

Quine and Pragmatism

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1. Introduction

W. V. Quine is often regarded as a pragmatist philosopher.¹ Claims of membership in a philosophical school of this kind can be based on influence and location in a lineage, on similarity of ideas, or a combination of both. I will discuss influences and similarities in turn. Quine does not appear to have been greatly influenced by the work of the "classical" pragmatists, Peirce, James, and Dewey, though there is evidence of detailed engagement with some work by Peirce. Quine's central epistemological ideas also differ from those of the classical pragmatists on a matter that they all regarded as of central importance: the link between thought and action.

Quine himself did not profess to know, or care, about where pragmatism begins and ends. The connection between Quine and pragmatism is important, however, as through a few crucial passages of text, Quine had a significant effect on the perceived importance of a pragmatist outlook in the second half of the twentieth century, and affected also what a pragmatist option was taken to be.

¹ See, for example, Richard Creath's introduction to *Dear Carnap, Dear Van* (1990): "There are three other themes in Quine's work that should be highlighted: pragmatism, holism, and naturalism, of which the most basic is the first." See also Haack (2006) and Murphy (1990) for discussions of his affinities with the pragmatist tradition. For a summary of how he has been categorized, see Koskinen and Pihlström (2006).

2. Influences

One of the first two philosophy books that Quine recalled reading, at the end of high school, was James' *Pragmatism*.² He "believed and forgot all." Quine later said that none of Peirce, James, or Dewey had much impact on his early thinking. These denials do not appear to reflect a mere desire to assert independence, as Quine aligned himself instead with the emerging European tradition in mathematical logic, especially Russell and Whitehead's *Principia Mathematica* (1910, 1912, 1913) and the work of Rudolf Carnap. Whitehead himself came to Harvard in 1924 and was the advisor of Quine's dissertation, completed in 1932, which sought to improve on the *Principia*.

Early in his professional career Quine wrote three reviews of Peirce's work in logic (1933, 1934, 1935). Quine saw Peirce's logical work (which here included Peirce's semiotics and some philosophical material) as containing "considerable dross" but also "much gold" (1933, p. 229). What is more notable than this praise is the detailed nature of Quine's engagement with Peirce's idiosyncratic work – detailed enough for Quine to make several dozen corrections of subtle typographical errors and "technical slips" by Peirce himself.

Another link to pragmatism in Quine's early years was C.I. Lewis, who also taught Quine at Harvard and was later his colleague.³ Lewis' epistemology was

² For the events in this paragraph, see M. Murphey (2011) and Koskinen and Pihlstrom (2006). The quote about James is from Quine's autobiography (1985). Koskinen and Pihlström also quote from a discussion between Quine and Lars Bergström and Dagfinn Føllesdal:

On essential points I seem to find myself especially in agreement with Dewey, although I was not influenced by Dewey. I didn't know his work that well in the old days. Certainly I'm much more sympathetic with Dewey than other pragmatists so called, notably William James. There are two points where I depart radically from James: one, his pragmatic theory of truth, second his "Will to believe", which seems to me to be a way of giving aid and comfort to wishful thinkers. As for Charles Sanders Peirce, I've never succeeded in gaining a unified picture of Peirce. I admire his pioneering contributions to modern logic, but as for his metaphysics, what little of his philosophy I've read hasn't appealed to me, because of the rather vague and excessive metaphysics that comes into it.

³ Murphey (2011) suggests that Quine may have underplayed the role of Lewis: "At Harvard, he tells us that he took Wood on Plato, Prall on Leibniz, and Lewis on Kant. What he does not say either in the published autobiographical sketch he wrote for the Schilpp volume, or in his published autobiography, is that he took Lewis's course on the theory of knowledge, in which

influenced by modern logic, Kant, and the pragmatists, especially Peirce. Lewis called his view "conceptualistic pragmatism." He held that we deal with experience by applying conceptual systems whose internal relationships can be described *a priori*, but which are chosen on "instrumental or pragmatic" grounds (1929, x). Lewis defended a number of ideas that Quine came to criticize in detail, including an analytic/synthetic distinction, the analyticity of mathematics, and an "intensional" approach to meaning. Lewis also pioneered modal logic. As a student Quine wrote term papers for Lewis including one that overtly discussed his "pragmatism," and which include initial statements of core ideas in Quine's epistemology: scientific investigation aims at building "a system of concepts and interconceptual relations of maximum simplicity compatible with its accommodating every item of experience falling within the limits of the study" (quoted in Murphey 2011, p. 7).

