JOHN DEWEY'S PRAGMATISM AND ECONOMIC METHOD: MODERNISM AND POSTMODERNISM IN ECONOMICS

A Dissertation Presented

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Dedicated to the memory of
Rodney Thaxton

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ABSTRACT

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The dissertation develops and demonstrates a new Marxist approach to the epistemological problem of cognitive modernism, the problem of knowing the true laws of economic reality. This new approach is an antiessentialist and postmodernist critique of versions of Deweyan pragmatism. In American economics, versions of Deweyan pragmatism provide epistemological justification for the verity and primacy of two different economic theories of the world: the American Institutionalism of Thorstein Veblen and the Chicago School of Milton Friedman. Each school uses Deweyan pragmatism to ground its claim to be a science, and each uses Deweyan pragmatism to prove its contention that it offers the correct scientific analysis and view of the fundamental laws of operation of the economy. The dissertation demonstrates that Deweyan pragmatism cannot provide such justification. The primary reason is that Deweyan pragmatism, like all other philosophies of science, is subject to the epistemological problem of cognitive modernism. It is thus unable to provide objective, transdiscursive, and essential knowledge of economic reality. Chapter 1 is an introduction to modernist methodology in economics. It situates Deweyan pragmatism within the tradition of economic modernism. Chapter 2 examines the Deweyan pragmatism of Veblen's American Institutionalism. Chapter 3 examines the Deweyan pragmatism of Friedman's Chicago School. Both schools offer Deweyan pragmatisms as theories of knowledge which prove the truth of each's theory of society. Chapter 4 offers a postmodern critique of

both modernist versions of Deweyan pragmatism. The analysis suggests several conclusions. First, for such different and directly opposed theories to claim a common affiliation to Deweyan pragmatism must mean that they understand that affiliation in fundamentally different ways. Second, by presenting different versions of pragmatism it becomes clear that it is not possible to discover the real Dewey, nor is it possible to evade the partiality of all readings of Dewey's philosophy. Third, by contesting pragmatism itself, I demonstrate that the cognitive modernist quest for certain foundations is a failed one, and that all knowledge products in economics are bound by the cultural conditions and discursive fields in which they are produced.

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CHAPTER I

ECONOMICS AND THE PROBLEM OF MODERNITY

A. Introduction

> Beginning is an activity which ultimately implies return and repetition rather than simple linear accomplishment...beginning and beginning-again are *historical*, whereas origins are divine...a beginning not only creates but is its own method because it has intention. In short, beginning is *making* or *producing difference*; but—and here is the great fascination in the subject—difference which is the result of combining the already-familiar with the fertile novelty of human work in language (Said 1975, xvii).

This dissertation is a study of the pervasiveness in economics of the modernist orientation toward knowledge and society. It is a beginning exploration of the effects of Cartesian thought-concretes on twenticth century economic thought in the United States. Because cognitive modernism in the social sciences, especially economics, found expression in the broad application of the scientific approach, this study looks at the philosophy of science foundations of economic theory. Situated in the field of economic methodology, this investigation looks at versions of John Dewey's philosophy of pragmatism as epistemological expressions of modernism in economics. I argue that through their wholesale investment in philosophical modernism, economists have accepted the challenges and sought to fulfill the promise of modernity.

The context of my beginning is the general problem of modernity in the human sciences. One manifestation in economics of the general problem of modernity is a crisis of *cognitive modernism*. This dissertation is an exploration of the epistemological problem of cognitive modernism in economics. The term, cognitive modernism, is critical for the discussion in these pages. As part of the broader orientation toward human experience of the world, an orientation commonly referred to as "modern," I use cognitive modernism to refer to the *philosophical* belief that there exists a world which stands completely *outside*

human experience, and that human perception and understanding of that world can transcend subjectivity and achieve Archimedean status as objective knowledge of the world. The *epistemological problem* of cognitive modernism refers to the recognition that the split between "reality" and "knowledge of reality" implied in all objectivist knowledge claims has no ultimate philosophical ground and that human understanding and perception can *never* transcend human subjectivity, can never stand outside the overdetermined cultural conditions of its production. This is the major battle line drawn in this thesis.

Examination of this problem is important for the discipline of economics. "Modern economic thought," the term for knowledge products in economics that are erected on the belief in objective knowledge, is part of the cognitive modernist tradition. That is, modern economics understands itself as a science which discovers empirically or deduces rationally the objective, transdiscursive truths of the economy. Modern economic thought is organized around the quest for universal economic truths of human society. Many different schools of thought in modern economics claim to have found the *essence* or transhistorical truth of economic reality through objectively obtained facts and formally modeled logic. These essences are expressed in what McCloskey (1985) terms "modernist" forms of rhetorical language—laws, tendencies, immutable relationships, mathematical and statistical "regularities"—which are themselves "signs" of modern scientific achievement. Modern economists, in other words, use the rhetoric and style of science to clothe economic discourse in an authoritative language, and thereby, implicitly assume that their discipline emerges out of and progresses according to the timeless laws articulated in philosophies of science. This kind of rhetoric is deployed as a way of demonstrating that economics is a science and as such is a privileged form of knowledge. Economists take for granted that economics is a science—believing the controversy to be old and settled by the progress and success of knowledge—and *do* economics as if it were a science.

In recent years, long-held presumptions about epistemology have come under attack in various disciplines of the humanities, rendering suspect the philosophical

foundation of economic science. Unyielding contradictions within cognitive modernism have unsettled the presumed relationship between economics (its methodology) and the philosophy of science. The unsettling of this relationship is significant because the presumed relationship between these two fields is in large measure the basis of claims made by economists that economics is a science much like the physical sciences. In the relationship between the two disciplines, the philosophy of science is said to provide the philosophical *foundation* for economic theory. Philosophy of science provides the rational and empirical forms of proof upon which economic models, predictions, and policies rely. Philosophy of science, therefore, is important because it gives economists methodological justification for the following conclusions: (a) economics is a science and (b) the knowledge products of "rigorous" economic research are objective, value-neutral, "scientific" products and are, therefore, "true." The epistemological problem of cognitive modernism, part of a general problem of meaning and interpretation in the human sciences, challenges the status of economics as a science *qua philosophy of science.* The epistemological problem of cognitive modernism questions the privileging of scientific over other discursive practices. By undermining the claims to objectivity and universality made by practitioners of economic science, confronting the epistemilogical problem of cognitive modernism suggests a devaluation of the authority of science in intellectual life.[1]

The thesis of this dissertation is that the cognitive modernism of economics must be deemed a failed project and, therefore, rejected. To illustrate my argument, I focus on the field of economic methodology, where I examine two versions of pragmatism which, I maintain, embody the epistemological problem of cognitive modernism. I show that each

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[1] A good illustration of the presumption of scientism in economics is in Blaug (1992, xxv). In the preface to the first edition of his seminal text, Blaug warns the reader that "there can be no doubt that economics provides plenty of examples of 'explanations that are at once systematic and controlled by factual evidence,' and hence no time will be wasted defending the assertion that economics is a science." Thus the standard text for the study of economic methodology begins its discussion of methodology with the *assertion* that the scientific status of economics is beyond question.

version of pragmatism sees "pragmatism" as a philosophy of science or epistemology which tells the economic practitioner—on the basis of extradiscursive criteria—how she knows what she knows. As epistemology, however, each pragmatism is burdened by the epistemological problem of cognitive modernism—the need to demonstrate that its rules of correspondence provide ultimate proof that the knowledge it permits is the true, objective, value-neutral, and scientific knowledge of reality. The inability to provide this ultimate foundation for truth is the critical limitation of each version of pragmatism. Each's pretensions to philosophy of science is undermined by the inability of knowledge to stand on its own, outside the context of its production.

The idea that economics is a science, and that as a science its methodologies provide epistemological norms for discovering "true" knowledge, is critical to the relationship between the epistemological problem of cognitive modernism and economics. That is, the relationship between economics and the epistemological problem of cognitive modernism is located in the context of the (modernist) arguments and justifications for economics *as a science*. It is economic science that delimits the problem of modernism in economics. Economic research proceeds as though the knowledge it produces is "true" because it is rigorously produced, highly technical, iterative knowledge. Such a position takes for granted the primacy of scientific knowledge and simply borrows from the pre-existing authority of pre-existing science. I argue against this position of privileging scientism in economics.

The dissertation is organized as follows. In chapter one, following this introduction, I survey the meanings of modernism in economics as a way of specifying the main thread of my argument. Then, I review the received wisdom concerning the link between economics and philosophy of science. The purpose of examining the link between these two fields is to establish that the modernist tradition in the form of cognitive modernism has a *dominant* position in economics. I argue that due to the profound influence of enlightenment thought on economics, the accepted methods for investigation into the

operations of the "economic" sphere of human activity have, in the modern era, which I demarcate as the period from around 1870 to the present, derived from philosophers of science like the Vienna Circle positivists, Karl Popper, Thomas Kuhn, Imre Lakatos, and others. Their work has defined the methods of obtaining falsifiable, testable, verifiable, or confirmable claims about economic reality. Work based on the philosophical-scientific conclusions of these authors legitimizes and hegemonizes the discourse of scientism in all schools in economics. Because so much rests on the scientific status of economics, I argue that the rhetoric of economic science places economics squarely in the cognitive modernist tradition.

Moving from Hutchison (1938) to Blaug (1980) and McCloskey (1994), the economics literature is full of attempts to clarify—both through examination of particular issues or questions and in attempts to provide for the general development of the discipline—the exact philosophical foundation of economic science. As philosophers of science have moved "beyond" Popper, Kuhn, and Lakatos, so have economists, albeit with an approximate 20 year lag. A historiographical review of twentieth century economic methodology reveals an ironic tendency within the discipline. On one hand, for the vast majority of practitioners it has been *assumed* that economics is a science in the same way that, say, physics is a science. Most economists see their object of study as amenable to the techniques and tools of science. Ever new methods and formal techniques have been appropriated uncritically from physics, mathematics, and statistics, presumably, to more precisely specify dynamics in realm of the economic. On the other hand, investigation into the nature of and justification for the use of these scientific methods has been a particular concern of a small subgroup of practicing economists. The irony is that most economists only come to question the scientificity of their discipline after they have become economic practitioners heavily invested in the scientificity of economics. Popper, Kuhn, and Lakatos are important "signs" in economics because they "signify" the very scientificity and objectivity sought—and more often presumed—by economists.

In this sense Kuhn, Popper, Lakatos, and others have been extremely important. Their work as philosophers of science forms the basis of claims made by economists for the scientific status of economics. As philosophies of science based on Kuhnian paradigms, Lakatosian research programs, and Popperian positivisms (in all its variations) have fallen from prestige in the physical and biological sciences, however, new "sources" have been sought for philosophical and scientific justification of the scientificity of economics. It is here that pragmatism enters the picture. Economic methodologists are moving away from the trend of Popper, Kuhn, and Lakatos and into the vogue of American philosopher John Dewey and his American philosophy of pragmatism as the contemporary sign for the scientific nature of economics.

In recent years a new philosophy of science has been offered as a justification for the claim that economics is a science. The philosophy of pragmatism of American philosopher John Dewey has been the label applied to the methodology of two schools of thought in economics: (1) Thorstein Veblen and American institutionalism's economic anthropology, important in the early twentieth century as an alternative historicist/culturalist approach to the reigning orthodox paradigm for constructing economic knowledge (2) Milton Friedman and the Chicago School's free-market economics, important as the purest expression, since the eighteenth century, of Adam Smith's natural law theory of capitalism. These two schools are important in the landscape of American economic thought. They represent the two dominant approaches to (and make up most of the professional positions taken with regard to) the study of the American economy. Moreover, their "representations" of the macroeconomy of the United States have held sway over policy debates for most of the twentieth century. Most schools of thought are reducible to or indirectly linked to the "core" outlooks of Friedman and Veblen. The following schools may be said to stand in relation to—as derivative forms of or antithetical counters to—the work of either Friedman or Veblen: New Keynesianism, New Classical economics, Post

Keynesian economics, Monetarism, Neo-Institutionalism. These approaches may be seen as rooted in the "pure" approaches of Friedman and Veblen.

The two "views" (of Friedman and of Veblen) are based on versions of pragmatism which are part of the cognitive modernist tradition. More importantly, the pragmatism each endorses is viewed as superior to the philosophy of positivism which has been so dominant in traditional economic research. For example, the pragmatism of Veblen is important because it stresses the role of realism in producing economic knowledge. Emphasis is placed on data-gathering and modelling based on exhaustive quantities of empirical information. The pragmatism of Friedman, by contrast, is important because it stresses the inevitability (indeed security) of universal economic laws over against the need for realist representations. Emphasis in Friedman is placed on allowing natural processes to move society to its naturally occurring, optimal position. Both versions of pragmatism relieve the need for economists to rest their scientific claims on positivism or any other philosophy of science. The current vogue of Deweyan pragmatism is viewed by Chicagoans (Friedman) and Institutionalists (Veblen) as the philosophical and scientific foundation of economics.

The pragmatisms of Veblen and Friedman emerge out of different views, different conceptual frameworks, and, therefore, each's pragmatism offers and is offered as a different "proof" of the "truth" of its views. Accordingly, in chapters two (Veblen) and three (Friedman), I deconstruct the version of pragmatism in each school as a way of detailing my argument that for such different and directly opposed theories to claim a common affiliation to pragmatism (and to Dewey) must mean that they understand that affiliation in fundamentally different ways. That is, "Friedman's pragmatism" and "Veblen's pragmatism" illustrate that it is not pragmatism in the singular that has left a lasting philosophic legacy on economics in the United States. Rather, it is the differently understood pragmatisms in the radically different plural that contest today in the growing struggles among alternative philosophies and methodologies of economics. That this is true

illustrates the failure of the cognitive modernist tradition to resolve disputes between competing worldviews over the "truth" of economic reality.

In the fourth and final chapter I present a postmodern critique of the cognitive modernism of *both* versions of pragmatism. That is, by presenting two different versions of pragmatism, it becomes clear that it is not possible to discover the *real* Deweyan pragmatism in economics. It is possible to highlight the differences and tensions that exist in each partial reading of Dewey. The postmodern critique of each pragmatism, as a form of cognitive modernism, consists in arguing that to justify or explain the "truth" of the Chicago View, or the "truth" of the Institutionalist View, by reference to its "pragmatism," dissolves upon close inspection, since "pragmatism" itself has been contested. Therefore, in chapter four, I present a third version of Deweyan pragmatism, one which emphasizes Dewey's doubt about the cognitive modernist "quest for certainty." I argue that this third version of Deweyan pragmatism anticipates the antiessentialism of a Marxian postmodernist philosophical critique of modernism in the social sciences generally and in economics particularly.

The dissertation as a whole seeks to explore the various uses of pragmatism in economics as a way of illustrating the point that *all knowledges are bound by the cultural or discursive fields or conditions under which they are produced.* This reading of pragmatism in economics, like all readings in economic methodology, is partial and partisan. Therefore, my argument is that no single "school of thought" in economics has greater claim to having found the "truth" of the "real" operations of the economy (including that school of thought's very understanding of what and where the economy is) than another school of thought. Instead, the disciplinarity or unity of economics is contested and the partiality of all outlooks is disclosed. Examining the pragmatisms in economics is one way of illustrating this point.

B. Modernism and Economic Thought: Picturing the Economy

> From imagined wholeness, it produced, by the imposition of order, a fractured subject (Tagg 1992, 40).

The title of this chapter suggests a relationship between the discipline of economics and "modernism." Moreover, it suggests a relationship that exists within, or is conditioned by, an "epistemological problem" of modernism. Before explaining the relationship, therefore, time must be spent elaborating on the term "modernism" and its "epistemological problem" so that the context of the relationship is clear. That there is an epistemological problem of modernism, and that economics is part of this problem, is the main point of this chapter.

What is modernism? The term signifies many different things to many different intellectual and artistic communities. As I apply the term in economics, modernism is the name given to an outlook or orientation toward human experience that is dominant in the age of Europe (1550-present). In the human sciences generally, modernism refers to an "imagined whole," a scientifically ordered space within which human experience is proscribed and inscribed. During the Age of Europe, the chief desire or Purpose was to remake the world in the "image of humankind" and according to universal principles and aesthetic values. This overriding Purpose defines the major trajectory of modernism in the development of European society. The main themes of modernism have been summarized by Amariglio (1990), where he lists five attributes of modernist discourse:

> First it presented the view that time and space are existential dimensions that can be "controlled" through a discovery of their essential principles. Second, the theoretical and empirical "discovery" of these principles—the bracketing of time and space in discourse—displayed the power of human knowledge, especially science, to transcend history by capturing what is universally and eternally true. Third, modernist discourse asserted that the basic principles of time and space are formal in nature and can be expressed theoretically, solely by a discourse that emphasizes form (the abstract, the universal, the eternal) over content (the concrete, the transient, the historically contingent). The only content worthy of scientific exploration is form itself. Fourth, modernist discourse attempted to structure itself according to the same formal principles it had discovered. One of the characteristic features of modernism is the self-conscious structuring of its

> written and spoken mode of presentation as a reflection or demonstration of the formal principles it seeks to portray. Thus, in neoclassical theory, for example, modernism has meant mathematical and axiomatic forms of discursive presentation in order to represent adequately—like a mirror—the logical behavior it claims to have discovered. Fifth, the point of modernist discourse and culture (including the sciences) was to remake the world according to the newly discovered universal and abstract principles. These abstract principles, if understood correctly, would provide any "concrete" society blueprints for beneficial change at any moment of their particular history.[2]

These characteristic attributes of modernism establish a *link* between modernity and science. In modernism, scientific discourse is privileged as a form of knowledge about the "nature" of the world. Moreover, a precondition for privileging scientific discourse is the separation in thought between a knowing subject and a known object. This split is fundamental to the modernist orientation. This split structures modernist inquiry. Through science—its methods, epistemological norms, language, tools, practices and procedures, and rhetorical forms—it was believed that the world could be re-imagined and re-constructed, first in the formal language of science and second in "reality," as a way of freeing humankind from the religious tyranny of early Catholicism. Once freed from religious authority, new and true (because objective) visions of the world could serve as roadmaps to be followed on the road to the formation of a utopian society. Utopian visions of society were considered the highest form of articulated knowledge about human existence—thus giving human knowledge products the necessary authority to compete with the divine revelations of papal authority—and the endpoint of human history. These visions of a world characterized by the maximum of individual freedom and self-fulfillment gave expression and content to the larger, overall Purpose of human inquiry. Use of formal, "scientific" language to redescribe, and application of scientific method to reconstruct, all spheres of human activity were supposed to provide essential knowledge of the world which could serve as a series of "blueprints" for building a society completely

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[2] Amariglio (1990, 18-9).

controllable and governable by human will and intent. From the beginning, the primary goal of modernism has been to guide human society toward a better world, and the "protocols of scientific procedure" have been viewed as the means to achieving that end. Science has been the form of all "reasonable and realistic 'horizons of expectation' in the program of modernity."[3]

The links between science and modernism in the development of "modern" economic thought has been outlined by McCloskey (1985, 1990, 1994), Mirowski (1986, 1988, 1989), and Amariglio and Ruccio (forthcoming). Mirowski (1988a, 13ff) argues, for example, that during the 1870s and 1880s economists were determined to model their understanding of classical economics on the mechanical model of the classical physics of Newton. Rather than seeing a steady "progress of knowledge" from the Physiocrats to Smith and Ricardo to Marshall, Keynes, Samuelson and Arrow and Debreu, Mirowski argues for the view that the "marginal revolution" is a rupture or discontinuous "break" in which economists self-consciously (and for the first time) see their work as a formal, universal, and mathematical *science in the context of economics*. The "break" represented by the "marginal revolution" signals the specification of the true, immutable laws of economic motion in society. The emphasis is on the fact that knowledge—like the world it reflects—is fundamentally scientific; it is incidental that knowledge is about economic behavior and economic dynamics. Even though Mirowski takes issue with the view that progress in the evolution of economic thought has been smooth, he endorses the view that economic analysis expressed in formal scientific language was of great importance to late nineteenth century economists. The use of scientific logic and tools, especially mathematics, has been the economist's stock in trade for more than a century. Borrowing from physics was part of the development of an ontological "thought concrete" concerning

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[3] For a discussion of the manner in which economics has been viewed by its practitioners as a science and how this view is grounded in a belief in the project of modernity, see Amariglio (1987) and (1990). Also see Toulmin (1990, 7).

the nature of economic reality. The codes of science defined the parameters of this thought concrete called the economy, and the result was a modernist notion of the economy.

