

Pragmatism, Discourse, and Situatedness

Philosophers, after all, are like everyone else; they want people who don't do what they do to believe that what they do is universally enabling. They want us to believe that the only good king is a philosopher king, and that the only good judge is a philosopher judge, and the only good baseball player is a philosopher baseball player. Well, I don't know about you, but I hope that my kings, if I should ever have any, are good at being kings, and that my judges are good at being judges, and that the players on my team throw strikes and keep 'em off the bases.

[Fish 1987, p. 1800]

Compared with other schools of economics the neoclassicals are notably butch. They are a motorcycle gang among economists, strutting about the camp with clattering matrices and rigorously fixed points, sheathed in leather, repelling affection. They are not going to like being told that they should be more feminine.

[McCloskey 1993, p. 76]

The last three chapters have focused on various contemporary developments within the philosophy of science and science studies. Although these two areas constitute much of contemporary science theory, they do not exhaust it, and more important, they do not exhaust the work that is relevant to the changing face of economic methodology. For one thing, despite the impact of logical positivism, not all philosophy is philosophy of science, and more general developments within

disciplinary philosophy also impact debates about scientific and economic knowledge. The more general philosophical approach that will receive the most attention in this chapter is *pragmatism*. Classical pragmatism was the most influential philosophical school in late nineteenth- and early twentieth-century America, but the program was eclipsed by positivist-inspired philosophical analysis during the interwar period. In recent years, pragmatism has returned – in its classical form, as well as in a number of neopragmatist guises – and it now represents, if not the most influential, at least one of the fastest growing philosophical frameworks on the intellectual landscape. Section 6.1 examines classical pragmatism, whereas the first part of Section 6.2 discusses the neopragmatism of philosophers like Richard Rorty.

Not only do philosophical ideas from outside the philosophy of science influence how we think about scientific knowledge; intellectual ideas originating from outside the strict confines of disciplinary philosophy often have a similar (or even more pronounced) effect. One such intellectual development, and one that has been alluded to several times in previous chapters, is *postmodernism*. Postmodernism certainly isn't a "philosophical position" in the sense that logical positivism or utilitarianism are philosophical positions – it is simultaneously wider and deeper than such positions – but it is an influential constellation of ideas that has profoundly influenced contemporary intellectual culture including the discipline of philosophy (and certain areas within economic methodology). A second intellectual development – related to both postmodernism and pragmatism – is the *discursive turn*; the notion that what is most important about intellectual discourse in all fields is not the specific content of the discussion but the fact that it is a discussion. A third influential development is *feminism*; feminist perspectives cut across every aspect of contemporary culture including all of the various academic disciplines. There are feminist literatures, feminist histories, feminist ethics, feminist artistic movements, and feminist contributions to almost every other field of inquiry or aspect of culture, but most relevant to the discussion at hand, there are feminist approaches to epistemology, science studies, and economics. In response to these extrametascientific developments, the second half of this chapter will offer a brief foray into the literature of postmodernism, discourse analysis, and feminism, in an effort to elucidate some of the many (and growing) contact points between these movements and the field of economic methodology. Although I have started almost every chapter with a disclaimer to the effect that “this is not a comprehensive survey but only an attempt to point out some of the ways that this literature bears

on (or might bear on) economic methodology"; such a warning is particularly pertinent to the discussion in this chapter.

6.1 The Pragmatic Turn

Pragmatism is back, and back in a pretty big way. Consider a few of the following examples. Quine's influential philosophical position has always been informed by pragmatic ideas (Quine 1981); so, too, for the work of Donald Davidson (1980), although he is less likely to use the term. A number of prominent philosophers who once endorsed scientific realism have now adopted a variant of the pragmatic stance; the most dramatic example being Hilary Putnam's (1995) evolution from scientific realism, to internal realism, to pragmatic realism. Many of the recent contributors to the philosophy of language take a pragmatic position (Brandom 1994, for example). Many philosophers who find experimental practice to be the key to understanding science – either its stability (Galison 1987) or its realism (Cartwright 1983; Hacking 1983) – have also been influenced by pragmatic ideas (see Lenoir 1988). The German philosophers of the Frankfurt school who once drew their inspiration from Marx and Freud now seem to be following Charles Sanders Peirce's pragmatic philosophy (Apel 1981; Habermas 1971 and 1992). Pragmatist ideas also seem to have a growing influence on the sociological side of science theory (see Lenoir 1992, or Barbara Herrnstein Smith 1997); among those discussed above, Andrew Pickering (1990, 1995a), in particular, uses pragmatic realism to undergird his postconstructivist vision of the sociological approach to scientific knowledge. And, finally, many of the philosophers who attempt to synthesize the best from both the naturalist and sociological turns seem to have much in common with classical pragmatism (Haack 1993 and Solomon 1995a for instance). And the list could go on and on.¹

So how did this happen? As the question was posed in the introduction to a recent pragmatist reader:

How is it that a philosophy so vibrant and promising at the turn of the twentieth century and so depleted at midcentury should revive now at the end: after positivism, phenomenology, logical analysis, naturalized epistemology, and deconstruction? (Goodman 1995, p. 1)

¹ A recent paper by Thomas Uebel (1996) is an interesting case in point. It argues that the positions of both Carnap and Schlick were quite close to the pragmatism of Charles S. Peirce. Whether or not one is persuaded by Uebel's argument, it is interesting that pragmatism has moved so demonstratively to center stage, that individual positivists are now being judged on the basis of how much their work conforms to pragmatic ideas.

Por que o pragmatismo, que em meados do século XX estava tão enfraquecido, reviveu no final do século XX?

1. Porque o pragmatismo clássico oferece uma saída para o dilema entre o fundacionalismo filosófico epistemológico e o relativismo radical.

216 *Reflection without Rules* O pragmatismo quer que a filosofia seja a mais científica possível, mas não limita a filosofia à filosofia da ciência.

Although a more substantive answer to this question will emerge in the next few sections, it seems useful at this point to make a few preliminary suggestions about how the argument will go. I will mention four issues at this point; others will surface in the following discussion.

1. First, pragmatism seems to provide a way out of what has become the major dilemma in contemporary metascience: the dilemma of being stuck between foundationalist philosophy, on the one hand and radical relativism, on the other. It seems that either science conforms to the narrow guidelines of some particular foundationalist-inspired philosophy of science, or we must conclude that science is nothing special at all (just social interests, just discourse, etc.). Pragmatism gives us another alternative; it is antifoundationalist – aggressively antifoundationalist – while retaining the notion that science is in fact rather special. All aspects of culture, at least for classical pragmatism, are not the same, and science is indeed a particularly beneficial form of life. The keys for (classical) pragmatism are: first, that while science has special, and desirable, properties, these special properties do not emerge because science provides a unique pathway to some sacred domain (the Truth, the Good, the Perfect), and second, these properties are quite general and are not based on narrow rules set down by some specific demarcation criterion that excludes all but the most cognitively pristine scientific activities. Pragmatism is proscience without being prophilosophy of science or eliminatively scientific. As Charles Morris put it many years ago:

[T]here is still an important difference between the pragmatists' conception of philosophy and that of the logical empiricists. The pragmatists have, without exception I believe, wished philosophy to become as scientific as possible, but have not limited philosophy to the philosophy of science. A scientific philosophy need not be a philosophy of science. (Morris 1963, pp. 96–7)

For pragmatism, science is special, but it is special because it helps us get on in (rather than get beyond) the mundane world, and because it is general enough that it can be applied to social, ethical, and other questions involving judgments of value in addition to those questions that are narrowly scientific. Again Charles Morris:

It has been a central tenet of the pragmatists, no matter how great their other differences, that judgments of value are empirical in nature, and so have a cognitive or theoretical character amenable in principle to control by scientific methods. Stated in

another way, the pragmatists have believed that judgments of value as well as the statements of science conform to the pragmatic maxim and are meaningful in the same sense. (Morris 1963, p. 94)

2. A second motivation for the increased popularity of pragmatic philosophy – closely related to the fact that pragmatism is scientific without being scientific – is that pragmatism blurs the relationship between theory and practice. Whether it is the experimental realism of Hacking (1983) and Cartwright (1983), the practice-centered view of Galison (1987, 1997), or the ethnography of scientific practice that characterizes much of SSK, practice has been elevated in recent science studies and the Received View's rigid hierarchy between "theory" and "practice" (among others) has been discredited. For pragmatism, there never was a meaningful distinction between the two – it lacked a rigid distinction between "knowing" and "doing" – thus allowing it to sit quite comfortably with the results from recent practice-centered approaches to the study of science.