Lewis (1929) and Carnap (1950) both used a distinction between analytic and synthetic sentences, and saw analytic truths as reflections of the structure of conceptual frameworks freely chosen as tools to organize experience. Carnap distinguished *internal* from *external* questions, where internal questions are asked within the resources of such a framework, and external questions concern which framework is to be used. Quine came to think there is no such divide. In all cases, whether a question looks internal in Carnap's sense or external, we adjust our web of belief to accommodate incoming experience while making as few changes as possible and while trying to keep the structure as simple as possible. The difference between the assessment of logical and mathematical sentences and the assessment of overtly empirical sentences is one of degree; some claims are more central to our conceptual network and unlikely to be shifted in response to any specific unexpected sensory input. But all a person's beliefs and hypotheses are linked in a single network or web, and this structure "meets the tribunal of sense-experience... as a corporate body" (1951, p. 38).

A pivotal presentation of Quine's epistemology is "Two Dogmas of Empiricism" (1951). Quine sketched his positive view only in the last couple of pages, but these pages

Mind and the World Order was the main text. Among Quine's manuscripts there are three papers he wrote for that class" (p. 6). It may be relevant that Quine at times had a difficult personal relationship with Lewis (R. Creath, personal communication).

became immensely influential. At the very end of the paper Quine made remarks that also influenced the fate of pragmatism in late 20th century philosophy.

Carnap, Lewis, and others take a pragmatic stand on the question of choosing between language forms, scientific frameworks; but their pragmatism leaves off at the imagined boundary between the analytic and the synthetic. In repudiating such a boundary I espouse a more thorough pragmatism. Each man is given a scientific heritage plus a continuing barrage of sensory stimulation; and the considerations which guide him in warping his scientific heritage to fit his continuing sensory promptings are, where rational, pragmatic. (p. 43)

For many this would seem radical because it treated principles of logic and mathematics as adjustable in response to their perceived usefulness. Carnap and Lewis already believed versions of this. Against the background of their views, what Quine said was radical because it erased any boundary between the choice of framework and moves made within it. And when Quine rejected the distinction between internal and external questions, he did so by asserting that *all* rational belief change is pragmatic in character.

What did Quine mean by "pragmatism" here? Did he have particular ideas from Peirce or James in mind? Here is what he said later:

'In repudiating such a boundary,' I wrote, 'I espouse a more thorough pragmatism.' This passage had unforeseen consequences. I suspect it is responsible for my being widely classified as a pragmatist. I don't object, except that I am not clear on what it takes to qualify as a pragmatist. I was merely taking the word from Carnap and handing it back: in whatever sense the framework for science is pragmatic, so is the rest of science. (1991, p. 272)

Rather than making a direct connection to his American predecessors – James in Harvard Philosophy, Peirce in American logic – Quine gestures to the sense of "pragmatic" seen in the Vienna Circle's Carnap.

A natural next question is what Carnap meant by the term. The most relevant Carnap paper, cited by Quine in this part of "Two Dogmas," is "Empiricism, Semantics, and Ontology" (1950, "ESO"). The terms "pragmatic" or "pragmatist" do not appear in this paper at all. So the term was not being taken from ESO and handed back. The most relevant parts of Carnap's view in this paper are fairly clear, though. Regarding the choice of linguistic frameworks, Carnap says:

[W]e have to face at this point an important question; but it is a practical, not a theoretical question; it is the question of whether or not to accept the new linguistic forms. The acceptance cannot be judged as being either true or false because it is not an assertion. It can only be judged as being more or less expedient, fruitful, conducive to the aim for which the language is intended.