McCloskey is equally direct in arguing that in economics there is a link between modernism and science. Analyzing economic modernism for its rhetorical practices, McCloskey explains that

> the credo of scientific methodology, known to its critics as the Received View, is, roughly speaking, 'positivism.' It argues that knowledge is to be modeled on the early twentieth century's understanding of certain pieces of nineteenth-century and especially seventeenth-century physics. To emphasize its pervasiveness in modern thinking well beyond science, however, it is best called 'modernism.' Philosophically speaking, modernism is the program of Descartes, regnant in philosophy since the seventeenth century, to build knowledge on a foundation of radical doubt.[4]

Following from this, Amariglio and Ruccio (forthcoming) offer an explanation for the advent of scientism in economics. Looking at the evolution of economic thought, they identify three "foundational axes" around which modernist economic thought is organized: order versus disorder, centering versus decentering, and certainty versus uncertainty. In modernism, order (of society and knowledge of society), centering (of the human subject), and certainty (of time and, therefore, of correspondence rules) have been favored over the "chaos" of disorder, decentering, and uncertainty. The task of science has been to disclose the laws of operation of the natural and social worlds. Knowledge of and adherence to these laws, modernists believe, will result in a stable, well-ordered society in which unknowable future events can be predicted with a high degree of expectation and, therefore, controlled.[5]

Favoring order, centering, and certainty in the development of knowledge is suggestive of the "imagined whole" that is basic to modernism. It also implies the view that essences exist and are knowable. This is an important point. Following Fuss's (1989, xi) definition of "essentialism," we may conclude that in modernism essences are truths

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[4] See McCloskey (1985, 5).

[5] See Amariglio and Ruccio (forthcoming, 4-7).

that are fixed over time and across space, and that the goal of modernist forms of inquiry is to discover those timeless essences.[6] The questing quality of modernism, that which guides the search for certainty, is also that which allows us to know essences. But knowing essences reveals a fundamental contradiction in modernism.

The contradiction may be seen clearly by examining Descartes' notion of "radical doubt." As he argued, "radical doubt" is the procedure or approach to knowledge which helps the knower to see through—beneath—the illusory surface appearance of objects in reality. Descartes believed that the truthful inner essence lay within an object, safely hidden in its core from would-be knowers. Inquiry, guided by insistent doubt about having reached that core, would not stop until knowledge of an object had reached its "irreducible essence." At that point, it was believed, "radical doubt" had yielded the essence of a "known" object to the knower. Knowledge of the essential truth of an object was considered to be, simply, the "truth" of the object. Therefore, the split between mind (thought about objects in the world) and matter (essence of objects in reality) was overcome by the process of Cartesian "doubt." By doubting until the point of irreducibility was reached, the idea of an object was fused with, regarded as identical to, the object itself.

It is the belief that scientific knowledge provides the formal language or grammar of reality that accounts for the contradiction. By relying on scientific knowledge constructs, modernist inquirers define the endpoint of (unlimited) scientific knowledge as the endpoint of inquiry, viewing the state of knowledge at that particular point as the essential knowledge of reality. The Cartesian edict to doubt—even to doubt the expansiveness and limits of *scientific knowledge*—or to view knowledge as a process without an endpoint dissolves into a fixed law or immutable feature of the "given" universe. As a consequence, an ironic and contradictory aspect of the cognitive modernist tradition in economics is that

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6 Fuss writes, "essentialism is most commonly understood as a belief in the real, true essence of things, the invariable and fixed properties which define the "whatness" of a given entity."

the impulse of radical doubt which lies "at the very heart of modernist discourse and culture," must be suppressed by the presumption that what economists do *is* science, that the knowledge they produce *is* scientific, and that science *is* a metadiscursive language and set of practices which, if applied and adhered to in different disciplines, yields truthful scientific knowledge *of* a "given" economic reality. Such an approach implies fixity over time and across space. Economic science arrives at the truth, but is unable to prove extradiscursively when it has done so. In other words, the link between modernity and science is maintained by the presumed existence of knowable essences.

The task of modernist science is to discover formally the true laws of economic motion. Further, the search for these laws proceeds according to the rules of scientific practice (scientific method). These practices are guided by a persistent radical doubt. The question arises, How do we know when we have arrived at the irreducible essence of an entity? Radical doubt suggests that we may never know. But the language of scientism in economics suggests that we do know, and that we know transcendentally. Amariglio (1987) makes a similar point in his discussion of the dominance of scientific logic:

> there is said to exist a transcendent Logic which stands in a privileged relation to Science. If analytic philosophy bequeaths scientificity to whosoever uses it, it is because it is a meta-logic, a master Logic from which all its particular uses in the sciences, including economics, derive their necessary power and effects...A scientific discursive logic does not emerge from the play of concepts. It both precedes those concepts and dictates to those concepts just how they must present themselves and be combined in science.[7]

Radical doubt in economics is simplified and flattened as a matter of calculable uncertainty, instead of remaining unknowable and "mysterious." As Amariglio (1990, 20) comments, despite the attempt to "domesticate" unknowability, "the recognition of the aporia at the core of modernist discourse—its inability to think the unknowable—has engendered doubts and criticisms of modernism." Modernism undoes itself by the

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[7] Amariglio (1987, 167).

permanence of radical doubt. One must look with a skeptical eye at universal, objective knowledge claims. A guiding impulse in modernism is the radical doubt that "doubts" the universality of modernism's knowledge claims.

This sense of the Cartesian notion of "radical doubt" suggests a contradiction. One indication that modernism is plagued by a fundamental epistemological problem and that the epistemological problem has manifestations in economics can be summarized in a subtle contradiction (or anti-modernism) in modernism. Modernism was to erect the essential "truth" of nature and society. The only way to construct a foundation based on the Cartesian notion of "radical doubt" is if, at some moment, doubt itself yields to certainty. Certainty is a must. The process of radical doubt must either guide us to what it takes to be fixed truth (and the question is, How do we know that this—as opposed to that—is the irreducible essence), or it can never achieve its stated goal, can never have a stable foundation. Modernism is based on "radical doubt" as part of the heritage of Descartes, and it is also grounded in the notion of (attainable) certainty, or the absence of "radical doubt." This is a contradiction. Modernism cannot have certain, immutable laws which are themselves the product of an approach to inquiry which begins (and ends) with uncertainty. Modernist economics, like all modernist knowledge products, suppresses this contradiction in favor of privileging essentialist, scientific economic knowledge. I return to the problems associated with this suppression in the next section where I look at the positivist tradition in the philosophy of economics.

Given that my purpose is to construct a knowledge of the epistemological problem of modernism and its relation to economics, however, further points about modernism need to be made. This argument will proceed in three parts. First, the Hegelian critique of classical epistemology will be situated as the philosophical background for the postmodern critique of modernism. Second, Heidegger's idea of "picturing the world" is presented because I believe it is central to the modernist orientation. Picturing as a kind of knowledge process is a prime feature of the modernist orientation. Of all the human senses, the visual

sense, as Martin Jay (1993) has persuasively argued, is the "master sense" of modernism. Third, I relate the idea of picturing to economic theorizing as a means of articulating what it means to "picture" theory, specifically, to picture the economy in theory. The act of picturing the economy not only establishes a form of knowledge *as* modern, it also requires that rules or criteria be established to secure order within and among worldviews or pictures of the world—a kind of how-to rule book for picture-painting. Establishing the accuracy or inaccuracy of these pictures constitutes the central task of the methodology of economic science. I argue in the next section that economists have looked to modern science for those rules of judgement.[8]

We can begin to construct a knowledge of the epistemological problem of modernism by examining the critique of classical philosophy offered by Hegel. Following Resnick and Wolff (1987), Norman (1976), and Lamb (1980), I propose that Hegel is "the philosopher of the modern age, that subsequent philosophers, whether or not they have read his works, must take their stand in relation to Hegel."[9] Hegel's concern with the "conditions of knowing," with the *criteria* for knowledge, rather than the *content* of knowledge, distinguishes his work in the modern age because it focuses on the epistemological issue of representedness. Classical philosophers viewed their discipline as the one which understood the unique relationship between knowledge of the world and the world itself. Philosophy before Hegel held that such a separation exists between knowledge of the world and the world, that there was a reality apart from knowledge of reality (a world "out there"), and that "philosophy's central concern is to be a general theory of representation, a theory which will divide culture [defined as the assemblage of all claims to knowledge] up into the areas which represent reality well, those which represent it less well, and those which do not represent it at all (despite their pretense of doing so)." Hegel

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[8] See Toulmin (1990) for an excellent overview of the development of scientific and philosophical modernity in Europe.
[9] Lamb (1980, xi).

attacked the classical philosophical idea that philosophy, as a separate discipline, was foundational in the sense that it could adjudicate (accept or reject) various claims to knowledge.[10]

Classical philosophy proposed a "split" between the mind's image of the world and the world itself, between "being-for-consciousness" (thought-concrete) and "being-in-itself" (concrete-real). This split has two important implications for Hegel. First, it implies that philosophers from Descartes to Kant believed that ontologically prior to the distinction between thought-concretes and real-concrete is an objective world which is independent of our knowledge of it. Accepting the first implication as true, the second implication is that the discipline of philosophy functions within culture as a "tribunal of pure reason" whose purpose is to separate truthful knowledge of the world from false knowledge. In this view, philosophy was foundational in that it established objective criteria or standards against which representations (thought-concretes) of the concrete-real were measured.

Two forms of argument or methods are supposed to "ground" knowledge of the concrete-real.[11] That is, in classical philosophy two epistemologies were held to provide "proof" of the truth or falsity of a knowledge claim about (independent) reality. The first, rationalism, begins by acknowledging the existence of fundamental, universal, fixed laws of reality. These laws are self-evident or "given" to trained inquirers. On the basis of these laws or codes of existence—reality's DNA—rationalist truths are deduced, yielding particular insights into the nature of reality. Assertions about human nature provide a good example of rationalist reasoning. Religious arguments about the fundamental goodness or evilness of human nature produce, as a direct result, individual and group religious practices of lasting significance. The belief that humanity is "fallen," a belief which bottoms traditional Judaic and Christian faith, produces a need for redemption; redemption is then ritualized in the institutions of both these faiths. In the rationalist approach to

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[10] Rorty (1979, 3).

[11] I say more about these two epistemologies below and in chapter four.

determining the "truth" of a thought-concrete, knowledge begins by discerning and deducing the implications of the basic laws of existence.

The second epistemology in classical philosophy is empiricism. As opposed to the rationalist, who gains knowledge of reality by deducing particular truths about reality from previously given laws about the nature of reality, the empiricist gains knowledge about reality—develops thought-concretes—from data perceived through the senses. The truth of stories and myths that form a group's tradition will succeed or fail based on whether that truth is verified in experience. On the basis of particular sense-data, observing and experiencing subjects are said to acquire knowledge of reality. Experience tests received and novel propositions. The end result is that truthful or accurate representations of the concrete-real emerge.

Hegel attacks these two criteria for knowledge in his critique of classical philosophy. His reflections on the existence and nature of the Absolute undermine the implicit proposition that a rationalist or empiricist epistemology is not, itself, a claim to knowledge. By viewing knowledge as a phenomenon, Hegel succeeds in disclosing what Norman (1976) refers to as the "dilemma of epistemology":

> *Any* principle which specifies some criterion of what can and what cannot count as authentic knowledge must itself appeal either to that criterion (circularity) or to some other criterion (regress); and this is so because, as Hegel says, any such principle is itself a claim to knowledge.[12]

In traditional philosophy, the "dilemma of epistemology" constitutes the central epistemological problem of modernism for economics. Economists rest their claims to the truth of one economic theory over another on rationalist and empiricist grounds. As Hegel argued, if a truth claim rests on a rationalist argument, that argument is circular in the sense that its truth relies on self-evident "givens" or "first principles" which cannot be (or at least have not been) proven. If a truth claim rests on an empiricist argument, that argument must appeal to another standard for its justification. But that standard, also, must be justified

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[12] Norman (1976, 12).

according to some standard, and so on infinitely. Therefore, these epistemologies do not provide us with unmediated, objective economic knowledge. Rationalist and empiricist claims must be viewed as claims to knowledge and not as standards of knowledge.

An implication of Hegel's critique is that all knowledge products—including economic knowledge products—are dependent on processes or influences which we may refer to as the conditions of production and consumption. This dissertation is an exploration of the consequences of taking seriously the Hegelian critique of classical epistemology. What is the status of economic knowledge products, economic "pictures of the world," if the "truth" of one is no more verifiable or logical than that of another? How are economic knowledges to be analyzed and adjudicated?

Before turning to two pictures as test cases for this question, I want to explore further the nature of the epistemological problem of modernism. If we grant that thought-concretes are representations of or ideas about the concrete-real, we may treat the representation as a phenomenon, an object for interrogation in itself. In fact, the idea of an idea expresses what I mean by picturing. The idea of "picturing" emphasizes the key notion of *representedness* that is a core concern for economic methodologists. The idea of an idea assumes that one capacity of the human mind is its ability to imagine or represent in the mind that which exists outside the mind. A representation or image is an idea of something. The "something" is said to be an object which contains a knowable essence. Through rigorous application of scientific and formal methods of analysis, the object is said to become "known." Once known, it can be appropriated for human ends. Knowing a thing-in-itself through its reflection or "mirror image" in the mind is possible because it is assumed that the mind is capable of capturing the essence of any object (which exists outside the Mind). In his essay titled, "The Age of the World Picture," Martin Heidegger ([1938] 1977) argues that what defines the modern age is the idea of a "world picture," which means, not only that a "true" or accurate "picture of the world" is possible but, more importantly, that *picturing* is possible, that the world can be "conceived and grasped

as picture." A world picture, in Heideggerian terms, means far more than a picture or copy of the world. It signals a fundamental shift in cultural and philosophical orientation. Since human experience cannot take place outside itself, i. e., since human beings cannot experience the world as other than human beings (although what a human being is unstable and changes over time), the picture or representation of the world that exists in the mind becomes the means of access for human experience of the world. The picture of the world is, therefore, a map or conceptual framework for human self-awareness of Being in the world.[13]

Heidegger's idea of a world picture highlights for economics some of the interesting aspects of the modern orientation. First, for Heidegger, the fact that the world can be pictured at all is what distinguishes "the modern age" from pre-, post-, or non-modern ages. Picturing was not possible before the Renaissance because "knowing" through *human searching* did not exist. The authority of the Christian Church defined a different orientation toward the world:

> [T]he real locus of truth has been transferred by Christendom to faith—to the infallibility of the written word and to the doctrine of the Church. The highest knowledge and teaching is theology as the interpretation of the divine word of revelation, which is set down in Scripture and proclaimed by the Church. Here, to know is not to search out; rather it is to understand rightly the authoritative Word and the authorities proclaiming it.[14]

The decline of religious authority and the rise of Science re-orients the world by redefining the nature of the world and of human agency. That is, the attempt to stand against and within the world picture and represent the world objectively, as these ideas are expressed in the scientific and philosophical writings of Newton, Galileo, Descartes, and Locke, is the distinctive orientation of modernist thought. Prior to the modern age, most

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[13] In the form of a critical footnote, I remind the reader of the fundamental Eurocentrism of this discussion, especially in the use of terms like "world" and "age"—terms which barely consider the possibility of standpoints—other "ages," other "worlds"—outside the "European experience."

[14] Heidegger ([1938] 1977, 122).

European thought assumed the Christian God to be the center of explanation and understanding. In modern thought, however, the Subject of explanation and understanding is humanity.