3. A third reason for the resurgence of pragmatic ideas is that pragmatism is fundamentally social; for pragmatism science is social, human life is social, and the most important properties of human inquiry and human action emerge from our sociality. Because pragmatism does not start from the traditional epistemological question of how individual beliefs come to accurately reflect the properties of the objective world, the ostensive failure of all the traditional answers to this epistemic question has left pragmatism effectively unscathed. Not only is pragmatism safe from the criticisms that have plagued traditional approaches to epistemology and philosophy of science, it also has benefited from the fact that it has always endorsed the social perspective that has increasingly become the mainstay of post-Kuhnian metascience. In other words, pragmatism gains credibility from the problems of the Received View because it was never committed to the class of questions the Received View failed to answer, and it has always focused on the same (social) issues that emerged within the critical literature.

Finally, pragmatists have always been aware of the problems of theory-ladenness and underdetermination. Pragmatic philosophers have never insisted that empirical facts exist independently of the theory-, social-, and interest-laden context of human practice, or that the confrontation between theory and evidence should, or even could, be restricted to the formulaic testing procedure explicated by the Received View. For pragmatism, human knowledge is much messier, and far more interesting, than how it appears in traditional philosophy of science.

4. Porque sempre reconheceu o caráter ideológico e indeterminado da ciência, e jamais quis limitá-la aos testes científicos, afirmando que o conhecimento é muito mais confuso e interessante do que isso.

Peirce fundou o pragmatismo (1877-78), mas qdo William James (1898) atribuiu a ele esse papel, Peirce, vendo que as teorias de James eram diferentes, reviu suas posições e as denominou pragmatismo.
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6.1.1 Peirce, Dewey, and Classical Pragmatism

The story goes that pragmatism was born in 1898 when William James first used the term during a philosophical address at the University of California. James attributed the term to Charles S. Peirce who had employed it twenty years earlier in two papers – “The Fixation of Belief” (1877) and “How to Make Our Ideas Clear” (1878) – published in the *Popular Science Monthly*. Peirce himself claimed that the term originally came from Kant, and that he had initially borrowed it in 1871 for a presentation at the Cambridge Metaphysical Club (Apel 1981, p. 16). Regardless of where the term first appeared, James’s attribution of the term to Peirce brought distinction to the elder philosopher – an unexpected distinction, as Peirce had essentially retired from academic life after his dismissal from Johns Hopkins in 1884 and was, by the late 1880s, living in relative isolation in Milford, Pennsylvania. The additional attention provoked Peirce to reexamine his position: particularly as it compared to James’s own, quite popular, and rather different, version of pragmatism. As a result of this reexamination, Peirce revised his earlier pragmatic position and by 1905 had renamed it “pragmaticism”: a term that he felt was “ugly enough to be safe from kidnappers” (Peirce 1905a, 186).²

Although the differences between James and Peirce are significant, these differences do not exhaust the variation within classical pragmatism. At the turn of the century, the American philosophical scene seemed to be littered with pragmatisms – James’s own *Pragmatism* (1907) mentions six different approaches, whereas Arthur Lovejoy’s famous paper (1908) examines thirteen different versions of the general pragmatic perspective. Although most of these pragmatisms originated from within academic philosophy, a few were products of the more general popular culture. Given that our ultimate interest remains economic methodology, I will only examine two of the many versions of classical pragmatism – those of Peirce and Dewey – and offer only the précis version of each of these.

Peirce’s original statements (1877, 1878) focused on the question of belief determination. According to Peirce, humans find doubt to be inherently unpleasant and consistently endeavor to avoid it. He argued

² Apel (1981) argues that there were actually four distinct periods in Peirce’s philosophical development with pragmaticism being the final phase. Even if the phases were not distinct, it is clear Peirce’s thought evolved over time, and, as a result, there are a number of different interpretations of his work within the contemporary literature (there are even authors who make Peirce into a simple falsificationist; Sullivan, 1991, criticizes this view). There has recently been a spate of interesting and entertaining biographical works on Peirce (Brent 1993, 1996; Ketner 1998).

Nos papers de 1877 e 78, Peirce focou a questão da fixação das crenças. Quatro métodos:

1. Tenacidade - evitar dúvidas
2. Autoridade
3. A priori - filosófica racionalista e idealista
4. Método da comunidade - qual Peirce adotava como método.

that historically we have used basically four different methods to facilitate the fixation of belief (avoidance of doubt): the method of tenacity, the method of authority, the a priori method, and the scientific method. Tenacity involves forming a belief and sticking with it come what may: principally by systematically avoiding doubt-creating situations. Once doubt intervenes, the historically prevalent response has been the method of authority: relying on the officially sanctioned views of the church, state, or other social authority to eliminate doubt. The third, a priori, method is the method of rational and idealistic philosophy – Peirce refers specifically to Plato, Kant, and Hegel – and even though such philosophical positions are less popular today, they were common methods of doubt elimination among Peirce's intellectual cohort. Peirce's preferred approach to fixing belief is the fourth method: the method of science. As a practicing scientist, Peirce had participated in the scientific method and was deeply committed to extending the scientific approach into other areas of belief fixation.³

According to Peirce, the most troublesome characteristic of both the rationalist and empiricist traditions was their commitment to foundationalism and the search for certainty. The advocates of both of these traditional epistemological positions sought a methodological guarantee: a method that could guarantee, absolute, apodictic certainty. But for Peirce, such certainty was unattainable. All one could do was to conduct philosophy in the same manner as scientists have traditionally conducted scientific inquiry: proceed systematically, investigate empirically, be open to criticism, and respect the fallibilism of the investigative process. Above all, science was a social community, and the values of science – the axiological framework for the scientific approach to the fixation of belief – were community values. Scientific inquiry was a continuous and self-correcting process of critical appraisal by those within the scientific community: those who shared its values. Science was not legitimated by the words of philosophers – the spell of logic, the appeal to foundations, or the rhetoric of certainty – but by its contribution to the enhancement of human life; all of those things that philosophers proffered as grounding science, as the indubitable foundations for human knowledge, were in fact far less certain than the reliable daily output of the scientific community. To contrast this view with some of the views discussed in previous chapters, particularly positivism, it is useful to briefly examine Peirce's position on a number of specific issues.

³ Backhouse (1994b) uses Peirce's four notions of belief fixation to explain why economists disagree. His bottom line is that economists disagree because they do not pay sufficient attention to empirical evidence. This use of Peirce seems to make him into a naive empiricist, which, as we will see, he certainly was not.

Para Peirce isto era impossível. O que era possível era agir como os cientistas tradicionalmente agem: (a) proceder sistematicamente; (b) investigar empiricamente; (c) ficar abertas à crítica; (d) respeitarem o falibilismo (caráter falível) do processo investigativo. A ciência não se legitima pela retórica da certeza (fundamentalismo), mas pela sua contribuição à melhoria da vida humana.

Para Peirce a verdade é a ideia que a comunidade de cientistas sinceros seria obrigada a adotar... é o resultado a que se chegaria se houvesse pesquisa suficiente.

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É uma perspectiva anti-individualista: a verdade é um problema social.

First, the perennial issue of truth. For Peirce, like so many others, science pursues truth, but what, for Peirce, is the truth that science pursues? Truth for Peirce is a property of certain beliefs, the beliefs that the scientific community would eventually converge to if inquiry were to continue indefinitely into the future. As science advances, certain beliefs become fixed and are not revised during the further progress of science; these beliefs, the beliefs that would be held by the scientific community at the end of inquiry, constitute truth. In Peirce's own words from one of his later works:

But no doubt what is meant is that the objectivity of truth really consists in the fact that, in the end, every sincere inquirer will be led to embrace it . . . I hold that truth's independence of individual opinion is due (so far as there is any "truth") to its being the predestined result to which sufficient inquiry would ultimately lead. (Peirce 1906, p. 288)

Notice that Peirce's concept of truth involves something objective (in the sense that it is a property of beliefs that exists independently of the beliefs of any particular individual); it is something social (it is a property of certain beliefs of the scientific community); and it is something that would be at the end of inquiry (opposed to what is now, or might be if certain procedures were followed). Also notice that nothing in the Peircean notion limits us to beliefs about "physical" processes or other things that we usually think of as amenable to "science"; truth as the ideal limit of a process of inquiry by a community of scientific inquirers could apply just as well to various inquiries outside the traditional domain of natural science. Finally, and relevant to any economic theory influenced by his pragmatism, Peirce's rather aggressive anti-individualism is clearly manifested in his notion of truth. Not only is scientific inquiry, and the truth that would emerge from it, a social and public affair, the beliefs of any individual are necessarily in error unless they happen to comply with what the community would believe in the limit.⁴ As Habermas characterizes Peirce's view of the individual:

This becomes apparent in Peirce's concept of the person, in which everything that makes a person into an individual is defined negatively, in terms of its difference from what is general – namely, in terms of the distance separating error from the truth and of that dividing the egoist from the community. The individual is something merely subjective and egoistic. (Habermas 1992, p. 108)

⁴ For this reason Apel (1981, p. 92) refers to Peirce's position as "logical socialism"; perhaps cognitive socialism would be a better description.

