Circle, a group of between 30 and 40 thinkers from a range of disciplines who met regularly in Vienna between the wars to discuss philosophy. This group was unified by the aim of making philosophy scientific, and to this end its members made special use of recent developments in logic with which Quine was very familiar. He subsequently spent time in Prague and Warsaw, and later described this period as intellectually the most rewarding of his life. This was principally because it brought him into contact with Rudolf Carnap, who was himself a member of the Vienna Circle and one of the foremost advocates of the logical positivism with which

the Circle had come to be associated. Much of Quine's work can be seen as a response to Carnap's own version of logical positivism, parts of which Quine thoroughly espoused, parts of which he just as thoroughly opposed, and all of which had a deep and lasting influence on his philosophical career.

Apart from some short visiting positions around the world, Quine spent the whole of that career at Harvard, until his retirement in the mid-1970s. He was a prolific and exceptional writer, with a remarkable and distinctive style. That style was marked by elegance, wit, and clarity, as well as an extraordinary economy of expression. Two of his best-known and most influential books, *From a Logical Point of View* and *Word and Object*, appeared at a comparatively early stage in his career, in 1953 and 1960 respectively. (The first of these is a collection of essays that includes the two classics "On What There Is" and "Two Dogmas of Empiricism.") Although there were changes of mind in his many subsequent publications, these were invariably of a subtle nature, and the fundamental views for which Quine is famed had already received forthright expression in these two books. Much of his later work was concerned with developing and refining these views. Much of it was also a self-conscious exercise in the economy of expression to which I have already referred. The two books *Pursuit of Truth* and *From Stimulus to Science*, both of which appeared when he was in his 80s, and each of which is only 100 pages long, are astonishing compendia of all his main ideas. Their very concision means that they serve as poor introductions to his work, but, for aficionados, they are invaluable points of reference and much to be savored. They have also excited fascinating discussion about how far some of the shifts of emphasis and reformulations vis-à-vis his earlier work are really changes of mind of the sort I indicated above. However that may be, in common with the earlier work, they reveal Quine to be something rarely encountered in the analytic tradition: a systematic philosopher with a profound synoptic vision.

To understand that vision we need to return to Carnap.

## 2 Carnap's Logical Positivism

Logical positivism is a modified form of empiricism. Empiricism, in its purest form, is the doctrine that all knowledge is derived from sense experience. Logical positivists espouse something that is weaker than this in one significant respect, stronger in another.

It is weaker in as much as it concedes the existence of some knowledge that is not derived from sense experience – but only knowledge of a very special

kind. Logical positivists draw a distinction between analytic truths and synthetic truths. Analytic truths are those whose truth depends on their meaning alone, albeit sometimes in recondite ways that take some working out. To understand an analytic truth is already to be in a position, at least in principle, to tell that it is true. Putative examples are trivial truths such as that all bachelors are unmarried, and mathematical truths such as that no square of a positive integer is exactly twice another. By contrast, synthetic truths are truths whose truth depends on something in addition to their meaning. Having understood a synthetic truth, one must rely on independent investigation to tell that it is true. A putative example is that water expands when it freezes. The logical positivists' position is that knowledge of analytic truths, and such knowledge alone, is an exception to the doctrine that all knowledge derives from sense experience.

In another respect logical positivists espouse something stronger than pure empiricism. For they espouse a doctrine with a semantic component as well as an epistemological component, that is to say a component that concerns meaning as well as a component that concerns knowledge. They insist that, unless a sentence expresses a truth that can in principle be determined in one of the two ways just indicated, or a falsehood whose negation can in principle be determined in one of these two ways, then it does not express a truth or a falsehood at all and is, to that extent, strictly meaningless. This so-called "verification theory of meaning" arguably casts each of the following sentences as strictly meaningless:

Every 24 hours each physical object in the universe doubles in size.  
There is never any justification for killing another human being.  
God moves in mysterious ways.

