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14

PRAGMATISM, PRAGMATICISM AND ECONOMIC METHOD

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> No man is an *Island*, entire of itself; every man is a piece of the *Continent*, a part of the *main*; if a *clod* be washed away by the *sea*, *Europe* is the less, as well as if a *promontory* were, as well as if a *manor* of thy *friends* or of *thine* own were; any man's *death* diminishes *me*, because I am involved in *Mankind*; . . .
>
> (John Donne, *Meditation XVII*)

PRAGMATISM AND ECONOMICS

The kinematics of intellectual history would make a field in its own right. There may be some universal laws governing the speed and trajectories with which the ideas of one field permeate another. Casual observation of the introduction of a sequence of philosophies (those of Popper, Kuhn and Lakatos) into methodological discussions in economics suggests that it takes ten to twenty years to make the transition between fields. The rule is borne out in the introduction of pragmatism into economics with a long lag from its revival in philosophy. References to W. V. O. Quine's (1951) pragmatic assault on the dogmas of empiricism are common among economic methodologists (e.g., Cross 1982; Caldwell 1982; McCloskey 1985). Pragmatic philosophy is implicit in the now ten-year-old rhetoric programme in economics. E. Roy Weintraub's (1990, 1991) recent assault on economic methodology is grounded in his readings of Richard Rorty (1979, 1982) and Stanley Fish (1980). Rorty is a self-described disciple of the early American pragmatist John Dewey; while not given to donning philosophical labels, Fish is a literary critic whose general perspective is nearly identical to Rorty's.[1] Abraham Hirsch and Neil de Marchi (1990) interpret Milton Friedman as an implicit disciple of Dewey.

'Who are the pragmatists?' and 'what is pragmatism?' are not wholly settled questions. A list such as given by Weintraub (1990: 268) is not uncommon: Dewey, James, Peirce, Rorty and Wittgenstein. But names on such lists, just like the names in the calendar of saints, are often merely honorific. Lacking direct familiarity with their works, the peculiar virtues

of the philosophers, as well as the saints, are unknown or preserved only in a confused and poorly recalled intellectual folklore. While the philosophy of Charles Sanders Peirce has undergone a revival, to most philosophers and those economists with some interest in philosophy he is still merely a two-dimensional figure belonging to the history of thought; vaguely perceived as the founder of pragmatism; but neither philosopher nor economist could generally say much about his doctrines.[2] Despite Dewey's (1938: 9) view that his own pragmatic *Logic* is but a direct extension of Peirce's logic, Dewey's disciple, Rorty (1982: 161), dismisses Peirce as just another Kantian, whose '... contribution to pragmatism was merely to have given it a name, and to have stimulated James.'[3] Peirce was a polymath and a frustrated genius. In contrast to Rorty, many regard Peirce as the greatest American philosopher of all time.[4] Hirsch and de Marchi (1990: 18, 115, 145) are rare among economic methodologists in even briefly referring to Peirce's central doctrines. The only extended treatment I know of is James Wible's (1992) paper on Peirce's analysis of the economics of research.

In 1902, reflecting on the quarter-century since he coined the term in the company of the Metaphysical Club (of Cambridge, Massachusetts), Peirce defined 'pragmatism' according to the maxim: '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' (5.1).[5] Peirce perceived that there was a risk that this bald statement could be mistaken for the stoical maxim that the end of man is action (5.3). While Peirce never wavered from the importance of action in a wide sense for the definition of pragmatism, he equally became less and less committed to worldliness. He acknowledged a sphere of intellectual action, and, in particular, did not interpret his doctrine as, for example, ruling out immaterial concepts such as the incommensurables in the Weierstrassian interpretation of the differential calculus. There are scattered throughout Peirce's writings numerous other definitions of 'pragmatism', related to this one in more or less subtle ways.

Peirce acknowledged a common spirit animating the works of William James, Josiah Royce, F. C. S. Schiller and John Dewey. Yet, he feared that their versions of pragmatism would push the doctrine into the direction of a mere practicalism (5.412). In his lectures, *Pragmatism*, James sounds a Peircian note:

> The pragmatic method is primarily a method of settling metaphysical disputes that otherwise might be interminable.... The pragmatic method... is to try to interpret each notion by tracing its respective practical consequences. What difference would it practically make to any one if this notion rather than that notion were true? If no

> practical difference whatever can be traced, then the alternatives mean practically the same thing, and all dispute is idle. Whenever a dispute is serious, we ought to be able to show some practical difference that must follow from one side or the other's being right.
>
> (James 1907/1949: 45–6)

But James does not stop here. To his description of the pragmatic method he adds a theory of truth: '... any idea that will carry us prosperously from any one part of our experience to any other part, linking things satisfactorily, working securely, simplifying, saving labor, is true for just so much, true in so far forth, true *instrumentally*' (James 1907/1949: 58). Here James parts company with Peirce. For Peirce, pragmatism was a doctrine about meaning not about truth, on which his views differ considerably from James (see 'Peirce's theory of inquiry', below). Peirce never denied that James, his close friend and generous patron, or the other pragmatic philosophers had legitimate claims on his terminology, that their doctrines were generically related to is own. But he worried that the radical empiricist, instrumentalist turn of the pragmatic philosophers opened the doors to popular abuse: pragmatism came to mean the crudest sort of practicalism; 'whatever works is true' came to be seen as the pragmatic creed. So Peirce sought a new terminology: the word 'pragmatism', he noted, was

> met with occasionally in literary journals, where it gets abused in the merciless way that words have to expect when they fall into literary clutches. Sometimes the manners of the British have effloresced in scolding at the word ill-chosen – ill-chosen, that is, to express some meaning that it was rather designed to exclude. So then, the writer, finding his bantling 'pragmatism' so promoted, feels that it is time to kiss his child good-bye and relinquish it to its higher destiny; while to serve the precise purpose of expressing the original definition, he begs to announce the birth of the word 'pragmaticism', which is ugly enough to be safe from kidnappers.
>
> (5.414)

My theme then is that as philosophers and economists we should repair to Peirce and declare a new pragmaticism. Modern pragmatists are clearly the successors to James and Dewey. As such their pragmatic credentials are secure. They do a great service, especially in advocating the importance of the situated subject and the richness of human experience. But, as I hope to make clear, they also expose us to risks – particularly, to the risk of intellectual Balkanization – that a more Peircian pragmatism would help us to avoid. We must be careful, however, not to claim too much. Although there are genuine differences between Peirce and, say, Rorty or Fish, many of the differences reduce to matters of tone and emphasis. But tone and

emphasis are part of what makes the difference between noise and music, prose and poetry. It is not the least important fact about Peirce that he valued good poetry above the science that was his life's work (1.315).

THE PRAGMATIC CHALLENGE IN ECONOMICS AND PHILOSOPHY

Perhaps the clearest appeal to modern pragmatism available in economics is Weintraub's (1990) article advocating reading Methodology out of the economics profession.[6] Weintraub distinguishes between methodology, which is the collection of procedural issues that arise in the ordinary discourse of a well-defined field, and *M*ethodology, which is '... a special project in economics: the attempt to govern appraisal of particular economic theories by an account of theorizing in general' (Weintraub 1990: 266). The Methodology project in economics is likened to the theory project in literary criticism, and is dismissed on grounds similar to those that Stanley Fish and others apply to literary theory. The Methodologist, according to Weintraub, seeks knowledge that is somehow more basic than the knowledge of economists practising economics and uses this knowledge to reform the practice of economists. The problem is, in Weintraub's view, that there is no such knowledge, because there is no privileged position outside the practice of economics, that is nonetheless relevant to economics, from which the Methodologist might appraise and instruct economists. Weintraub (1990: 268; 1991: 111) puts the objection in another way. The Methodologist appeals to *T*ruth, which is supposed to stand in correspondence with Reality. But how could we have access to such a Truth, that seems to abandon the human practice of inquiry? 'The pragmatist instead believes that we construct our world out of the ideas we create' (Weintraub 1990: 268), in much the same way that we construct constellations somewhat freely out of stars that are not, in fact, grouped that way by Nature or Reality. For the moment, at least, let us set aside the accuracy of this characterization of the practitioners of economic methodology (here I abandon Weintraub's typographical convention without prejudice). What is important is that the pragmatic objection that Weintraub raises imports the more general perspective of modern pragmatism into economics.