Second, the idea of picturing the world forces us to confront the notion of representedness, in which a Subject, the "self," visualizes an Object, the "world." In economics, the notion of representedness refers to a subject, an economist, who gazes at and visualizes an object, the economy, and uses that visualization as a means of ordering a subset of activities in the real concrete. The act of visualizing produces a subject/object relationship. The age of the world picture is the age in which nature, history, and all that is in the world become conceivable as a unified whole, as a coherent human construct. This human construct is commonly referred to as a "worldview." For human beings to have a worldview is for human beings to have a notion of how the world *really* is. Two types of Being are implied here. One type is the emergence of the Subject and Object as an *ontological structure* within which humans exist; within that structure is the *epistemological relationship* between "reality" and the "image or knowledge of reality" in the mind out of which understanding of Being arises. For Heidegger, subjectivity and images in the mind come first. In economics this means that, following Heidegger, in the age of the world picture, being, the "economy," first exists in the (mind's) representation or image of the "concrete real" and then exists in what "is," the economy "out there." The "thought concrete" indexes the "concrete real." Heidegger writes,

> world picture, when understood essentially, does not mean a picture of the world but the world conceived and grasped as picture. What is, in its entirety, is now taken in such a way that it first is in being and only is in being to the extent that it is set up by man [sic], who represents and sets forth. Wherever we have the world picture, an essential decision takes place regarding what is, in its entirety. The Being of whatever is, is sought and found in the representedness of the latter.[15]

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15 Heidegger ([1938] 1977, 129-30).

Heidegger is arguing for the importance of the subject's thinking process in relation to knowledge of the objective, real world. In Heidegger's view, the real world is "what is" because it first was an image, a representation. Subjective thought precedes and shapes "objective" knowledge. The idea of representedness in modernism is analogous to the world becoming conscious of itself—its essential nature, its ideal and material form, its history, its possibility. In Heideggerian terms, the economists' vision is a precondition of economic analysis. The economists vision of the economy produces the economy in the real concrete. The social and cultural conditions of existence of the reproduction of human society are the material out of which a vision of the economy emerges. After the vision exists in the mind, effort is expended confirming the existence of the economy in the real concrete.

A third important aspect of the age of the world picture, the age of modernism, is that humanity achieves positionality in relation to the inhabited world. Heidegger writes,

> to represent means to bring what is present at hand before oneself as something standing over against, to relate it to oneself, to the one representing it, and to force it back into this relationship to oneself as the normative realm. Wherever this happens, man "gets into the picture" in precedence over whatever is. But in that man puts himself into the picture in this way, he puts himself into the scene, i. e., into the open sphere of that which is generally and publicly represented. Therewith man sets himself up as the setting in which whatever is must henceforth set itself forth, must present itself. Man becomes the representative of that which is, in the sense of that which has the character of object.[16]

In other words, the emergence of a modern world picture has, as a precondition *and* consequence, the positioning of the human agent as Subject. Picturing and subjectivity are conditions of existence of each other. Subject-centered "seeing" becomes the dominant, official, hegemonic worldview in the modernist orientation to the extent that the picture derives from the visual sense. Martin Jay (1992) argues the point more forcefully in commenting that the visual sense is the "master sense" of modernism. His notion of

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16 Heidegger ([1938] 1977, 131-2).

"scopic" regimes, like Rorty's (1979) "mirroring" of nature, constitutes an important element of the human subject's positionality in modernism. In an ocularcentric world ideals such as Value and Truth are determined by what is pleasing to the senses, primarily the sense of sight. The subject's visual sense as a "master" sense signals conquest of the world now that the world has been pictured:

> The word "picture" now means the structured image that is the creature of man's producing which represents and sets before. In such producing, man contends for the position in which he can be that particular being who gives the measure and draws up the guidelines for everything that is...this position secures, organizes, and articulates itself as a world view.[17]

Framing the subject in the world picture, as that which "stands against," the objective world is the basic ontological principle which orders existence. Given that there is a subject and object, a way must be found for the two "entities" to correspond, to "know" the other. Such an order requires rules of conduct so that certain knowledge of the "nature" of the world may be obtained. Epistemology, understood as the quest for certain knowledge of the concrete real, is a product of the modern orientation toward human existence.

Restating an earlier discussion, this time in light of the notion of representedness, in the modernist tradition two epistemologies have been used primarily to provide certain knowledge of objective reality: rationalism and empiricism. Rationalism accepts the dualism that there is an independent, subject-seeing observer of an independent, objective reality. For the rationalist, the goal of inquiry is to represent the Absolute Truth of objective reality. Rationalists discover the Absolute by peeling away layer after layer of meaning until the irreducible essence is revealed. Thought concretes are capable of being ranked according to how rigorously they probe the essence of objective reality.

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[17] Heidegger ([1938] 1977, 134). Also, see Jay (1992) and Rorty (1979) for discussions of Heidegger's notion of "world picture." It should be noted here that picturing is not exclusively or even primarily visual. All our senses are involved in picturing. My use of the visual, following other works on this topic, underscores the tradition of seeing the Mind as a "mirror" of the world.

Rationalists do not rely on "facts" observed in objective reality because they believe that basic laws govern objective reality. The laws contain the ultimate purpose of objects (including human beings) in reality. A rationalist epistemology is an epistemology which holds that a theory is to be judged as true or false according to how well it coheres logically and how well it explains the origins or causes of objective reality. On the basis of given truths, the rationalist proof offers a Grand Theory of objective reality in which that reality is given, fixed and knowable once its universal laws are discovered. Rationalist proofs are accepted according to how well a theory's logical conclusions follow from accepted premises.

For example, economists take as a given feature of human nature that human beings are selfish. From this axiom they deduce the basic proposition that individuals seek to maximize in their behavior, that they seek to acquire the maximum amount of pleasure for self. The first cause, selfishness, is true universally—it *mirrors* human nature—and has effects in constructing and representing "objective" reality. Among those effects is the effect of maximizing behavior. The law of maximization follows logically from a theory based on the idea alone—the idea that human beings are selfish by nature. The given laws of human nature, then, prove the truth of one of the most fundamental propositions in economics.

Empiricism, by contrast, is an epistemology which holds that truth about objective reality comes, not from the process of reasoning back to conceptual first causes, but rather from observing the objectively obtained "facts" of reality. Human senses, well-trained, discover the truth of reality by observing and recording and reaching informed conclusions. Empiricists seek proof of the accuracy of one picture or another by appealing to "tests" which verify truth or falsity according to "closeness of fit" criterion. Science is the method of determining which theory, among the many possible explanations of objective reality, is the correct knowledge of reality. Science yields the one, true knowledge of reality. From a set of "given" propositions, the empiricist uses the scientific method to measure and

evaluate these givens. The result of this process is that the truth of objective reality is revealed. Whereas rationalists appeal to laws that the world obeys and that can be captured in thought, empiricists appeal to measured facts as proof of a thought concrete. Both epistemologies seek to provide proof that one thought concrete is right and that others are necessarily false. These are the two dominant epistemologies in economic science.

Continuing the above example, an empiricist would not accept a priori the notion that individuals are selfish by human nature and conclude that that "fact" explains neoclassical theory's principle of maximization. Instead, an empiricist would appeal to factual data—recorded events in objective reality—as proof of the basic principle. An empiricist would argue that it may or may not be part of human nature to be selfish—the empiricist is unconcerned with this aspect of the proposition—but it is true that human beings are observed to behave "selfishly." Therefore, the principle of maximization is true (until disproven by evidence). In both cases—rationalism and empiricism—the goal is to prove the correctness of one thought concrete versus another by appealing either to reason, in the case of rationalists, or sense data for the empiricists. Correctness links the representation to the real.

These epistemological considerations on the relationship between representedness and reality are important for two reasons. First, epistemology establishes the principles of *correspondence*, the standards by which "objective" knowledge is judged to be "truthful," *positive* knowledge. Second, being able to picture the world as a unified whole produces, in dialectical fashion, its negation—disunity, fragmentation, separation. Modernist knowledge knows itself by differentiating its "achievements" and goals, in form if not in content, from earlier, more primitive forms of knowledge. In overdeterminist fashion, the conditions of disorder, decenteredness, and uncertainty are conditions of existence of the order, centeredness, and certainty which were the goals of modernism. The dialectical "other" of modernism is the contradictory presence in modernism of anti- or post-modernism. In economics, this means that epistemology must function not only as a system for evaluating

terms like "order," "centering," and "certainty," it must also make the thought concrete coherent against intrinsic incoherence—disorder, decentering, uncertainty—which is its "other." Epistemology must prove, in human affairs, that the mind's image of the world is correct and favorable to humankind. It must insure the stability of order and certainty and centering.

This need to "prove itself" to itself suggests that there is an ethical and moral component in epistemology. For once we assert such a normative element, once we specify *which* representation is right or good (and which are not), it must be asked, For Whom? How? Why? In other words, the question of subjectivity emerges once again. We are right back to the epistemological problem of modernism—the desire (need) to overcome history and culture in search of the eternal. Unfortunately for modernist economics, order, centeredness, and certainty refer to a particular Subject's notion of each. But, and here again is a contradictory aspect of modernist knowledge, in modernist economics, the Subject is erased, removed from the Object in the name of objective Science! That is, the hallmark of modernism, following the Heideggerian process of "picturing the world," is subject-centered seeing. Yet, as it strove to become a science "like physics is a science," this *normative* component of economics has been largely sacrificed to notions of advancement and progress. An important epistemological consequence for economics of subject-centered seeing is that the process of picturing, with its requirement of verification of some sort, becomes a form of positivism in that the activity of thinking correctly becomes the condition of existence of the picture of the world. Behavioral adjustments on the part of the seer are required for the "correctness" of the picture to be, or remain, evident.

For modern economists, what is called "picturing" becomes a precondition of prediction. The process of picturing becomes economic forecasting. Prediction modifies and confirms economists' understanding of the objective world as represented in the mind's picture. Economists formalize their ideas in models (*pictures*) and through logic

formulate hypotheses about the nature of economic behavior in the real concrete on the basis of those models. The "truth" of the model, or the accuracy of the picture, and acceptance or rejection of the hypothesis, depend on how well the model describes economic behavior in the real concrete. Are the assumptions of the model "realistic"? Does the model yield useful predictions which may be used for policy? These are the types of epistemological questions raised by the "picture painting" of economists. I return to these epistemological questions in the next section, where I argue that the link between economic theory (and methodology) and the philosophy of science exists *because* of modernist "epistemological" imperatives. This is the process through which rationalism and empiricism function in relation to the process of picturing in modern economics.

This last point about the behavioral implications of the process of picturing brings me to a fourth aspect of the Heideggerian notion of a world picture, which is that the scientistic impulse that served as the guiding impulse in the development of modernist picturing of the world of nature led to the view that *social* science (the "sciences of man"), too, could be based on the natural science model for the purpose of transforming uncertain historical processes into controllable, "natural" ones. The development of social science was the intellectual equivalent of "bracketing" God-talk and redescribing the world on the basis of the assumption that the Unmoved Mover was not responsible for past, present, or future. Instead, human beings were masters of their own fate. The goal of *social* science, the disciplines erected to study human behavior using the science of physics as a model, was to rationalize the uncertainties of individual and social behavior so that humans could master the internal and external forces and laws of nature. This goal was the endpoint implied in the human subject's superior position in relation to history and nature. Randall ([1926] 1976) summarizes the lasting impact that the emergence of modern consciousness had on behavioral science:

> The two leading ideas of the eighteenth century, Nature and Reason,...derived their meaning from the natural sciences, and, carried over to man, led to the attempt to discover a social physics. Man and his

> institutions were included in the order of nature and the scope of the recognized scientific method, and in all things the newly invented social sciences were assimilated to the physical sciences (255).

What was it that was so appealing about Newton's science of Nature and Descartes's philosophy of Reason as to give rise to social science? Ross (1991) argues that "the effort to create social sciences was bound up with the discovery that history was a realm of human construction, propelled ever forward in time by the cumulative effects of human action, and taking new qualitative forms" (3). As part of the trend of secularization, modern social scientists embraced science because science promised the means to manipulate and reconstruct life on earth, to create a society in which all were free, rational, and responsible for their own destinies, both individually and collectively. Human knowledge of physical nature, through direct observation and experimentation in natural science, had progressed by leaps and bounds in little more than two centuries. Enlightenment social scientists hoped for the same progressive development for human civilization. The modernist commitment to the tools and methods of science promised to tame the wild, aggressive "passions" of "man" and protect him against anarchy and barbarity in a rapidly expanding capitalist system. In this, too, economics has played an important contributing role.

In economics, picturing the economy was accomplished through wholesale borrowing of the metaphors and laws of physics. Again by way of example, neoclassical economics attempted self-consciously to think and visualize the means whereby *homo economicus* could control and reign over the surrounding environment. To achieve control required a fundamental redescription of the economy and of economic behavior. In this redescription the forces of history were displaced by attributing to human and physical Nature what previously had been divine in origin. The economic sphere was "naturalized." That is, historically produced knowledge products became embedded in a pre-given "natural order." In the process of naturalization, a socially constructed aspect of human behavior came to be viewed as *innate* in human nature. In Heidegger's terms, this picturing

enabled the functioning of an emerging commercial, market-centered and property-based capitalist economy to be seen as guided by natural processes that were seen to be a part of human and physical nature.

By the end of the nineteenth century, Smith's theory of capitalism, now called neoclassical theory, had been translated into modernist form. To scientific seekers after the truth, the formal language of mathematics had the appeal of capturing the essence of an objective reality. The natural laws of the economy had been discovered, appropriated, and then formalized in a set of axiomatic statements that were necessarily true. Neoclassical economists, with their modernist knowledge of the economy, could rationally deduce the correct form and inner essence of society from the given, innate human and physical laws of nature.

The picture of the economy erected by neoclassicals was not the only contribution of modernist scientism to economics. A second, equally scientistic picture of the economy emerged during the final decades of the nineteenth century. Basing his retinal image of the economy in the root metaphor of Darwin's (instead of Newton's) science, Thorstein Veblen argued that the economy was a culture-based collection of institutions which evolved in response to technological change. Not surprisingly, Veblen's theory of the "real" economy was shaped by the widespread effects of the revolutionary changes in industry which took place during his lifetime. Veblen also saw "natural" processes. But unlike his neoclassical peers, he did not locate those processes completely outside human history in the form of immutable, pre-existing laws of nature. Instead, to Veblen the essence of human society was the consequence of an evolutionary process. Specifically, in his theory society was an ever-evolving, self-sustaining social organism rather than as a fixed, unchanging entity. Veblen applied Darwin's theory of evolution to the social organism and produced a social theory of change which represented a contrast to the Newtonian neoclassical one.

Whereas neoclassical economists, following Smith, pictured the economy as deducible from Laws of Nature, Veblen (and his followers) pictured the economy as an organism guided by the impulse to survive. Implicit in this view was that the future direction was not pre-determined. Instead, change evolved according to the changing combination and conjunction of processes within society. This type of change included human nature. For Veblen, human nature was shaped by the institutions to which individuals belonged. Their participation in institutional growth and development, in turn, shaped and defined them. Since Veblen rejected the teleological "givenness" of neoclassical theory, proof of the correctness of his view was provided through an empiricist epistemology. Whereas neoclassical theory deduced the nature of the economy from given laws (rationalism), Veblen argued that the value-neutral "tools of scientific method" be used to collect and tabulate rapid changes in society. On the basis of these tabulations (empiricism), truthful knowledge of the economy was produced.

Following a rationalist epistemology, the ontology of neoclassical economics is consistent with the idea of a naturally ordered social universe which is guided by "laws" of motion. This was the proposed solution to the social scientist's quest for certainty regarding economic affairs, present and future. These two pictures are based in modernist science. Both are mobilized around the belief that science (empirical and analytical) is the highest form of "true" knowledge. As part of the demonstration of the truth of this belief, each picture enlists essentialist epistemologies in defense of its claim to have captured the truth of objective reality. The objective truth which is verified by essentialist epistemologies, in turn, gives credibility to the methodology by which it was discovered.[18]

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[18] I elaborate on the relationship between the essentialist epistemologies and ontologies of each picture in chapters two and three.

C. Modernist Methodology of Economics: An Epistemological Problem[19]

In the previous section I argued that the cognitive modernist split between the mind's knowledge of reality and reality itself raised epistemology to a critical level of importance. When in the name of scientific method economic theories compete for disciplinary pre-eminence, epistemology becomes the litmus test for the scientificity (and authority) of theoretical economic knowledge. To authorize a particular set of economic practices (theoretical research and policy implementation) based on the veracity of one economic theory versus another, epistemology becomes the means whereby theories and knowledge products with competing explanations of reality are judged for their relative strength and explanatory power. In economics, subject-centered seeing requires correspondence criteria to link the knowledge product and the objective "thing-in-itself," or the particular economic phenomenon under investigation. Epistemology defines the standards by which one picture may be said to be "truer" than another, where truth is understood as accuracy or "closeness of fit" to the objective world. In this section, I examine traditional arguments made by economists for establishing correspondence between knowledge of reality and reality itself.

The earlier discussion of what modernism is and how the epistemological problem of cognitive modernism is a necessary part of a modernist social science like economics has prepared us to examine exactly how economists have responded to the epistemological problem of cognitive modernism. A review of the main themes in the methodology of economics literature reveals that economic methodologists have sought justification for the scientific status of economic knowledge products primarily by grounding those products in various forms of empiricism.

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[19] This section is indebted to surveys by Caldwell (1982, 1991), Hausman (1984), and Redman (1991). Other useful surveys of economic methodology include Boland (1982), Pheby (1988), Caldwell (1980), and Blaug (1992).

As Amariglio (1985) cogently argues, historians of economic thought and methodology have, throughout most of the twentieth century, sought to establish the epistemological grounds for economic theory in science. Philosophy of science has been viewed as the key to reproducing the "authority" of modern economic ideas. Over time, the philosophies of science used by economists as a foundation for economic knowledge have ranged from positivism to Popperian falsificationism to operationalism and pragmatism. In fact, the development of the field of economic methodology can be read as a history of "progress" in the appropriation of scientific tools for the study of economics.