Carnap's own brand of logical positivism has one crucial further feature. He holds that the most fundamental of these distinctions, the distinction between the true and the false, is always drawn relative to some linguistic framework. By a linguistic framework, he means some systematic way of speaking about entities of a certain kind, such as the set of arithmetical rules that allow us to speak about positive integers. The decision whether or not to adopt any given framework is not itself a matter of truth or falsity at all, but rather a matter of the advantages and disadvantages of doing so. Thus, if we ask whether there is any positive integer whose square is exactly twice that of another, then we are asking an "internal" question within a particular framework. (As it happens, the answer in this case is "no." And this answer can be determined independently of sense experience: it is analytic.) If we ask whether we are right to accept the existence of positive integers in the

first place, then we are asking an “external” question about whether we are right to adopt that framework. This takes us beyond the realm of the true and the false. But it is a legitimate question for all that. It is a question about how to speak, and, although there is no *truth* of the matter, there are important practical issues about the costs and benefits of speaking in this particular way.

In sum, then, Carnap holds the following package of ideas:

- a linguistic framework comprises rules for speaking about entities of some kind;
- within the framework there are truths about these entities;
- among these truths there are some, the analytic ones, whose truth depends solely on the rules of the framework (or, in other words, whose truth depends solely on their meaning);
- the truth of the rest, the synthetic ones, can be determined by appeal to sense experience, and *only* by appeal to sense experience;
- the decision whether to adopt the framework is not itself a matter of truth or falsity.

Very roughly, Quine accepts the core empiricism in this package of ideas, but balks at the various modifications. What are his objections to these modifications? To answer this question, we need first to consider the particular form that his own empiricism takes.

### 3 Quine’s Naturalism

Quine is a naturalist. That is, he holds that there is no higher authority, when it comes to determining the general character of reality, than what has in fact led us to our current broad consensus about its general character – which is to say, the methods and principles of the natural sciences, and paradigmatically of physics.

Such naturalism is not itself entailed by empiricism. True, natural scientists justify their findings by appeal to sense experience, as they would have to if empiricism were correct and if their findings had any claim to the title of knowledge. But empiricism does not entail that their findings do have any claim to the title of knowledge, still less that they have a unique claim to it. Even if physics is the best we can do in trying to derive a general systematic account of reality from our sense experience, it is not dictated to us by our sense experience. Our sense experience does not rule out alternative such

accounts, say accounts whereby space has some very different geometry with corresponding implications concerning the shrinking and stretching of bodies as they move about, or accounts whereby reality is not fundamentally physical at all but fundamentally mental. Quine himself would be the first to insist on this. This is what he means when he says that physics is underdetermined by the evidence (*PT* §§41–3). Furthermore some people, if not Quine himself, will worry about the compass of physics, and indeed about the compass of the natural sciences more broadly. Such people may be perfectly happy to accept the findings of the natural sciences, at least provisionally. But they will urge that there are many matters on which these findings are silent and on which, say, the findings of the *social* sciences, or even such “self-evident truths” as appear at the beginning of the US Declaration of Independence, have as much right to count as part of “our current broad consensus about the general character of reality.” None of the qualms that we might have, in light of these reflections, about privileging physics in the way in which Quine does, would be an obvious offence against *empiricism*. Quine’s naturalism, to repeat, is not entailed by empiricism. Nevertheless, that is the context within which his own empiricism finds expression.

*Why* is Quine a naturalist? Partly because of the spectacular success that the natural sciences have enjoyed when it comes to predicting the future and thereby controlling and modifying the environment. But there is an even more basic reason. Ultimately, Quine does not think that there is any alternative. Physics *is* the best we can do, or at any rate is the best we have been able to do so far, in trying to derive a general systematic account of reality from our sense experience. It *must* therefore be our point of departure. It may not be our destination: in 100 years’ time we may look back on our current scientific theories and see them as irremediably flawed in certain critical ways. But if so, then this will be because we have got there from here, and this in turn will be because we have done the only thing we can do starting from here, namely employ the procedures of currently accepted scientific methodology. If we were to step outside our current broad consensus altogether, in an effort to raise theory-neutral questions about how our current scientific theories stand in relation to reality, then we should have no basis for any further progress. In the famous image of the Austrian philosopher of science Otto Neurath (1882–1945) – an image that Quine himself often uses – we are in a boat and the only way in which we can rebuild the boat is by rebuilding it plank by plank, while remaining all the while afloat in it (*WO* 3).

Quine’s naturalism, to repeat once more, does not follow from his empiricism. It is rather the reverse. Quine sees his empiricism as following from his naturalism. Thus he writes:

It is a finding of natural science itself, however fallible, that our information about the world comes only through impacts on our sensory receptors. . . . Even telepathy and clairvoyance are scientific options, however moribund. It would take some extraordinary evidence to enliven them, but, if that were to happen, then empiricism itself . . . would go by the board. (*PT* 19–21)

Empiricism is itself an empirically testable theory then. It is not part of some philosophical propædæutic to scientific investigation. For Quine, there is no such thing.