⊗ Não é apenas a verdade que depende da realidade, esta tb depende da verdade: (deu lá fora, algo idealista)

In his early pragmatic essays, Peirce defined “the real” in terms of his notion of truth. For example, in “How to Make Our Ideas Clear,” he characterized reality in the following way:

The opinion which is fated to be ultimately agreed to by all who investigate, is what we mean by the truth, and the object represented in this opinion is the real. That is the way that I would explain reality. (Peirce 1978, p. 133)

This makes Peirce a scientific realist, but a scientific realist of a rather unusual sort. Instead of the traditional realism where scientific theories correctly represent the properties of the objective world, Peirce defines truth as that which the scientific community would believe at the end of inquiry, and then characterizes reality in terms of this truth; it is a realism that associates reality with possible knowledge. In Habermas’s words, Peirce has a “cognizability” (1971, p. 98) notion of the real; a concept of reality that is based on his “methodological concept of truth” (1971, p. 99). Of course, because Peirce’s notion of reality is based on his concept of truth, and his conception of truth is fundamentally social, Peirce ends up with social characterization of reality. Reality is established as what a particular community of inquirers would eventually believe. The social nature of reality is quite clear in the following remarks from one of Peirce’s early works.

And what do we mean by the real? . . . The real, then, is that which, sooner or later, information and reasoning would finally result in, and which is therefore independent of the vagaries of me and you. Thus, the very origin of the conception of reality shows that this conception essentially involves the notion of a COMMUNITY, without definite limits, and capable of a definite increase of knowledge. And so those two series of cognitions – the real and the unreal – consist of those which, at a time sufficiently future, the community will always continue to re-affirm; and these which, under the same conditions, will ever after be denied. (Peirce 1868, pp. 247–8, capitalization in original)

It is easy to see why the Peircean concepts of truth and reality – as a temporally emergent stable set in the belief space of a certain idealized community of inquirers – might harmonize with voices from post-Kuhnian philosophy of science and science studies. In addition, Peirce achieves this harmony while being consistently proscience, antifoundationalist, and naturalistic. By contrast, it also should be clear why many find Peirce’s ideas to be rather controversial and why there is a tendency for contemporary authors to skim off a few aspects of his philosophical program without adopting it in toto.

A máxima pragmática de Peirce (que subj. Lúci/Aviã) o critério de verificabilidade: uma crença é verdadeira, crenças diferentes provocam ações diferentes.
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ou: A base racional para nomear a afirmação é a sua consequência.
// experiência sobre coisas do cotidiano

Before turning to Dewey's version of classical pragmatism, it is useful to briefly mention two other aspects of Peirce's philosophical program that are relevant to the task at hand: his pragmatic maxim and abductive inference.⁵ The pragmatic maxim plays somewhat the same role in Peirce's philosophical program as the verifiability criterion of meaningfulness plays in positivism: it serves to differentiate meaningful from meaningless discourse and places traditional metaphysics on the meaningless side of the line.⁶ The classic statement of what later came to be called the pragmatic maxim is contained in "How to Make Our Ideas Clear."

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 differences in the manner of consciousness of them can make them different beliefs, any more than playing a tune in different keys is playing different tunes. (Peirce 1878, p. 121)

Or as he put it more succinctly in a later work.

|| [T]he rational purport of a word or other expression, lies exclusively in its conceivable bearing upon the conduct of life. (Peirce 1905a, p. 183)

To modify an old adage, Peirce's pragmatic maxim seems to say that "meaningful is as meaningful does"; statements have meaning if they can be translated into actions and two statements have the same meaning if they imply the same action. There has been a protracted debate, starting in Peirce's own time and continuing into the contemporary literature, about exactly how this pragmatic maxim is different, or if it is different, from some sort of operationalist or behaviorist maxim about the meaningfulness of empirical statements. If the pragmatic maxim reduces to a type of observability or verifiability criterion, then it would seem that Peirce's pragmatism has little to distinguish it from logical empiricism. In fact, some pragmatic philosophers sympathetic to positivism (Charles Morris 1963, for example) see the two criteria as essentially identical; the only difference being that pragmatism also was concerned with prac-

⁵ One other important aspect of Peirce's work that will not be examined is his semiotics (theory of signs). For Peirce's own comments on the subject collected from a number of different works, see Peirce (1940), and for a contemporary discussion, see Habermas (1992, pp. 88-112).

⁶ Peirce did significant work on metaphysics – his concepts of firstness, secondness, and thirdness – but he was insistent about dismissing traditional metaphysical programs. For a discussion of Peirce's metaphysical views and their relationship to his general philosophy, see Ketner (1998) and Ch. 2 of Lewis and Smith (1980).

Peirce reconhecia que o método de estabelecer o sentido das palavras e dos conceitos era o da pesquisa experimental.

Isto leva alguns pragmatistas a identificar a máxima pragmática com o critério de verificabilidade. Outros, mais naturalistas, afirmam que a máxima pragmática é diferente.

tical matters – adding a criterion of theory choice that involved the practical usefulness of the theory – but it is just an add-on (recall the discussion of van Fraassen in Chapter 3). Other authors want to stress that since Peirce emphasized the experimentally actionable implications, his notion of experiment was much more robust than the foundationalist-inspired notion of observational implications at work in late positivism. For Peirce, the “method of ascertaining the meanings of words and concepts is no other than that experimental method by which all the successful sciences . . . have reached the degrees of certainty that are severally proper to them today; this experimental method being itself nothing but a particular application of the older logical rule, ‘By their fruits ye shall know them’” (Peirce 1906, p. 271). On this more naturalistic reading, meaningful is just what science does, rather than the statements of a scientific theory being meaningful because they are in compliance with some empiricist (as opposed to merely empirical) criterion of meaning. Needless to say, we are not going to settle the debate over the pragmatic maxim at this point – nor do we need to – but it is an important issue, particularly as it relates to situating Peirce’s pragmatism with respect to the contemporary naturalistic turn.

Finally, there is the issue of Peirce’s notion of abduction. For Peirce, there were three forms of logical reasoning: deduction, induction, and abduction. These modes of inference are extremely important for Peirce, since he sees the *process of science*, the actual application of these forms of inference, as the most significant factor in knowledge production (remember, he has no indubitable first principles or foundations to fall back on). Although Peirce’s views about deduction and induction were relatively standard (for the late nineteenth century), his concept of abduction was an important contribution. Abduction is the process of going from a fact to the theory that supports it. It is the process of seeing the connection between a fact, particularly a surprising fact, and the theory that would cover or explain it. Because abduction involves positing a hypothesis, Peirce sometimes referred to the abductive method as the method of “hypothesis” (Ketner 1998, pp. 294–8). An abductive “argument” thus takes the form:

The surprising fact, C, is observed:
 But if A were true, C would be matter of course,
 Hence, there is reason to suspect A is true.
 (Peirce quoted by Hoover 1994, p. 301)⁷

⊕ Este é a abdução em
 no campo da lógica da
 descoberta, a inferência
 que se dá entre a
 lógica da justificativa.

⁷ Niiniluoto (1999) provides a detailed discussion of Peirce’s notion of abduction and argues that this version was more general than his original formulation. Needless to say, it is possible to find more than one concept of abduction in Peirce’s writings.

Exemplo de abdução:

O fato C foi observado.

Se A fosse verdadeiro, C seria lógico.

Logo é possível que A seja verdadeiro.

⊕ A abdução é a inferência que se dá entre a observação

A abdução é a matéria (stuff) de todo insight. É uma forma
crucial de inferência. Um passo necessário mas não suficiente
do conhecimento científico à ciência.
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Abductive inferences seem to be the main "stuff" of good science. They represent the explanatory hunches and the creative insights that are the mainstay of successful scientific practice, and for Peirce they correspond to what is truly novel and knowledge expanding about human inquiry. Of course, one could respond that abduction is the stuff of all insight, and that it is just as easy to abduce a metaphysical explanation as a scientific one; to this, Peirce would probably respond that abduction is necessary, and not sufficient, for scientific knowledge.⁸

Because abduction is a relatively loose notion of inference, it received little attention during the heyday of the Received View where the focus was on deduction and the type of formulaic inductive inference that could be used to narrow rather than broaden the field of legitimate scientific activity. Now, of course, things have changed, and the question of ferreting out the differences among the various types of abductive inference that appear in different fields of inquiry seems to be a worthwhile project. Perhaps one could say that "neoclassical abduction" is an apt characterization of the pedagogical goal of economists who say they want their students to "think like an economist." Maybe such things could be said for other fields as well.