Rorty's (1979) attack on epistemology since Descartes is of a piece with Weintraub's attack on methodology. The advocates of the theory of knowledge, in Rorty's view, insist that knowledge is representation of reality to the mind's eye (hence the idea of the 'mirror of nature'), and that truth is the correspondence between representation and reality. The difficulty, according to Rorty, is that there is no detached observer, no polished glass in which one might observe the reflection of reality. Instead, man is an interpreter of interpretations, with no hope of securing a neutral standpoint from which to compare interpretations with independent reality.

The only standard of truth must be the coherence of our interpretations, including their coherence with our values and purposes in the world. Newton's physics is judged superior to Aristotle's not because there is a closer correspondence between it and reality, but because it enables us to better cope with life (Rorty 1979: 269). In the place of epistemology, Rorty advocates hermeneutics, which treats knowledge as a vast network of mutually interpreting beliefs. Additions to knowledge can then be seen as relatively minor adjustments in this network. The adequacy of such a network cannot be judged from any independent standpoint; for there is none. Rather, it must be judged holistically, according to how the beliefs cohere and support one another.

The central difficulty with any holistic or coherence theories of truth, as Rorty (1979: 317) clearly observes, is that they appear to license individuals to construct private wholes, paradigms, practices, Wittgensteinian language games, and so forth, without any constraint. This problem forms the core of Fish's (1980) analysis of literary theory. Fish poses a puzzle. One might think that the question of which literary theory to employ is, which is right? Empirical evidence, however, suggests that alternative theories of interpretation always work. Fish (1980: 1) argues that this is because '... the field of inquiry is *constituted* by the questions we are able to ask because the entities that populate it come into being as the presuppositions – they are the discourse-specific entities – of those questions'. But if the theories themselves constitute the only reality of literature, then is relativism not given free rein? Fish (1980: 11) answers this fear with this observation:

> the act of recognizing literature is not constrained by something in the text, nor does it issue from an independent and arbitrary will; rather it proceeds from a collective decision as to what will count as literature, a decision that will be in force only so long as a community of readers or believers continues to abide by it.

Although what is in the text is, in Fish's view, constituted by the interpretation, it is nonetheless not freely chosen for any individual, but 'there' for every member of the community bound together by the same interpretive theory.

The text is for Fish – as knowledge is for Peirce, Dewey and Rorty – a social construction. Fish christens the societies formed around literary theories' *interpretive communities*. On the one hand, different theories constitute different interpretive communities; and different communities generate different, and perhaps mutually incomprehensible, interpretations. Relativism of a sort appears to be unavoidable. On the other hand, interpretive communities stabilize texts within their limits; and stabilized texts may be subjected to principled debate. Individual interpretation is constrained. The interpretive community imposes an ethical norm on its mem-

bers: a *passé* interpretation may be ruled out because 'nobody reads that way any more' just as *outré* behaviour might be censored because 'civilized people simply do not act that way'. Fish (1980: 172) writes: 'The notion of interpretive communities thus stands between an impossible ideal [of a text neutral with respect to alternative interpretive theories] and the fear [of interpretive anarchy] which leads so many to maintain it.' Weintraub (1990) imports Fish's notion of an interpretive community into economics: he regards general equilibrium theory, Keynesian macroeconomics, macroeconometrics, new classical macroeconomics and other areas of specialization as interpretive communities.

Interpretive communities for Fish create the text and facilitate principled debate, and they define a community with a definite limit:

> communication occurs only *within* . . . a system (or context, or situation, or interpretive community) and . . . the understanding achieved by two or more persons is specific to that system and determinate only within its confines . . . such an understanding is enough and . . . an understanding that operates above or across situations . . . would have no place in the world even if it were available, because it is only in situations – with their interested specifications as to what counts as a fact, what it is possible to say, what will be heard as an argument – that one is called on to understand.
>
> (Fish 1980: 304)

Weintraub (1990: 267) takes essentially the same view. The reason that Methodology cannot succeed in reforming the practice of economists is not only that it does not, indeed cannot, occupy a privileged position, but also that it does not belong to the same interpretive community as the economists whose practices it hopes to reform. General equilibrium theory cannot be successfully criticized from the perspective of an 'epistemological theory of probabilistic knowledge', and neoclassical economics cannot be successfully criticized from a Hegelian historiographic tradition. Both critical perspectives are 'outside' economics, and therefore do not participate in the same interpretive communities as their objects of criticism. Methodology is impossible, and therefore cannot matter:

> One never in fact refutes or disallows an argument in economics by an argument in Methodology. An economic argument, like an explanation of the rate of inflation, is always appraised from within economics; there is no independent basis for appraisal: Philosophy does not construct theories of inflation.
>
> (Weintraub 1990: 272)

PEIRCE'S THEORY OF INQUIRY

To see the way in which Peirce's pragmaticism improves on modern pragmatism, we must first give a brief, and necessarily superficial, sketch of some of the main points of Peirce's own theory of inquiry. Peirce's hope for pragmatism was that it would bring an end to those disputes among philosophers that empirical evidence could not resolve. Once the meanings of the terms under dispute were stated in terms of their consequences, it should turn out either that nothing were at stake or that there were some (empirical) means of answering the now clarified question (5.6). Taken as a means of resolving disputes, the pragmatic theory of meaning is incomplete. Once disputed questions are clarified, resolution still wants evidence. Peirce's theory of inquiry fills out this aspect of pragmatism.[7]

For Peirce the life of science – and the life of philosophy as well, for he hoped for a scientific philosophy – was the life of inquiry. Peirce was a systematic philosopher. His account of scientific inquiry cuts across virtually every aspect of his philosophical system. A brief summary of the main points might be helpful. Inquiry begins, for Peirce, in disputes between people or in the intellectual unease within an individual mind that we call doubt. Inquiry aims at assuaging doubt or at, as Peirce calls it, the 'fixation of belief' (5.358ff.). That inquiry ends when doubts are satisfied might suggest that Peirce adheres to a view that would popularly be considered 'pragmatic', that whatever works to put our minds at ease is as close to truth as we can hope to come. Pragmatism and relativism are sometimes bracketed together because of this view. But Peirce takes great pains to contradict it. For him the workaday sense of 'truth' is indeed the coherence of our beliefs. If coherence were all there was to it, the door would be open to relativism. Relativism usually begins with the observation that different people are deeply committed to apparently contradictory beliefs. Peirce notices, however, that human nature being social, the coexistence of contradictory beliefs is bound to raise exactly the doubts that start any inquiry. Truth then must have another sense: ultimately fixed belief, belief that resolves all doubts and resolves all contradictions. No one can know that they possess such a truth; it nonetheless serves as a regulatory ideal for inquiry. Inquiry could not possibly converge to such a truth unless, in Peirce's view, it was really there to converge to. Peirce's doctrine of scholastic realism is thus a fundamental element of his theory of inquiry. Etymologically and doctrinally pragmatism is fundamentally related to action. The sharp end of Peirce's theory of inquiry is then found in his logic: the guide for the inquiring mind. Let us now consider the main points of Peirce's theory of inquiry in greater detail.

Belief and doubt

Doubt is itself parasitic on belief; where there was not first belief, there can be no doubt. The source of all doubt is surprise. Surprise is a disappointment of our expectations, a contradiction of our beliefs (5.512).

> Peirce defines 'belief' in accordance with his pragmatic maxim: The essence of belief is the establishment of a habit; and different beliefs are distinguished by the different modes of action to which they give rise. If beliefs do not differ in this respect, if they appease the same doubt by producing the same rule of action, then no mere difference in the manner of consciousness of them can make different beliefs, any more than playing a tune in different keys is playing different tunes.
>
> (5.398)

A belief has three properties: we are aware of it; it appeases a related doubt; and it establishes a habit or rule of action (5.397). Peirce was aware that the terms 'belief' and 'doubt' carry emotive baggage more appropriate to religion than to everyday life (5.394). Thus, while he recognized that belief and doubt have psychological correlates and are active in the imagination, he was at pains to deny that they were essentially momentary modes of consciousness or feelings (2.148, 2.210, 5.417). Rather, belief is a mostly unconscious continuing mental habit, a kind of self-satisfaction, and doubt is the privation of a habit; to have a belief is to be prepared to adopt the formula believed in as the guide to action or conduct (5.27–32, 5.417). 'A belief that will not be acted on ceases to be a belief' (7.356).