That is why, in the quotation above, our sensory experience is itself construed in scientific terms, as “impacts on our sensory receptors.” And this in turn connects with yet another part of Quine’s overall vision: his physicalism. He holds that there are no facts, not even facts about our thoughts and experiences, that are not ultimately physical facts, that is facts about how things are physically (see section 7 below). Where exactly does *this* stand in relation to his naturalism? That depends on how “the physical” is construed. If the physical is construed in terms of our current physics, then Quine’s physicalism is best seen as a further consequence of his naturalism, a consequence which, just like his empiricism, might have to be rejected in the light of evidence that challenged current physics itself. Quine sometimes construes the physical in this way. It is in this vein that he writes, “The science game is not committed to the physical” (*PT* 20). But if the physical is construed in a more regulative way, not in terms of current physics, but in terms of some *ideal* physics, then his physicalism is something closer to an evidence-insensitive methodological principle. And Quine sometimes construes the physical in *this* way. It is in this vein that he writes, in “Goodman’s *Ways of Worldmaking*”:

If the physicist suspected there was any event that did not consist in a redistribution of the elementary states of his physical theory, he would seek a way of supplementing his theory. Full coverage in this sense is the very business of physics, and only of physics. (*TT* 98)

Either way, there is a special deference to physics, whereby, as Quine himself puts it, “nothing happens in the world, not the flutter of an eyelid, not the flicker of a thought, without some redistribution of microphysical states” (*ibid.*).

Now so far, there is nothing in Quine’s vision that obviously distances him either from logical positivism in general or from Carnap’s logical positivism in particular. Both his vision and the logical positivist vision are embellishments of empiricism. True, they are different embellishments. But we have seen

nothing yet to bring them into conflict with each other. Logical positivists share Quine's respect for science. In my very first reference to the Vienna Circle (see section 1), I mentioned their aim of making philosophy scientific. Where, then, does the conflict lie?

## **4 The External/Internal Distinction and the Analytic/Synthetic Distinction**

As far as Carnap's version of logical positivism is concerned, one useful way of broaching this question is to consider the very claim that there are fundamental particles of the sort postulated by current physics. What is Quine's attitude to this claim? He takes it to be a basic truth about reality (see section 7 below). He is not dogmatic about this. As we have seen, he concedes that current physics may eventually be rejected. But, pending any such rejection, all he *can* take this claim to be, granted his naturalism, is a basic truth about reality, neither more nor less. What is Carnap's attitude to the claim? He takes it to be, on the most natural way of construing it, a decision, or, better, the announcement of a decision, to adopt a particular linguistic framework, neither true nor false. This, certainly, is a point of disagreement.

The fact is that Quine sees no rationale for Carnap's distinction between external questions and internal questions. When the forces of the world impinge on people's surfaces, they hit back by making noises and marks on paper which record their conception of what is going on. And there are various dimensions of assessment for these noises and marks. Two in particular are pertinent to this issue. One is with respect to truth. The other is with respect to desiderata in the systems of classification involved: power, elegance, economy, user-friendliness, and suchlike. But there is neither need nor justification, in Quine's view, for keeping these separate; for seeing the latter as bearing on a choice of framework and the former as bearing on assertions made within the framework. If people respond to their sensory experience – the impacts on their sensory receptors – by claiming that there are quarks, or that there are positive integers, or that the number of quarks in the known universe is greater than some positive integer, then, in each case, they are simply asserting how they take things to be. Their classifications may have the aesthetic-cum-utilitarian virtues advertised above; and other classifications may have these virtues to a greater or lesser extent. But what these people have claimed is, in each case, straightforwardly true or false.

For similar reasons, Quine utterly repudiates the idea that there is a dichotomy between analytic truths and synthetic truths – a feature of logical positivism in all its guises, not just Carnap's version. In his celebrated essay "Two Dogmas of Empiricism" Quine identifies this idea as one of two dogmas that characterize "modern" empiricism and urges that there is no satisfactory way of effecting the dichotomy. We might suggest, for instance, that an analytic truth is one that would be true whatever reality was like; or that it could not be denied without self-contradiction; or that someone who genuinely took it to be false would thereby betray a misunderstanding of the language, whereas someone who genuinely took a synthetic truth to be false could simply be mistaken about reality. But, for Quine, these are variations on a single incoherent theme. They all presuppose that each individual truth has its own meaning, determining, by itself, what is required of reality to make that truth true.