As a final point, it is important to note that even though Peirce was pro-science and naturalistic, he did not (unlike some contemporary authors) want to replace philosophical discourse with a radically narrower set of questions. In the language of Chapter 4, he was a reformist, not revolutionary, naturalist. The goal was to apply the principles of scientific inquiry to the broad class of issues that had traditionally been the purview of philosophy, and not to eliminate most (some perhaps, but not most) of these questions from our reasoned investigation. The purpose was to change the scope of philosophy, not to replace it entirely. As Peirce says in the opening pages of "A Guess at the Riddle":

The undertaking which this volume inaugurates is to make a philosophy like that of Aristotle, that is to say, to outline a theory so comprehensive that, for a long time to come, the entire work of human reason, in philosophy of every school and kind, in mathematics, in psychology, in physical science, in history, in sociology, and in whatever other department there may be, shall appear as the filling up of its details. The first step toward this is to find simple concepts applicable to every subject. (Peirce 1887-8, p. 247)

⁸ Hintikka (1998) offers an interesting strategic (game-theoretic) interpretation of abductive inference.

Peirce era um naturalista, mas não era um revolucionário, que queria substituir o discurso filosófico por um conjunto estreito de questões, e sim um reformista (cap. 4).

...dade era algo inaceitável. Essa perspectiva transformava o saber (assim
como o bom e o belo) no privilégio da classe dominante, e deixava o fazer
para as pessoas práticas e mundanas.

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Although Peirce's work has received a considerable amount of attention in recent years, the name that remains most closely associated with pragmatic philosophy is John Dewey, not Peirce. John Dewey represented "America's philosopher" to a greater degree than any other professional philosopher in the nation's history. For many years, Dewey was not only the country's most influential philosopher, he was one of its most influential intellectuals, and touched in some way almost every aspect of American social discourse and public debate. Although Dewey was a graduate student at Johns Hopkins during the time that Peirce was on the faculty, he was not initially influenced by Peirce. In the early years, Dewey was under the influence of Hegelian idealism, and it was only later after his own pragmatic turn that Dewey started to appreciate significant aspects of Peirce's work. Although Dewey shared the broad pragmatic theme of Peirce's program, there were considerable differences between the two men: in public persona as well as substantive philosophy.

Dewey was reacting first and foremost to the epistemologicalization of philosophy: the tendency, since at least Descartes, to think of all philosophical problems in terms of accurate representation of some ultimate reality. Whether this ultimate reality was considered to be something that humans themselves created, or whether it was something objective to be discovered, the core epistemological questions remained the same. How do our thoughts accurately reflect, or mirror, or represent, this ultimate reality? How do our thoughts correspond (or how could they possibly correspond) to the way the world really is? *Dewey rejected this entire philosophical framework.* According to Dewey, this framework originated in premodern, particularly slave, societies, where the pure and the ultimate were the exclusive domain of the few and the privileged; the ultimate reality became the sacred domain of the dominant class at the expense of the more practical and mundane, which were normally associated with the lower classes. There was a cultivated separation between *knowing* (a lofty, higher, privileged, goal of reflecting the ultimate) and *doing* (the lowly and mundane affairs of human practice and instrumental action). Dewey wanted to dissolve this separation and reaffirm a guiding role for practical affairs; he believed the key to modernism and the scientific form of life lie in just this reaffirmation. But he also felt that the institution of science created a great rift in Western life. If the ultimates – the true, the good, and the beautiful – were privileged and sacred, then science, this great engine of practical expediency and technical advance, was at odds with all that was sacred and revered. The terror of modernism was that really special human things, from poetry to metaphysical insight, appeared to be the antithesis of the mechanical

and practical focus of science. Philosophers from Descartes through Kant and on to logical positivism, sought to reconcile these two tendencies in human culture, while continuing to maintain their separateness. For Dewey, such reconciliation efforts were fundamentally wrongheaded. One of Dewey's problems with the traditional approach was that it left moral and social questions on the other (nonscience) side of culture, thereby denying these areas the potential for the type of progress that has been experienced in the scientific fields. Ethics and values are privileged, but in an effort to stay free of the contamination of the more base science, they are unable to benefit from the progressive methodology that characterized science.

These and the other problems associated with the traditional approach all stem back to the Enlightenment's epistemological turn: to what Dewey calls the "spectator theory of knowledge."

We tend to think of it after the model of a spectator viewing a finished picture rather than after that of the artist producing a painting. . . . these questions all spring from the assumption of a merely beholding mind on one side and a foreign and remote object to be viewed and noted on the other. They ask how a mind and world, subject and object, so separated and independent can by any possibility come into such relationship to each other as to make true knowledge possible. If knowing were habitually conceived of as active and operative, after the analogy of experiment guided by hypothesis, or of invention guided by the imagination of some possibility, it is not too much to say that the first effect would be to emancipate philosophy from all the epistemological puzzles which now perplex it. For these all arise from a conception of the relation of mind and world, subject and object in knowing, which assumes that to know is to seize upon what is already in existence. (Dewey 1948, pp. 122-3)

The main goal of Dewey's work was to break the "intellectual lockjaw called epistemology" (Dewey, quoted by Westbrook 1991, p. 137) by bringing the scientific method into all domains of inquiry. Although Dewey clearly endorsed the scientific method, the method he endorsed was a very general, perhaps even generic, approach to inquiry: the method of "analytic, experimental observation, mathematical formulation and deduction, constant and elaborate check and test" (Dewey 1927, p. 164). For Dewey the "scientific method is not confined to those who are called scientists" (Dewey 1970, p. 29); it was simply "an elaboration, often a highly technical one, of everyday operations" (1970, p. 29). To use

Ele aceitava o método científico, mas tinha uma visão ampla do que era ciência. Com frequência Dewey usava como sinônimo de ciência *razão*,

Robert Westbrook's felicitous term, Dewey had a "latitudinarian" view of science (Westbrook 1991, p. 142). But while the scientific method was quite general, it was also profoundly important; it was the single most reliable approach to the discovery of the type of practical truth that was most useful in making sense of human experience and guiding social action. Dewey did not endorse the scientific method, because it gave us "knowledge" in the traditional sense – correspondence to an ultimate reality that existed outside of human experience – but because it was the most effective tool in accommodating human experience.⁹ As Westbrook characterized Dewey's vision of science:

Although his conception of scientific method did set definite limits on what could count as "science," it was a most liberal formulation. It was so liberal that Dewey often comfortably used science as a synonym for reason, intelligence, and reflective thought, a practice that did not manifest, . . . an unduly narrow notion of the latter terms but rather a willingness to offer relatively relaxed entrance requirements to the house of science. (Westbrook 1991, p. 141)

For Dewey, as for Peirce, scientists (and others) do pursue truth, but the truth they pursue is not the standard notion of truth as a correspondence with an ultimate reality. For Dewey, truth is what works in the solution of concrete problems and furthers or enhances human life. This is an *instrumental* notion of truth¹⁰ that sees truth as an effective instrument for the engagement of human life with material existence. It is an active, not a passive or reflective, notion of truth.

⁹ Dewey's notion of "experience" is fundamental to his critique of traditional epistemology. His use of the term seems to resonate more with contemporary evolutionary epistemology than with the way the term is used within empiricist-inspired philosophy of science.

Dewey's analysis . . . pointed to his larger critique of the concept of experience at the heart of traditional epistemology and to a different conception of experience, one congruent with the findings of evolutionary biology and functional psychology and evident in his own logical theory. This alternative conception of experience, which Dewey termed variously "immediate empiricism" or "naive realism," held that experience was not, ubiquitously, a knowledge-affair but rather "an affair of the intercourse of a living being with its physical and social environment" in which that living being was, in the first instance, not a knower but an "agent-patient, doer, sufferer, and enjoyer." (Westbrook 1991, p. 126)

¹⁰ Dewey's instrumentalism should not be confused with the "instrumentalist" interpretation of theories associated with the Received View. The next section will examine a particular case in economic methodology – Friedman's methodology – where there has been some debate about these two different interpretations of instrumentalism.

A verdade não é a correspondência a realidade final, mas aquilo que ajuda na solução de problemas concretos ou que melhora a vida humana. É uma noção ativa de verdade.

Os conceitos e teorias são instrumentais, na medida em que resolvem problemas inclusive até aos fins.