Christoph Limbeck-Lilienau (2012) has looked in detail at Carnap's relation to pragmatism. He claims that Carnap's views converged on some broadly pragmatist positions in the 1930s. This was not mainly due, Limbeck-Lilienau thinks, to direct influence from the pragmatists but to internal developments within the Vienna Circle. However, Carnap did interact in the 1930s with US-based philosophers who had connections to the pragmatist tradition – C.I. Lewis, Charles Morris, and Ernest Nagel. In the early 1930s they criticized various versions of the verifiability principle defended in the Vienna Circle. In his important paper "Testability and Meaning" (1936, 1937) Carnap notes substantial agreement with what he takes to be the pragmatist side:

It seems to me that there is agreement on the main points between the present views of the Vienna Circle, which are the basis of our following considerations, and those of *Pragmatism*, as interpreted e.g. by *Lewis*. This agreement is especially marked with respect to the view that every (synthetic) sentence is a hypothesis, i.e. can never be verified completely and definitively. (1936, p. 427)

The idea that all statements remain to some extent provisional and unproven, even very simple ones, was defended by Peirce under the name of "fallibilism." As discussed by Haack (1979), Peirce was uncertain about how his fallibilism applied to logical and mathematical statements. Fallibilism about all empirical statements, though, is a strong Peircian theme.

So Carnap explicitly associated pragmatism with fallibilism. It is likely that he would have associated pragmatism with the kind of analysis referred to in ESO when he talks of a framework being "expedient, fruitful, conducive to the aim for which the language is intended." Lewis, in 1929, explicitly linked these two ideas in his "conceptualistic pragmatism": "the choice of conceptual systems... is instrumental or pragmatic, and empirical truth is never more than probable" (1929, x). It seems likely that Quine's talk of pragmatism in "Two Dogmas" involves the same sort of ideas, along with

an explicit treatment of science as a "tool" for predicting experience, and emphasis on a rational agent's flexible and opportunistic handling of the trade-offs between accommodating the data, conservatism, and simplicity.

Other passages in Quine's work where pragmatism and the classical pragmatists are discussed in detail are few in number. Quine criticizes Peirce's theory of truth (the claim that to be true is to be believed at the limit of inquiry) in Chapter 1 of *Word and Object* (1960). Quine claims that the notion of convergence to a limit does not make sense when applied to changes in opinion over time.⁴ A well-known and more positive passage that makes contact with Dewey is found in the opening pages of "Ontological Relativity" (1968). Here Quine approves of Dewey's naturalism and what he sees as a similarly behaviorist approach to language. The original context for Quine's remarks was the beginning of his John Dewey lectures at Columbia. This passage is probably best regarded as a polite gesture and a recognition of genuine agreement, not as acknowledging significant influence of Dewey on Quine (see again footnote 2). Another relevant Quine paper is an explicit discussion of the place of pragmatists within the development of empiricism, published in 1981. I discuss this paper in the next section, as it does not indicate influence of the pragmatists on Quine but is relevant to questions about similarity of outlook and doctrine.

In sum, the direct influence of the "classical" pragmatists on Quine's thinking appears to be slight. The detail and care seen in Quine's reviews of Peirce's work might perhaps be taken as evidence against this, but engagement with a body of work does not imply that the work had much effect. C.I. Lewis, on the other hand, may have an underappreciated role (see again footnote 3). Lewis' 1929 book, which Quine studied and wrote about at Harvard, brought ideas deriving from the classical pragmatists, especially Peirce, into contact with the orientation to epistemology that was developing in early analytic philosophy. Quine also came to criticize many ideas defended in Lewis, though Quine was more focused on Carnap's version of these ideas in cases where Carnap and Lewis coincided. Lewis' epistemology put a more explicitly pragmatist cast on the choice of "conceptual systems" than Carnap did. According to Limbeck-Lilienau, Carnap's own

⁴ See Creath (1998) for discussion of Quine's arguments.

thinking may show some influence of the pragmatists, mediated by Lewis, Nagel, and Morris, but the US connection was secondary to the internal development of ideas in the Vienna Circle.

Despite the slim connections between Quine and the classical pragmatists, Quine's work had a substantial influence on the perceived importance and viability of a pragmatist outlook in the latter part of the 20th century. The move Quine made at the end of "Two Dogmas" affected what analytic philosophers saw as a "pragmatist" option, and the seriousness with which pragmatism was taken in the years following the eclipse of Dewey's work. Quine's move was part of a reorienting of the pragmatist tradition in the second half of the twentieth century, discussed further in the next section.

3. Belief and Action

This section looks at Quine's own role within the development of the pragmatist tradition, and at similarities and differences between Quine and others associated with pragmatism.