Quine's view is that, when the forces of the world impinge on people's surfaces and they hit back by making noises and marks that record their conception of what is going on, they do so by making noises and marks that *collectively* record their conception of what is going on. None of their claims makes its own isolable contribution to the story that they have to tell. (This is the *holism* for which Quine is renowned and which he in turn finds in the work of the physicist and philosopher Pierre Duhem (1861–1941; TDE 41).) Suppose that, when the forces of the world impinge some more, these people find themselves reconsidering their earlier conception of what is going on. Perhaps they used to claim that all swans are white, and now they find themselves having what seems for all the world like an encounter with a black swan. There are all sorts of ways in which they might accommodate this unexpected sense experience. They might simply reject their earlier claim that all swans are white. They might continue to claim that all swans are white and dismiss this apparent counterexample as an illusion of some kind. They might continue to claim that all swans are white, *accept* that here is a black swan, and reject whatever principle precludes doing both of these things at once. There is much to be said for or against each of these options, for instance in terms of how easy each of them would be to implement given its various repercussions. But there is nothing in the meaning of any of the claims these people used to make, considered in isolation, to force them to take one option rather than another.

The real target of Quine's attack, then, is the idea that each individual claim stands in its own relations of confirmation and confutation with different possible courses of sense experience. This, indeed, is the second dogma



that he identifies in his essay, though he also claims that “the two dogmas are . . . at root identical” (ibid.). An analytic truth would be a truth that was confirmed by *any possible* sense experience. For Quine that makes no sense. Any truth we accept, even the truth that all bachelors are unmarried, is just part of our overall story about how things are, and, had our sense experience taken a different course, it would have been a candidate for rejection. For instance, had we noticed a high correlation, but not an exceptionless one, between being unmarried and having some psychological trait, and had we found it more convenient to align bachelorhood with the latter rather than the former, then we might well have acknowledged a few married bachelors. Likewise, a synthetic truth would be a truth that was confuted by some possible sense experience. But that too makes no sense for Quine. Any truth we accept could be preserved in the light of any possible evidence if we made suitable compensating adjustments to the rest of what we accept, most obviously if we dismissed the evidence as illusory.

It is natural to protest, in the bachelor example, that had we ventured, on those grounds, “There are some married bachelors,” then we would simply have been changing the meaning of the word “bachelor.” Indeed, in later writings Quine himself talks in similar terms. Commenting on the case of a “deviant logician” who tries to flout the law of non-contradiction by accepting something of the form “This is how things are and this is not how things are,” Quine urges that such a person merely evidences a non-standard use of language – say, an idiosyncratic use of “not.” “Here, evidently, is the deviant logician’s predicament,” writes Quine: “when he tries to deny the doctrine he only changes the subject” (PL 81). In “Two Dogmas of Empiricism,” however, his position is less compromising, and the idea that each bit of language has its own monadic meaning which it might retain or lose through any change of doctrine is itself part of what is under attack.

In repudiating the dichotomy between analytic and synthetic truths, Quine is not denying that there are associated distinctions of degree. He readily concedes that, among the claims we currently accept, some would be more resistant to rejection than others. To use the eponymous metaphor of his book *The Web of Belief*, these claims are closer to the centre of the web of what we currently accept than the other claims are, and hence more directly connected to more of the rest of the web. So their rejection would necessitate more rejections elsewhere. And the more of the web we reject, the harder it is for us to maintain our grip on what we come to accept. Hence Quine’s “maxim of minimum mutilation” (PT 14). The fact remains that the distinction of the kind which the logical positivists recognize, and which is deliberately designed to mitigate their empiricism, is anathema to Quine. His empiricism

is of a purer form. He holds that *all* knowledge is derived from sense experience — albeit no individual item of knowledge is derived from any individual episode of sense experience.

## 5 The Indeterminacy of Translation

One consequence of these views, and one of Quine's best-known theses, is what he calls the indeterminacy of translation. This is the thesis that there can be two ways of translating from one language into another which are incompatible with each other even though neither is incompatible with anything that the speakers of the two languages are disposed to say or do; and, furthermore, that there is no fact of the matter, in such a case, concerning which way of translating is correct (though there may be pragmatic factors, such as simplicity, to tell in favor of one over the other).