If ideas, meanings, conceptions, notions, theories, systems are instrumental to an active reorganization of the given environment, to a removal of some specific trouble and perplexity, then the test of their validity and value lies in accomplishing this work. If they succeed in their office, they are reliable, sound, valid, good, true. If they increase confusion, uncertainty and evil when they are acted upon, then they are false. . . . Handsome is that handsome does. By their fruits shall ye *know* them. . . . The hypothesis that works is the *true* one; and truth is an abstract noun applied to the collection of cases, actual, foreseen and desired, that receive confirmation in their works and consequences. (Dewey 1948, pp. 156-7)

Os f. verdade (instrumentais -> lista)

Notice that Dewey's instrumentalism is not (as he is often accused) simply the idea of choosing the most efficient means for achieving any particular (arbitrarily given) end or goal. For Dewey, knowledge shapes ends as well as the means for achieving them.

By one of those curious distortions so over-frequent in philosophical discussions, my use of the word "instrumental" in previous writings has been often represented as criticized as if it signified that "knowing" must be limited to some *predetermined specific end*. What I have said, time and again, is precisely to the opposite effect. It is that scientific knowing is the only general way in our possession of getting free from customary ends and of opening up vistas of new and freer ends. (Dewey from *The Later Works*, quoted in Seigfried 1996, p. 174)

Dewey argued that the reason why this pragmatic notion of truth seems so alien is the grip of our traditional epistemological vision.

In just the degree in which existence is divided into two realms, a higher one of perfect being and a lower one of seeming, phenomenal, deficient reality, truth and falsity are thought of as fixed, ready-made static properties of things themselves. Supreme Reality is true Being, inferior and imperfect Reality is false being. . . . Such a notion lies at the back of the head of every one who has, in however an indirect way, been a recipient of the ancient and medieval tradition. This view is radically challenged by the pragmatic conception of truth. (Dewey 1948, pp. 158-9)

Dewey's instrumentalist notion of truth combined with his latitudinarian view of science – a combination he called "empirical naturalism"

A concepção pragmática da verdade (as ideias que são confirmadas por suas consequências) rejeita o dualismo de uma realidade superior, perfeita versus uma realidade inferior, imperfeita.

(Dewey 1929) – allowed for truth-seeking inquiry to extend broadly into politics, ethics, and other value-directed inquiries. Although the desire to integrate axiological inquiry was common to all pragmatists – all wanted values to be subject to the same type of rational examination that characterizes science – the issue was particularly poignant for Dewey because of his deep concern for social policy and axiological inquiry (Manicas 1998). It was ultimately the application of his quite liberal notion of scientific inquiry to other aspects of culture, particularly those involving the formation of values, that provided the driving force behind his work. In his own words:

To frame a theory of knowledge which makes it necessary to deny the validity of moral ideas, or else to refer them to some other and separate kind of universe from that of common sense and science, is both provincial and arbitrary. The pragmatist has at least tried to face, and not to dodge, the question of how it is that moral and scientific “knowledge” can both hold of one and the same world. And whatever the difficulties in his proffered solution, the conception that scientific judgments are to be assimilated to moral is closer to common sense than is the theory that validity is to be denied of moral judgments because they do not square with a preconceived theory of the nature of the world to which scientific judgments must refer. (Dewey 1908, p. 83)

Dewey was concerned with social and ethical issues, and he maintained a view of science that would allow scientific inquiry to accommodate such topics, but it was *not just* that science could be *applied to* such fields. In a sense, science was coextensive with these fields. It was not a matter of science, out there and removed, being brought *to* the domain of axiological inquiry; rather, there was just one – instrumental, means-ends, matter-of-fact, intelligent – method of inquiry, and it had always been a part of human social existence. It is just that since the Enlightenment, the method had become markedly successful in the one particular domain we call science. The problem was, according to Dewey, that the process had not been allowed to come to fruition; its more general (and quite natural) extension to all aspects of human culture had been sabotaged by pressure, particularly philosophical pressure, for separation and purification. It should have been one continuous and many faceted application of intelligence to human experience; it just became arrested along the way.

This method, the method of intelligent inquiry, congeals effectively within the scientific fields because of the particular social structure of the scientific community. Science and knowledge are fundamentally social,

Quando seu conceito amplo e pragmático de ciência e método,
no qual a pesquisa da verdade devia ser instrumental,
concreta, inteligente, como nem os homens procuraram fazer,
não fazendo sentido a separação entre moral e ciência.

A ciência e conhecimento são fundamentalmente social,
são funções da associação e da comunicação.

A cultura ²³⁰ da ciência é crítica, aberta, cooperativa, não-hierárquica,
and Dewey repeatedly criticized traditional epistemology for missing
this point. Em suma, é essencialmente democrática.

But current philosophy held that ideas and knowledge were functions of a mind or consciousness which originated in individuals by means of isolated contact with objects. But in fact, knowledge is a function of association and communication; it depends upon tradition, upon tools and methods socially transmitted, developed and sanctioned. Faculties of effectual observation, reflection and desire are habits acquired under the influence of the culture and institutions of society, not ready-made inherent powers. (Dewey 1927, p. 158)

Not only is science social; it has a particular social structure that facilitates the process of intelligent inquiry. According to Dewey, the culture of science is critical, and yet open, cooperative, nonhierarchical, and maintains social consensus as the ultimate source of stability. For Dewey, science is democratic and therein lies the key to its intelligence and success. Science is simply an exemplar of the democratic problem solving and the extension of this democratic process to other aspects of culture will allow for the wider application of intelligence and the discovery of (instrumental) truth to those other aspects of culture. Democracy is ultimately the key to human knowledge.

What Dewey is concerned to argue, early and late, is that democracy is the precondition for the application of intelligence to the solution of social problems. We need the method of intelligence ("the scientific method") to find out what our ends-in-view should be, as well as to find what means are to be used. And democracy is a precondition for the use of the method of intelligence in social life. (Putnam and Putnam 1990, p. 427)

Dewey was profoundly influential and had a wide-ranging, comprehensive, and continually evolving philosophical vision; in addition to these things, he lived a very long life and was intellectually productive during almost all of it. I have barely scratched the surface of Dewey's work. Nonetheless, I have tried to summarize the main themes of his instrumentalist pragmatism in a way that differentiates his position from that of other classical pragmatists such as Peirce, as well as from neo-pragmatists like Richard Rorty (discussed below). I have also set the stage for the next section that discusses, among other things, Dewey's impact on certain areas of economics.

6.1.2 *Classical Pragmatism and Economics*

The previous section discussed the classical pragmatism of Peirce and Dewey without any reference to economics; this section will examine some of the many points of contact between these two bodies of literature. I will discuss three, very different, examples of such contact: they occur at different points in time and involve entirely different aspects of economic theory. The first is the influence of Deweyan pragmatism on institutionalist economics (particularly the economics of Clarence Ayres). Although Ayresian institutionalism is certainly not a mainstream economic topic, it is relevant in this context, because it is a non-Marxist heterodox program that has explicit and rather pronounced links to classical pragmatism. Second, I will discuss the thesis defended by Abraham Hirsch and Neil De Marchi (1990) that Milton Friedman's methodology of positive economics is best understood as a version of Deweyan instrumentalism. Finally, and on a slightly different note, I will consider Peirce's own "Note on the Theory of the Economy of Research" (1879), a paper where the philosopher himself applied a relatively contemporary-looking economic model to the question of the optimal choice of scientific research projects. These are three very different types of cross-fertilization, but they provide a good sense of the diversity of the contact.

It is almost cliché that any discussion of American Institutionalism must include a reference to the "impact" of pragmatic philosophy. Like Hegel's influence on Marxian economics, or the impact of Bentham's utilitarianism on Mill's version of the classical program, pragmatism is automatically linked to institutional economic theory.¹¹ There are many different ways that one might approach the relationship between institutionalism and pragmatism; for example, one could examine Peirce's impact on institutional economics, or the way that Dewey's instrumentalism affected the work of Thorstein Veblen, or Dewey's impact on later institutionalists such as Wesley Clair Mitchell.¹² Rather than pursuing any of these, rather controversial, connections, I will focus on a case

¹¹ When I refer to "institutional" economics in this chapter, I mean the "old" institutionalism of Thorstein Veblen, John R. Commons, and those who were directly influenced by their work, and not the more recent, and perhaps more mainstream, economics of the "new" institutionalist school (sometimes called the "CDAWN" school after the names of its most influential contributors: Ronald Coase, Harold Demsetz, Armen Alchian, Oliver Williamson, and Douglass North). For various comparisons of the old and the new institutionalism, see Hodgson (1989, 1994, 1998a), Langlois (1986, 1989), Mayhew (1989), and Rutherford (1989, 1994).