I take the "classical" pragmatists to be Peirce, James, and Dewey.⁵ Their philosophies differed substantially, and there are also many ways to single out themes as "central" to their philosophical achievement. But one undeniably important common feature is their focus on the relationship between thought and action. Peirce, James, and Dewey were empiricist philosophers in a broad sense, but they were unlike earlier empiricists in the role in their epistemology given to action.

Here is a rough initial summary of this side of their views. Thought is prompted by doubt, which typically arises in the context of an impediment to behavior, or a situation that makes an established habit of action inapplicable. Some sort of inquiry – perhaps quick and cursory, perhaps elaborate – results. This ends in adoption of a belief or hypothesis, and the result of that is the production of an action, or perhaps the formation of a habit of action which is not exercised immediately but is ready for future use. Important properties of thoughts themselves (justification, truth, and so on) are consequences of the embedding of thoughts in a context which involves both perception and action.

⁵ See especially Peirce (1877, 1878), James (1907), Dewey (1917, 1925, 1929).

Moving beyond that outline, differences in emphasis and doctrine emerge. Peirce (1877, 1878) emphasized the role of doubt as a special psychological state that is unsettling and prompts thought. He also gave a simple treatment of belief in which beliefs are categorized in terms of the habits of action to which they give rise. James' version, even after he began to overtly ally himself with Peirce and "pragmatism" from 1898 onwards, placed less emphasis than Peirce on doubt as a special psychological state, and his view of belief retained the more voluntarist character seen in "The Will to Believe." The sequence from doubt to inquiry to belief to action is less orderly, less regularized in James. The link between thought and action, however, is understood in strong terms: "cognition is incomplete until discharged in act" (1897, p. 85), and even very abstract philosophical ideas orient us towards acting in particular ways.

John Dewey gave the doubt-inquiry-belief-action sequence a "wider" environmental embedding. Actions guided by thought transform the agent's environment. In Dewey there is a kind of "closing of a circle" only partially sketched by Peirce and James. The disruption of habit that prompts doubt and inquiry is due to particular kinds of environmental conditions, and the aim of action is to restore a kind of stability in the organism's interactions with that environment. Action does not merely transform how the agent is situated in relation to external conditions, but transforms the way things are laid out in the world itself. Craft work and engineering are paradigms here.

Given that sketch, how does Quine relate to "classical" pragmatist ideas? What is most conspicuous is the absence in Quine's picture of any particular role for action. For the classical pragmatists, especially James and Dewey, earlier philosophy had erred by describing only one part of the structure in which thought is embedded and derives its function. Much effort had been devoted to descriptions of how the mind responds to sensory experience, but little had been said about how the beliefs formed by those experiences go on to help the agent live their life. Quine's view is a return to this truncated picture: thought and theory are responses to experience, and the upshot is prediction of further experiences. Quine, of course, would not deny that beliefs are often expressed in action, but for him this is apparently not an essential part of the story.

When I make this claim I am discussing Quine's epistemology, his theory of belief change. Quine's philosophy of language does give a central role to behavior, and

the interpretation of that behavior by an interpreter (Quine 1960, Føllesdal 2011). The interpreter is imagined to be similar to a "field linguist," who notes what is said and what circumstances prompt each utterance. So verbal behavior is essential to the framework Quine uses in his philosophy of language. Non-verbal behavior, however, has no particular role here or in his theory of belief change. Quine, I take it, would say that James was wrong to assert that "cognition is incomplete until discharged in act"; cognition can be entirely "complete" when the agent has worked out a way to accommodate past experience in a way that predicts what will happen next.⁶

A heuristic that can be applied when making comparisons of this kind is to ask: what is the *minimal structure* that suffices as a realization of a philosopher's theory? Consider an *inert predictor*, someone who has experiences and responds by developing predictive theories, but who never expresses these theories in action. An inert predictor suffices as a realization of Quine's theory of belief change. The essential upshot of theorizing is prediction, and the expression of belief in action is optional.

To this it might be said that unless an agent acts, they cannot be interpreted as having a theory at all. I am not sure how Quine's theory of interpretation and his theory of belief change constrain each other in this context, but suppose that a capacity for action is a constraint on an agent having a "web of belief." Still, all they would need to do in order to be interpretable is to voice their opinions from time to time. They would not be entirely inert, but their only output would be verbal. An interpreter could interpret them by seeing which environmental situations prompt which utterances.