Inquiry for Peirce begins with surprise, doubt and hesitancy, which together thwart action. Inquiry aims at peace of mind and restoration of a firm basis for action. Peirce begins with doubt, but rejects the Cartesian project of universal doubt as the foundation for true knowledge:

> We cannot begin with complete doubt. We must begin with all the prejudices which we actually have. . . . These prejudices are not to be dispelled by a maxim, for they are things which it does not occur to us *can* be questioned. Hence this initial scepticism will be a mere self-deception, and not real doubt; and no one who follows the Cartesian method will ever be satisfied until he has formally recovered all those beliefs which in form he has given up. . . . A person may, it is true, in the course of his studies, find reason to doubt what he began by believing; but in that case he doubts because he has a positive reason for it, and not on account of the Cartesian maxim. Let us not pretend to doubt in philosophy what we do not doubt in our hearts.
>
> (5.265)

Descartes's project of radical doubt aims to establish a detached vantage point (a privileged position) from which to evaluate all knowledge. Like Peirce, Fish (1980: 360) rejects Cartesian scepticism: 'The project of radical doubt can never outrun the necessity of being situated . . .'. Peirce clearly agrees with the modern pragmatists that man is situated and cannot get behind the beliefs that organize his understanding of the world (5.440; cf. Fish 1980: 361). Equally, Peirce would understand why all literary theories work: they do not begin with genuine doubt, but recover the prejudices (Fish's 'interests') that motivated them in the first place.

For Peirce, the Cartesian project goes off the rails even before it leaves the station. Descartes advocated the strategy of doubting everything as a way of uncovering the bedrock of an absolutely indubitable belief, thinking that no inquiry could be secure that did not possess this firm foundation.[8] Peirce argues that it is enough to begin inquiry from less than absolutely indubitable premises, from premises that are merely free from any actual doubt: 'If the premises are not doubted at all, they cannot be more satisfactory than they are' (5.376). Such indubitable beliefs are beyond criticism: 'You cannot criticize what you do not doubt' (2.27; cf. 5.515, 5.523); and doubt presupposes previous belief (5.512). Aristotle's law of non-contradiction, 'not (*A* and not-*A*)', is an example of an indubitable proposition. Indubitability is a contingent fact. Any experienced inquirer knows that beliefs once firmly held sometimes come to be doubted and discarded. Peirce does not exempt even the simplest arithmetic or the laws of logic from the possibility of being doubted at some point (7.109). Even mathematical proofs of centuries' standing having sometimes come to be regarded as wrong (5.577). Peirce praises Hegel for trying to cast doubt where none existed before (2.192).

Peirce is as hard on radical empiricists as he is on Cartesian rationalists:

> One proposes that you shall begin by doubting everything, and says that there is only one thing that you cannot doubt, as if doubting were 'as easy as lying'. Another proposes that we should begin by observing 'the first impressions of sense', forgetting that our very precepts are the results of cognitive elaboration. But in truth there is but one state of mind from which you can 'set out' – a state in which you are laden with an immense mass of cognition already formed, of which you cannot divest yourself if you would; and who knows whether, if you could, you would not have made all knowledge impossible to yourself? Do you call it *doubting* to write down on a piece of paper that you doubt? If so, doubt has nothing to do with any serious business. But do not make believe; if pedantry has not eaten all the reality out of you, recognize, as you must, that there is much that you do not doubt, in the least. Now that which you do not at all doubt, you must and do regard as infallible absolute truth. (5.416)

Locally infallible, indubitable beliefs are the basis upon which any other beliefs are criticized. Here Peirce anticipates Fish (1980: 360, 361) who argues that doubt is possible only within a perspective not currently subject to doubt, so that current beliefs are privileged.[9] But Peirce examines the limits of infallibility. Common sense relies on the indubitable beliefs of everyday (even primitive) life (5.511, 5.523). Such indubitable beliefs are, however, necessarily vague (5.446). For Peirce, a belief is *vague* to the extent that the law of non-contradiction does not apply to it (5.505, 5.448).[10] As reasoning advances and becomes more subject to self-control, beliefs are formulated more precisely. Because their vagueness is reduced, the range of contradictory beliefs, including ones induced by experience, is increased, and the more subject to doubt they become. There is, for Peirce, then, no difference in kind between commonsense beliefs and scientific beliefs. Scientific beliefs are more doubtful, because they rest on more minutely drawn distinctions; yet both science and common sense are the products of the long experience of many people (2.147, 5.522, 5.498).

That common sense is the closest science comes to unshakeable foundations is evident from Peirce's observation that physical dynamics, as it was understood by its founders and not including the law of the conservation of energy, as not a science that aimed at novel facts, but one that analysed truths that all men acknowledged from experience. Virtually the whole of Lagrange's statistical mechanics, he argues, is based on working out the implications of Archimedes' principle of the lever which is presumed in our ordinary conception of equal weight. Such universal, commonsense experiences may not, he notes, be true to microscopical exactitude (this, it should be noted, before the development of quantum mechanics), but are nonetheless presupposed by anyone who devises a scientific experiment. In one of his relatively few references to economics Peirce writes:

> The analytical economics of Adam Smith and of Ricardo were examples of [the sort of science that is founded upon the common experience of all men]. The whole doctrine in its totality is properly termed the Philosophy of Common Sense, of which analytical mechanics and analytical economics are branches.
>
> (8.199)

In this, Peirce would also appear to anticipate the *apriorism* of Mises and the Austrian school (see Hoover 1988: ch. 10).

Reasoning in science and ordinary life share in Peirce's view, a foundation in common sense. Yet Peirce replaces the simple commonsensism of Thomas Reid and the Scottish school by distinguishing science from the ordinary life. Science is a 'critical' discipline, and yet another reformulation of the pragmatism is as 'critical commonsensism'. The background of indubitable beliefs makes criticism possible. Any belief may be criticized,

but, as Fish recognizes, not all beliefs can be doubted or criticized at once (5.514).[11] Critical, scientific inquiry further strips belief and doubt of their emotive correlate: while not a false, paper doubt, a feigned hesitancy may be as much doubt as the advance of scientific inquiry demands (5.394, cf. 7.606). Science progresses partly by raising and entertaining doubts where they do not exist practically. Science may, therefore, be of little relevance with respect to the 'vital questions' of life. Peirce argues that experience is complex and that science is insufficiently grounded in the vital interests of life for it to provide much practical guidance. Rather, he believes, customary beliefs have adapted to the interests and experiences of life so as to provide much better guides to practical matters (1.661–77; Peirce 1992: Lecture 1; cf. 5.60 and fn. 15 below).

Truth

Peirce's theory of belief provides him with a dual-faceted theory of truth. Truth for Peirce is a property of propositions (5.569). It is therefore inextricably linked with representation. On the one hand, truth is thus a matter of *correspondence* between the proposition and the facts of the world (5.553–4). It is a matter of mirroring, but the quicksilver is provided by the indubitable beliefs that the inquirer brings to bear on the world, and not by any privileged representation detached from the situated subject. Peirce rejects metaphysical truth as a source of confusion. And, although he never stops using the term 'truth', he suggests that we could just as well replace it with 'belief unassailable by doubt' and be done (5.416). Peirce's notion of truth is thus hardly different from Dewey's (1938: 7 *passim*) 'warranted assertability' or Weintraub's (1991: 112) 'contingent truths'.

On the other hand, truth also is a regulatory ideal for inquiry. Although he does not often feel the need to make such a distinction, he does not hesitate to speak of *T*ruth. Truth in this sense is also not a claim to a privileged representation. Truth is what agrees with the ultimate propositions of a community of inquirers in the fullness of time (5.416, 5.565, 5.569, 7.187). Truth is 'that at which inquiry aims' (5.557). Ultimate truth is therefore a *coherence* of the beliefs, including the experiential or perceptual beliefs; and, as always with Peirce, beliefs are mediated by other beliefs; there is no getting behind them (5.440).