After early positivism's demise among historians and philosophers of science, economic methodologists rested their claims for the authority of economic science on the mature philosophy of science of Karl Popper, and later on the "progress of knowledge" philosophies of science developed by Thomas Kuhn ("paradigms and normal science") and Imre Lakatos ("research programmes").[20] I review these philosophies of science to show how economists have used them to resolve the epistemological problem of cognitive modernism. A review of the literature of economic methodology also establishes the context for the emergence of pragmatism as an alternative to traditional philosophies of science. For it is two empiricist versions of pragmatism which now provide scientific authority for the economics of Friedman's free-market theory of capitalism (Chicago School) and of Veblen's American Institutionalism. Hence, while this literature review is not meant to be an original and exhaustive treatment of the growing literature on positivism, post-positivism, and economic methodology, it does provide an illustration of how the epistemological problem of cognitive modernism has been a persistent theme in economic methodology. It also sets the context for the emergence of two empiricist versions of Deweyan pragmatism as the latest justifications for the scientific authority of

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[20] In the literature, it is common to see references to early, or naive, positivism, and later, or mature, positivism. The "break" is regarded as the intervention of Karl Popper, who argued that falsification, not verification, was the only proper way to build a coherent and useful scientific knowledge.

modernist economic knowledge products. I should point out that there are many interesting and important issues within this discussion that must be excluded from my discussion. Some of those themes, however, will emerge in my discussions of pragmatism in chapters two and three.

What is positivism? Positivism is a form of empiricism; it is a philosophical language whose grammar, when strictly adhered to, serves as a sure *foundation* for scientific knowledge; it is a philosophy whose form is logical analysis and whose subject matter is empirical science; it is "scientific therapy" for philosophical thought, separating science from pseudo-science.[21] Applying the formal language codes that were endemic to modernism (see page 9 above), the goal of logical positivists was to make theoretical statements unambiguous by ruthless application of formal logic to economic arguments. Caldwell (1982), in his survey of twentieth century positivism, writes

> The logical positivist program asserted that only meaningful statements were to be permitted scientific consideration and accorded the status of knowledge claims. Meaningfulness (or cognitive significance) was strictly defined as being attributable only to those statements which are either analytic (tautologies or self-contradictions) or synthetic (factual statements which may be verified or falsified by evidence).[22]

Positivism asserts that there are only three kinds of statements: (1) analytic, (2) synthetic, and (3) meaningless. Analytic statements are those statements which are true *a priori*. It is unnecessary and impossible to find "proof" of analytic statements in the realm of experience. Analytic statements are formally or logically true. A syllogism in analytic philosophy provides an example of an analytic statement:

Premise 1: All economists have mule brains
Premise 2: Thomas Sowell is an economist
Conclusion: Therefore, Thomas Sowell has a mule brain.

The "truth" of analytic statements does not rely on correspondence to some other realm of reality. The truth of the conclusion is contained in the grammar of the syllogism.

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21 See Caldwell (1980, 54-5).
22 Caldwell (1980, 13).

Both premises may be false in relation to a reality external to the syllogism but the conclusion is "true" because it matters only that the conclusion *follows* from the premises according to given rules of logic. Moritz Schlick (1959, 223) commented on analytic statements, "What makes them true is just their being correctly constructed, i.e., their standing in agreement with our arbitrarily established definitions." Deductive reasoning in formal logic establishes the criteria for the truth of analytic statements by encoding meaning in the grammar of formal logic. To understand the rules of logic is to understand the meaning of an analytic statement.[23]

A meaningless statement is any statement which is neither analytic nor synthetic. A synthetic statement, then, is a statement whose "truth" depends on empirical *verification* in human experience. For all synthetic statements, the criteria for meaningfulness (as truth) stressed the primacy of physical sense-data. While the truth of analytic statements is self-evident, the only way to establish the truth of synthetic statements is to *test* them. Testability or verifiability, meaning the ability to verify the (scientific) truth or falsity of a statement, is the criterion for the cognitive significance of synthetic statements. Caldwell (1982) traces the development of positivist criteria for synthetic statements, going from the *verifiability* criterion of the Vienna Circle's early positivism, to the *weak verifiability* of Ayer, to the *translatability* and then *confirmability* of Carnap. In all these criteria, positivism bridged the gap in economic theory between a scientific hypothesis about the economy and the factual truth of the real world economy. The positivist philosophical program established criteria for a philosophy that would clarify and demarcate between science and nonscience and between meaningful knowledge and meaningless "knowledge."

The effect on social sciences like economics of the quest for certainty in knowledge among philosophers of science was profound. Schlick (1959) concludes his important

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[23] Friedman's natural law theory of capitalism is a good example of this kind of reasoning. See chapter three.

essay with the confidence of a philosopher of science who conducts inquiry with complete certainty about the scientific method's "truth-tracking" ability:

> If attention is directed upon the relation of science to reality the system of its statements is seen to be that which it really is, namely, a means of finding one's way among the facts; of arriving at the joy of confirmation, the feeling of finality. The problem of the "basis" changes then automatically into that of the unshakeable point of contact between knowledge and reality. We have come to know these absolutely fixed points of contact, the confirmations, in their individuality: they are the only synthetic statements that are not *hypotheses*. They do not in any way lie at the base of science; but like a flame, cognition, as it were, licks out to them, reaching each but for a moment and then at once consuming it. And newly fed and strengthened, it flames onward to the next. These moments of fulfilment and combustion are what is essential. All the light of knowledge comes from them. And it is for the source of this light the philosopher is really inquiring when he seeks the ultimate basis of all knowledge.[24]

The early positivists believed they had outlined a sure, universally applicable program for science. The positivist program consisted of one method—the scientific method—and one goal—scientific knowledge. This was the highest form of human inquiry. It did not take long, however, for the anti-positivist counterattack on verificationism to arise.

An early and important opponent of positivism as "verificationism" was contained in the "falsificationist" logic of scientific discovery espoused by Karl Popper. While positivism as an empirical research program continues as the dominant philosophy of science approach of modern economists, no less than Bruce Caldwell, Mark Blaug, Wade Hands, Lawrence Boland, Friedrich Hayek, Terence W. Hutchison, Joop Klant, Spiro Latsis, and Stanley Wong count themselves among those economists whose methodological research is in the Popperian—as opposed to Vienna School—tradition. That is, they see themselves as falsificationists, not verificationists. It seems somewhat ironic that the literature defines Popper's "anti-positivism" as "mature positivism," accepting Popper's critique of verificationism while preserving the empiricism of early positivism. In fact, in his intellectual history of the role of positivism in twentieth century

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[24] Schlick (1959, 226-7).

economics, Caldwell (1982) includes Popper's falsificationism as a version of positivism.[25] Popper's alternative philosophy of science is worth looking at more closely because no other philosopher of science has had more influence on the discipline of economic science than Popper. The publication in English of his *The Logic of Scientific Discovery* in 1959 stands as a pioneering reference for the methodology of economic science. Caldwell (1991, 30) attributes Popper's popularity among economists to the fact that Popper writes well, has an engaging style, and offered "simple and direct answers" to questions that were at the core of economists' concerns with making economics a science.

Popper rejected the positivist's testability or verificationist principle on two grounds. First, he objected to verifiability as the criterion of cognitive significance because of the implied *logical status* of scientific statements. There were many scientific statements that were verifiable, but not falsifiable. These statements could be "false," but their falsity could not be established through verification. The statement, "Racial groups exist" can be verified by finding people who are members of different racial groups. But the failure to find "races" does not mean that "races" don't exist. The statement cannot be falsified. The verification principle means that confirmation of existence may be obtained, but failure to confirm does not mean non-existence. Consequently, the statement, "racial groups exist" would have to be considered a scientific statement.

Conversely, there were many statements in science that could be falsified but not verified. The example most common in the literature is the statement "All ravens are black." This statement is based on the empirical fact that all *observations* of ravens have shown that black is their only color. But to accept that *all* ravens are black is to make the further assertion that all ravens have been observed. There is no way of providing empirical proof across time and space that all ravens have been observed. Verification is impossible.

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[25] Caldwell makes the distinction between early and mature, strong and weak, positivism.

Popper argued that, in both cases there were logical problems with using verification as the criterion for cognitive significance of synthetic statements.

Popper's second objection was to the logic of *scientific explanation* implied in the verification criterion. In his view the problem with the logical empiricism of the Vienna Circle was that analytic statements were themselves meaningless since they could not be subjected to any type of empirical test. Analytic statements were often defined by philosophers as universals that were central to scientific research and development, but were not testable. Since such statements often were part of a discipline's "received wisdom," it was not an option to reject them as "meaningless" just because they could not be tested empirically. Popper replaced the overly strict verifiability criterion of the logical positivists with the softer criterion of falsifiability. Caldwell (1980, 56) quotes Popper's criticism of the logical positivists of the Vienna Circle, "positivists, in their anxiety to annihilate metaphysics, annihilate natural science along with it." The problem with verifiability is that statements which are considered universally true in the scientific community often cannot be proven empirically.

Does this mean those statements cannot be used in scientific investigation? Initially Popper's critique of early positivism meant that core concepts of neoclassical economic theory—concepts like "equilibrium" or "perfect foresight"—had to be rejected because they were untestable. But Popper added that *in practice* clean and neat falsifiability was virtually impossible. He granted that whenever a hypothesis was tested, a number of "auxiliary hypotheses" were also part of the test. These auxiliary hypotheses could "bias" the result. Therefore, as a practical matter, some hypotheses—ones like "equilibrium" and "perfect foresight"—could be accepted as conventions of science although currently untestable.[26]

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[26] Hands (1991, 122-5) contains a good example of the important related problem of ad hocness in Popperian methodology. Ad hocness was an early counter to Popper's falsifiability criterion, one which led Popper to concede that some collections of sentences, like theories, could be accepted as scientific even though they were untestable. Popper

Rather than continuing the pursuit of the futile "complete" proof, Popper argued, science could proceed by making bold conjectures which would stand until falsified or refuted. For synthetic and analytic statements, the practice of science should be falsification. Any statement could be accepted as true and meaningful until it was proven untrue by experiment. Falsfiability became the "criterion of demarcation" in philosophy of science. Scientific statements were those statements that were either testable or part of the received wisdom of scientific explanation. (Popper even allowed for "currently untestable" statements to be included in scientific work, recognizing their "necessity" for scientific progress and hoping that through progress such statements would become testable.)

The search for a criterion of demarcation, which is the same criterion as what we refer to as a criterion for scientifically "true" knowledge, was the precondition for progress in science. Systematic progress in science and advances in scientific knowledge resulted from submitting hypotheses or conjectures to empirical testing. Much of the branch of economics called econometrics takes its methodology from Popper. Econometric exercises answer the question, What evidence would cause you to give up or reject your hypothesis? Empirical testing is designed to uncover such evidence; the corollary being that until such evidence is uncovered, the hypothesis is to be accepted.

The willingness and ability of economists to practice Popperian falsification was overdetermined by various other pressures brought to bear upon neoclassical theory. In addition to their interest in seeing the quest for certain foundations for economic science succeed, neoclassical economists during the 1930s and 40s were also under attack from liberal and leftist heterodox, dissident, even Marxist economists. The asserted unrealism of the core propositions or basic assumptions of neoclassical made that theory, in the view of

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insisted, however, that ad hoc scientific statements were unacceptable attempts to cling to a theory which had been falsified. He believed most ad hoc statements to be attempts to render a preferred theory "immune" to falsification and held, therefore, that they were distinct from other, "acceptable" auxiliary hypotheses.

many, untenable. Long before Friedman's solution to the "realism of assumptions" debate, the controversy had occupied center stage in professional journals. The famous debate in England between Lionel Robbins and Terence Hutchison, and the subsequent debate between Hutchison and Fritz Machlup, centered on the basic epistemological questions of an emerging modern economic science. The debate between Robbins and Hutchinson is an example of the meaning of positivism in economics.[27]

Robbins, influenced by the Austrians, adopted a subjectivist approach in which he argued that the "fundamental generalizations of economics were self-evident propositions about reality." In addition to his rationalist understanding of economic theory, he argued that it was possible to control and order economic activity; knowledge was ergodic; and other "subsidiary postulates" based on empirical evidence of the nature of the real world. Hutchison, who studied the writings of the Vienna Circle positivists while at the University of Bonn in the late thirties, responded to Robbins' assertions by insisting that to be a science economics had to adopt a positivist methodology, an empirical research program. There was no other way to avoid engaging in pseudo-science. The important achievement of Hutchison's critique of Robbins is twofold. First, Hutchison formally introduces and imports (verificationist) positivism into economics. *The Significance and Basic Postulates of Economic Theory* (1938, six years after Robbins' classic text) is the first comprehensive statement of a positivist methodology for economics. Hutchison's second achievement was that he removed the basic propositions of economic theory from the pseudo-scientific language of Robbins' (and the Austrians') subjectivism and methodological individualism, and stated the core propositions neoclassical theory in the language of objective logic.

Hutchison thought—consistent with the methodology of positivism, which blends rationalist and empiricist approaches—that the only way to vindicate the core propositions of modern (mainstream) economic theory, propositions which he argued were empty of

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[27] See Caldwell (1982).

empirical content, was to test them.[28] The core propositions were tautological (completely deducible from the basic arbitrary definitions of terms). They were also conventionally accepted. Because they were generally accepted tautologies, Hutchison argued, they defined a basic language, or picture, which could then be used to arrive at scientifically or cognitively significant knowledge of the economy. The core propositions of neoclassical theory were symbolically and terminologically useful for scientific progress in economics:

> Pure theory affords us a sharp clear-cut language or system of definitions with which to approach the problems which the facts of the world raise. Just as theoretical physicists and astronomers have the task of explaining everything we say by implication if we assert the law of gravitation, so theoretical economists have the task of explaining what we say by implication if we assert the various assumptions of economic analysis.[29]

Hutchison does not grant all of the core propositions of neoclassical theory the status of "law." That is, he does not grant them status as law *a priori*. Instead of rejecting the propositions because they are not testable, Hutchison acknowledges the possibility that the propositions may be supported or "confirmed" by "empirical regularities." "Laws" are those universals which it is the "central object of science" to discover. The role of positivism, in Hutchison's view, was to give the maximum of empirical support for economic laws. Since some conclusions were not testable, rational calculation could be used to supplement investigations into the nature of economic dynamics. Hutchison's importation of positivism into economics meant that the core propositions of economic theory were not the only means of arriving at important truths. Empirical testing and

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[28] Neoclassical economic theory is one kind of economic theory that I regard as modern. Following from my definition of the epistemological problem of modernism, other types of economic theory—new keynesianism, post keynesianism, new classical economics, some versions of Marxism—are also "modern," or epistemologically essentialist. My discussion of the core propositions of neoclassical economic theory is useful because of the dominance and authority of that theory among other schools, and also, following from its dominance, the widespread textbook treatment of neoclassical theory. I do not, however, regard neoclassical theory as coterminous with modern economics. The latter is a much broader and more inclusive category in which the former is classified.

[29] See Hutchison (1938, 34).

rational, logical analysis were to support each other. The two types of epistemologies working in tandem defined positivism in economics.

Neoclassical theory was a group of statements that could be true in general (although containing untestable particulars) and could be useful for research purposes even though the predicted outcomes of a theory do not occur in every instance. Following Huthchison's positivist program, what came to be called an "interpretive system" shifted the emphasis from Popper's falsifying of individual statements to confirming general models and theories. In economics the dominant "interpretive system" (or hypothetico-deductive model, H-D) is the neoclassical model. Caldwell (1980) defines the hypothetico-deductive method of inquiry as follows:

> The formal structure of a theory is nothing more than a mechanical calculus, or a hypothetico-deductive system. A theory contains axioms, or primitive sentences, and theorems, or derivative statements. The axioms may refer either to observable or nonobservable entities. As a mechanical calculus, the system is devoid of meaning until given an empirical content by means of interpretive sentences, that is, when some of the sentences of the theory (often the derived ones) are translated into the observation language. Implicit is the idea that theories are to be judged as entire systems: The fact that there is no complete (or incomplete, for that matter) definition for every theoretical term is not to be held against a theory. All terms gain meaningfulness to the extent that the theory as a whole is confirmed, usually by checking the derivative theorems (or predictions) against evidence (58).

Caldwell's summary of the H-D model stresses the role of empirical research in testing and accumulating economic knowledge. The derivative statements and the overall system is to be judged by "evidence," which is itself gathered by empirical testing. "Interpretive sentences" are the links between whole theories and empirical evidence. Such sentences explain the evidence or the theory as a "fit."

The H-D model calls for a positivist approach to the problem of scientific knowledge because it defines the neoclassical model as a rationally deduced and empirically verified predictor of economic events. The interpretive system known as the neoclassical model consists of derivative statements which follow from neoclassical

theory's basic assumptions about human nature. The derivative statements and a priori statements are accepted as true on the basis of the supporting empirical evidence. In other words, to confirm or disconfirm hypotheses generated on the neoclassical model, the H-D method calls for empirical testing of a rationally deduced idea. Positivism is an epistemology which uses empirical evidence to prove the truth of rationalist propositions. It is a blend of both rationalism and empiricism in that the ultimate appeal to the truth of rationalism is based on empirical evidence. This form of positivism has prevailed in modern economic thought through most of the twentieth century.[30]

In the early 1950s, Fritz Machlup responded to Hutchison's positivist position by arguing that the problem of verification in economics was not one of "closeness of fit" between the asumptions of neoclassical theory and the real world. Rather, the problem of verification was one of "reconciling" empirical phenomena with hypothetical generalizations about those phenomena. Machlup argued that there were three different types of assumptions in economic theory: fundamental assumptions, specific assumptions, and deduced low-level hypotheses. Fundamental hypotheses could be tested only indirectly but could be confirmed, nonetheless, on the basis of indirect testing. Their debate over "degrees of testing," the "content of fundamental assumptions," and the "exercise of good judgment" in carrying out the empiricist project of economic science left the discipline divided between those who insisted that the "realism of assumptions" matters to theory, and those who believed that the realism of assumptions did not matter. Much was at stake: the clear implication was that if the dominant school of thought in modern economics—neoclassical theory—could not pass the "closeness of fit" test, on what basis could it be regarded as true?

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30 This is an instance of the epistemological trick where rationalisms often rely on empiricism for "proof," and vice versa. See Resnick and Wolff (1982, 33-7) for a discussion of this problem.

Despite the rationalist "truth" of the model—its "intuitive" or "self-evident" correspondence with "real" human nature—the demands of a rigorous science required that economics have an empirical branch. To preserve the authority and hegemony of neoclassical theory, Machlup moved away from the rigid empricism of Hutchison and positivists by granting that theory was to be assessed not by its match with reality but with its usefulness in predicting real events. Machlup argued for the continued importance of the basic propositions of neoclassical theory by insisting that neoclassical theory's core propositions were acceptable because they were plausible, intuitively evident (though empirically unverifiable) approximations of real world behavior. He stressed the importance of the rationalist truth of neoclassical theory.