To see how this thesis is related to the views just being canvassed, imagine yourself engaged in a project of radical translation. That is, imagine yourself trying to compile a bilingual dictionary for English and the language of some people with whom neither you nor any other English speaker has had any prior contact. And suppose that you have got as far as speculating, perhaps on excellent grounds, that one of the sentences they accept as true can be translated as "All swans are white." Now suppose that you see, for the first time, a group of them encountering a black swan, though this does not stop them from accepting the sentence in question as true. There are all sorts of hypotheses you might form. Perhaps they allowed for this possibility all along and your translation was imperfect. Perhaps they are dismissing this sense experience as an illusion. Perhaps they have started using one of the terms in their sentence in a new way, say the term that they previously used to denote swans. Perhaps they operate with some bizarre logic. To be sure, some of these hypotheses will come to mind much more naturally than others, depending on what exactly these people go on to say and do. But if Quine is right about the holistic interdependence of the claims they make, and of the claims you make, then *in principle* all of these hypotheses, and more besides, can, with suitable compensatory adjustments elsewhere, be kept alive. And this in turn will allow for incompatible ways of translating from their language into English.

There is a less severe example, due to Quine himself, which shows how the choice of a system of classification likewise allows for latitude in translation. The example is less severe in that it concerns differences of translation

that impact only at the level of words, not of whole sentences (where they cancel out). Quine imagines a word in the alien language, “gavagai,” whose use is akin to the use of “rabbit” in English. He urges that “gavagai” might just as well be rendered, not as “rabbit,” but as “undetached part of a rabbit” (*WO* ch. 2). Again, nothing that the speakers of the alien language say or do can rule out this extravagant rendering if suitable compensatory adjustments are made elsewhere. Thus, suppose there is an alien construction which is naturally translated as “There are exactly two —s here.” And suppose this construction is combined with the word “gavagai” to yield a whole sentence *S* which the speakers of the alien language accept as true when, and only when, there are exactly two rabbits manifest. Then this might seem decisive against a rendering of “rabbit” as “undetached part of a rabbit.” For when there are exactly two rabbits manifest, there are many more than two undetached parts of a rabbit manifest. In fact, however, it is not decisive against that rendering. For the original construction might itself be translated differently. It might be translated, however artificially, as “There are exactly two —s here, unless —s are undetached parts of a rabbit, in which case there are exactly two rabbits here.” Because these differences do not impact at the level of whole sentences — the two rival translations of *S* are in *some* sense equivalent, each amounting to the claim that there are exactly two rabbits present — Quine sometimes calls the indeterminacy that this example illustrates the indeterminacy of reference rather than the indeterminacy of translation (e.g. *PT* §20). It is a less radical indeterminacy. But the lessons to be learned are essentially the same.

And what of Quine’s insistence that there is no fact of the matter in these cases concerning which way of translating is correct? He means this quite literally. Recall that, for Quine, the only facts are physical facts, facts about how things are physically (see section 3 above). The physical facts of these cases, including all the facts about how speakers of the alien language interact with their environment, do not themselves rule out any of the rival translation schemes. The whole point, in a way, is that we have the conceptual resources to discriminate more finely than the facts themselves can.

To be sure, this raises the question of why Quine thinks that the facts “stop” where they do. For, as we noted earlier, they themselves already discriminate more finely than the evidence can: thus Quine’s insistence that physics is underdetermined by the evidence (section 3 above). Many critics have wondered why Quine allows the facts to go beyond the evidence but not all the way to settling these differences of translation. The key, once again, is Quine’s naturalism. To determine the general character of reality, beyond the evidence, is the very business of the natural sciences, and above

all of physics. To determine the best way of translating from one language into another is not.

## 6 Quine's Conception of Philosophy I: Metaphysics

At the beginning of the previous section I described the indeterminacy of translation as "one consequence" of Quine's naturalistic recoil from Carnap's logical positivism. Another is his particular conception of philosophy.

