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Citation

Elgin, Catherine Z. 2011. The Legacy of 'Two Dogmas'. American Philosophical Quarterly 48, no. 3: 267-272.

Published version

<http://apq.press.illinois.edu/48/3/elgin.html>

Link

<http://nrs.harvard.edu/urn-3:HUL.InstRepos:12872176>

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The Legacy of 'Two Dogmas'

W. V. Quine is famous, or perhaps infamous, for his repudiation of the analytic/synthetic distinction and kindred dualisms – the necessary/contingent dichotomy and the a priori/a posteriori dichotomy. As these dualisms have come back into vogue in recent years, it might seem that the denial of the dualisms is no part of Quine's enduring legacy. Such a conclusion is unwarranted – not only because the dualisms are deeply problematic, but because 'Two Dogmas of Empiricism' haunts even those who want to retain them. 'Two Dogmas' reconfigured the philosophical terrain and issued a challenge to philosophy's self understanding – a challenge that has yet to be fully met.

The commitment to the analytic/synthetic distinction derives from the recognition that the truth of any sentence depends on two things: the way the world is and what the sentence means. It seems natural then that each sentence should be subject to a sort of factor analysis that disentangles the contribution of language to its truth value from the contribution of world. Just how much each contributes varies from one sentence to the next. When the contribution of the world goes to zero, the sentence is analytic. Its truth value depends on its meaning alone. On the face of it, this says nothing about metaphysics or epistemology; it is merely a statement about semantics. So to see the significance of denying that sentences admit of such factorization requires recalling how Quine's predecessors thought the dualisms hang together. According to Soames, they believed that

all necessary and a priori truths are analytic, and it is only because they are analytic that they are necessary and a priori. For (the early) Wittgenstein, the source of this view lay in his contention that for a sentence to say anything, for it

to provide any information, is for its truth to exclude certain possible states that the world could be in. Since necessary truths exclude nothing, they say nothing, and since they say nothing about the way the world is, the way the world is makes no contribution to their being true. Hence their truth must be due to their meanings alone. For positivists, all knowledge about the world is dependent on observation and sense experience. It follows that since a priori truths can be known independent of observation and sense experience, they must not be about the world; and if they don't tell us anything about the world, their truth must be due to their meanings alone. Given the background assumption that all and only a priori truths are necessary, the positivists saw their identification of the a priori with the analytic as coinciding with Wittgenstein's identification of the necessary with the analytic. (Soames, 353-354).

Thus readers of 'Two Dogmas' thought that discrediting the analytic/synthetic distinction would undermine a lot more than a theory about the meanings of words. It also at least hints at why, if analyticity is abandoned, it will be difficult to ground necessity and a priority. 'Two Dogmas' was alarming (or liberating) not just for philosophers of language, but for all philosophers concerned with what is necessary, or a priori – concerned, that is, with what holds or is knowable independently of the way the world is. That is just about all philosophers.

One consequence was an identity crisis. Prior to 'Two Dogmas', there was a reasonably clear division of labor: science did the empirical work and philosophy did the a priori work. If the analytic/synthetic distinction is disavowed, what is left for philosophy to do? In confronting this question, it is important to recall that Quine did not

just repudiate *analyticity*; he did not argue that all sentences are synthetic. He repudiated the *distinction*. So apart from the fact that philosophers are more likely than scientists to read Quine, there is no obvious reason why philosophers should be more shaken than scientists. It is equally reasonable to ask, 'If nothing is purely a matter of mind independent fact, what is left for science to do?' No one asks that question.

Although 'Two Dogmas' did not plunge empirical science into paroxysms of self-doubt, it is worth emphasizing that Quine's argument does not especially undermine philosophy. If it is sound, the argument undermines the supposed relation between philosophy and science (and, arguably, other disciplines as well). A philosophy that accommodates Quine would not be the underlaborer to science that Locke hoped his philosophy would be. The question remains: What would it be? How should philosophy understand itself and its mission? What resources can it draw on? These questions lie at the heart of Quine's legacy.