Truth in either its correspondence or coherence dress is, for Peirce, parasitic on belief. A central human predicament is how to obtain stable beliefs. Peirce considers four methods of fixing belief (5.358–87).

The *method of tenacity* amounts to believing whatever one will, brooking no objections, and avoiding doubt-inducing experiences. Of the advocate of this method, Peirce writes:

> It would be an egotistical impertinence to object that his procedure is irrational, for that only amounts to saying that his method is not ours. He does not propose to himself to be rational, and, indeed, will often talk with scorn of man's weak and illusive reason.
>
> (5.377)

Peirce thus would appear to license private truth. He observes, however, that the method of tenacity is unstable:

> The social impulse is against it. The man who adopts it will find that other men think differently from him, and it will be apt to occur to him, in some saner moment, that their opinions are quite as good as his own, and this will shake his confidence in his belief.
>
> (5.378)

Peirce argues that this social impulse is strong and irrepressible:

> Unless we make ourselves hermits, we shall necessarily influence each other's opinions; so that the problem becomes how to fix belief, not in the individual merely, but in the community.
>
> (5.378)

The government, the church or some similar social institution may fix the belief of the community using the *method of authority*: official beliefs are enforced through sanctions, coercion, incitement of the passions, and even violence and terror (5.379–82). The method of authority is far more stable than the method of tenacity, and, indeed, to Peirce's mind has much to recommend it, having built many of the great edifices of civilization and marked off the great epochs of history. But the method of authority is always in danger of failing because it cannot practically be sufficiently totalitarian. Some ideas will escape regulation, and some people will, at least in private, rise above the condition in which one opinion cannot influence another. Indeed, Peirce argues that an even 'wider sort of social feeling' than that which destabilizes the method of tenacity undermines the method of authority: people come to see that other nations and other centuries held different beliefs; that their own beliefs are an accident of their situation; and that they would have to place a high value indeed on their own beliefs for those observations not to induce some doubts.

Having broken the fetters of authority, the individual in a community may employ the *a priori method* of fixing belief: he believes whatever is agreeable to reason (5.382–3). Plato, for example, found it agreeable to reason that the celestial spheres should be proportioned to the lengths of string that produce harmonious chords. *A priori* beliefs are unlikely to be completely idiosyncratic precisely because they arise in communities. Nevertheless, *a priori* beliefs are not stable as fashions of opinion change.

Awareness of the cycle of intellectual fashions raises doubt in the method itself.

For Fish, interpretive communities form to provide needed constraints on interpretation. Some or all of these communities employ essentially the *a priori* method. In Peirce's view those who abandon the *a priori* method must seek a source of constraints external to ourselves – 'something upon which our thinking has no effect'. Peirce suggests that the *method of science* provides such a constraint (3.84–5). The fundamental hypothesis of the method of science is: 'There are real things, whose characters are entirely independent of our opinions about them.' These real things are subject to laws which may be ascertained through reasoning and experience, leading ultimately to one True conclusion. It is important to note that Peirce does not here abandon his denial of a privileged position behind one's beliefs. To maintain that there is a truth is not to claim that one is in possession of it. The method of science, in Peirce's view, is a method that in the fullness of time would attain the truth, but provides no guarantee for the present.[12] The method of science, in Peirce's view, is more stable than the other methods. Although it cannot be proved that there are reals, it cannot be disproved either; there is then, unlike with the other methods, no intrinsic disharmony in the foundation of the method. Furthermore, the disharmonies of the methods of tenacity and authority and the method *a priori* arise from a bedrock belief that there is a fact of the matter; otherwise, why should the fact that other people hold opinions different from our own or that intellectual fashions change concern us all? The social impulse that undermines the other methods does not undermine science. What is more, the method of science is used in everyday life wherever we know how to apply it. At its homeliest level it is common sense; and, in some settings, is one of those things that is not actually doubted. Finally, when carried on at a more refined level, the method has been a triumph, and not raised living doubts about its efficacy.[13] For Peirce, the method of science is the method of pragmatism, and the method of pragmatism is *critical commonsensism* (5.497–590). Rorty (1979: 176) similarly identifies pragmatism with common sense.

Realism

Pragmatism and the method of science, for Peirce, are closely tied up with realism. Peirce's metaphysics is complex and mostly beyond our present purposes. Brief mention of a few points is essential, nonetheless, to understanding the role of realism in Peirce's theory of inquiry.

Peirce's phenomenology involves three categories.[14] *Firstness* is Peirce's name for the category of existence out of relation to anything else. The qualitative impression of a particular shade of blue in isolation from all context is an example of firstness. *Secondness* is existence relative to other

things. Secondness is epitomized by resistance; as Rorty (1979: 375) puts it, by the 'obduracy of things'. Experience for Peirce is the sum of ideas irresistibly borne in upon us: experience is largely secondness (7.437; cf. 2.138). As with experience, so with truth: 'The essence of truth lies in its resistance to being ignored' (2.139); truth is what is *so* regardless of what anyone thinks about it (2.135); 'truth crushed to the earth shall rise again' (5.408). *Thirdness* is mediation between things. Thirdness is expressed in generalizations, laws and universals. Peirce's categories can be summarized as first, second, third: presentness, struggle, law.

Realism for Peirce is the doctrine that asserts the existence of generals; that is, the secondness of thirdness. Peirce opposes *scholastic realism*, the belief that general principles are really operative in nature, to nominalism (5.101). *Nominalism* is the doctrine that only the particular is real, while types or universals are mental constructions (see, e.g., Goodman and Quine 1947). Goodman's view, endorsed by Weintraub, that worlds are made by theories in the same way as constellations are constructed by stargazers, is a classic example of what Peirce means to reject in opposing realism to nominalism. The adjective 'scholastic' acknowledges the affinity of Peirce's doctrine to those of certain medieval philosophers, philosophers who took indubitable beliefs as their starting point (5.312). In contrast, nominalists begin with Ockham's razor and Cartesian doubt.[15]

Realism has two important consequences for Peirce's theory of inquiry. First, it makes logic possible. For logic is the generalization and codification of procedures of inquiry that, given the way the world really is, lead us to truth – i.e., to unassailable belief. Logic would have nothing to codify if generality did not exist. Peirce rejects the non-existence of the general with the observation:

> to suppose a thing sporadic, spontaneous, irregular, is to suppose it departs from the ordinary course of things. That is blocking the road of inquiry; it is supposing the thing inexplicable, when a supposition can only be justified by its affording an explanation.
>
> (1.156)

A failing of nominalism, in Peirce's view, is that it constantly assumes things to be inexplicable, which is a poor theory on which to base any inquiry (1.170).

The recognition of the social impulse to doubt our own beliefs when confronted with the beliefs of others undermines the stability of the three methods of fixing belief other than science. For Peirce, the recognition that our beliefs may be wrong is not simply a social fact, it is also a consequence of realism. The second way in which realism is important to Peirce's theory of inquiry is that it provides the foundation for his doctrine of *fallibilism* (1.159–62). Peirce observes that laws cannot explain diversity; a Laplacian dream is one of unchanging regularity. But diversity is

ubiquitous. Therefore, there must be exceptions to laws, and the best grounded of our beliefs must sometimes turn out to be false.[16] Thus realism at once raises the possibility of grounded knowledge and puts us on guard against complacency and the hubris of thinking that we know the final truth.

Logic

Logic in Peirce's view follows up the positive plank of realism, and looks for the conditions that would make our reasonings be secure (2.1).[17] Logic encompasses all of rational inquiry: 'Logic is the doctrine of truth, its nature and the manner in which it is discovered' (7.321). As such, logic is the study of the method of science as a means of fixing belief. Logic is a branch of ethics: it tells us how we ought to reason (2.7). Logic requires a notion of good and bad inferences; it is, therefore, a critical study (5.108). There is no need for logic in ordinary life; for by habit or natural instinct, people draw sufficiently correct conclusions to ensure survival (2.3). Once, however, one moves into unfamiliar fields, logic comes into its own (2.4, 5.368).