In one sense, the dispute between Machlup and Hutchison reduces to a dispute over the degree of precision, weak versus strong, which neoclassical theory—and all modernist, epistemologically essentialist discourses—must meet in representing the real world. How much accuracy should be required to establish "truthfulness" in representation? Science, after all, was supposed to be the "language of the physical universe." As such, it was assumed to express the "true nature" of the physical universe, including human society. If modern, neoclassical economic theory achieved only approximate truth, then what could economists claim to "know" with scientific precision and certainty? Machlup's contention that over time and through progress in theoretical research the true nature of the economy would reveal itself to be like that described in the neoclassical model prevailed over Hutchison's strong requirement that only propositions which were verified by empirical evidence be accepted. Without questioning the epistemological assumptions underlying positivism, modernist neoclassical economists acted as if the core propositions of neoclassical captured the essential truth of the economy.

In recent years, the empiricism of Hutchison and the positivism espoused by Machlup have come under increasing criticism by philosophers of science. While the methods of positivist scientists were appropriate for the natural or physical sciences,

characterized chiefly by the control scientists had over the experimental environment, such methods were too strict, or restrictive, for the human and social sciences. Rather than slowing the progress of scientific knowledge by worrying over whether or not the correct methodology was being followed, economists increasingly came to rely on "progress of knowledge" approaches to economic methodology.

In these sociology of knowledge descriptions of the progress of scientific knowledge, emphasis was placed not on how the epistemological question could be answered. Instead, emphasis was on accurately describing how communities of scientists *practice* science. Sociologists of scientific knowledge like Thomas Kuhn and Imre Lakatos centered their work on developing new ways to account for successful methods of research which do not rely exclusively on positivist criteria. Kuhn and Lakatos were concerned to demonstrate that there is no single scientific method which unifies all scientific discourses according to one grand methodology, and that the disparateness between scientific communities could be so great that communication between two communities of working scientists might be impossible. For Kuhn and Lakatos, the issue was not determining what true science is. For each of them, science is as science does. They were more concerned with showing communities of scientists how they could erect knowledges based on a core set of shared, "normal" assumptions. Disagreement with the assumptions merely placed one outside the particular scientific community in which there was agreement.

Kuhn's (1970) notion of a research paradigm describes the way successive schools emerge in the natural sciences. "Scientific revolutions" involve the displacement of one world view by another by declaring itself to be better or superior science. In Kuhn's stages, a normal science begins as a protoscience. In this preparadigm stage, the discipline is just getting started. Theorists acitvely work on a set of questions which defines their common ground. Eventually one set of questions and procedures for addressing those questions become dominant. The school becomes a discipline. Along with the seminal questions and a few "applications," a disciplinary matrix is defined. The purpose of research in this

paradigm or normal science stage is too expand the paradigm as much as possible. Researchers are concerned to demonstrate the widest applicability of the paradigm. They do so by confronting those issues and questions which seem not to "fit" the paradigm. Over time, if the paradigm cannot continue to expand, puzzles begin to develop. These puzzles must either be answered within the paradigm or defined as unanswerables (nonscience), which lets the paradigm move on. Otherwise, the anomalies or "bad fits" become the focus of research, generating a crisis for the paradigm. At this point other approaches and world views challenge the dominant world view for predictive adequacy. The paradigm that best describes the object, the paradigm that best resolves the crisis, succeeds in revolutionizing the field. A new paradigm now takes over.

Kuhn's work on describing the nature of scientific progress has undergone modificiations since its initial publication. In later versions periods of scientific development are characterized by "interpenetrating and overlapping" paradigms (in the plural). This brings Kuhn somewhat closer to Lakatos. Lakatos argues that instead of a dominant paradigm which forms a "normal" scientific discipline, scienctific investigation is characterized by "clusters of interconnected theories," or scientific research programmes. Research programs are characterized by their different stages; Lakatos distinguishes between progressive and degenerating problem shifts. The "hard core" of a research program corresponds to Kuhn's dominant paradigm. The protective belts correspond to puzzles or "refutable variants" of the hard core. A research program is progressive as long as its constituents provide empirically corroborated evidence which strengthens the hard core. Some of the refutable variants in the protective belt must be resolved favorably.

Kuhn and Lakatos, however, differ primarily on the question of how scientific research moves forward. Whereas Kuhn relies on revolutions (caused by *meta*physical factors), Lakatos explains his shifts in research programs by the fact that programs eventually degenerate and the "center," or hard core, shifts to another set of core propositions. This difference underscores the fact that both explanations of scientific

progress are prescriptive rather than descriptive. Both beg the questions of how and why scientific, as opposed to nonscientific, knowledge is privileged.

In the discussion of this section, I have tried to outline the fundamental reliance of modern economics on the essentialist epistemologies of rationalism and empiricism. A third epistemology, positivism, blends rationalism and empiricism by lapsing one into the other. I have argued that throughout the history of methodological inquiry in modern economics, the progress of economic knowledge has depended upon the rigor of rational and empirical argument. Rationalist and empiricist epistemologies have been used to confirm the truth or scientificity of economic knowledge. Positivism and the "progress of knowledge" schools verify their knowledge products by appealing to one or both classical epistemologies to prove the meaningfulness, value, correctness, and truth of the theory. On the basis of rationalist and empiricist epistemologies, which in tandem form the methodology of positivism, economics rests its claim to science.

Developments in philosophy of science, however, have cast a shadow of doubt on the "authority" of rationalist and empiricist argument to provide the independent criterion for objective, true knowledge it is supposed to have. Recently, a wave of renewed interest in the methodology of economics has offered a way around essentialist epistemologies like rationalism and empiricism. Pragmatism, specifically versions of the pragmatism of American philosopher John Dewey, has been viewed as the way around the epistemological problem of cognitive modernism. In the next section I examine pragmatism as the basis of this renewed interest in the "philosophical foundations" of modernist economics.

D. Economics, Pragmatism, and the Problem of Cognitive Modernism

The central question of this section is, What motivates economists' interest in John Dewey's philosophy of pragmatism? Is Deweyan pragmatism a solution to the epistemological problem of cognitive modernism? To answer this question requires that

the interest in pragmatism be situated in its historical context. Literary and cultural critic Edward Said (1983, 226) writes that "theory, like people and schools of criticism," travels across time and space. That theories circulate raises the question of rearticulation: as theory travels from one place to another, one person to another, one historical period to another, does it gain or lose in strength? How is it transformed in the process of travel and how is it rearticulated once it "arrives" in a new site? Or, does theory remain essentially unchanged, proving its universality by remaining recognizable to informed experts? Said (1983, 226) argues that once a theory travels to a context different from its origin, "it necessarily involves processes of representation and institutionalization different from those at the point of origin." Hence, theories *change* as they travel. The different political, cultural (including scientific), and economic "influences" across time and space can be said to effect the constitution of a theory as it travels. Travelling theory, consequently, undermines any attempt to naturalize theory. It resists efforts to be used to render representations universal and transcendent.

The American philosophy of pragmatism, best exemplified in the work of John Dewey, now "travels" in economics. That is, pragmatism has emerged in a new site—economic theory—and is being offered as an economic methodology for two different schools of thought. In American economic thought in the twentieth century, there are two direct consequences of the modernist orientation toward knowledge and society. First, two distinct pictures or worldviews of the economy have been constructed: the Chicago view, implied in Friedman's 1953 essay, the "central document of modernism in economics" (McCloskey 1985, 9); and the Institutionalist view, articulated in the criticisms and grand theoretical scheme of its founder, Thorstein Veblen. Second, each of these visions of the economy rests on a method of proof, a "closeness of fit" criterion, which they call Deweyan pragmatism. Both versions (of pragmatism) are modernist. Pragmatism, then, is the epistemological justification for maintaining that the privileged representation to which

both of these cognitive modernist traditions subscribe as the "true" or "correct" representation of objective reality.

Ranging far from the intradisciplinary debate in philosophy in which it emerged, pragmatism in economics was understood by Thorstein Veblen to be a methodology calling for broad application of the scientific method; pragmatism in economics was understood by Milton Friedman to be a neo-positivist philosophy of science. Both versions of pragmatism have been shaped by the economic theories and practices of which each is said to be a part. The pragmatisms in economics are not the same as the pragmatisms in education or business or literature or philosophy or any of the other disciplines in which it circulates and rearticulates.

Describing the process of rearticulation which takes place as theories travel, Said (1983, 226-7) identifies four stages which constitute a pattern of movement of theory. In the first stage, the origin, there exists a set of initial conditions in which the theory "entered discourse"; a particular problem or controversy shapes the entrance of the theory into analysis in a way that distinguishes it from other theories. In the second stage, theory transverses a distance which includes "passage through the pressure of various contexts" into a different time and place. In the third stage, a new set of conditions of existence—conditions of acceptance as well as resistance—emerge and "confront" the theory, allowing its entrance into a new discourse. In the fourth stage, the "accomodated" theory is transformed or "rearticulated" by its new "uses" in a different time and place.

The "crisis of authority" of traditional rationalist and empiricist argument in economic theory motivates the continued research into the philosophical and scientific foundations of economic science. The failure of philosophers of science to find an epistemology which could provide universal proof for scientific claims is just one example of the new "conditions of existence" which led to the emergence of pragmatism as an economic philosophy *unconcerned* with epistemology. That is, the epistemological problem of cognitive modernism—the inability of rationalist and empiricist argument to

meet their own criteria for "authoritative" knowledge—is a condition of existence of the turn to the pragmatism of John Dewey.

Veblen viewed Dewey's pragmatism as the key to modern scientific method, a method uninhibited by the outdated worldview of a bygone (Newtonian) era. In Friedman's case, on the other hand, Deweyan pragmatism functions to rescue the core propositions of neoclassical theory from the challenge of irrelevance which was levelled by economists in the 1930s and 40s. Friedman, the Deweyan pragmatist, argued on philosophical grounds that "the realism of asumptions" criterion should not be a consideration in deciding the truth value of a theory. As a pragmatist, Friedman was concerned only with the instrumental effectiveness of theory, not with its "closeness of fit" as a picture of reality. Friedman asks, Does the model predict well? As he understood Dewey, this was the essence of pragmatic philosophy.

For Veblen, on the other hand, pragmatism is a philosophy of science which emerges out of a specific cultural context and governs inquiry. Realism is the ultimate aim of theorizing activity. In Veblen's institutionalist paradigm, "realism" is of paramount concern. Veblen's economic theory, known as American institutionalism, is constructed on the basis of pragmatic (scientific) inquiry. Veblen the Deweyan pragmatist rejects neoclassical theory because it is outdated (pre-modern!) and fails to describe what is "really" happening in the real economy. As Veblen understands Dewey, pragmatism is a philosophy which will shield economic inquiry from the stale ruminations of neoclassicism and allow economists to "know" reality and, with the knowledge of reality, control economic change. Veblen asks, Does the model capture the essence of the processes of evolutionary change in the economy? As he understood Dewey, this was the essence of pragmatic philosophy.

My objective in this dissertation is not to critically exegete Dewey's works to determine which of these economic pragmatisms is the correct Deweyan pragmatism. To do this would be to shift the discussion back onto the terrain in which essentialist

epistemology functions, namely to demarcate or prove true from false knowledge. Rather, my task is to ask how pragmatism as an economic methodology has changed, and been changed by, the theoretical practices of Friedman and Veblen. How is each pragmatism constructed and at what expense? They are not the same pragmatisms; nor is either the same as the pragmatism of Dewey. That is, there are differences among the different pragmatisms theorized in the work of Dewey, Friedman, and Veblen.

It is not possible to resolve the debate between the different pragmatisms. To solve the debate would require some extradiscursive "court of appeal" which would "know" from the outside all versions of pragmatism and compare each version with the *essential* pragmatism, whatever that might be. This approach to resolving the dilemma of two different pragmatisms in economics, both proving two different versions of reality, is the category mistake which I identify with the cognitive modernist tradition. Adjudicating philosophies from the standpoint of a "view from nowhere" is not humanly possible. Only within the framework of modernism does the subject-centered spectator posit such a question. Since no extradiscursive authority exists, no solution to the problem of finding the real Dewey can be found.

But, as will be shown in chapters two and three, the versions of pragmatism espoused by Veblen and Friedman participate in authorizing the practices of cognitive modernism's essentialist epistemologies. The versions of pragmatism in the economics of Friedman and of Veblen are modernist versions of pragmatism. Both versions of pragmatism fail to overcome the legacy of the cognitive modernist search for an ultimate context for scientific truth. Each asserts a pragmatism as proof that *its* picture of the world is the accurate, true picture of the world.

Pragmatism has become the new philosophy of science of choice among economists. Its appeal is based on the fact that (1) it is an American philosophy (hence it is not surprising that the two indigenous schools of economic thought in the United States should embrace pragmatism as the preferred economic methodology); (2) it was authored

by the most famous American philosopher, John Dewey; (3) it provides a justification for economic science which "resolves" Cartesianism's quest for certainty.

But each school claims that pragmatism provides proof that their practices and views are "true" scientifically. Each, in other words, uses pragmatism to show that its knowledge is scientific. But if pragmatism is used as the epistemology which confirms the scientific status of a particular view, then that pragmatism is an epistemology subject to the crisis of cognitive modernism. I regard both of the pragmatisms of economic science as relying on epistemological essentialism just as other philosophies of science do. These pragmatisms are, therefore, rejected as being unable ultimately to prove the truths they offer.

The crisis of cognitive modernism, the inability to stand "nowhere" and look down or in upon human activity with an ability to ascertain the truth of the matter is what gives us an opportunity to demote without devaluing terms like "truth" and "scientific authority" and "objectivity" and the like. We abandon the search for objective truth in favor of partisan knowledges which promote partisan and context-specific practices. Recognizing that there is no way to establish an ultimate context for truth, we may shift the direction of the debate and raise other questions, questions which are answered in the following chapters: What other pragmatisms are possible in economics? Is it possible to read Dewey as a postmodernist? If Dewey was *against* classical (essentialist) epistemology, are the versions of Deweyan pragmatism in economics *for* epistemology, and therefore inscribed in the modernist tradition?

These questions are posed in an age in which modernism is in a state of crisis, an age in which theory or the world picture—the imagined whole—becomes fragmented into theories and pictures which cannot be privileged according to some criterion of truth-content. There are many Deweyan pragmatisms; those of Veblen, Friedman, my own, and others as well. I offer the rudiments of a third version of Deweyan pragmatism in chapter four. In this third version, I argue that it is possible to see Deweyan pragmatism as a

philosophy which anticipates the antiessentialist "epistemology" of Marxism. That is, in my third reading of Deweyan pragmatism, Dewey's rejection of essentialist epistemology is taken seriously to the effect that modernist knowledge products are not privileged as "true" or "natural" representations of the concrete real. Rather than, privileging the reliance of Dewey on emerging science, I insist that Dewey's scientific empiricism comes after—and must be viewed in the context of—his rejection of essentialist epistemologies. In this reading, Dewey anticipates a break with classical rationalist and empiricist epistemologies.

In this chapter I have outlined the modernist tradition in economics. I have shown that the cognitive modernist quest for certain foundations for economic knowledge is a failed project. Modernist epistemologies cannot provide extradiscursive proof of the knowledge products of economic science. Nor can modernist epistemologies provide an objective standard against which one epistemology can be said to be a better "truth-tracker" than another. The different epistemologies in economics which purport to deliver the truth about the essence of the world have been unable to do so. The modernist project of ordering thought and ordering society succeeded only in exposing the seams, the cracks in the social whole. The task of re-imagining and re-constructing society in the image of a utopian well-ordered and stable society, the grand promise of modernism, cannot be fulfilled. All human knowledge is culture-bound and partial. All conversation is incomplete. To assert that one discourse is privileged over another by virtue of its claim to know the essence of human experience betrays a theoretical flaw and is, therefore, folly. McCloskey writes,

> While having a culture-bound conversation about whether knowledge is culture bound, they insist that conversation is not culture bound. They think they can assume an Archimedean point with which to lever the world of conversation. They do not want rhetoric, but rules of perfect knowledge for all time. They are not discouraged by the failure of 2,500 years of the epistemological conversation to find one.[31]

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[31] See McCloskey(1988b, 252).

The culture which dominates in the discipline of economics is the culture of science. The philosophical authority and epistemological justification on which its claim to hegemony rests has been challenged by its failure to hold itself together in the face of its own image.

CHAPTER II

THORSTEIN VEBLEN, INSTITUTIONALISM, AND PRAGMATISM

As discussed in the first chapter, the promise of modernity pivots along three axes: order versus disorder, centering versus decentering, and certainty versus uncertainty. Economic modernism has favored order, centering, and certainty over disorder, decentering, and uncertainty. For those economists in the majority, who believed in the efficacy of free markets guided by the invisible hand, order and progress came magically as a result of the unfettered pursuit of self-interest. On the other hand, for a small but growing minority of "dissident" economists, at the beginning of the twentieth century, modernity promised social engineers order, progress, control, stability, and certainty over time through the manipulation and reform of social and cultural institutions. Diverse and often contradictory frameworks or schools of thought in economics such as these had in common the fact that their methodological prescriptions were based in the enlightenment discourse of philosophical modernism.[32] The enlightenment discourse of modernism allowed economists to discover the true, essential nature of economic reality, and then to act in objective reality in the attempt to realize the image or theory of reality which they believed to be the truth of that reality. The first step in this process, in which it is believed that thinking captures the essence of reality outside the mind (and of the mind) involves an epistemological form of cognitive modernism. The second step, where the consequences of modernist thought influence and shape objective reality, is, more and less, modern society.

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[32] This argument extends to include various schools within Marxism. I am limiting myself to those schools of thought in economics which, by self-proclamation, embrace Dewey's pragmatism as the methodology of choice. See Ruccio and Amariglio (forthcoming) and, especially, Amariglio (1987) for a discussion of the problems of modernism and Marxist economic thought.

Examining the economic theory of American instutitionalism provides an opportunity to see how these two steps are overdetermined by each other. That is, modernist theories of society are constructed, partly, out of modernist epistemologies (truth-tracking methodologies). Essentialist epistemologies, in turn, confirm or prove essentialist theories of society. In economics the modernist epistemological tradition is expressed in the what I have termed cognitive modernism.