Analytic philosophers often conceive of philosophy as an undertaking of a very different kind from any of the natural sciences. They do not see it as their business, as it is the business of natural scientists, to discover and state truths about reality, but rather to analyze and to clarify the concepts that are used in discovering and stating truths about reality, and to understand the very nature of the scientific enterprise – its aims, its scope, its limits, and its methodology. Philosophy, particularly in the guise of metaphysics or epistemology, serves as a kind of propædæutic to the natural sciences.

Quine, as we have seen, is deeply opposed to this conception (section 3 above). His naturalism itself already precludes the idea that there is either room or need for any such propædæutic to the natural sciences. And his rejection both of Carnap's distinction between external questions and internal questions and of the dichotomy between analytic truths and synthetic truths blocks two of the most obvious suggestions about how philosophical practice and scientific practice, on this conception, differ (one of these suggestions being that, where philosophers are principally concerned with answering external questions, natural scientists are principally concerned with answering internal questions; the other being that, where philosophers are principally concerned with establishing analytic truths, scientists are principally concerned with establishing synthetic truths).

For Quine, again as we have seen, there are some related distinctions of degree (section 4 above). But those are all there are. Philosophers, no less than natural scientists, are engaged in the broad project of determining the general character of reality. Insofar as they have a distinctive contribution to make to this project, then it is simply a matter of their operating at a particularly high level of generality. Metaphysics is no different in *kind* from physics.

Or at least, such is the case where metaphysics is a legitimate enterprise at all. Towards the sort of metaphysics that purports to be concerned with truths that utterly transcend sense experience, Quine has straightforward logical positivist antipathy. The logical positivists' verification theory of

meaning (see section 2 above) is one part of their doctrine that he thoroughly applauds – subject, of course, to the crucial proviso that it be construed in a suitably holistic way, and not at the level of individual claims.

There is a delicious example of Quine's utter impatience with empirically unconditioned flights of linguistic fancy which I cannot resist quoting, since the quotation is a personal favorite of mine. In a collection of essays on Quine's work entitled *The Philosophy of W. V. Quine*, Henryk Skolimowski makes a series of needling proposals about Quine's ideas, from a broadly unsympathetic point of view, about which he himself comments, "I can anticipate Professor Quine's response to my proposals. He is likely to say that he doesn't know what I mean by my assertions about the spiral of understanding as corresponding to the walls of our cosmos" (PQ 489). Quine's response, published in the same book, is mischievously caustic:

Skolimowski predicts that I will pretend not to understand what he means by his "assertions about the spiral of understanding as corresponding to the walls of our cosmos." I am tempted, perversely, to pretend that I do understand. But let us be fair: if he claimed not to understand me, I would not for a moment suspect him of pretending. (PQ 493)

What examples are there, then, of the distinctive, highly general tasks that it is the prerogative of philosophers to undertake? One very typical example is to determine whether physical objects are three-dimensional objects that endure through time, or four-dimensional objects with temporal parts. The former view is pretty much the view of common sense. The latter view assimilates physical objects to what we ordinarily think of as their "histories," where these extend into the future as well as into the past; and it means that physical objects divide up into different "periods." Quine himself favors the latter view (*WO* §36). A closely related and equally representative example is to determine whether propositions concerning the future are (already) true or false. Quine's view, consonant with his four-dimensionalism, is that they are. What is particularly striking, especially in light of the pragmatism that motivates Carnap in his approach to what he takes to be external questions, is the way in which Quine at one point argues for his view by unashamedly adverting to its *ethical* pay-off. He writes:

Consider the following dilemma. Conservation of the environment is called for by the interests of people as yet unborn, and birth control is called for by the menace of overpopulation. On the one hand, thus, we are respecting the interests of people as yet unborn, and on the other hand we are denying them the very right to be born. Observe, then, how the four-dimensional view resolves the dilemma.

On that view, people and other things of the past and future are as real as those of today, where “are” is taken tenselessly as in “Two and two are four.” People who will be born *are* real people, tenselessly speaking, and their interests are to be respected now and always. People who, thanks to birth control, will not be born, are a figment; there are no such people, not even tenselessly, and so nobody’s right to life has been infringed. (Q 74–5; emphasis in the original, punctuation slightly adapted)