Inference, which is the machinery of logic, is the process by which one belief determines another belief, habit or action (7.354). A successful inference is one that leads from true premises to true conclusions. In one sense, then, Peirce is an empiricist with respect to logic. Since the object of inference is to carry the inquirer from the known to the unknown, and since all reasoning refers to the future, one cannot know that the conclusion of an inference is in fact true in advance, at the very point when an inference is demanded and useful (2.146, 5.365, 5.461, 7.102). Consequently, useful inferences cannot be *sui generis* or *ad hoc*. Logic is therefore a product of thirdness: conclusions justified in one case are justified in analogous cases (5.108). The study of logic is, therefore, largely the study of *leading* or *guiding principles*, general rules by which one belief determines another (4.62–4, 5.367, 5.440–1).

Valid inference is inference according to leading principles which are in fact true. Peirce is not embarrassed by appealing to facts rather than form in justifying inference: it is facts, after all, that are pragmatically useful (2.214, 7.325). Material validity, therefore, is prior and decisive. The interest in leading principles, however, is not in the particular case, but in whether they are true or false in general (5.367). As generalizations, rules or habits governing the determination of truth, leading principles are all propositional and, therefore, representational. This opens up the possibility of a formal validity, a study of the circumstances in which leading principles cannot be false (7.461). Peirce, as noted earlier, does not exempt logic or mathematics from either the pitfall or the promise of thirdness: like all beliefs, leading principles are subject to fallibilism, they may be false; like

all subjects, leading principles, the objects of critical logic, exemplify diversity. Logic or critical inquiry, in Peirce's view, evolves.

Peirce divides inference into explicative inference, which derives conclusions from premises known or presumed to be true, and ampliative inference, which justifies conclusions on the basis of particular facts. Explicative inference includes classical deductive logic, mathematics, and probabilistic and statistical deductions; the last two being deductions with probabilities as their subject matter (2.694, 2.785). Perhaps Peirce's most original contribution to logic was the recognition that ampliative inference could be further divided into induction and abduction.

Abduction (also known as hypothesis, presumption and retroduction) takes the general form:

> The surprising fact, C, is observed;
> But if A were true, C would be a matter of course,
> Hence, there is reason to suspect A is true.
>
> (5.189, cf. 2.264)

Kepler's laws of planetary motion are a paradigm of abduction: the particular measurements of centuries of astronomers would have their observed patterns if planetary orbits were elliptical; therefore there is some reason to think that they are elliptical. Similarly, Planck's inference of the quantum theory from the observed spectra of irradiating bodies is again a paradigmatic abduction. Abductions are not disguised deductions. As such they would clearly be invalid, committing the fallacy of affirming the consequence. Indeed, there is no guarantee of the truth of an abductive inference; in most cases the inference will be false. Abduction is thus a weak form of inference; but 'abduction is Originary in respect of being the only kind of argument which starts an idea' (2.96, cf. 2.777, 5.145). Abduction is a type of inference because it is governed by leading principles subject to critical logic, and because it carries some measure of determinative force over our beliefs. Considerations of economy of money, time, thought and energy are the important guides to abductive/inductive inquiry (2.780, 5.600; also see Peirce's early paper applying marginal analysis to science, 'Note on the economy of research' (1876) (7.139–61) and Wible 1992).

Although abductions are typically easy to doubt, Peirce notices that the subjective likelihood of an abduction sometimes becomes objective (by which he means 'indubitable'). Sense perception illustrates this well. Peirce argues that sense perception is a limiting case of abduction, an abduction immune to immediate criticism (5.181, 5.183). Perceptions are a sort of compelled interpretation (5.291, 5.584–6, 7.622, 7.627). Perceptions can be criticized, but only at one remove. The beliefs that they compel may be judged to be illusory or false when confronted with other beliefs. In recognizing the interpretive content of the most neutral observation, Peirce anticipates many elements in modern epistemology as well as recent

pragmatism. There is no unmediated knowledge, no getting behind one's perceptual beliefs.

Induction for Peirce is the experimental testing of a theory (5.145). It cannot originate ideas; it can only measure the degree to which a theory, a prior abduction, fits the facts. The conflation of induction and abduction is, Peirce believed, the greatest source of confusion in science (7.218). Induction is not sterile. Peirce himself spent thirty years making exacting gravitational measurements for the United States Coast Survey. This experience may account for his observation that the validity of induction consists in its being a method that if persisted in will lead to the ultimate correction of errors (2.769, 5.170). This point is familiar to the econometrician: in a well-formulated regression, the standard errors of coefficient estimates shrink as sample size grows. Of course, the interpretation of the regression is parasitic on a prior abduction. If the functional form does not correspond to the underlying process that generated the actual data, then the coefficients, no matter how accurately measured, do not measure anything of interest.

THE WEB OF BELIEF

Rorty (1979: 170ff.) holds up Willard Quine's account of the structure of theories as a paradigm of modern pragmatism. He dissents from Quine's account only in that he sees no reason to prefer, as Quine does, science to arts, politics or religion as successors to philosophy (Rorty 1979: 171). The power of Peirce's theory of inquiry can be seen by using it to analyse Quine's account of the relationship between theory and experience.

In his famous article, 'Two dogmas of empiricism' (1951), Quine argues that statements are confirmed or disconfirmed as a corporate body rather than individually. Quine likens all belief and knowledge to

> a man-made fabric which impinges on experience only along the edges. Or, to change the figure, total science is like a field of force whose boundary conditions are experience. A conflict with experience at the periphery occasions readjustments in the interior of the field. Truth values have to be redistributed over some of our statements. Reevaluation of some statements entails reevaluation of others, because of their logical interconnections – the logical laws being in turn simply certain further elements of the field. Having reevaluated one statement we must reevaluate some others, which may be statements logically connected with the first or may be the statements of logical connections themselves. But the total field is so underdetermined by its boundary conditions, experience, that there is much latitude of choice as to what statements to reevaluate in the light of any single contrary experience. No particular experiences are linked

> with any particular statements in the interior of the field, except indirectly through considerations of equilibrium affecting the field as a whole.
>
> (Quine 1951: 42–3)

The consequences of Quine's 'field-of-force' model is the rejection of reductionism: 'any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system', and '. . . no statement is immune to revision' (Quine 1951: 43). Together, these conclusions are often referred to as the Quine/Duhem thesis, after Pierre Duhem, the French physicist who early in the century advocated similar views. A further consequence of Quine's model is that no statement is analytically true in the sense of being beyond rejection. At best, analyticity expresses one's relatively firm resolve to maintain a statement in the face of even the most recalcitrant experience – a matter of degree, not of kind.

Quine believes that theories should be judged on a pragmatic standard. As a physicist, Quine (1951: 44) believes '. . . in physical objects and not in Homer's gods' and considers '. . . it a scientific error to believe otherwise'. Nevertheless, both the gods and physical objects are on the same 'epistemological footing'. The pragmatic standard, Quine believes, only suggests that '. . . the myth of physical objects is epistemologically superior to most in that it has proven more efficacious than other myths as a device for working a manageable structure into the flux of experience' (Quine 1951: 44). To use Fish's terminology, physics and Homeric religion form different interpretive communities. Rorty's dissent from Quine is merely a challenge to Quine's assumption that the values of science are the only ones worth pursuing. His question to Quine might be: efficacious for what purpose?

'Efficacy' in Quine's usage must mean something like the relative ease of accommodating recalcitrant experience into the field of force. It is similar to Peirce's suggestion that it is considerations of economy – of time, money, thought and energy – which dictate which hypotheses should be inductively tested, and, therefore, which hypotheses should become part of our current beliefs. To account for a pragmatic standard of efficacy, both Peirce and Quine must be able to make sense of disconfirming or recalcitrant experience. Peirce's theory of inquiry suggests, as we shall presently see in more detail, that, if Quine's field-of-force metaphor is taken seriously, an adequate account of recalcitrance compels us to reject the Quine/Duhem thesis in its usual form.