Quine's heirs are not just his faithful followers. They are all whose work has been informed or whose problem space has been transformed by his positions. They have given a variety of answers. Richard Rorty's answer to the first question is 'nothing'. Philosophy, he believes is, like alchemy, a one problem field. The discovery that base metal cannot be transmuted into gold leaves the the alchemist qua alchemist with nothing to do. He should go out and get a job. Similarly, the recognition that the project of philosophical analysis rests on a mistake leaves philosopher qua philosopher with nothing to do. She too should go out and get a job.

Rorty's former Princeton colleagues and their allies seem to share his view of the adverse consequences of abandoning the dualisms. Their solution was to retain but

unbraid them, thereby denying the interdependence that Soames describes. Following Kripke, they maintain that necessity and a priority are not so tightly bound to analyticity as once was thought. If this is so, then metaphysicians can continue to invoke the necessary/contingent distinction and epistemologists can continue to invoke the a priori/a posteriori distinction, leaving philosophers of language to do what they will with the analytic/synthetic distinction. Moreover, if analyticity does not have to underwrite necessity and a priority, it can limit its aspirations to explicating a few sentences where synonymy seems relatively unproblematic. Then, insofar as Quine's arguments against the analytic/synthetic distinction are sound, all that they undermine is the explication of a small number of philosophically insignificant sentences like 'All bachelors are unmarried men.' The recognition that linguists need to come up with a different semantics for 'bachelor' does not pose a dire threat to the discipline.

Contemporary analytic metaphysics and contemporary epistemology are part of Quine's legacy then because Quine's challenges brought certain questions to the fore, and showed that the complacent conviction that necessity and a priority were unproblematic was unfounded. Once it became clear that language alone would not ground them, the stage was set for current appeals to intuitions. Since these appeals are not backed by an account of why the intuitions in question are supposed to be trustworthy, this amounts to taking necessity and a priority as primitives. Whether adopting such primitives is a promising strategy or a desperate rearguard action, the need for such a drastic expedients is part of Quine's legacy. Had he not problematized the project of analysis, they would not have been required.

As is well known, Quine maintained that the denial of the dualisms leads to the

conclusion that philosophy is continuous with natural science. Arguably, this licenses philosophers such as Stephen Stich and Joshua Greene to do empirical work. Experimental philosophy is born. The question is whether what they are doing is still philosophy, or have they just moved over to empirical science instead? Obviously the answer depends on what philosophy is.

To say that philosophy is *continuous with* natural science is not the same as saying that philosophy is *identical to* or is *nothing but* natural science. Although visible light is continuous with the rest of the electromagnetic spectrum, there is something special about visible light. Without resort to instrumentation, we are sensitive to it. As a result, there are ways of investigating visible light that do not extend to the rest of the electromagnetic spectrum. Analogously, philosophy might be continuous with natural science without thereby becoming nothing but natural science. It might have methods, problems and approaches of its own that do not extend to the rest of natural science.

One possibility is that its domain is second-order investigation. Philosophers like Daniel Dennett and Peter Godfrey-Smith analyze evolutionary arguments to see what they show, what assumptions they rest on, how vulnerable they are to slight changes in background assumptions and so on. They explain what such arguments do, and assess how well they do it and where they are vulnerable. Philosophers like Hilary Putnam, Nancy Cartwright, and Arthur Fine analyze the bewildering pronouncements of quantum mechanics, and explain how to understand the world as composed of items that behave in the strange ways quantum mechanics says its objects behave. Although the word ‘analyze’ is used in describing their activities, there is, and need be, no commitment to the idea that their work commits them to analyticity. They simply explicate the

commitments of the science – its laws and boundary conditions, evidence statements and rules of inference – and show how they hang together, where the commitments clash and what they do and do not demonstrate.