## 7 Quine’s Conception of Philosophy II: Ontology

Perhaps the most characteristic philosophical questions, however – on Quine’s conception – are questions in ontology: questions about what exists and, more fundamentally, about what it is to exist. As far as the latter are concerned, Quine’s view is that to exist is to be among the entities postulated by some true theory, or, as he more frequently puts it, to be among the entities to which some true theory is “ontologically committed”; and that a theory is ontologically committed to just the entities that must exist in order for it to be true. In a way this is trivial, as Quine himself would be the first to concede (though it non-trivially precludes existence beyond the purview of any theory). It sounds somewhat less trivial when Quine hones what he means by saying that an entity must exist in order for a theory to be true. He means that the entity must be among the things about which the theory makes explicit generalizations, once it has been suitably formalized (where an explicit generalization is any claim of the form “Everything is thus and so”). Anyone versed in modern logic will recognize this account as the purport of Quine’s famous slogan “To be is to be the value of a variable” (OWTI 15).

As for what actually does exist, that, we now see, is a question to be answered, in part, by determining which theories are actually true. So it is a question largely for natural scientists; but not exclusively for them. For there is also the issue of how any given theory is best formalized. This is an issue that is more philosophical. Typically it will involve what Quine calls “semantic ascent” (WO §56): the shift from talking in certain terms to reflecting on those terms instead. To revert once again to the example of the positive integers (see section 2 above), the issue will be not whether there are any positive integers satisfying this or that condition, but whether we do well to include the term “positive integer” and all the apparatus that goes with it as part of the formalization of the theory. This is *precisely* the kind of shift that

Carnap takes to be constitutive of ceasing to ask internal questions, within a linguistic framework, and instead asking external questions, about that framework. But although Quine takes it to be a characteristically philosophical kind of move, he does not think that moves of this kind are only ever made by philosophers, still less that moves made by philosophers are only ever of this kind. Moreover – and this is the crucial point of disagreement between him and Carnap – he thinks that, provided all goes well, the results of the exercise will be, not just decisions about how to speak, but insights into how things are (see section 4 above). The differences between what philosophers will have contributed to these insights and what natural scientists will have contributed to them are all, still, differences of *degree*.

Quine's own preference, both on aesthetic and on pragmatic grounds, is for theories that postulate as few entities as possible. He describes this preference as “a taste for desert landscapes” (OWTI 4). It aligns him to William of Ockham, who is famously credited with the slogan known as Ockham's razor, that “*entia non sunt multiplicanda praeter necessitatem*” (“entities are not to be multiplied beyond necessity”). And it means that, if he could, Quine would gladly endorse formalizations of scientific theories that did *not* include the term “positive integer” and all the apparatus that goes with it. As it is, he reluctantly acknowledges that a good deal of heavy-duty mathematics – not just arithmetic – is indispensable to current physics. He concludes, against his own instincts, but in strict accord with his ontological principles, that positive integers exist.

In some cases, parsimony can be achieved through what might be called creative doubling. This occurs whenever we acknowledge entities of one kind by identifying them with entities of some other kind that we already acknowledge. For an example of this, we can turn to a section of *Word and Object* with the remarkable title “The Ordered Pair as Philosophical Paradigm” (§53). No great philosophical significance attaches to the *content* of this example: quite the opposite! But in its structure, it serves as a particularly clear illustration of the phenomenon in question. The relevant background to the example is Quine's belief that, over and above whatever other entities exist, there are also sets of these entities. This in turn rests on his conviction that set theory is part of the heavy-duty mathematics that occurs in the best formulation of current physics. Thus, given any two entities  $a$  and  $b$ , there is also their *pair set*  $\{a, b\}$ , the set whose members they are. This is not the same as their *ordered pair*  $\langle a, b \rangle$ . The latter differs from the former in one crucial respect: the order matters. Thus, whereas  $\{a, b\}$  is the same entity as  $\{b, a\}$ ,  $\langle a, b \rangle$  is not the same entity as  $\langle b, a \rangle$ . Suppose, then, that we acknowledge ordered pairs as well as pair sets. (Quine gives reasons for doing

so.) Does this mean that we are thereby acknowledging entities of an entirely new kind? Not necessarily. The defining characteristic of ordered pairs is that the identity of each should be determined, asymmetrically, by the identity of its two elements, where what “asymmetrically” signals is that the contribution made by the “first” element to determining the identity of the ordered pair should be different from that made by the “second.” But there are sets that satisfy this condition, albeit not the elements’ pair sets: consider, for example, in the case of the two elements  $a$  and  $b$ , the set  $\{\{a\}, \{a, b\}\}$ . (This is the pair set of the singleton  $\{a\}$  and the pair set  $\{a, b\}$ , where the singleton  $a$  is the set whose only member is  $a$ .) We can therefore identify ordered pairs with sets that we already acknowledge. Not that  $\{\{a\}, \{a, b\}\}$  is unique in this respect. There are many identifications we could adopt. It does not matter which we adopt, so long as we are clear about it – and faithful to it.