¹² Bush (1989), Dyer (1986), Liebhafsky (1993), Mirowski (1987a), and Rutherford (1990) offer differing views on the Peirce-institutionalism connection and Tilman (1998) provides a recent discussion of Dewey and Veblen.

where the relationship between pragmatism and institutionalism is less contentious, where the impact is direct and well established within the literature: the relationship between Dewey's instrumentalism and the economics of Clarence Ayres.

Clarence E. Ayres received his Ph.D. in philosophy from the University of Chicago in 1917 but didn't begin his work on economic theory until thirteen years later. During the next twenty-five years, Ayres elaborated a theory of economic development and cultural change that rivaled Marx's materialism in historical scope. The theory provided an explanatory schema that encompassed both the development of the material forces of economic production as well as the corresponding evolution of social and cultural institutions. The theory, like Marx's historical materialism, provided a very general explanation of social and economic change applicable to all societies in all places and at all times, but it could be (and was) directed primarily, again like Marx, at the evolution of modern capitalist society. While Ayres was quite explicit about the intellectual origins of his theory – it came from the direct combination of Dewey's instrumentalism and Thorstein Veblen's institutionalist economics (particularly Veblen 1904 and 1923) – many commentators consider Dewey to be the more important influence.

Although he has taken from Veblen his general approach and some of Veblen's interpretation of the evolving economic system, it is in Dewey's work that Ayres found the inspiration to go beyond Veblen. This is especially the case in connection with the problem of value. Ayres technological or instrumental theory of value, which is his main contribution in the field of economic theorizing, owes more to Dewey than to Veblen. (Gruchy 1972, pp. 89-90)

The core concept in Ayres's theory of economic development (1952, 1961, 1962) was the so-called Veblenian dichotomy of "technology" and "institutions." Expanding on Veblen's distinction between "business" (or salesmanship) and "industry" (or workmanship), Ayres maintained that every human culture was an uneasy combination of two basic and contradictory forces: the forward-looking, dynamic, and progressive forces of technology and instrumental value, and the backward-looking, static, and impeding forces of institutions and ceremonial value. These two forces, while always intertwined, in fact represent two distinct cultural poles, and the relative magnitude of their respective influences provides an explanation for the observed characteristics of any particular society.

Todas as sociedades são o resultado de duas forças contraditórias: dinâmicas: tecnologia e valor instrumental
obscurecedoras: instituições e valores cerimoniais
estáticas

For Ayres, as for Dewey, means and ends form a continuum that arises from within the process of experience. There is, in this view, no dualistic separation between means conceived as experiential in origin and ends conceived in exclusively metaphysical terms. Thus Ayres made a clear distinction between genuine values, which are the technological stuff of experience, and ceremonial values, which are the product of cultural mores and institutionalized rank, status, and authority. (Hickerson 1987, p. 1129)

Because technology develops spontaneously as a result of the recombination of existing tools, and since institutions are inherently static, particular institutional configurations can never cause technological change, but they can impede or accommodate it. Certain institutions are relatively permissive of technological change, while others are relatively nonpermissive.¹³ The basic rule for successful economic development is to promote institutional patterns that are permissive of technological progress and to eliminate those that resist or sabotage it.

The history of the human race is that of a perpetual opposition of these forces, the dynamic force of technology continually making for change, and the static force of ceremony – status, mores, and legendary belief – opposing change. (Ayres 1962, p. 176)

As Ayres tells the story of Western economic development (1962), Roman invasion of Northern and central Europe brought Mediterranean technology, while destroying the existing institutional structures, but when the Romans withdrew Roman ceremonial patterns withdrew with them, leaving an institutional vacuum that was quite permissive of technological change: permissive enough to accommodate the industrial revolution.

Ayres's notion of technology is the cornerstone of his entire analysis and it comes directly from Dewey's instrumentalism.

It was from John Dewey that I first learned what that way of knowing is. It is what Dewey called the "instrumental" process. This, as Dewey clearly realized, is identical with what Veblen was calling the "technological" process. Both of these great pioneers recognized this process as (in Veblen's words) "the life process"

¹³ Ayres's work has undergone further elaboration by later institutionalists such as Louis Junker (1962), Marc Tool (1985), and others. A number of more recent discussions emphasize the Deweyan connection: Bush (1994) and Hickerson (1987), for example.

of mankind, a process that runs in unbroken continuity through the activities of all societies and has the same meaning for all, so that a good charitable bequest, or a good peace treaty, or a good system of regulation of the flights of airplanes, is good in exactly the same sense that a cave man's striking stone was good: good in the sense of bringing home the bacon. (Ayres 1961, p. 29)

Not only is Ayres's notion of technology derived from Dewey's pragmatism, his theory of value – and, because economics is fundamentally about valuing and choice, his entire economic theory – is based on Dewey's instrumental theory of valuation (Dewey 1939). Humans must resolve certain problems in their engagement with nature, and for Dewey, the solutions to these problems come about as a result of an instrumental process of trial and error: so, too, for economic problems and their solution. In our economic lives, we must find effective ways of provisioning, and the means for such provisioning are uncovered through the same instrumental process that typifies scientific knowledge acquisition for Dewey. To make economic decisions requires valuation – value must be assigned to the various options – and the method by which that valuation occurs is the same method of inquiry that occurs in science; the proper valuation is the instrumentally warranted valuation.¹⁴

Although there is more to Ayresian institutionalism than the Veblenian dichotomy and his theory of social valuation, this brief introduction is sufficient to drive home the point about the program's relationship to Dewey's pragmatism. Whether or not one thinks the Ayresian program

¹⁴ Dewey and Ayres both made interesting comments about the terms "institutional," "technological," and "instrumental." It seems that Ayres considered calling his theory instrumental (rather than institutional) economics, whereas Dewey considered calling his philosophy "technological" (rather than instrumental) pragmatism.

As a designation of a way of thinking in economics the term "Institutionalism" is singularly unfortunate, since it points only at that from which an escape is being sought. . . . As a designation of the way of thinking which recognizes the decisive part played by technology in economic life the term "instrumentalism" is far more satisfactory. (Ayres 1962, pp. 155–6, note 1)

While a number of writers have brought forward the facts which are involved in this view, Dr. Clarence Ayres, as far as I am aware, was the first one explicitly to call science a mode of technology. It is probable that I might avoided a considerable amount of misunderstanding if I had systematically used "technology" instead of "instrumentalism" in connection with the view I put forth regarding the distinctive quality of science as knowledge. (Dewey, quoted by Junker 1962, p. 68, note 5)

was, or is, a reasonable theory of economic development, it is clear that he derived the key concept of technology directly from Dewey's instrumental theory of scientific knowledge. Ayres sought, as Dewey did, a concept of instrumental valuation that was explicitly normative – and, thus, antirelativist – while still being general enough that it did not eliminate every type of human inquiry that could not be forced into the Procrustean bed of the physical sciences, or (worse yet) the traditional foundationalist characterization of those sciences. For Ayres, as for Dewey and other pragmatists, the key to science was not that it transcended all other forms of culture, or as Ayres put it, not that it was not “a cult” (1962, pp. 278–9), but that it is a very special cult, with quite special, though practical, qualities: “the decisive difference between science and superstition is that the operational efficiency of scientific ‘beliefs’ is rather more apparent than that of other ‘cults’” (1962, p. 279). Science doesn't touch god, but it does touch home.

The second point of contact between pragmatism and economics that I will examine concerns a more mainstream methodological topic – Milton Friedman's methodology of positive economics – but before embarking on that discussion, it is useful to clear up a potential confusion that arises because of the variety of ways the term “instrumentalism” is used within the methodological literature. While philosophers use the term in many different ways (see Mäki 1998a), it is not necessary for us to survey all of these possibilities. There are, though, *three different ways* that the term is used in contemporary economic methodology, and individuating these three uses should go a long way toward eliminating a potential source of considerable confusion. Because two of these are relevant to the previous discussion of institutionalism, and two are relevant to the following discussion of Friedman's methodology, this seems to be an opportune time to ferret out these various possibilities. The three uses are:

- Instrumentalism as it is used in the philosophy of science.
- Instrumentalism in Dewey's sense.
- Instrumental rationality as an attribute of the most efficient means to achieving given ends.

The first of these, instrumentalism within the philosophy of science, was examined in Chapter 3 in the section on Logical Empiricism. According to this interpretation of instrumentalism – commonly associated with Pierre Duhem (1954) – scientific theories are merely tools for prediction; they are merely “instruments” to facilitate the prediction of empirical observations, and do not in any sense (nor should they be expected to) explain the way the world really is. The second usage of the

term, Deweyan instrumentalism, was discussed in detail in the previous section of this chapter. Mixing these two meanings of the term instrumentalism seems to be common in the methodological literature and it is potentially a source of much disagreement.