As already observed, Peirce maintains a mixed coherence/correspondence theory of truth (see subsection 'Truth', above). Truth is correspondence to reality that is mediated through perceptual judgements. But perceptual judgements are simply another class of abductive inference. Thus there is no appeal to privileged observations outside or behind one's beliefs nor to an unattainable standard of truth. Seen as a coherence theory, Peirce's

theory of truth involves commitments of belief in the process of interpretation (i.e., introducing a new belief into the system) and in the process of revision (i.e., establishing coherence among all beliefs). Quine's 'field' model must involve both these processes if it is to account for recalcitrant experience.

The field of force in Quine's metaphor has an interior and a periphery. Experience impinges at the periphery and compels revision, either there or on the interior. Peripheral statements or beliefs are those which are more 'germane' to sense experience (Quine 1951: 43). Each instance, every impingement, requires interpretation of what counts as an instance. This is equivalent to Peirce's rule of predesignation in abductive/inductive inquiry (2.735–40). Since perceptual judgement, for Peirce, is a limiting case of abduction, perceptual categories are limiting cases of predesignation: a perceptual judgement must be made – i.e., one must believe that some percept fits into certain perceptual categories – before any experience is registered at all. Fish and Weintraub make similar points when they assert that interpretations constrain and constitute the facts rather than the other way round (Fish 1980: 293 *passim*; Weintraub 1991: 150, 151).

The peripheral statements in Quine's field model interpret experience and account, in part, for the compulsive force of recalcitrant experience by introducing new beliefs into the field that must be dealt with.[18] Although in Peirce's view the beliefs produced by the abductive inference of perceptual judgement are fallible, they cannot be immediately criticized. One cannot get behind one's beliefs; rather all criticism must be based on other beliefs (2.141, 2.142, 7.662; cf. 5.181, 7.437, 7.626). The result for Quine is that on the field of a particular theory, perceptual beliefs (at least) are fixed at any given time. They can be determined veridical or non-veridical with regard to other beliefs, but they cannot be ignored.

The idea of a periphery/interior split makes sense only if interior statements do not provide interpretation of experience – i.e., are not beliefs about perceptual categories and are not germane to sense experience. If they did interpret experience directly, there would be little sense in saying that sense experience impinges upon the periphery rather than on the interior statements directly. Interior statements like 'the earth is spherical' or 'John and James are brothers' are not disconfirmed by complexes of bare sensations. Instead, a peripheral statement defines a recalcitrant experience – e.g., a ship never getting to India by sailing west or John and James being of different racial types. The experience is believed because of a perceptual judgement, and is seen to involve these interior statements because of beliefs in certain logical links. The germaneness of peripheral statements to sense experience thus distinguishes them far more radically from the theoretical interior statements than Quine imagines: single peripheral statements serve to interpret experience for interior statements as well as for themselves.

If any experience impinges at the periphery at all, the immediate, uncriticizable nature of perceptual judgement ensures that a new belief is introduced into the field of force. With the introduction of this new belief, the stage of revision is reached. Even though it is the peripheral statement which determines immediately whether or not an experience is recalcitrant, both Peirce and Quine recognize that there is some latitude in resolving the inconsistency. The perceptual belief can be accepted and the theory disconfirmed or modified or it can be explained away as hallucination or error.

The compulsive force of recalcitrant experience derives, in part, from the necessary introduction of new beliefs into the field whenever experience is interpreted through (perceptual) judgement. This compulsion is not enough to determine that the experience be recalcitrant. It is only recalcitrant if a logical inconsistency exists between the new belief and other beliefs in the field. Given such an inconsistency, what is it that compels revision of some beliefs in order to remove it? Lewis Carroll (1895) demonstrated in 'What Achilles said to the tortoise' that, if a logical rule is taken as just another premise of an argument, nothing compels the conclusion. Similarly, if logical laws are '... simply certain further statements of the system, certain further elements of the field', then nothing requires, as Quine claims, that '... truth values *have* to be redistributed over some of our statements' (Quine 1951: 42; emphasis added). If logical laws did not occupy a preferred position, recalcitrant experience would have no compulsive force. At one level, of course, logical laws *could* be further statements of the system. There can be no objection to altering the law of excluded middle to simplify quantum mechanics (Quine 1951: 43). At another level, however, either the law of excluded middle applies to quantum mechanics or it does not. The notion of recalcitrant experience in Quine's field model requires that some beliefs about logical rules remain fixed and unrevisable relative to the field. This point is implicit in Quine's emphasis on the redistribution of truth values.

Some methodological beliefs stand outside the field in the sense that they are rules governing the manipulation of statements in the field in the face of recalcitrant experience. To be outside the field is to be immune to revision. Quine's two principles – that any statement can be held true come what may and that no statement is immune from revision – are only true in a relative sense. Peirce agrees that any belief may be revised. Revision of infallible methodological beliefs, however, is a matter of committing or not committing oneself to them. It may turn out in practice that everyone agrees on the most general methodological beliefs, but it cannot be the case that they must agree. Revision of some indubitable beliefs – methodological rules or perceptual categories – may be possible, but only once their primacy has been called into doubt, either by logical considerations or success at developing new perceptual categories. Revision

of ordinary beliefs can be compelled only if the class of infallible or indubitable beliefs is taken as given. Conversely, if these are given, particular ordinary beliefs must be revised in the face of recalcitrant experience. Without infallible, indubitable beliefs, there is no pragmatic standard of efficacy at all.

PRAGMATICISM, COMMUNITY AND PRIVILEGE

The central point about Quine's field model generalizes beyond the scientific context in which he first formulated it. Rorty (1979: 202) recognizes that Quine's periphery/core distinction (beliefs that express facts versus beliefs that do not) rests on his ontological commitments. Rorty would prefer a broader set of interests and values. But, as Fish (1980: 296) observes, judgements about whether or not those interests or values are furthered can only be made if we assume standards of judgement that are locally indubitable: '. . . assumptions are not all held at the same level and . . . a challenge to one proceeds within the precinct of others that are, at least for the time being, exempt from challenge'. Science, Peirce believed, differed from philosophy as it was practised in his day (and no doubt in ours as well) in that it does not set up the individual as the ultimate judge of truth:

> In sciences in which men come to agreement, when a theory has been broached it is considered to be on probation until this agreement is reached. After it is reached, the question of certainty becomes an idle one, because there is no one left who doubts it. We individually cannot reasonably hope to attain the ultimate philosophy which we pursue; we can only seek it, therefore, for the *community* of philosophers. Hence, if disciplined and candid minds carefully examine a theory and refuse to accept it, this ought to create doubts in the mind of the author of the theory himself.
>
> (5.265)

Modern pragmatism seems to echo Peirce's notion of community. To examine the parallel, consider the problem of individuation and membership in a community.[19] Fish's interpretive communities are plural, because they are offered as a solution to the problem of why people may differ radically in their understanding of texts without abandoning principle. But communication across interpretive communities is blocked. Who is a member of any particular interpretive community is also a question of interpretation. 'The only proof of membership is a nod of recognition from someone in the same community, someone who says to you what neither of us could ever prove to a third party' (Fish 1980: 173). Both Fish (1980: 171) and Weintraub (1991: 7) recognize that the individual might belong to more than one community. Nevertheless both emphasize not the potential inter-

connectedness but the independence of the interpretive community. Where Fish stresses the lack of communication between communities, Weintraub stresses the idleness of criticism from beyond the borders of the community. Rorty's (1979: 189) position is similar to Weintraub's: philosophers of mind cannot reinforce or diminish '... the confidence in our own assertions which the approval of our peers gives us'. And who are our peers? Rorty (1979: 190, fn. 22) denies that philosophers have anything to say even on who to regard as part of the larger human community; at the same time, he suggests that novelists and poets do. Such an anti-philosophic position might seem a strange one for a professional philosopher to take. One should recall, however, that Rorty (1979: ch. 8) seeks an 'edifying' philosophy, and prefers the more poetical and novelistic philosophers, Nietzsche, Heidegger, Wittgenstein and Sartre, to epistemologists. To the extent that a philosopher succeeds in saying something that matters on the question of community, he is an edifying philosopher, which is as close to a poet or novelist as makes no difference. Weintraub's distinction between Methodology and methodology can work similarly. Had Kaldor's criticisms of general equilibrium connected with the practice of general equilibrium theorists, they would have had to have been reclassified as methodology. The term 'Methodology', then, simply becomes an aspersion to be cast on criticisms that fail to connect. Social privilege, a station from which to decide who is in and who is out, what is Methodology and what is methodology, seems to have replaced epistemological privilege in the pragmatist account of knowledge. Despite his quite specific listing of economists whose criticisms misfire because they come from outside economics and are, therefore, Methodological, Weintraub might take the view that it is really only the practitioner, and not even the non-Methodological commentator like himself, who can ultimately judge which criticisms connect and which arguments are persuasive. To make this move, however, is to render the distinction between Methodology and methodology entirely orthographical. For the arguments of philosophers of science and professional economic methodologists do sometimes appeal to economists and help to shape their economics (Samuelson's use of Percy Bridgman's operationalism is one example, and is even cited by Weintraub 1990: 268).[20] Weintraub's argument would then have to be that in particular cases these appeals are materially wrong-headed. But that amounts to saying, use good arguments, not bad ones. And who could quarrel with that?