The process of unmasking begun in general in chapter one takes specific form in this chapter: When economists do what they do, they are often unconscious modernists because *modernism in economics*, as an experience in or orientation toward the world and the economy, is largely *untheorized*. That is, economic modernism uncritically appropriates the end positions of philosophy of science in the endless and futile quest for certain, transdiscursive foundations for truth claims. It is difficult to overestimate the profound impact that science has had in organizing western social thought.[33] The anti- or postmodernist moments within modernism, or the dialectical negations of the different modernist philosophy of science strategies, are repressed or overlooked by the eagerness to perfect economic science. Consequently, antiessentialist critiques of economic knowledge continue to receive little or no attention from practitioners of mainstream economic theory. Economists have not dealt with the problem of modernity, not because the problem does not have profound implications for the name and nature of economics, but because they have not probed into the critical philosophical issues that lie at the foundation of their discipline.

In American economic thought in the twentieth century, there are two direct consequences of the modernist orientation toward knowledge and society. First, two distinct pictures or worldviews of the economy have been constructed: the Chicago view,

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[33] Even the great opponents of the Age of Science—the Romantics—have been forced into extreme opposing views which, in some expressions, deny the validity of *any* materialist outlook.

implied in Friedman's 1953 essay, the "central document of modernism in economics" (McCloskey 1985, 9); and the Institutionalist view, articulated in the criticisms and grand theoretical scheme of its founder, Thorstein Veblen. Second, each of these visions of the economy rests on a method of proof, a "closeness of fit" criterion, which they call Deweyan pragmatism. Both versions (of pragmatism) are modernist. Pragmatism, then, is the epistemological justification for maintaining that the privileged representation to which both of these cognitive modernist traditions subscribe is the "true" or "correct" representation of objective reality. It is the purpose of this chapter to examine the modernism of American institutionalism's picture of the economy and how it uses a version of Deweyan pragmatism to provide epistemological justification for its picture.

Shifting in time and place from the critical methodological analysis of chapter one, I argue that the refusal or inability to see behind the philosophical and scientific "veil" is illustrated in the school of thought known as American Institutionalism. Reliance upon a philosophy of Deweyan pragmatism by Veblen and his followers signals the earliest presence of any form of pragmatism in economics. In American Institutionalism John Dewey's pragmatism is understood and practiced as an application of Scientific Method in the quest to understand the evolving social organism. Examination of the Veblenian tradition, however, reveals that the Institutionalist version of Deweyan pragmatism is essentialist and, due to its scientism, reduces to a form of philosophical modernism called classical empiricism.

Early Institutionalists embraced classical empiricism as a way of "modernizing" and expanding economics, of engaging economists in careful study of the rapid changes taking place in the late nineteenth and early twentieth centuries. Like most social reformers in turn-of-the-century America, Veblen (and Dewey) were disturbed by the social consequences of the consolidation of economic and political power that occurred as a result of rapid industrialization and capitalist expansion. The resulting social upheaval and radical

dislocations created challenges for reformist intellectuals and policymakers. Veblen was motivated by these issues.

The reliance of American Institutionalists on a scientistic reading of Deweyan pragmatism enabled them both to critique the dominant orthodox theory and to outline an agenda for creating an alternative model of the economy. A new thought concrete was developed but, while Veblen encouraged economists to "modernize" their theories by replacing the "given" mechanistic vision of Newton with the open-ended organicism of Darwin, the knowledge criterion for "proving" the correctness of the institutionalist model remained modernist inasmuch as Veblenian Institutionalism is the site of the advent of scientism (classical empiricism) in economics. Classical empiricism is a form of philosophical essentialism. Therefore, it is an essentialist epistemological position. It sets out to prove—in the case of Veblen and American Institionalism to prove "scientifically"—the objective conditions of a rapidly evolving American economy. This chapter looks at the Institutionalist agenda and the modernism of Thorstein Veblen, founder of American Institutionalism, as one expression of philosophical modernism in economics.

In the three sections which follow I consider Institutionalism as: (a) a protest movement, (b) a body of knowledge, and (c) a problem-solving approach to the acquisition of knowledge. This subdivision follows Samuels (1991) summary of Institutionalism. The first two aspects of Samuels' three-part division constitute Institutionalism's theory of society. The third aspect can be seen as Institutionalism's theory of knowledge. This chapter examines each of these aspects with a view toward understanding the modernism of American Institutionalism's theories of knowledge and society.

A. Veblen's Evolutionist Theory of Society: Critiquing Orthodoxy

The first moment of American Institutionalism is a moment of dissent or protest from the received tradition. Thorstein Veblen's institutions-based critique of orthodox

theory grew out of his perceived lack of agreement between that theory and the actual changes he saw taking place in the American economy of the late nineteenth century. He is the first economist after Marx, and the only American economist ever, to have attempted to construct a "grand theory" of the evolution of humankind. His theory of the evolution of human civilization is based not on discoverable immutable laws which govern natural economic behavior, but rather on cultural, institutional, and technological tendencies, habits, and achievements which shape collective and individual behavior over time.

Veblen's major writings on economics begin by attacking the orthodoxy for being "helplessly behind the times, and unable to handle its subject-matter in a way to entitle it to standing as a modern science."[34] The main thread in his essays on the problems of orthodox theory is a critique of the static equilibrium, atomistic individualist, and marginalist analysis regnant at the time. In these essays he points out precisely in what ways the discipline of economics is "out of date." In Veblen's view orthodox economic theory was "pre-evolutionary" because of its: (1) vision of the world; (2) theory of human nature; (3) theory of change. These three features of neoclassical theory constitute the major themes of Veblen's critique of orthodoxy.

1. Vision of the World

Veblen argued that the philosophical basis of neoclassicism was a mechanistic and formalist appropriation of Newton's physical science. This vision is often summarized as a "social physics" model of the economy. The question Veblen asks in what is perhaps his most famous essay, is "Why Is Economics Not An Evolutionary Science? (1898)."

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34 Veblen ([1919] 1990, 56). In addition to the title essay, see also "The Evolution of the Scientific Point of View," "Why Is Economics Not An Evolutionary Science?" and "The Preconceptions of Economic Science I, II, and III," "The Limitations of Marginal Utility," and "Professor Clark's Economics," all of which are collected in the same volume. These essays were originally collected in a volume of the same title published in 1919. With a new introduction by Warren Samuels, a leading exponent of American Institutionalism, and three new essays, the volume was reissued in 1990. References and page numbers refer to the 1990 edition.

Posing this question about neoclassical theory organizes my understanding of Veblen's critique of orthodox theory's vision of the world. The answer to this question, Veblen believed, lay in a fresh understanding of the subject-matter of economics: the institutions, social forces, production processes and technologies, and social relations that converged to form the economic structure of society in late nineteenth century America. In short, Veblen believed that the orthodox picture of the economy was wrong.

The Newtonian world system that was the root of the late nineteenth century liberal capitalist vision of society served as the foundation for the essentialist knowledge of capitalism which early twentieth century neoclassical economists inherited from their classical ancestors. By 1890, marginal utility analysis had successfully formalized the first principles of classical economic theory. The formalism of mainstream theory rested on the assumption that the social order was protected and guided by natural laws. In commenting on the theoretical implications of the problems of modern, pre-Darwinian science, Veblen writes,

> economic science is living over again in its turn the experiences which the natural sciences passed through some time back. In the natural sciences the work of the taxonomist was and continues to be of great value, but the scientists grew restless under the regime of symmetry and system-making. They took to asking why, and so shifted their inquiries from the structure of the coral reefs to the structure and habits of life of the polyp that lives in and by them. In the science of plants, systematic botany has not ceased to be of service; but the stress of investigation and discussion among the botanists today falls on the biological value of any given feature of structure, function, or tissue rather than on its taxonomic bearing. All the talk about cytoplasm, centrosomes, and karyokinetic process, means that the inquiry now looks consistently to the life process and aims to explain it in terms of cumulative causation.[35]

In contrast with his project, Veblen sees that classical economic theory suffers the blindnesses and limitations of its "too many reminiscences of the 'natural' and the 'normal,' of 'verities' and 'tendencies,' of 'controlling principles' and 'disturbing causes'" (64). Veblen cites, in addition to Adam Smith's "invisible hand," the work of Alfred

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35 "Why is Economics not an Evolutionary Science?" In Veblen (1990, 68).

Marshall, John Stuart Mill, and John Bates Clark as exemplars of the problems inherent in orthodox theory's vision of the world. Orthodox theory was "non-scientific" because it was based on a flawed model of the world.[36]

In a crafty move, made at the outset of his 1898 essay, Veblen uses as a straw man an address given a year earlier by one of the authors of neoclassical (marginalist) economic theory. Alfred Marshall's inaugural address to the Cambridge Economic Club, a newly established group of young economists who shared a skepticism toward the orthodoxy, is used by Veblen to authorize his own point of view on the crisis of the discipline. He also uses it to underscore the limitations of orthodox theory's vision of the world, limitations acknowledged even by skeptical insiders like Marshall and Mill. This enables him to solidify the need for a new theory, a theory different from the neoclassical one.

Because of Marshall's prominence and because Veblen uses Marshall to legitimize his critique of orthodox (neoclassical) theory, I review Veblen's summary of Marshall's position. Marshall (1897)[37] sought to distinguish between, yet also link together, the research agendas of the old and new generations of economists. Marshall claimed that much of the dissent on the part of the younger generation of economists was warranted. Economic science, in 1897, was "less confident" than it was thirty years earlier. According to Veblen, Marshall cites two challenges to the orthodoxy that were particularly effective in highlighting its limited appeal to a younger generation of economists. First, the emergence of a historicist consciousness.[38] Expressing a form of humanism in the social sciences,

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[36] The multireferential use of the term "modern" is intentional. There is a tension, a contradiction, within modernism itself. The tension is not simply terminological; it underscores the fact that part of the elusiveness of modernism is its constantly changing face, its ability to absorb, repress, or accomodate it contradictions. Veblen regarded orthodox theory as pre-modern because it was pre-Darwinian. Veblen's Institutionalism, however, is "modern" in the same philosophical sense that the Newtonian economic science of orthodox theory was. I accept Veblen's critique of orthodoxy *and* use it against him.

[37] Marshall was anything but a maverick economist; he enjoyed great respect from his peers. The profession remembers him as a pioneer of modern economic thought.

[38] See Dugger (1979a) and Edgell and Tilman (1989).

historicism forced a generation of social scientists to abandon abstract, ahistorical analyses in favor of the view that history—past, present, and future—was a product of *human* intention and action, not a result of natural or religious forces. Historical understanding was to be gained by actively seeking to document and explain what individuals and institutions actually did. The rise of a historicist consciousness contrasts sharply with the view of neoclassical economists, which stated that the economy was self-regulating. As such, analysis of historical change was more likely to yield truthful knowledge than the abstract, neat, elegant "natural law" economics of neoclassicism.

Implicit in Marshall's recognition of the significance of historicist economics, however, was a more general belief that an economic science with a strong empirical content—based on tracking historical change and development- could develop models and theories with greater explanatory value for policymakers. Ross (1991, 4) writes that this "modern consciousness" of the nature of change and progress meant that "change could be understood as a succession of qualitatively different phenomena, not merely as random variations, or the surface appearance of essentially unchanging things, or the recurring cycle of an endless wheel." In this new, "secular" understanding of time and historical change the past, present and, most importantly, the future, were different from and causally linked to each other.

Considering the rapid social, political, and economic changes taking place at the time, an economic science rooted in a "modern consciousness" could produce more useful policy than the (neoclassical) policy of non-interference in markets. Marshall recognized that a historicist consciousness contrasted with orthodox theory's search for "timeless, changeless truths" of the economy. Marshall recognized and was prepared to concede that the loss of social control (the potential for chaos) that could result from clinging to neoclassical theory's outdated worldview warranted *less* concern with disovering the universal laws of economic motion and *more* concern with a careful examination of the contemporary changes taking place. Because he understood the dramatic changes in the

lived experience of capitalism in late nineteenth century America, he was open to the idea that there was increased need for a greater degree of social control. He accepted the decreased significance of the search for universals, realizing that the emergence and acceptance of a historicist sense meant that social scientists in the United States had to think more in context-specific, contingent terms.

Veblen understood Marshall's writings to be characterized by modesty and uncertainty regarding the validity and efficacy of orthodox theory. To underscore and encourage the doubt held by Marshall, Veblen "plugged" Marshall's writings, describing them as a "meritorious work." Veblen agreed with Marshall that continuing to "picture" the economy as a self-regulating, self-adjusting, "closed" mechanism in which a policy of laissez-faire guarantees that equilibria occur, was not wise. Veblen uses Marshall's understated appreciation for a modern, historical consciousness as the starting point for his much harsher critique of orthodox theory. In offering that critique, Veblen shows none of the "modesty" exhibited by Marshall.

The second and more important challenge to the old generation of economists was the need to make sense of the "rapid changes which were taking place throughout the whole Western World in the economic structure of society, and in the tone and temper of political thought" (Marshall, 116). If the discipline was going to take a historicist turn, then the associated philosophical problem of the relationship between theory and the "real world" had to be addressed. The relationship between theory and "reality" represents one theme on which Veblen differs with Marshall and his neoclassical peers. *Veblen accepts the epistemological essentialism of modernist science even as he rejects one (Newton/neoclassical) scientific, modernist vision for another (Darwin/institutionalist).* Received economic wisdom encouraged the tendency to engage in a prioristic deductionism as a means of isolating the *essential* impetus for economic events. While Marshall thought the discipline of economics had advanced qualitatively to a level of sophistication where effort could now be directed at developing quantitative insight, Veblen

believed that orthodox theory's "level of sophistication" was, in actuality, an endpoint, a dead end. Veblen, unlike Marshall, believed that it was not possible to save neoclassical theory by simply "adding on" a quantitative branch. He argued that orthodox theory was without explanatory power.

A close reading of Marshall's essay suggests slight agreement with Veblen on this point. Marshall, too, thought there was a deep problem with neoclassical theory's inability to "explain" the changes taking place at the end of the ninteenth century in the United States. Marshall's solution was to branch out from "blackboard" analysis of a closed system of theory into the "real world" of business and government for the purpose of tabulating behavior. The consequence of not doing so, Marshall warned, was a decline in the explanatory power of economic theory. Orthodox theorists suffered from a fatal lack of engagement with the real world, with the actual functionings of the market economy. The new generation of economists had to concern themselves less with the "what" of economic *theory* and more with the "what is" of the real world.[39] Marshall writes,

> We may wish that the ways of all were different; we may exhort ourselves and others to better ways; but we have to study mankind as they are. We must not picture to ourselves an unreal world as it might, or ought to be; and make schemes for it....Our first duty as economists is to make a reasoned catalogue of the world as it is; and never to allow our estimates as to what forces will prove the strongest in any social contingency to be biased by our opinion as to what forms ought to prove the strongest. A chief part of the work which lies before the economists of the twentieth century is to make that estimate...somewhat less badly than it has been made hitherto (125).

Veblen endorsed Marshall's view that there loomed a generation gap between old and new economists. Whereas Marshall saw this gap as an unrecognized and undervalued result of the normal progress of knowledge, Veblen theorized it as a historical and philosophical paradigm shift. The generation gap, in Veblen's view, was unbridgeable. The

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[39] This shift in emphsis called for by Marshall anticipated the advent of scientism in neoclassical theory, as well as the realism of assumptions debate to which Friedman would address himself in 1953.

changes in the real world called for a more radical reassessment of economic theory than what Marshall advocated. In response to a new social phenomenon, Veblen argued that a new picture, a new set of social processes, and a new way of thinking about and organizing those processes was necessary. To be sure, Marshall thought the younger generation to be restless partly because of the narrowness and paucity of theoretically engaging questions remaining in a qualitatively "mature" intellectual discipline such as economics. But whereas Marshall called for an empirical branch to be added to the mainstream of economic research, Veblen called for a more thoroughgoing re-evaluation of the entire optic paradigm. Veblen and Marshall both agreed, however, that the new picture of the economy should emerge out of the actual transformations of the economy.

Veblen further credits Marshall with recognizing that "mere knowledge of the fundamental forces, without making a full investigation of the particular circumstances under which they act," was inevitably and severely limited (Marshall 118). He credited Marshall with recognizing that in "modern" economic science,

> [i]t is now generally recognized that every inference from one set of facts to another, whether it be performed by instinctive or by formal reasoning, involves not one process but two. It involves a passage upwards from particulars to general propositions and ideas; and a passage downwards from them [general propositions and ideas] to other particulars. We can seldom infer particulars from other particulars without passing through generals, however simple be the subject-matter of our study; and we can never do so in the complex problems of social life.[40]

Again Veblen concurs with Marshall. But where Marshall seeks methodological revision, Veblen calls for an epistemological shift. For Veblen, the simple truth was that modern, Darwinian science was not continuous with pre-modern Newtonian science. Marshall, being of the older generation, did not appreciate the profundity of the implications of his own criticisms.

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[40] Marshall (1897, 119).

Veblen charged that given the views of Marshall and other orthodox theorists, it was not hard to conclude that "the men of the sciences that are proud to own themselves 'modern' find fault with the economists for being still content to occupy themselves with repairing a structure and doctrines and maxims resting on natural rights, utilitarianism, and administrative expediency" (57). The stale structure, the worn out doctrines and maxims that were the building blocks of classical economic theory, were best left to the "idle curiosities" of an earlier time. Economists wedded to this orthodoxy were concerned primarily with *classifying* real world events; that is, finding the exact logical causes of economic phenomena in previously established laws of economic motion through a prioristic argument. Veblen thought this Newtonian approach to be at least a century out of date. The metaphysical norms of competition and equilibration offered little clarity in what he viewed as a radically changed and changing world.