In the previous section I mentioned Quine's retrospective paper about the role of pragmatism in the development of empiricism (1981a). Here Quine discusses various versions and interpretations of the "pragmatic maxim," often seen as central to pragmatist philosophy.⁷ Quine notes that Peirce's expressions of the maxim are ambiguous between several ideas. In one interpretation, Peirce claims that our "conception" of an object is

⁶ Within the pragmatists, Peirce and Dewey both gave a central place to the social in their epistemology. They would probably regard Quine's epistemology as too individualist. Here again, Quine's philosophy of language, which is emphatically social (1960), differs from his epistemology. This observation is not an objection to Quine's view.

⁷ The original wording, from Peirce 1878: "Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object."

reflected in the effects this conception has on the conceiver's *behavior*. In another interpretation Quine gives, Peirce is saying that the meaning of a sentence consists in the consequences it has for "experimental phenomena." Quine then says that under the second interpretation, Peirce's maxim states a familiar empiricist idea:

Meaning is empirical meaning; the meaning of a sentence consists in its observable consequences. It is the verification theory of meaning, echoed in the Vienna Circle. I find difficulty in regarding it as distinctive of pragmatism. Any empiricist, if asked about the meaning of sentences, might have been expected to come out with something like this. (p. 30)

Setting aside what Peirce might have meant, what sort of view in this area does Quine regard as more promising?

Peirce does not lend himself readily to single-minded interpretation. We had to interpret his pragmatic maxim sometimes in terms of dispositions to actions and sometimes in terms of confirmatory experiences. William James made a loyal effort to accept the maxim in both interpretations. He wrote as follows:

The ultimate test for us of what a truth means is indeed the conduct it dictates or inspires. But it inspires that conduct because it first foretells some particular turn to our experience which shall call for just that conduct from us. And I should prefer to express Peirce's principle by saying that the effective meaning of any philosophic proposition can always be brought down to some particular consequence, in our future practical experience, whether active or passive.

The conduct inspired is the ultimate test, and the predictions are what inspire it. Why not just settle for the predictions and say, like any empiricist, that the test of a truth *is* the experience it foretells? What substance is added by calling the conduct the "ultimate" test? James was too loyal to Peirce's faltering line. (p. 32)

For Quine, Peirce and James fumbled a bit, and the right response is to extract the part of their view that links the content of thought to the prediction of experience, and to drop the part that involves a link to action. Whereas the classical pragmatists sought to make a link between thought and action central to their view, Quine cuts the link, and brings the pragmatist view back towards other forms of empiricism.

Before looking at the consequences of this move, I'll note a point of similarity between Quine and James. Among the classical pragmatists, James had more to say about internal business of belief management than the others:⁸

The individual has a stock of old opinions already, but he meets a new experience that puts them to a strain. Somebody contradicts them; or in a reflective moment he discovers that they contradict each other; or he hears of facts with which they are incompatible; or desires arise in him which they cease to satisfy. The result is an inward trouble to which his mind till then had been a stranger, and from which he seeks to escape by modifying his previous mass of opinions. He saves as much of it as he can, for in this matter of belief we are all extreme conservatives. So he tries to change first this opinion, and then that (for they resist change very variously), until at last some new idea comes up which he can graft upon the ancient stock with a minimum of disturbance of the latter, some idea that mediates between the stock and the new experience and runs them into one another most felicitously and expediently.

... The most violent revolutions in an individual's beliefs leave most of his old order standing. Time and space, cause and effect, nature and history, and one's own biography remain untouched. New truth is always a go-between, a smoother-over of transitions. It marries old opinion to new fact so as ever to show a minimum of jolt, a maximum of continuity. We hold a theory true just in proportion to its success in solving this 'problem of maxima and minima.' But success in solving this problem is eminently a matter of approximation. We say this theory solves it on the whole more satisfactorily than that theory; but that means more satisfactorily to ourselves, and individuals will emphasize their points of satisfaction differently. To a certain degree, therefore, everything here is plastic. (1907, p. 33)

Quine's view, half a century later, also emphasized trade-offs and used a similar mathematical analogy. He said that belief revision tries to accommodate experience while also trying for simplicity and holding onto as much of the pre-existing stock of beliefs as possible. He referred to this last point as a "maxim of minimum mutilation" (1990, pp. 14-15).