Rorty's disdain for Peirce appears to be rooted in Peirce's architectonic approach to philosophy and inquiry: system-builders do not appeal to Rorty's humanism.[21] But Peirce's humanist credentials are, in fact, secure: after all, Peirce believed such things as '... nothing is truer than true poetry' (1.315). Still, he did not regard system-building as opposed to humanist values:

> I know very well that science is not the whole of life, but I believe in the division of labour among intellectual agencies. The apostle of Humanism says that professional philosophists 'have rendered philosophy like unto themselves, abstruse, arid, abstract and abhorrent'. But I conceive that some branches of science are not in a healthy sate if they are *not* abstruse, arid and abstract, in which case, like Aristotelianism which is this gentleman's [F. C. S. Schiller's] particular *bête noire*, it will be as Shakespeare said (*of it* remember)
>
> 'Not harsh and crabbed, as dull fools suppose,
> But musical as is Apollo's lute,' etc.
>
> (5.537)[22]

A division of labour presupposes a common enterprise. For Peirce there is a difference between the systematic and the unsystematic, but no unbridgeable gulf between them. Rorty confuses the desire for a privileged framework, a thing Peirce's theory of belief cannot allow, with the urge to generalize and systematize inquiry. Is there any reason why an edifying philosophy needs to be unsystematic, local or parochial?

Rorty (1979: ch. 7) identifies epistemology with commensuration. He looks for a world without any cultural need for constraints, one in which the commensurability of different systems of belief is not sought (Rorty 1979: 315–16). By 'commensurability' Rorty (1979: 316) means that conflicting beliefs could '... be brought under a set of rules which will tell us how rational agreement can be reached on what would settle the issue on every point where statements seem to conflict'. Peirce's pragmatism, unlike Rorty's (1979: 317) philosopher-king, does not set up to know everyone else's common ground from an ultimate and privileged perspective. The pragmatist is instead like a surveyor: he climbs a high hill to gain perspective, to map out other people's common ground from a better vantage point; he is, nevertheless, bound to the earth, and his vision is always more or less limited; yet, relative to the valley and the foothills, his station is genuinely detached and locally privileged.

Rorty prefers conversation to adjudication of competing beliefs. But he also concedes that good conversation requires norms. He even admits that hermeneutics is parasitic on epistemology, that to use a hermeneutical approach when epistemology will do is at best bad taste and at worst madness; and that hermeneutics is intrinsically oppositional, needing epistemological projects for its own self-definition (Rorty 1979: 366). This seems little different from Peirce's observations that some of our beliefs are indubitable, that none is infallible, and that doubt requires prior belief. It is, therefore, difficult in the end to say whether Peirce and Rorty occupy common ground after all. There is perhaps a pragmatic difference, a difference in how true followers of Peirce and true followers of Rorty would behave. Peirce believes that the object of inquiry is to seek the

common ground on which the truth of abductions can be inductively decided. Rorty believes that we should be prepared to be unable to find that common ground. Peirce replies that, while it may be true that such common ground does not exist, to operate on that assumption is to block the road of enquiry and to abandon reason. The true social impulse is against this assumption. Rorty (1979: 318) appeals for civility in the face of a recognition that we share neither common goals nor common ground. Tolerance, however, requires humility; and Rorty provides us with no basis for humility. True intellectual humility arises from the faith that there is a truth; the acknowledgement that others, as well as we, seek it; and the recognition that we may not have already found it. Without true humility, we run the risk of slipping into Peirce's method of tenacity for fixing belief.

The danger of the method of tenacity is often thought to be relativism. But that is wrong: the deeper danger is Balkanization. Relativism arises when one recognizes that the beliefs of others may be as good as one's own beliefs. There is, however, as Peirce observed, no reason to accord any respect to the beliefs of others unless one senses that perhaps the others might just be right after all, unless one senses that there is a fact of the matter. Relativism, for Fish (1980: 319; cf. Rorty 1982: ch. 9), '. . . is a position one can entertain, it is not a position one can occupy'. He claims that one cannot get sufficient distance from one's own beliefs to put them on a par with the beliefs of others (cf. Fish 1980: 316). Surely, this is right as far as it goes; it follows from the indubitability of some of our beliefs. But, for Peirce, experience and the social impulse make us doubt some of our beliefs, not because we are sure that others are right, but because we recognize that others believe differently, and that there is a fact about the matter, so that adjudication is possible and necessary. Fish acknowledges the fear of relativism, and looks for constraints in the interpretive community. If the social impulse is limited, and humility does not extend beyond the bounds of the interpretive community, widening the search for common ground, then the interpretive community runs the risk of slipping into the corporate solipsism of Peirce's method of authority or *a priori* method for fixing belief.

That Fish's analysis appears persuasive is largely because it is applied to literature. Fish speaks of interpretations making texts and interpretive communities generating the constraints on interpretations that at once provide the common ground within a community and demarcate one community from another. But there is one aspect of the text that is common to all communities: the ink on paper.[23] The object of literary critical interpretation – in most cases and for the most part – is exhausted in the sense that an interpretation cannot be checked against new information related to the text but not available when the interpretation was formulated.[24] That is, there is nothing analogous to sense perception in Quine's web of

scientific belief to introduce recalcitrant experience that we *must* deal with. The irresolvability of literary and some historical disputes (not excluding natural and economic history) arises from their particularity and givenness. Theoretical accounts are counterfactual: they are constructed out of conditionals (if *A* then *B*), and the theory is asserted to hold even in those cases where the antecedent (*A*) does not occur. In these disputes, there may be no new evidence. We cannot provide alternative antecedents to generate discriminating facts. The parallel situation arises frequently in empirical economics. Consider the fitted or predicted values from a regression or a test to establish what caused x at time t in a stochastic environment. When all is said and done, the estimated result may be nothing but a low probability drawn from the far tail of the distribution. The only evidence relevant to discrimination is new data, although even that is not finally conclusive. This is, of course, a paradigm of Peirce's account of induction as a method of establishing a numerical fact that must succeed, but only if persisted in indefinitely (5.145, 5.170).

The absence of a common and irrepressible experience in literary criticism (although not necessarily in literary production) distinguishes it from science. Lacking such an experience, there is nothing to block the move to solipsistic interpretive communities or to undermine the authoritarian possibilities of a narrowed social impulse.[25] For Fish, you are a member of my interpretive community and can understand me because you already accept my interpretation. There is nothing to shatter our mutual complacency, except perhaps boredom (on which see Rorty 1979: 136; Peirce 5.520). For Peirce, experience destroys complacency:

> In all the works on pedagogy that ever I read . . . I don't remember that any one has advocated a system of teaching by practical jokes, mostly cruel. That, however, describes the method of our great teacher, Experience. She says
>
> > Open your mouth and shut your eyes
> > And I'll give you something to make you wise;
>
> and thereupon she keeps her promise, and seems to take her pay in the form of tormenting us.
>
> (5.51)

That the practical jokes are at the expense of us all is socially broadening. Ultimately, Peirce would not deny the existence of interpretive communities; but he would insist that their borders are extremely porous. As Dewey (1938: 50) puts it: 'In an intellectual sense, there are many languages, though in a social sense there is but one.' Perhaps the most unintentionally telling anecdote of the title essay of Fish's (1980) *Is There a Text in This Class?* is that of the student who originally asks that protean question to

the misapprehension of her instructor. Fish takes the story to illustrate that interpretations are made, not discovered, and belong to particular interpretive communities. But the student is finally able to bring the instructor around to at least comprehend her own interpretation. In a pragmatic (or pragmaticistic) sense, we are all insiders to the only interpretive community that matters.