Veblen argued that orthodox economics was not evolutionary, or "modern," because its vision of the world (theory of society) reduced theoretical research to mere taxonomy. No new theoretical questions had been developed, no unanswered questions remained. Rationally deducing most of its truths from basic assumptions regarding the nature of the physical and social world, orthodox theory was wedded to myths of givenness when asked to explain "market distubances," " exogenous shocks," and other extra- or nonmarket economic dynamic conditions. Veblen thought this was the case because of what he termed a "taxonomic" habit of mind. The problem was not that the economy was, finally, understood. Instead, the challenge, Veblen argued, was that in place of classifying economic events, "economic action must be the subject matter of the science if the science is to fall into line as an evolutionary science." Neoclassical economists, Veblen (1990, 72) held, "have made no serious attempt to depart from the standpoint of taxonomy and make their science a genetic account of the economic life process." Veblen argued that the end of the road for neoclassical economic theory had been reached.

2. Theory of Human Nature

Veblen viewed orthodox theory as pre-modern because of its outmoded theory of human nature. In this vein, he sometimes referred to orthodox theory as "hedonistic economics," castigating the theory for choosing one behavioral motivation (utility maximization) as *the* driving force in human nature, thereby ignoring *all* other motivations. Veblen argued that neoclassical theory is derived from an atomistic theory of human nature. In Veblen's view, neoclassical theory was organized around a deductive logic in which the collectivity of atomistic individuals constitutes society. Each individual was a pleasure-seeking, rational cell. The sum of these cells formed society. In Veblen's view, social forces in orthodox theory emerged in the form of the pursuit of self-interested satisfaction on the part of each individual. As he saw contemporary American society, social forces proceeded at such a rapid pace that individuals were more the effect than the cause of social change. Veblen thought the "arrow of causality" should point in the opposite direction: rather than atomistic individuals constituting and causing the social, Veblen believed that social forces—especially technology and other forces consequent upon the industrial revolution—constituted individuals. Whereas in orthodox theory individuals are assumed to exist in isolation from one another, Veblen maintained that such isolation stands in contradiction with the very notion of society. The (overdetermined) influence of social forces, he believed, shaped the individual as much as the individual directed social forces.[41]

Veblen understood the orthodox conception of "given" human nature to have its sources in the Enlightenment philosophy of "the rights of man" (over and against the absolutist powers of religious or monarchic authorities) and in the hedonistic utilitarianism of Bentham. He recognized that given the basic driving force of utilitarianism, orthodox theory in its pre-Darwinian incarnation was based upon a Cartesian myth of rationality to

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[41] I elaborate on Veblen's alternative theory of society in the next section.

explain agents' behavior. These "sources" of orthodox theory's conception of human nature combined with a Newton-influenced or "naturalized" theory of capitalism (Adam Smith's invisible hand, free-market theory) to produce a self-contained, self-regulating social system.

These aspects of orthodox economists' theory of human nature left them with only the ability to interpret "economic behavior after the industrial revolution with concepts appropriate to the era of handicraft" (Murphree 1959, 314). As a scientific observer of late nineteenth century American society, focusing especially on the radical transformations taking place in work and industry, Veblen believed none of these categories of orthodox theory to be useful in describing the reality of individual or group economic activity (which he referred to as "the economic life process"). The "economic life process," was much more complex than the picture described by orthodox theory.

The importance of Veblen's critique of orthodox theory's conception of human nature cannot be overstressed. Throughout its history mainstream theory has posited a stable, centered, rational economic subject whose economic activities are artificially abstracted from all other affairs. In the "hedonistic calculus," as Veblen liked to refer to it, the tendency has been to abstract "from those elements that make for anything but a statical result." (242) Consequently, orthodox theory ignored change and growth and assumed instead a static world which produced static results:

> It is characteristic of the school that wherever an element of the cultural fabric, an institution or any institutional phenomenon, is involved in the facts with which the theory is occupied, such institutional facts are taken for granted, denied, or explained away. If it is a question of price, there is offered an explanation of how exchanges may take place with such effect as to leave money and price out of the account. If it is a question of credit, the effect of credit extension on business traffic is left on one side and there is an explanation of how the borrower and lender cooperate to smooth out their respective income streams of consumable goods or sensations of consumption. The failure of the school in this respect is consistent and comprehensive.[42]

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[42] Veblen (1990, 233).

What emerged out of this "failure" was a taxonomic science that was of limited use. With a complete, closed system, orthodox theory was left with the monotonous task of labelling economic events according to the basic, pre-determined concepts of neoclassicism. Veblen and his followers argued that "all of life is interrelated and separation into categories is an artificial device of the scholar which is apt to give a false impression of the life process" (Hamilton 1953, 18). Veblenian Institutionalists insist that "the economic" cannot profitably be separated from all other human activity; that human activities in the overall life process are analyzable not through sufficient reason (Veblen's term for orthodox theory's logic of deductionism) but through a careful analysis of cause and effect. Consequently, Veblen rejected orthodox theory's model of human nature was because it led, especially in conjunction with the implied logic of deduction, to a static and largely irrelevant explanatory apparatus. He maintained that group dynamics and societal institutions play a more significant role in economic outcomes than is credited within orthodox theory. Orthodox theory, if Veblen was correct, was complicit in perpetuating a false explanation of economic events by reducing group decisions to the mystical, atomistic individual, driven by a profit- or utility-maximizing rationality.

What else was wrong with the orthodox theory of human nature? Orthodox theory was (and remains) a methodological individualist theory of the economy; it viewed its economic subject as a complete creation, born with an innate essence or Purpose (the axioms of rational choice) which, if nurtured in an environment in which individual Liberty is a virtue, became known through sufficient, reasoned, individual activity. In this anthropocentric formulation, the decisions of human agents *cause* all other economic outcomes. The human agent, therefore, is the basic building block of this theory of society.

Veblen argued that in orthodox theory a rational, informed subject is required. Someone must *choose*. The consequences of individual choices are reflected in the price and quantity vectors of markets. There are two important points to highlight for a clear understanding of Veblen's opposition to this view. First, this stable economic subject

contains a given, inner essence that is the core truth of that individual's existence. After everything, the core truth, or essence, constitutes the *raison d'etre* of human existence in orthodox theory. The inner essence is the ability to choose. This ability combines with endowments of technology and physical resources to produce wealth. That is, individuals seek to maximize their wealth (which is the means of satisfaction) by using their natural (innate) ability to choose rationally and produce wealth (in neoclassical theory the production of wealth is summarized in production functions).

The cognitive modernist notion of "mirroring" or picturing the world is illustrated in the orthodox theory of society. The theory that the mind reconstructs or pictures the world by deducing its form from universal principles applies to the orthodox theory of society. In neoclassical orthodoxy, the inner essence of rational economic man, when rationality prevails, pictures or mirrors the outer world of Nature by producing that world. This is so because in orthodox theory the mind is capable of knowing the true nature of reality. As a consequence, the logic of discovery, or the way in which rational, scientific inquiry led to useful knowledge of the world of Nature, offered the key to the way man [sic] could come to know his natural self. By knowing his natural self, he was able rationally to express that self in the form of choices which, combined with technology and physical resources, are embodied in commodities. That is, the process of self-discovery, magically, provided the extra benefit of revealing the true, natural (and therefore just) form of society.

But that was not all. Orthodox theory went one step further and asserted that the process of self-discovery was key to the constitution and progress of society. The key to development and progress lay in the ability of individuals to remain atomistic, self-centered, pleasure-seeking agents. The collective known as "society" represented a threat inasmuch as that society could become a restriction on individual liberty. Rather than theorizing a society in which the social was tyrannical, orthodox theory posited that enlightened, self-interested individuals, through pursuit of self-interested goals, produced

the greatest good for society as a whole. The individual is dominant in relation to the social. The individual is the essence of the social. This form of society is its *true* form since it is the ideal form as expressed by human intention and rationality.The benefits of the process of coming into *self*-knowledge extended to include *social* development and progress. (In fact, an optimal social welfare is guaranteed as a *necessary* implication of orthodox theory; the theory assumes that the choices individuals make are optimal choices, otherwise they would choose differently.) The challenge of the rational economic subject was to discover the immutable truth of the social order by looking to and seeking to express his/her self. The core truths of inner and outer existence await the enlightened individual's cognitive appreciation. Immanuel Kant summarized the basic principle of scientific discovery, which placed human freedom as a primary goal of inquiry, when he offered his answer to the question, What is Enlightenment?:

> *Enlightenment is man's emergence from his self-imposed immaturity. Immaturity* is the inability to use one's understanding without guidance from another. This immaturity is *self-imposed* when its cause lies not in lack of understanding, but in lack of resolve and courage to use it without guidance from another. *Sapere Aude*! "Have courage to use your own understanding!"—that is the motto of enlightenment (41)[43]

The key to rendering finite what is infinite, of knowing the Knowable, is the prime benefit of knowledge in the modern philosophical tradition, to which orthodox economic theory is deeply indebted. Moreover, orthodox theory privileged the individual over the group by constructing the individual as a rational animal, driven by selfish curiosity to discover the Truth of his inner self and achieve freedom in the world.

By the time of Veblen, the *content* of man's inner essence had been clearly defined. A dualistic philosophical attitude had given that the essence of human nature contained a

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[43] Humphrey comments that "Kant's point in the essay is that by virtue of understanding and reason men have the inherent right and ability to make all intellectual, political, and religious decisions for themselves" (47). Whether he chooses to do so is a matter of courage. Kant challenges men to "dare to know" (sapere aude!). The ability to know, assuming one *wants* to know, is given by nature as a natural right.

great, tragic flaw which betrayed the species' "passionate," animal origins: the vice of avarice. Self-interested, unregulated greed was part of human nature. Whereas unenlightened, pre-scientific religious authorities sought to repress this instinct in favor of the higher virtues, modern thought embraced and appropriated it as a virtue. This principle, in fact, eventually became the centerpiece of orthodox theory's view of human nature.

The writings of Mandeville (*The Fable of the Bees: Private Vices and Public Virtues*, published in 1714), Hobbes (*The Leviathan*, published in 1651), Mill ("On the Definition of Political Economy; and the Method of Investigation Proper to It," published in 1830) and, of course, Adam Smith (*An Inquiry Into the Nature and Causes of the Wealth of Nations*, published in 1776) helped to give credo status to the Enlightenment view of human nature as egotistical and acquisitive. What religious authorities had condemned as evidence of "fallenness," scientists and men of commerce upheld as in the best interests of the whole of society. By viewing self-interested choice as the root cause of all human economic activity (indeed *all* human activity), orthodox theory offered that a collection of self-interested individuals organized in an economic constellation characterized by liberty could produce the maximum of wealth by creating a society of industrious producers. Greed was an inevitable aspect of human nature. More importantly, however, it was among the wise endowments of Nature, ennabling man to improve his station in life so long as competition and private property ruled. Orthodox theory uncritically adopted this view of human nature. Veblen wrote,

> The cultural elements so tacitly postulated as immutable conditions precedent to economic life are ownership and free contract, together with such other features of the scheme of natural rights as are implied in the exercise of these. These cultural products are, for the purpose of the theory, conceived to be given a priori in unmitigated force. They are part of the nature of things; so that there is no need of accounting for them or inquiring into them, as to how they have come to be such as they are, or how and

> why they have changed and are changing, or what effect all this may have on the relations of men who live by or under this cultural situation.[44]

Veblen's alternative construction of "the economic life process" is a radical critique of the givenness, fixity, and anthropocentrism of this orthodox view. Veblen rejected the orthodox theory of human nature not only because for him it contained a faulty logic—the logic of sufficient reason which posited the individual as the cause of the social structure—in constructing its vision of the world. He rejected it also because it assumed a static and fixed human subject. So long as competitive markets and private property ruled, the consequences of greed meant that greed was not a vice. Rather, the accumulation of wealth, being the consequence of individual choice in an environment of markets and private property, i. e., capitalism, meant that acquisitive behavior could be seen as ethically valid and morally acceptable because it insured that the greatest benefit would accrue to the nation-state's economic and social life. Thus did the philosophy of individualism serve the needs of an expanding competitive capitalism. By the end of the nineteenth century, this theory of human nature had become so firmly entrenched, so *hegemonic*, that it was part of the given in economic theory. In one of his most famous, often quoted passages, Veblen summarizes the status of the orthodox view of human nature:

> The hedonistic conception of man is that of a lightning calculator of pleasures and pains, who oscillates like a homogeneous globule of desire of happiness under the impulse of stimuli that shift him about the area, but leave him intact. He has neither antecedent nor consequent. He is an isolated, definitive human datum, in stable equilibrium except for the buffets of the impinging forces that displace him in one direction or another. Self-imposed in elemental space, he spins symmetrically about his own spiritual axis until the parallelogram of forces bears down upon him, whereupon he follows the line of the resultant. When the force of the impact is spent, he comes to rest, a self-contained globule as before. Spiritually, the hedonistic man is not a prime mover. He is not the seat of a process of living, except in the sense that he is subject to a series of permutations enforced upon him by circumstances external and alien to him.[45]

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[44] See "The Limitations of Marginal Utility," originally published in 1909 and reprinted in Veblen (1990, 236).

[45] Originally published in 1898 and reprinted in Veblen (1990, 73-4).

Veblen rejected this view of human nature. He saved his sharpest sarcastic criticism for the neoclassical conception of human nature, charging that in this view the human animal, "is not the seat of *a process of living*, except in the sense that he is subject to a series of permutations enforced upon him by circumstances *external and alien* to him" (emphasis added, 74). Veblen believed that the orthodox theory of human nature ignored contemporary advancements in the study of human psychology. These studies suggested that the human animal was motivated by complex drives and instincts. He argued that orthodox theory, because it ignored or trivialized these motives, was ahistorical. What orthodox theorists took as given and natural, Veblen believed to be the result of an evolutionary process of dynamic, unending change. The processes of change were guided by the instinct to adapt. The locus of these processes was in the institutions, cultural patterns, and habits of thought, all of which were elements of every human society.

In Veblen's view, individuals are a product of group processes, not "passive accomodators of their environment" (Miller 1978, 15). Culture produces individuals. The traditional view of human nature as being passive, unchanging, and fixed was both a contributor to and outgrowth of the "naturalizing" tendency of ascribing behavior to innate human nature. In an essay (1908) attacking the state-of-the-art marginal utility theory of John Bates Clark, Veblen commented that the "naturalizing" tendency of neoclassicism led to the conclusion that "a gang of Aleutian Islanders slushing about in the wrack and surf with rakes and magical incantations for the capture of shell-fish are held, in point of taxonomic reality, to be engaged on a feat of hedonistic equilibrium in rent, wages, and interest" (193).[46] Veblen charged that in orthodox theory there was no accounting for the fact that man [sic] evolves or changes (through progress) over time, and does so in a specific cultural environment. There was no theory of change in particular (the consequent), no theory of history in general (the antecedent).

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[46] See "Professor Clark's Economics," originally published in 1908 and reprinted in Veblen (1990, 180-230).

What distinguishes orthodox theory from Veblen's Institutionalist alternative is the manner in which human nature is constituted. Rather than viewing society as the sum of individuals, Veblen believed that individuals were the product of group-based, collective human activity. These collectives are referred to as institutions in Veblen's writings. Institutionalists in the Veblenian tradition reject methodological individualism in favor of methodological collectivism. The group is the basic organizing concept which causes the individual. (At the industrial stage of human development, groups are formed by the demands of technology.)

Institutions are *cultural* products. Rather than taking greed as a necessary component part of human nature, Veblen saw human nature as a cultural product, a consequence of the past and the present. Mayhew (1987), who calls Veblen America's first economic anthropologist, explains that basic to Veblen's Institutionalism is the idea that "the ways in which people saw, described, and related to their kin were both culturally specific and changed over time" (975).

The concept of culture is fundamental and fluid in Veblen's usage. The anthropological sense of the term suggests that the process of cultural evolution is never-ending, that there are time and space specific cultures, and that there is no grand, universal, fixed, transhistorical scheme that alone explains human phenomena. Orthodox theory was trapped in a tradition of natural law, regarding the precepts and concepts of culture as "incidental" to "the process of saturating given desires" (74).[47] Rather than viewing economic agents as driven by self-interested, pleasure seeking behavior, Veblen saw human beings as the product of an inherited past and a constantly changing present. Veblen's point is that the context of economic activity, the material content of economic behavior, was abstracted in orthodox theory. According to orthodox theory, all activity, including "prayers of Aleutians," was theoretically indistinct from the maximizing

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[47] Veblen (1990).

behavior of early twentieth century industrial capitalists in the United States. Veblen could not accept this view because he regarded it as being at odds with what he understood to be contemporary history.

In summary, economic agents in orthodox theory are atomistic individuals whose preferences and tastes are given. As innate characteristics of human nature, these tastes express themselves in the form of individual rational choices. The process of self-discovery expresses itself in the form of choices whose consequences constitute the ideal form of society. The sources of consumer and producer preferences, as far as orthodox theory is concerned, come from an innate self-interested disposition common to all "rational" beings. In orthodox theory, individuals enter the marketplace with fully described, rational impulses which guide their behavior, magically, toward some maximizing end. Veblen accused orthodox theory of employing a "passive and substantially inert and immutably given human nature" (73). Their theory placed ultimate decision-making authority in the individual rather than in the social institutions to which all individuals belonged. The failure to recognize the power of social institutions in the lives of individuals threatened to erode the potential for social progress and to betray the promise of modernity.

3. Theory of Change

Veblen argued that neoclassical theory did not have a "true" theory of change. Instead, the competitive equilibrium process rested on what he viewed as a static, "taxonomic," habit of mind grounded in Adam Smith's invisible hand theory of social order. Orthodox theory contained a theory of change that was effectively a theory of natural law or "divine design." Veblen's attack on the orthodox theory of change defines what he means by his alternative evolutionary science of economics. More than a shift in the root metaphor (or vision of the world) of economic thought, Veblen, in his criticisms of the orthodox theory of change, means to differentiate the way orthodox theory systematically

explains origins and growth from the way his Institutionalist alternative explains it. In doing this he draws heavily on the evolutionary biology of Charles Darwin.

Edgell and Tilman (1989) comment that Darwin's biological evolutionism had a primary influence on Veblen's "theoretical orientation" (1005). Of the various influences on Veblen's work cited by these authors, the impact of Darwin's biology is considered most fundamental. Darwinian adaptation is viewed as a "nonteleological sequence of opaque cause and effect."[48] This understanding of Darwin has two important implications for Veblen. First, the ability of species to adapt to the environment is the prime law of survival in Darwinian natural selection. The differential ability of species to adapt in an *orderly* and *systematic* way to changes in the environment is the competitive process which establishes favored and destroys unfavored species. Second, there is no necessary end or movement from underdeveloped (the lower) to developed (the higher) forms of life. The "goal" of species adaptation is to continue to exist in any form.