James, I said, insisted on the importance of the link to action. Quine noted this fact about James but said that it does not seem to add any "substance" to what James was saying. I do not want to over-interpret this comment of Quine's; the immediate context, as we saw, was a treatment of meaning, and perhaps Quine's remark was meant to be

⁸ Thanks to Shawn Simpson for emphasizing this passage to me.

restricted to that topic. Are there other parts of Quine's work where non-verbal action is put back on the table in something like the way seen in the classical pragmatists? I know of only a few, though perhaps there are more. One is Quine's discussion of induction and our sense of similarity in "Natural Kinds" (1969). Quine holds that evolution by natural selection will tend to shape inductive rules and intuitions about similarity, and this happens as a result of the expression of inductions in action. Quine does not, to my knowledge, apply a Darwinian principle of this kind to principles of belief change in general – there is no Darwinian justification for simplicity and conservatism, for example. There is also a comment in the second edition of Quine and Ullian's *Web of Belief* (1978, p. 108): "The immediate utility of a good hypothesis is as an aid to prediction. For it is by predicting the effect of our actions or of other observed events that we are enabled to turn our environment to best advantage." Quine also opens "Things and Their Place in Theories" by saying that our talk of external things is a conceptual apparatus that helps us "foresee and control" the triggering of our sensory receptors" (1981b, p. 1), though control recedes from the paper from this point.⁹

Different readers will put different weight on these occasional comments about action, but suppose it is right that Quine does not regard the expression of belief in action as something that a theory of belief and belief change has to consider in any detail. If that is what Quine thinks, perhaps he is right to think it? Though the classical pragmatists made much of the link between thought and action, perhaps this made their views less plausible than they would otherwise be. Quine might say that while action is often or typically the upshot of thought, "often" is not "always," and whereas there is a good deal of regularity in how belief is shaped by experience, regularity of a kind that makes for an informative theory, the links between belief and action are too multifarious and idiosyncratic to be made the basis of an interesting theory in this area.

I'll discuss two objections to this view, both relevant to Quine's philosophy. The first looks more closely at the *point* of theory and belief. Quine regards prediction as central. But why is successful prediction a good thing? If we predict and the prediction fails, what kind of bad outcome is this?

⁹ *Word and Object* opens by saying that the familiar desk manifests its presence "by resisting my pressures and deflecting light to my eyes" (1960, p. 1).

In much of his work Quine appears to suppose that successful prediction is just a desirable thing. In "Two Dogmas" he says that he thinks of "the conceptual scheme of science as a tool, ultimately, for predicting future experience in the light of past experience" (p. 41). However, in later works Quine sometimes explicitly says that though prediction is "always the bottom line" in science, it is not the sole *purpose* of science. A central purpose is "satisfaction of pure intellectual curiosity" (1989, p. 163), and we use prediction as a way of choosing the theories that serve this goal. Once there is a retreat from talk of science as a predictive "tool," and prediction is seen as a test in theories chosen to assuage intellectual curiosity, it is not clear what contrast is left between a pragmatist epistemology and more mainstream empiricist views.

Quine's emphasis on conservatism and simplicity also raises questions here. Some have thought that simplicity is a guide to truth, but Quine does not, as far as I know, make this case. It would be harder still to argue that a conservative approach to belief change is conducive to truth. Instead it seems that simplicity and conservatism are treated by Quine as natural goals because they make for cognitive ease and economy. Richard Creath (1990) sees this as central to Quine's pragmatism:

[T]he chief consequence of Quine's pragmatism is to make plausible the reliance on simplicity and conservatism as the main pillars of his theory of knowledge. Simplicity is a pragmatic matter because simpler systems are easier to use. Conservatism, too, has its roots in practice because it is often convenient to avoid the effort of learning to use new (conceptual) tools. (p. 17)