Empirical science rests on observation. An attractive feature of the positivist picture was the idea that to each factual sentence there corresponds a class of possible observations which would confirm it. That class of possible observations constituted the sentence's meaning. Just by understanding its meaning then, one would know what it would take to confirm it. But the demise of the analytic/synthetic distinction discredits the contention that the meaning of a sentence is (or is tightly correlated with) its verification conditions.

Nevertheless, one might hold out hope for sentence-by-sentence verification, if there were some other way to identify the observations that would separately confirm each factual sentence. What could it be? Before worrying about hard cases like 'electrons have negative charge', consider a seemingly easier case: 'That apple is red.' Numerous observation statements of the form 'That apple looks red to me,' 'That apple looks red to Peter,' 'That apple looked red to Alex yesterday', and so on contribute to its confirmation. These, it might seem, underwrite what an 'observation conditional' which connects the observation statements with the factual statement they are supposed to confirm: 'If something looks red in suitable circumstances, it probably is red'. But what justifies the observation conditional? Well, investigators might have or get correlations which indicate that things that look red in one setting or to one person, typically look red in another, or to another. If so, they have reason to think that its looking red is not a fluke. They might also have a theory that tells them how things that are red typically

look. They might have information to the effect that the apple in question is a ripe McIntosh apple, and ripe McIntosh apples typically are red. Then they have good reason to believe that the apple is red. But notice that the original judgment is hostage, not just to the observation statements, but to the broader account. What they are entitled to conclude is that if the background assumptions are sound and the observation statements are true, the apple is, or at least probably is, red .

The same sort of story holds for ‘electrons have negative charge’, although a lot more complicated theory mediates between the claim and the evidence for it. Still, if the complicated theory is true (or true enough), a certain identifiable set of observation statements confirm ‘electrons have negative charge’. ‘Our statements about the external world face the tribunal of sense experience not individually but only as a corporate body.’ (Quine, 41). Rather than sentence-by-sentence verification, what results is total-theory verification. An individual sentence is verified by belonging to a theory or account that is verified.

The flip side, of course, is that when an account is not borne out, only the entire cluster of commitments has been discredited. The disconfirmation does not by itself point to any particular commitment as the locus of the difficulty. So any of a number of revisions could bring theory and observation into accord. ‘Any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system.’ (Quine, 43). Quine's contention might seem too lax. It suggests that an individual can hold to her claim, whatever it is, by dogmatically insisting that the error *must* lie outside of her purview. Indeed, she can. But such dogmatism has its price. If she wants to hold a given sentence true, she is going to have to make the compensatory adjustments. She

cannot just insist, 'I'm right about this! The discrepancy is not my fault!' If the price is too high, it is not worth paying. Quine's point is not that it is permissible to be dogmatic, but that there is no algorithm for assigning blame when something goes wrong. When an observation is at odds with the background theory, scientists sometimes conclude the observation report is wrong; in other cases they conclude that the theory is flawed; in other cases, they judge that the experiment was poorly designed, or that the methods for evaluating their findings were flawed. Similarly, when one part of a theory does not accord with another. Quine considers such flexibility a strength rather than a weakness. It enables scientists to make adjustments that yield theories that are best on balance.

An example may bring this out. 'Inanimate objects are identical when their parts are identical' is a principle that many metaphysicians consider necessary. Those who believe in the a priori, might consider it a priori as well. If so, it cannot be false and, independently of experience, anyone who understands it can tell that it cannot be false. Being a universal claim, it should hold for particles of a viscous fluid. However, if it holds, then ' $F=ma$ ' does not. The reason is this: The molecules in a viscous fluid move at different rates. In prototypical applications of ' $F=ma$ ', forces act on objects like billiard balls that have some sort of integrity or boundary. But in viscous fluids, the 'forces' on the 'object' are the effects on momentum of molecules moving in and out of that 'object'. So preserving ' $F=ma$ ' requires continually redefining what constitutes a particle, letting different molecules comprise it at different times. Although physicists are willing to concede that ' $F=ma$ ' does not hold at the quantum level or at relativistic speeds and distances, it is an extremely valuable law for characterizing the behavior of middle sized items in this neighborhood of the cosmos. These include the viscous fluids