The second potential confusion relates to the second and third of the above uses. There is a growing contemporary literature (Hargreaves Heap 1989 and Stewart 1995, for example) that *criticizes* mainstream neoclassical economics *because it is instrumentalist*. The argument is that neoclassical economics involves (only) an *instrumental theory of rationality*. According to this instrumental view, “rationality” is solely a property of the relationship between means and ends – being rational simply involves choosing the most efficient means for achieving any given end – and has nothing to do with the nature of the end itself. Thus, one can just as rationally decide how to commit mass murder as how to spend one’s fixed income on various bundles of consumption goods. Critics argue that there is significantly more to the concept of rationality than just this instrumental notion and that economics would benefit greatly from a more sophisticated concept: particularly one that allows for the rationality of goals as well as the means for achieving them. The irony is that, whereas this critique is one that most institutionalists would wholeheartedly endorse, those institutionalists would say that the problem is that *mainstream economics does not have* (rather than has) *an instrumentalist* theory of rationality. According to the (Veblen-Ayres-Dewey) instrumental theory of valuation, goals as well as means have instrumental value – not only means, but certain goals as well, are consistent with the human life process and are, thus, associated with instrumentally rational (i.e., good) social decision making. Both groups agree about the problem with mainstream economics: but those writing in contemporary philosophy of economics say the problem is because the mainstream *is* instrumentalist, whereas institutionalists say that the problem is because it *is not* instrumentalist. Perhaps identifying subscripts are in order – instrumental_D for the Deweyan use of the term and instrumental_R for the notion of instrumental rationality – or perhaps we should just remember that the words instrumental and instrumentalism are used in a variety of different ways and be careful not to mix them.

Milton Friedman’s essay on positive economics (1953) was discussed in Chapter 2 along with the “F-twist” and the “assumptions” controversies that comprise the first round of methodological debate about Friedman’s essay. A second round of debate opened up in 1979, with the publication of Larry Boland’s “Critique of Friedman’s Critics” (also

Boland, 1982).¹⁵ Boland argued that the most consistent way to interpret Friedman's essay was to view it as an argument in favor of an instrumentalist approach to economic methodology. The type of "instrumentalism" that Boland accused Friedman of endorsing was the first (philosophy of science) type of instrumentalism on the above list – scientific theories are just predictive instruments – and, while Boland was not the first to interpret Friedman in this way (Wong 1973 and 1978, for example), the paper was widely read and set off a protracted (and continuing) debate.¹⁶

Hirsch and De Marchi (1990) changed the debate substantially by arguing that, while Friedman in fact advocated an instrumentalist position, a careful examination of his life and work suggests his instrumentalism is of a Deweyan, not a Duhemian, kind.¹⁷ Their argument focused (unlike most of the work on Friedman's methodology) on his implicit working methodology – the method that can be discerned from his actual theoretical and empirical practice – rather than just examining what he wrote in the 1953 essay. They presented evidence that Friedman's Marshallian microeconomics, his monetary theory, his work on the permanent income hypothesis, his critique of Keynesian economics, as well as a number of his less-well-known projects (such as his study of professional incomes) could all be understood best as economic inquiries in the Deweyan instrumentalist mode.

Thus, Friedman rejects the *logic* of economic theory, as formulated by the economic methodologists . . . just as Dewey does. And he seems to have a notion of what the appropriate logic should be, which is essentially the logic that Dewey formulated. . . . It is Friedman's position, as it was Dewey's, that 'the concepts involved [should be] regarded as hypotheses to be employed in observing and ordering of phenomena, and hence . . . [should] be tested by the consequences produced by acting upon them.' Theory should be judged according to how helpful it is when one uses it to try to understand past economic experience and to

¹⁵ For an entertaining rendition of the events leading up to the publication of Boland (1979), see Ch. 1 of Boland (1997); Chs. 3 and 4 of the same book discuss the aftermath of the paper.

¹⁶ A partial list would include: Boland (1980, 1981, 1987), Dennis (1986), Fels (1981), Frazer and Boland (1983), Hoover (1984), Lagueux (1994), Mäki (1986, 1992b), Rotwein (1980), and Wible (1984), as well as Ch. 4 of Blaug (1980/1992), Ch. 8 of Caldwell (1982/1994), and pp. 162–9 of Hausman (1992).

¹⁷ A version of this thesis was also offered in Wible (1984).

predict future occurrences, and especially, by whether it leads to new insights as the process of further inquiry proceeds. (Hirsch and De Marchi 1990, p. 54)

In addition to examining Friedman's essay on methodology and his economic practice, Hirsch and De Marchi also trace the influence of his teacher and National Bureau of Economic Research (NBER) colleague Wesley Clair Mitchell. As Hirsch and De Marchi put it: There were "interesting traces of Mitchell's heterodoxy in Friedman's views about methodology" (1990, p. 2). Of course Mitchell is not Dewey, but Mitchell was pragmatically inclined (though clearly on the empiricist end of the pragmatic continuum); he was Veblen's student; his early work on *Business Cycles* (1913) was an attempt to empirically corroborate Veblen's theoretical insights from *The Theory of Business Enterprise* (1904); and he was one of the main representatives (along with Veblen) of what Dorothy Ross calls the scientific version of American liberal exceptionalism (Ross 1991, Ch. 10). These are not philosophical or political connections that one would expect to find lurking in the background of Friedman's free market economics, but therein lies the rub. According to Hirsch and De Marchi, Friedman's positive economics (method and practice) is broadly instrumentalist in the Deweyan sense, but his free market political economy is not; his political economy was more influenced by Frank Knight. Now, although it is clear that Knight was also influenced by American pragmatism (Emmett 1990; Hammond 1991; Hands 1997b), he was quite hostile to Dewey's particular version of the pragmatic tradition – in part because he felt that it was too close to positivism and behaviorism (according to Knight the most pernicious of philosophical doctrines) – and he also advocated a political economy that was quite different from that of Dewey (or Veblen, or Mitchell) and much closer to that of Friedman. Although Hirsch and De Marchi uncover this tension between Friedman's (Deweyan) positive methodology and his (Knightian) political economy, they offer little in the way of rapprochement. They end their study of Friedman by insisting that his political economy was not a "substantive contribution" (1990, p. 292).

Whether or not one is entirely persuaded by Hirsch and De Marchi's argument, it is clear that they have provided an interesting new interpretation of Friedman's methodology and managed to connect Deweyan instrumentalism to a type of economics that is radically different from the American Institutionalism that is usually associated with pragmatic philosophy. Their work, along with recent work on Knight, also raises interesting questions about the general relationship between pragmatism and the early Chicago School of economics. The metascience most com-

monly associated with the Chicago School seems to be the self-conscious positivism of George Stigler, but perhaps that perception is more a product of the rhetorical success of the Received View than with the philosophical predilections (or practice) of the founders of the Chicago School. In any case, the fact that Friedman's instrumentalism is automatically associated with Duhemian instrumentalism – or, for that matter, the fact that Knight's methodological position is associated with *a priorism* – is clear evidence that the philosophy of science (particularly Received View philosophy of science) *set the terms of the debate* in mid-twentieth-century economic methodology. To be doing "science" has (up until very recently) meant to be doing empiricist-foundationalist science of either the logical empiricist or falsificationist sort; to do otherwise – for instance, to engage in scientific inquiry in a pragmatic way – was simply not to be doing science at all. Since Friedman's work was extremely successful and influential within the profession, the implication would seem to be that he must have been doing something that was in compliance with the tenets of (at least some part of) the Received View; Knight, because he insisted on defying the positivist party line, must have been supporting *a priorism*. Of course, the main message of the pragmatic turn is that these two options are no longer the only games in town.

The final example of the connection between classical pragmatism and economics takes us back to Peirce, in fact a paper published by Peirce in 1879. The paper, "A Note on the Theory of the Economy of Research," was essentially an application of cost-benefit analysis – in this case, cognitive cost-benefit analysis – to the problem of choosing among scientific research projects. A number of recent authors have taken note of the paper (Delaney 1992; Rescher 1976 and 1978; Stewart 1991; Wible 1994a, 1994b, and 1998), and some make the argument that "Peirce's interest in political economy exerted a strong influence on his theory of science" (Stewart 1991, p. 505).¹⁸ The paper addresses a relatively straightforward problem in cost-benefit analysis: How should the scientific community allocate its resources to achieve the most epistemic efficiency?