From the point of view of a pragmatism that emphasizes the link between belief and action, what is striking all through here is the omission of what seem very important considerations. Beliefs are used to predict experiences, and they are also used as the basis for actions aimed at meeting needs and satisfying desires. These actions can go well or badly, leading to desirable or disastrous outcomes.¹⁰ When beliefs are used as a basis for prediction, this is usually not merely to see how things come out. A belief that generates bad predictions will also generate bad actions, where "badness" is a matter of running out

¹⁰ Peirce, in a less widely quoted claim about truth than the "limit of inquiry" passages, says: "For truth is neither more nor less than that character of a proposition which consists in this, that belief in the proposition would, with sufficient experience and reflection, lead us to such conduct as would tend to satisfy the desires we should then have" (1903 note added to Pierce 1877).

of water, going broke, taking the wrong road, planting crops that do not grow. Simplicity and conservatism might indeed make for cognitive ease, but cognitive ease is a minor factor in comparison to running out of water. When the guidance of action is set aside, the practical stakes associated with belief are low.

In sum, documents like "Two Dogmas" present a pragmatic view of theory choice in which prediction is central and traditional goals such as "correspondence to the facts" are absent. But with the link between belief and action set aside, the stakes seem inevitably low. In later work, prediction is made instrumental to other goals – satisfying curiosity, working out how things are. But after moves like this, little remains of Quine's "more thorough pragmatism" (1951, p. 43). What is left is an insistence on flexibility in areas such as logic. But much of the contrast with more traditional epistemologies that a pragmatist move is supposed to involve are lost.

I will discuss a second role for the link between thought and action. Within the total set of relationships between experience, belief, action, and its consequences, Quine, as we've seen, focuses on the link between experience and belief. Beliefs predict experience, and the fact that they cause action is treated as secondary. However, experience is *dependent* on how we act. This includes not just the immediate dependence of how things seem on where we look or press our hands, but also less immediate dependences. Beliefs give rise to actions, those actions affect our environment, and this, in turn, affects what is later experienced. Summarizing the network of relationships: new beliefs are functions (outcomes) of pre-existing beliefs and present experiences; actions are functions of present beliefs and preferences, and (perhaps) present experiences (unless those are subsumed into present belief); future experiences are functions of future actions and the state of the environment at that time; and the state of the environment at future times depends in part on present actions. So future sensory stimuli are partly under the control of present actions, which themselves depend on present beliefs.

I used the broad term "environment" above. The basic phenomenon in which future experiences depend on present actions does not require a world of discrete *objects* by which the feedback is routed. Quine was especially interested in what leads us to posit objects, including both physical objects and others (1981b). Introducing physical objects to a theory gives rise to a distinctive kind of predictive framework. These objects,

however, are not just initiators of barrages of sensory stimulation, but beneficiaries of our own barrages. Within the general category of "external structure," objects are responsible for particular kinds of feedback connecting actions now with experience later. They are nodes or loci in which the results of a variety of acts may coalesce, with further consequences downstream. (If you close the valve and apply the heat to the *same* cylinder, this will have different consequences from closing the valve and applying the heat to *different* cylinders.)

It might be replied that all this is just part of the theoretical apparatus that we construct in order to make predictions. Maybe it is, but it is then something that needs to be explicitly registered. External objects are not just things that exist and affect us, but nodes in a structure whereby we partially control, by means of action, the flow of sensory input. The stimuli that come our way are partly under our control and partly out of our hands, because action gives us partial control over the contents of our environments.

So the link between belief and action does bear on themes that are important to Quine. As I said earlier, I don't think that many philosophers would deny these relationships, but they have been largely absent from the pragmatist tradition in philosophy since the second half of the 20th century. The restriction of view that I have discussed here in the case of Quine is also seen in Richard Rorty (1982) and Robert Brandom (2010), for example. Verbal behavior – saying things – is treated as a central topic in these treatments of pragmatism, but the general features of behavior described above, which are clearly evident in nonverbal behavior, are not.

To show definite influence is difficult, but I suggest that Quine was an important figure in bringing about this reorientation of pragmatism. This shift did not begin with Lewis, for example, who said "Our categories are guides to action" (1929, p. 29). Quine became part of the development of the pragmatist lineage. A few crucially placed remarks helped change the weighting of pragmatist themes – more attention to theoretical flexibility, less attention to action – as they exited the context of the classical pragmatists and extended into the era of analytic philosophy.

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