flowing around here. Fluid mechanics thus characterizes its particles so as to comport with the law. Rather than insisting that all component molecules of a particle be the same from one instant to the next, they let the individual molecules come and go, but keep the average enclosed mass constant. (Wilson, 158-9). ' $F=ma$ ', evidently, is a so central a law of physics that scientists are willing to make drastic revisions in the criteria for the identity of a fluid particle over time in order to preserve it. In this case, the tension is acute. One way or another a major revision in antecedently plausible principles is needed. Either scientists must revise a very reasonable metaphysical commitment about the identity of an object over time, or revise a fundamental law of physics. Quine's philosophy readily accommodates the scientists' solution. Most metaphysics does not.

The resolution is not a manifestation of stubbornness or dogmatism. It is a matter of charting the effects of different revisions on an overall theory of the world, and assessing the costs and benefits of different potential revisions. If they revise their views about the identity of a particle, scientists can retain the power of classical mechanics. That is something that they have a strong, and scientifically justified, incentive to do. 'Two Dogmas' not only meshes with what science does in this case, it also affords an understanding of why the accommodation is scientifically reasonable.

Science is a flexible network of cognitive commitments that, through continual adjustments, achieves an understanding of nature that is on balance reasonable. None of its commitments is absolutely irrevocable. But different potential revisions have different costs and benefits. Here is where the pragmatic moment in Quine's philosophy enters. To decide among potential revisions requires asking what science (or any other inquiry) is trying to do, what resources it has to draw on, and what limitations it currently faces, to

decide among potential revisions. There are multiple cognitive desiderata – simplicity, fecundity, elegance, predictive power, and so on. Insofar as it is feasible, revisions should yield a theory that satisfies them. Moreover, with the growth of knowledge, methods, standards, and values and goals evolve. There emerge new understandings of how to find things out, what sorts of methods and results stand the test of time, what desiderata are worth pursuing, and when and how they might conflict. Investigators no longer examine the entrails of birds to divine the future and theorists no longer appeal to the gods of Homer to explain phenomena, not because such methods were a priori unwarranted, but because they discovered that such methods did not work very well and they developed other methods that work better. That is what science does. Quine's legacy shows why it is a reasonable thing to do. In so doing, it provides more than a sociology of science. It affords the basis for a normative, second-order enterprise that evaluates the sort of understanding science purports to deliver and the standards it should satisfy.

Although Quine privileges science, he never argues that all that remains after the demise of the dualisms is natural science. Stanley Cavell suggests that rather than concluding that philosophy is continuous with natural science, it is preferable to conclude that philosophy is continuous with the rest of culture. In that case, without relying on rigid divides or adopting a God's eye view, philosophy can presumably contribute to the understanding of morality, the arts, social and political life, and so forth. And just as the philosopher of science can reflect fruitfully on scientific practice, the moral philosopher, the political philosopher and the philosopher of art can reflect fruitfully on the practices in their respective domains.

To make anything of this legacy requires accepting Quine's challenge. Philosophy can take a broad, deep view of the various cognitive and practical enterprises, ascertain patterns and discrepancies, and identify and assess the norms, standards and methods that are used. 'Two Dogmas' brings philosophy into closer accord with the first-order theories and the phenomena it seeks to understand. Philosophy used to purport to be judging from a 'God's eye view'. But, besides being unachievable, that perspective was too distant from the realities of first-order theories and practices to be useful. Quine brings philosophy down to earth (or at least into near-earth orbit). Philosophical theories can reflect and reflect on the sort of scientific, social, and aesthetic theories and practices that actually occur, rather than simply proclaiming from Olympus about what should be going on. Everything is more precarious. Theories, even the good ones, may not stand the test of time. But even if there is no assurance that they will or should be held true come what may, they may be enormously useful in understanding the world and the available ways understanding of the world here and now.

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