How is this a “philosophical paradigm”? In as much as it exemplifies a tactic that we can exploit in a range of cases, many of them of far greater philosophical interest than this. Thus consider minds. Many people think that these are quite distinct from any physical objects; and hence that mental states and processes are logically independent, if not causally independent, of any physical states and processes. (If this were so, it would threaten Quine’s physicalism (see section 3 above).) Suppose, however, that physical states and processes always at least *accompany* mental states and processes, and that they exhibit a complexity that correlates perfectly with the complexity of the mental states and processes themselves. Then, Quine says, we can identify the latter with the former, which in turn means that we can identify minds themselves with physical objects (brains perhaps). This will clearly be of great philosophical significance. Not that we shall be revealing what minds “really are” in some deep metaphysical sense – any more than we were revealing what ordered pairs “really are” in some deep metaphysical sense. It is a piece of legislation, designed to help us systematize and formalize, in as elegant and economical a way as possible, our theories about what is going on. That is, it contributes, as does all good philosophy on Quine’s conception, to our best account of the general character of reality.

## 8 Quine’s Influence

I said at the outset that Quine is considered by many to have been the greatest analytic philosopher of the postwar period. Certainly, his brand of naturalism is the apotheosis of the naturalistic spirit that has been so characteristic of



analytic philosophy during the past half-century. To what extent he created that spirit, and to what extent he reflected it, are less important than how successfully he refined and propagated it. His influence has been manifest in more particular ways too: in the many doctrines that he advanced that have since been adopted by countless others; in the many questions that he raised that have since been addressed by countless others; and in the many techniques that he introduced that have since been exploited by countless others. There is also his highly influential philosophical style, where by “style” I mean something that embraces not just his prose style (which is in fact inimitable) but his conception of how philosophy should be done. Here, special mention should be made of the extent to which he brought an appreciation of the value and use of formal logic to analytic philosophy.

As is the case with any great philosopher, however, his influence has been marked no less by rebellion among his successors than by discipleship. Thus many of his specific proposals about meaning, to take one central example, have been subjected to sustained and vigorous counter-argument. And, even when philosophers who have disagreed with him have not been particularly concerned to justify their disagreement, they have felt obliged to register it. It would be virtually inconceivable nowadays for an analytic philosopher to make pivotal but uncritical use of the analytic/synthetic distinction – something that was commonplace before Quine’s onslaught.

Several of Quine’s students went on to become great philosophers in their own right. Two notable examples are Donald Davidson and David Lewis. Davidson in particular was something of an acolyte. Although he had many extremely important ideas of his own, they were ideas that made sense only in a broadly Quinean framework – and his disagreements with Quine, fascinating and instructive though they were, could be viewed as disagreements of detail. Lewis’s case is somewhat more complex. He is renowned for a philosophical thesis that appears radically un-Quinean: that there are infinitely many possible worlds apart from the actual world, or in other words that there are infinitely many spatio-temporally unified cosmoses of a piece with, but quite independent of, the one which we inhabit. In one respect, at least, this thesis *is* radically un-Quinean. For it does not so much as make sense without a distinction between what is necessarily true and what is contingently true (between what is true in all possible worlds and what is true merely in some possible worlds, including our own); and this distinction is either the same as the distinction between what is analytically true and what is synthetically true or at any rate close enough to it to succumb to Quine’s strictures. In another respect, however, Lewis shows his Quinean credentials. For, although his commitment to all of these possible worlds hardly seems to

betoken a “taste for desert landscapes,” it is a reluctant commitment, exactly of a piece with Quine’s own commitment to positive integers. Lewis holds that appeal to possible worlds is indispensable to the smooth running of systematic philosophy; and hence, to echo the phrase that I used at the end of the previous section, that it contributes to our best account of the general character of reality. We should not lose sight of the irony, which is itself a testament to Quine’s influence, that even this most un-Quinean of theses is accepted only because of what its proponent sees as due allegiance to a basic methodological principle of Quineanism.

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