> And therefore never send to know for whom the *bell* tolls; it tolls for *thee*.
>
> (John Donne, *Meditation XVII*)

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NOTES

1 Fish (1980) hardly mentions philosophers, the main exceptions being John Searle and John Austin. Nonetheless, the pragmatic cast of Fish's work is brought sharply home to anyone who reads his *Is There a Text in This Class?* (1980) side by side with Rorty's *Philosophy and the Mirror of Nature* (1979) as I have recently done.

2 Peirce's surname sounds like 'purse' and is not to be confused with the more common 'Pierce'.

3 Whether Dewey is, as Rorty believes, a true pragmatist or a Peircian pragmaticist is a question that goes well beyond the scope of this essay.

4 For example, Karl Popper (1972: 212) refers to Peirce as '... the great American mathematician and physicist and, I believe, one of the greatest philosophers of all time'. Nicholas Rescher (1978: ix) says of Peirce: 'More than any other student of the nature of science, he pries into the thing we always wanted to know but were afraid to ask.' A full-length biography has just become available (Brent 1993).

5 In keeping with the common practice of Peirce scholars, references to Peirce's *Collected Papers* will be made according to the format (volume number, paragraph number, e.g., 5.51). Partly because of his personal style, but more because of the vicissitudes of his life, Peirce's writings are scattered and fragmentary. A number of only partially satisfactory anthologies are available as introductions to Peirce's thought; see Peirce (1923, 1955, 1966, 1972). Recently, Peirce's complete Cambridge lectures of 1898 have been published (Peirce 1992).

6 I single out Weintraub because his article (1990) and most recent book (1991) give clear statements of connection with Rorty, Fish and Nelson Goodman (who is not generally considered a pragmatist). I use Weintraub's recent work instrumentally and avoid a systematic discussion of Weintraub's views because the book and the article have been the subject of a vigorous exchange between Roger Backhouse (1992a,b,c,d) and Weintraub (1992a,b).

7 Both Rorty and Peirce lament the fact that disputes can take on an unproductive life of their own:

> It would be foolish to keep conversation on the subject going once everyone, or the majority, or the wise, are satisfied, but of course we *can*.
>
> (Rorty 1979: 159)

> [The pragmatist] is none of those overcultivated Oxford dons – I hope their day is over – whom any discovery that brought quietus to a vexed question would inevitably vex because it would end the fun of arguing around it and about it and over it.
>
> (Peirce 5.520)

8 Peirce's views would in a number of respects appear to be closely related to those of Popper – particularly Popper's fallibilism and conventionalism; see Freeman (1983) and Popper (1983) for a detailed discussion.

9 Rorty (1979: 275, fn. 16) takes the milder view that less controversial, but not privileged, beliefs can control more controversial ones. This is merely a difference in tone, for neither Peirce nor Fish hold that indubitable beliefs are anything more than *locally* infallible or *temporarily* privileged.

10 A belief is *general* to the extent that the law of excluded middle does not apply.

11 In a similar vein, see Rorty's (1979: 180) discussion of Wilfrid Sellars.

12 Peirce asserts that scientific belief will ultimately converge on Truth – i.e., on stable, fixed belief. He does not provide a completely compelling argument for his view. It may be motivated from his own experience as an experimentalist in which he observed the way that precise measurements, repeated using different methods, tend to converge to some central or limiting value. It is also clear that he regards the assumption of convergence as the only one that can motivate the scientific enterprise – i.e., not block the path of research. It is thus implicit in the life of the scientist, but is not an independent justification of that life.

13 Some believe that Peirce has his tongue firmly in cheek in discussing the methods other than science: these methods are straw men that allow him to present a Whiggish account of the development of method towards its final flowering in science. It is, however, difficult to read his essay 'The fixation of belief', and to doubt that he is serious in noting the advantages of the other methods: his analysis is wholly consistent with his general theory of belief. For a similar view on Peirce's sincerity in this regard, see Hacking (1983: 59). Incidentally, Hacking's evaluation of Peirce is strikingly different from Rorty's; Hacking writes: 'Peirce and Nietzsche [a Rorty hero] are the two most memorable philosophers writing a century ago.'

14 The names of Peirce's fundamental categories do not derive from simple enumeration, reflecting a lack of imagination, which would be beyond belief given Peirce's forays into improvements in scientific and philosophical nomenclature. Rather, 'firstness', 'secondness' and 'thirdness' are derived from Peirce's studies of the logic of relatives and his conclusion that the properties these terms designated must be represented as monadic, dyadic and triadic relations. Peirce has an almost cabalistic attachment to the number three. It is hardly surprising to discover that, having been brought up a Unitarian, Peirce in adulthood joined the trinitarian Episcopal Church (Brent 1993).

15 Peirce does not deny the heuristic value of Ockham's razor: it may be the most economical way for science to proceed. In practical contexts, however, it may be useless. The living beliefs of an experienced sea-captain may save the ship in a storm; whereas Ockham's razor may simply be a fancy way of spelling Shipwreck (5.60).

16 Peirce elsewhere denies that laws are ever exact (6.201–2). He endorses some-

thing like Lucretius's belief that objects are normally subject to law, but from time to time swerve ever so slightly off their destined track. Peirce is in a sense ahead of science. He advocates *tychism*, the doctrine that the universe is *fundamentally* stochastic (i.e., the randomness is 'really' there and not just an artefact of our ignorance, as might be maintained by advocates of pre-quantum thermodynamics). He also realizes that irregularity at one level may, as in the gas laws, become an element of regularity at a higher level (1.157). In all this, Peirce predates quantum mechanics, which made these Peircian doctrines commonplaces of scientific practice.

17 For a fuller discussion of Peirce's logic, see Harris and Hoover (1980).

18 Quine's metaphor of the interior and periphery appears to echo Lakatos's (1970) famous metaphor of the hardcore and protective belt of research programmes (see Hoover 1991 for a detailed criticism of Lakatos's methodology). The relationships between Lakatos and pragmatism are beyond the scope of the present paper.

19 Similar problems of individuation and communication arise in Lakatos's methodology of scientific research programmes; see Hoover (1991).

20 Abraham Hirsch has pointed out to me (private communication) that the dismissal of Friedman's monetary theories by many economists on the grounds that he has no adequate causal account of the transmission mechanism (the so-called 'black box' argument) is a good example of the influence of methodological considerations in the thinking of practising economists.

21 Rorty (1982: 161) refers to Peirce's 'undeserved apotheosis'. Peirce's '... contribution to pragmatism was merely to have given it a name, and to have stimulated William James. Peirce himself remained the most Kantian of thinkers – the most convinced that philosophy gave us an all-embracing ahistorical context in which every other species of discourse could be assigned its proper place and rank.' Rorty's assessment is strange in several ways: it does not appear to have been shared by either James or Dewey, whom Rorty sees as reacting to Kantianism; it stands in sharp contrast to Rorty's earlier (1961) warm appreciation of Peirce as an intellectual kindred spirit to Wittgenstein; and it seems odd to charge Peirce, who stresses the evolution of knowledge, a kind of intellectual Darwinism, with preferring an ahistorical context.

22 An editor's note to this passage points out that Peirce has mistaken Milton for Shakespeare.

23 It is not strictly true that communities must share texts in this sense: consider the Roman Catholic, Protestant and Jewish bibles or the recent controversy over the 'corrected' edition of James Joyce's *Ulysses*.

24 The qualification 'in most cases and for the most part' is necessary, for example, because in some cases scholarship adds to fragmentary texts or because some literary theories appeal to historical, biographical or social information that may not be exhausted in the intended sense.

25 That Peirce was aware of the dangers of such a move is evident in his discussion of intellectual repression (5.386); that the risks remain live is evident in Fish's (1992) discussion of the First Amendment to the United States Constitution.

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