Peirce saw as one of the most fundamental problems of the scientific community the rational determination of "how, with a given expenditure of money, time and energy, to obtain the most valuable addition to our knowledge." . . . In response to

¹⁸ Although this 1879 paper is undoubtedly Peirce's most significant contribution to economics, it is certainly not his only contribution; Wible (1999) gives a complete list of his writings related to economics.

this problem, he worked out specific criteria in an area he called "The Economy of Research" that would function in the rational assessment on a cost-benefit basis of proposed research programs so as to optimize the allocation of limited resources in its pursuit of long-range goals. It was his conviction that if these or criteria like them were to be adopted by the funding arm of the scientific community, judgments otherwise unprincipled would come under the purview of rational criteria designed with long-range success in mind. (Delaney 1991, p. 34)

Peirce's approach to the problem was to maximize the difference between the total utility and total cost of various projects and the efficient solution was expressed in terms of the marginal conditions (ratios of marginal benefits and costs) familiar from contemporary microeconomics. If marginal benefit is greater than marginal cost for a particular project, increase the number of resources going to that project; if marginal cost is greater than marginal benefit, reduce the resource commitment. This, according to Peirce, provides a framework for analyzing the allocation of scientific resources and, thus, the division of cognitive labor between various research projects. It offers a solution to the problem of underdetermination, because it provides (cost-benefit) criteria for deciding among various scientific research programs when the data alone does not afford a clear choice. His paper is an early example of what might be termed the "economic approach" to the problem of scientific resource allocation and it presents us with a totally different type of connection between economics and pragmatic philosophy.¹⁹

Although Peirce's paper looks a bit like some of the recent "economics of science" that will be discussed in Chapter 8, there is an important difference. As we will see in Chapter 8, much of the recent literature on the economics of science focuses on invisible hand-type results: where epistemic efficiency emerges (or could emerge) as the result of the rational self-interested actions of individual scientists. Peirce would not endorse such a view of science. Peirce was radically anti-individualist and viewed science as cooperative and relatively selfless; his economics of research is about how the *scientific community* could efficiently allocate its resources. Peirce uses marginal analysis, but it is to discuss a planner's problem (epistemic planning by the scientific community) and not how cognitive efficiency would emerge from the self-interested actions of individualist scientist-agents.

¹⁹ It is not entirely clear how much of the argument was original to Peirce and how much came from the economics literature. Stewart (1991) claims that Peirce was influenced by Ricardo – and more relevant to this particular paper – Cournot.

This brings us to one final, but important, point about the relationship(s) between classical pragmatism and economics. For pragmatists of all stripes, there is an “inseparable connection between rational cognition and rational purpose” (Peirce 1905a, p. 184) and as “purpose” necessarily involves doing things – putting things to work, producing and distributing – pragmatism necessarily connects cognition and economic activity. Pragmatism is not just a philosophy of knowledge that can be “applied” to economics like methodologists have tried to apply positivism and Popperian falsificationism; *it is a philosophy of knowledge that is inexorably tied up with economic life*. Dewey attributed the framework of classical epistemology to the class structure of the society from which that framework emerged; he also explicitly sought a characterization of scientific inquiry that would accommodate the moral and social sciences, while simultaneously maintaining democracy as the most important characteristic of such inquiries; finally Peirce, aggressively anti-individualist, and yet using what is now standard microeconomics to decide among various scientific research projects. These are not just cases of philosophers applying their ideas to economics, or of proffering ideas that can easily be picked up by economists; these are more cases of the inseparable intermeshing of philosophical and economic ideas.

6.2 Neopragmatism and the Discursive Turn

Although pragmatism is clearly back on the philosophical scene, there are reasons for its revival that are independent of any of the issues discussed in the previous section. In fact, there are reasons for the resurgence of pragmatic ideas that are totally independent of the philosophical problem-situation of classical pragmatists such as Peirce and Dewey. One such reason is the development of a neopragmatist philosophical perspective – particularly through the work of Richard Rorty (1979, 1982, 1989, 1991a, 1991b) – that manages to meld elements of classical pragmatism with aspects of postmodernism. Given Rorty’s philosophical impact, and the fact that his work has influenced the literature on economic methodology, a brief summary of his position is clearly in order. But before embarking on the discussion Rorty’s particular contribution, it will be useful to briefly broach the vexing and tangled question of *postmodernism*.

6.2.1 Rorty, Neopragmatism, and Science as Discourse

Although postmodernism has touched almost every aspect of contemporary intellectual life, it is not a philosophical “position” that can be summarized in the way that I have tried to summarize other aspects

of contemporary science theory.²⁰ Perhaps the best method is to follow Allan Megill's (1989) lead in his discussion of postmodernism and approach the topic from Wittgenstein's "family resemblance" point of view; while postmodernism has no single defining characteristic, certain authors and certain texts bear a family resemblance that identifies them with the postmodernist perspective. The family resemblance seems to be most clear when we focus on what postmodernism *is against* – what it *opposes* – rather than what it advocates. Most important, postmodernism *contests modernism*. It challenges the entire intellectual and cultural inheritance of the Enlightenment; it contests reason-centered universalism and, thus, challenges traditional views of rationality in both science and society; it opposes not only conventional rationality but the necessity and authority of all universalist perspectives. A recurrent theme in postmodern discourse is that the project of the Enlightenment has simply run out of gas; the rationalist discourse that has provided the backdrop for, and the legitimization of, almost every aspect of our post-Enlightenment intellectual (and much of our practical) life, has been radically *delegitimized*.

One way to view the process of coming into postmodernism is to think about the historical evolution of the three main topics of classical philosophy: the true, the good, and the beautiful. Epistemology investigated the true, ethics the good, and aesthetics the beautiful. Originally all three were considered absolutes; all existed as universals independent of the particularities of time, place, culture, or individual perspective. Aesthetics was the first to give up its universality, the first to be situated, particularized, dependent on culture and perspective. Then came ethics. By the Enlightenment, there were many different ways of thinking about ethical matters – some religious-based, some thoroughly secular, none with a universal obeisance – and although these views could be discussed rationally, the absolutism of the good faded farther and farther into our collective philosophical memory. But truth held its ground. In fact, a main feature of the Enlightenment was to extend the method of truth finding – the method of science – into many of the domains that had once been occupied by other aspects of culture. Logical positivism is, thus, in a sense, philosophical high modernism; for strict positivism both aesthetics and ethics are purely perspectival – they depend on the perspective of the individual and have no objective meaning – meaningfulness and truth are reserved for science and logic alone. Megill (1985) thus refers to post-

²⁰ Nonetheless, at least one philosopher has the audacity to give it a birthday: "The dynamiting, at 3:32 p.m. on 15 July 1972, of the (Le Corbusier-based) Pruitt-Igoe housing development in St. Louis" (Bhaskar 1991, p. 139).

modernism as “aestheticizing knowledge” – basically doing to knowledge what modernism did to aesthetics. One implication of this aestheticization is a general suspicion of “theory” – after all, theories are attempts to corral contingency, to contain the particular within the universal and the absolute. Thus, postmodernism is, in Lyotard’s much quoted phrase: “incredulity toward metanarratives” (Lyotard 1987, p. 74). All stories about necessity – in science, in society, in history, in ethics – are to be contested. Science is deconstructed, but then so are the other touchstones of modern life: progress, efficiency, justice; you name it.

Postmodernism, of course, comes in a variety of different hues, from the most radical to the relatively complaisant. On the extreme end, there are postmodernist authors who totally disavow any effort to find a “solution” to the postmodernist dilemma; they seem, instead, to simply revel in the abyss. But such extreme views are quite rare among those sympathetic to postmodernism. For most authors, being informed by postmodernist ideas simply means maintaining a deep suspicion about traditional modernist stories – be they stories about truth, necessity, justice, or anything else – and the more the stories seem to be endorsed by the powers that be, the more suspicious they are. Perhaps we can find a new postmodernist place to stand, but the assumption is that we are not going to find it by looking at the same old maps and asking the same old people. In this sense, many of the views discussed in previous chapters, those that have undermined and offered replacements for the Received View, seem to bear a faint postmodernist family resemblance. It is sometimes barely detectable, and many of the authors would vehemently deny it, but on close examination one can in fact make it out.

So if Kuhn and SSK are only remotely related to postmodernism, what names are associated with more extreme versions of the postmodernist view? Well, there is no definitive list, but names that often appear include: Friedrich Nietzsche from the end of the nineteenth century; Martin Heidegger from the first half of the twentieth century; and Michel Foucault, Jacques Derrida, and Jean-Francois Lyotard more recently. Nietzsche was perhaps the first to inaugurate this style of thought and although many aspects of his philosophy show traces of postmodernism, his perspectivist concept of truth – that all truth is partial, provisional, situated, and relative to the context of the knower, or as he put it, that truth is “a mobile army of metaphors, metonyms, and anthropomorphisms” (Nietzsche 1954, p. 46) – is perhaps the most revealing. But even for Nietzsche, as with much of postmodernism, the nihilism that follows from aestheticizing (particularly) knowledge, is active, not a passive nihilism.