According to Edgell and Tilman, Veblen "effectively substituted the concept "institutions" for Darwin's reference to species (1005). Change in society was caused by changes in the basic institutions of society.[49] Institutional change is a form of "effective causation," a theory of change superior to orthodox theory's "sufficient reason" (deductionism).[50] In his view, the orthodox theory of change was erected on a pre-Darwinian understanding of being and becoming. It was an outgrowth of the age of Newton. In this regard, Veblen writes,

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48 See Dugger (1979, 426). Dugger bases his understanding of Darwin on the writings of Loren Eiseley. Edgell and Tilman read Darwin through the work of Stephen Jay Gould.
49 In Veblen's usage "institutions" may refer to cultural habits and patterns, language, workmanship and other 'instincts,' corporations, households, government, technology, tools and weapons, and more. Institutions in Veblen are the artifacts of culture.
50 See "The Limitations of Marginal Utility" in Veblen (1990, 232ff). "Effective causation," as Veblen used the term, refers to mutually effective, mutually determined cause and effect. "Sufficient reason" is his term for traditional logic's uniform cause and effect. "Effective causation" is a concept which anticipates the (Freud-based) Marxian concept of overdetermination.

> Before [Darwin] the animus of a science was, on the whole, the animus of taxonomy; the consistent end of scientific inquiry was definition and classification,—as it still continues to be in such fields of science as have not been affected by the modern notion of consecutive change. The scientist of that era looked to a final term, a consummation of the changes which provoked their inquiry, as well as to a first beginning of the matters with which their researches were concerned. The questions of science were directed to the problem, essentially classificatory, of how things had been in the presumed primordial stable equilibrium out of which they, putatively, had come, and how they should be in the definitive state of settlement into which things were to fall as the outcome of the play of forces which intervened between this primordial and the definitive stable equilibrium. To the pre-Darwinian taxonomists the center of interest and attention, to which all scientific inquiry must legitimately converge, was the body of natural laws governing phenonmena under the rule of causation.[51]

Orthodox theory was a theory of how inertial bodies began at rest, were acted upon by some outside force and, once disturbed, moved "automatically" until they once again, as a result of the balancing pressure of opposing forces, achieved a new state of rest. This, in essence, is the theory of change in the classical and neoclassical traditions. Orthodox theorists explained change (in logical time) as a sequence of ordered causes and effects. Change was consummated by the re-establishment of equilibrium. Equilibrium is the "final term" and the "first beginning" of economic inquiry. In modern terminology, this conception of change is described as the efficient, market-clearing "equilibrium adjustment process" which results from information transmitted by market prices, and then received and acted upon by "rational" economic agents. Clearly, contemporary economists have clarified what they mean by change, especially when compared with Veblen's summary:

> These natural laws were of the nature of rules of the game of causation. They formulated the immutable relations in which things "naturally" stood to one another before causal disturbance took place between them, the orderly unfolding of the complement causes involved in the transition over this interval of transient activity, and the settled relations that would supervene when the disturbance has passed and the transition from cause to effect had been consummated,—the emphasis falling on the consummation.[52]

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51 See "The Evolution of the Scientific Point of View" in Veblen (1990, 36-7).
52 Veblen (1990, 37).

As was seen in the discussion of Veblen's criticism of orthodox theory's vision of the world, the problem of fixity or "immutability" within the theory is targeted by Veblen. A theory of change based on immutable laws renders the vast majority of the processes of everyday life irrelevant to economic outcomes. In Veblen's view, process and consecutive change were the only means to accurately conduct "rigorous" research. Since human beings were engaged in endless activity, a theory of cumulative causation was required to order human activity. The orthodox theory of change contained no analysis of the complex sequence of events. The orthodox theory of change, committed to the belief in the universality of natural laws, was a mere "pre-Darwinian taxonomy."[53]

Darwin is important as the scientist who represents a "break" in the history of science. His evolutionary science is distinct from that of his precursors precisely on the three points on which Veblen differs with his orthodox peers. My discussion of Veblen's critique of orthodox theory parallels positions held by other social reformers at the beginning of the twentieth century. The application of Darwin's evolutionary science of nature challenged the image of the world regnant in Veblen's time. Orthodox economic theory's vision of the world, its theory of the human subject, and its theory of change all reflect the foundational notion that the world has been created, is given in creation as a complete totality, and simply reveals itself to enlightened inquirers. In contrast, what distinguishes the economic thought of Veblen is his attempt to dislodge economics from the "physics model" of Newton and to theorize economics in the "new" science of Darwin.

Veblen championed Newtonian science as "revolutionary" in the context of the superstitious and religious tyranny of the Church. Newtonian science was emancipatory in that it helped to liberate humans from religious authority. Veblen argued that in the modern era, Newtonian science had to compete not with religion, but with another science—the

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53 Veblen (1990, 32-4).

science of Charles Darwin. In the latter comparison, Newtonian science was anything but revolutionary. A careless reading of the above criticisms suggests that Veblen simply replaced Newton's with Darwin's notion of change as the root metaphor, while the cause and effect "chain of causality" and the deductive logic of orthodox theory remained in tact. One might conclude that the closed system of Newton, in which the immutable laws are discovered and allowed to operate, has given way to a view of society as an "evolving species" or social organism. But Veblen meant more than this. In Veblen's theory of change, there is no ncecessary direction (no *telos*) of social change. The social organism constantly evolves because it constantly reacts to and impacts on environmental forces. There is no ultimate revelation which is ever achieved. This view specifies a role for science: to amass data on sociocultural development which will allow economic scientists to understand what is happening in the real world.

These three criticisms constitute the main themes of Veblen's dissatisfaction with the orthodox theory of his day. In his view, to be pre-modern was to have an economics that was rooted in the quasi-religious givens of the world of Newton. In a brilliant summation of how orthodox theory ("clerical economics") was received in Veblen's day, Rima (1986) writes,

> clerical economics maintained that there is a divine link between ethical behavior and favorable economic outcomes, capitalism is the natural system for guiding production, exchange, and distribution activities to achieve optimal results. Interference with the free operation of market forces is not only inefficient, it is immoral in the sense that it interferes with natural law (387).

Rapid social changes had cast a great deal of doubt on the reliability of such givens and laws. The "new" world was in search of a "new" theory to accurately picture it.

B. Veblen's Evolutionist Theory of Society: Process, Culture, and Power

What is evolutionary economics? In short, it is a study of "the economic life process." In an essay commemorating the fiftieth anniversary of Veblen's death (in 1929),

Dugger (1979a) lists five sources of Veblen's evolutionary theory: (1) German philosophy (historicism and Kantian idealism), (2) Darwinian evolution, (3) Deweyan pragmatism, (4) Marxism, and (5) behaviorism (in psychology). In a reassessment of these five "intellectual antecedents," Edgell and Tilman (1989) add the following sources to the list: (6) British empiricism, (7) Bellamy's utopian vision, (8) Norwegian Lutheranism, (9) anthropology, (10) Scottish political economy, (11) French utopianism, and (12) British socialism. These sources constitute the influences which are evident in Veblen's proposed alternative paradigm to orthodox theory. These sources represent, for Veblen, the insights of "modern social science." Placing Veblen in the broader context of the major intellectual currents of his generation, we can see that Veblen's Institutionalism is part of the movement known as Anti-formalism. The "revolt against formalism" was an attempt by early twentieth century American intellectuals to replace abstractionism (the formalism and rationalism of closed systems) with a historical understanding of social change and cultural development.

Taking their lead from Darwin, Veblen and other anti-formalists believed that if the world was indeed a product of the actions and accomplishments of humankind, then the social organism or collectivity of socially constructed individuals actively evolved through human experience.[54] Along with Charles Beard (political science), Oliver Holmes (law), and John Dewey (philosophy), Veblen insisted on replacing "as-if" thinking with the careful study of history and culture. White (1947, 6) maintains that Dewey, Holmes, and Veblen sought to destroy "three fictions": "the logical, legal, and economic man" (27). Not surprisingly, the concrete social changes which occurred in their formative years shaped the anti-formalist ideas of these men:

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[54] It is important to clarify that Veblen does not mean that society is an aggregation of the individuals who compose it. That is the position of his opponents. Veblen is arguing that there are traditions and legacies which play a vital role in reproducing society, preserving and furthering its accomplishments. Individuals, in fact, are constituted by society in the view of Veblen. Society, however, has a history that is independent of the individuals who "inherit" it.

> Pragmatism, instrumentalism, institutionalism, economic determinism, and legal realism exhibit striking philosophical kinships. They are all suspicious of approaches which are excessively formal; they all protest their anxiety to come to grips with reality, their attachment to the moving and the vital in social life. Most of those who founded or represented these movements started their serious thinking in the eighties and nineties of the last century. [This period] saw the growth of science and capitalism, the spread of Darwinism, socialism, industrialization, and monopoly.[55]

Other commentators have elaborated on the influences on Veblen. Mayhew (1987b) says that the frontier played a prominent role in Veblen's personality profile and in his belief in the centrality of "change " in social analysis. Being a midwesterner (he was born in Wisconsin, raised in Minnesota) and son of immigrants from Europe meant that he grew up, literally, on the American frontier. The mood of the frontier—as an uncharted, uninhabited geographical territory *and* as an ideological orientation (invoking themes of radical freedom or unconstraint, discovery, and conquest in the radical quest for self-realization and self-invention)—was enhanced by the rapid industrialization and capitalist expansion (into the South and West) following the Civil War. Veblen lived through the changes wrought by the beginning years of the scientific and industrial revolutions. His Institutionalism grew out of a dissatisfaction with orthodox theory's inability or unwillingness to use these ingredients—urbanization, migration, immigration, industrialization, centralization—as a point of entry into social inquiry. In his view, orthdox theory failed by a wide margin to meet the "closeness of fit" criterion for understanding the real world.

Establishing the intellectual ancestry and cultural milieu of Veblen's Institutionalism is only a first step in specifying what Institutionalism is. Most descriptions of Institutionalism begin with the insistence that it is a mode of inquiry which examines

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55 Interestingly, White comments that each of these men was also profoundly disturbed by the epidemic spread of capitalist *exploitation* during this period. Veblen in particular was brought "face to face with the pattern of exploitation" in American life when he "unmasked" the effects of absentee ownership on industry. Of course, Veblen's notion of exploitation had only indirect relation to the "surplus labor" based notion of exploitation as found in Marx. See White (1947, 6 and 21ff).

culture. Institutionalism begins with the concept of culture. Culture is the discursive *site* of any Institutionalist theory of society. Waller (1988, 669) for example, writes that "analyzing cultural processes has been a *sine qua non* of institutional economics." Miller (1978, 14) says that "Institutionalists historically have been concerned with the evolution of the power structure and of rules of the game, with the *process* of want creation and of conflict resolution; in sum, with the evolving framework within which economic actvities occur" (emphasis added). This "evolving framework" is society's culture. Mayhew (1987a) offers a powerful and succinct summary of the meaning and significance of culture in Institutionalism. By the time of Veblen it was generally agreed that different "cultures" had developed at different rates in different times and places. The "common idea has been that what economists describe are regularities of behavior and that those regularities are specific to time and place and persist because of enculturation rather than because of some innate and constant human characteristics" (Mayhew 588). The regularities of behavior constitute "culture" for Veblen. This notion of culture is what distinguishes Institutionalism from neoclassicism. According to Mayhew,

> The contrast between institutional economics and neoclassical economics stems from the fact that those who work within the neoclassical tradition assume that the patterns of behavior that they describe derive from universal characteristics and that the cultural patterns that are time and place specific may constrain or alter behavior but are not a major subject matter of economics. Institutions are, in this view, relatively trivial, and their study inferior to the 'real' work of real economists (588).

Institutionalism is, for Mayhew (1987a, 1987b), Waller (1988), and other leading institutionalists a culture-centered social science. The term "culture," is a term that simultaneously critiques orthodox theory and establishes Institutionalism's alternative theory of society. As a critique, "culture" specifies a broader set of activities and events that constitute the "economic." As an alternative, "culture" is defined as the entire significative world that shapes and is shaped by power and change.

Using culture as the broadly defined object of inquiry in Institutionalist theory establishes the terrain of this investigation. Within this terrain three basic organizing

principles can be identified: *Process*, or effective or cumulative causation, is the logic of Institutionalist theory. *Culture*, and specifically the *Veblenian dichotomy*, describes the basic structure of the Institutionalist theory of society. It is the object of inquiry in that the Veblenian dichotomy is the object within culture that structures what Institutionalists mean by "the economy."[The reader should bear in mind that "the economy" is one part of the broader object of inquiry, which is the whole of culture.] *Institutions* (or power relations) are the entry point concept in Institutionalist theory of society. Finally, but not least important, *power* is the essence of the Institutionalist theory of society.

Three points need to be made about these principles: First, Institutionalism is more than a descriptive theoretical and historical mode of inquiry. The importance of process is that Veblenian Institutionalism is an attempt to analyze social processes (dynamic) rather than social structures (static). Institutionalism is a historical, dynamic social science in which the infinity of changes and events in society mutually effect each other. Second, in analyzing these events and changes, the Veblenian dichotomy is the major focus. The tension between two types of processes constitutes the site of the production and appropriation of power in an Institutionalist theory of society. The Veblenian dichotomy is the term used to describe Veblen's distinction between "machine processes" (technology) and "ceremonial processes" (institutions). Veblen maintained that these two types of behavior patterns were present in all cultures and constitute the basic structure of all societies. The third point to make about the general thrust of Institutionalist thought is that the production and distribution of power, rather than the "machinations of atomistic individuals" is the entry point concept. Institutionalism begins by inquiring into the power relations within a society. Each of these points is elaborated below.

1. Process

The meaning of process in Institutionalism is closely related to the distinction between static and dynamic analysis, a distinction which separates classical and

neoclassical theory from Institutionalism. In applying Darwin's theory of evolution, Veblen saw a world of nonequilibrium, a world continually evolving, and therefore, never "in equilibrium." He distinguishies his theory from the a prioristic deductionism of orthodox theory. In the Newtonian closed system of orthodox theory, a given world reveals itself—in the form of basic natural laws of motion and operation—as the ultimate cause of everything. This is deductionism in that the first principles cause all events. It is essentialism in that the basic structure of the world is given and unchanged over time.

In Veblen's system, by contrast, "the world" is not given as a closed totality. Not only is the world continually evolving, but the manner in which it evolves specifies that various events and processes in society mutually effect each other. The consequence of change, therefore, is not pre-determined. Also, in formulating his theory of change, Veblen, while borrowing evolutionary theory from Darwin, rejected the "progressionism" or "stages of development" thesis that was part of Darwin's theory. Process was nonteleological. (Veblen embraced, however, the racist scientific "theories of racial difference" which were popular during this period.) In The *Theory of the Leisure Class* ([1899] 1953) he wrote,

> The life of man in society, just like the life of other species, is a struggle for existence, and therefore it is a process of selective adaptation. The evolution of social structure has been a process of natural selection of institutions. The progress which has been and is being made in human institutions and in human character may be set down, broadly, to a natural selection of the fittest habits of thought and to a process of enforced adaptation of individuals to an environment which has progressively changed with the growth of the community and with the changing institutions under which men have lived. Institutions are not only themselves the result of a selectve and adaptive process which shapes the prevailing or dominant types of spiritual attitude and aptitudes; they are at the same time special methods of life and of human relations, and are therefore in their turn efficient factors of selection.[56]

Edgell and Tilman (1989, 1006) comment that the notion of process, Veblen's term for a theory of change, is "perhaps the linchpin of his whole macrosociology." Veblen argued

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56 Veblen ([1899] 1953, 131).

that institutions such as "habits of thought" evolve and favor those individuals who are "endowed with the fittest" temperament, and these favored individuals then go on to create new institutions. This is Veblen's notion of an ever-changing social organism. The individual is produced by the inherited institutions and these institutions, in turn, shape new institutions and individuals. This logic implies a mutual effectivity of cause and effect between institutions and individuals. The "arrow of causality" points in both (all) directions.

Veblen's notion of process is inscribed in an understanding of cultures as historical phenomena. Institutionalism does not seek transcendant principles of mutual causality. It seeks time and place specific patterns of behavior. Waller (1988, 668) comments that because culture is fluid, "members of a culture are both simultaneously learning and changing their culture" and that "the Polaroid photograph model" of the economy, as a description of the real world, only does "tremendous violence" to the real world. In contrast with static analysis, resource allocation and economic outcomes in the Institutionalist constellation result from an infinity of cultural dynamics at work in the social organism. This organism, in a sense, evolves as a result of the many different processes at work. The processes influence each other and are in turn influenced by each other. The ceremonial process called "the habits of thought," for example, is believed to have an effect on the values and beliefs of members of society. The thoughts they use to understand the world influence activity in the world. The activities in which human beings engage, in turn, react back upon the thoughts (received wisdom) of that society.

So, Veblen would violently disagree with the notion—implicit in orthodox theory—that there is a "natural" way to distribute agricultural products, viz., the market mechanism. In Veblen's Institutionalist theory of change, the manner in which corn is distributed is partly a result of the evolution of thoughts about corn production and distribution in that society. The thoughts themselves may be shaped by religion, weather patterns, overseas exploration, or technological "advances" which increase farm

productivity. It is nonscientific, or "religious superstition" in Veblen's lexicon, to hold universally—as orthodox theorists do—that the free market is the efficient and ideal allocative mechanism. In orthodox theory, by contrast, corn distribution is theorized as the coming together of buyers and sellers of corn—the supply of corn and the demand for corn having been produced independently of each other—and agreeing on the price of corn. The factors that determine the supply of corn have nothing to do with the factors that influence the effective desire for corn. All that matters is the stated "willingness and ability" to buy and sell corn as reflected in the market price of corn.

Opposition not only to the free market as an ideal, timeless allocative mechanism, but also to *any* universals, implies that in Veblen's Institutionalism there is no room for an ahistorical outlook. Historical consciousness is a starting assumption. Waller summarizes the point:

> Cultures are historic phenomena. The process of enculturation is the process of teaching the ways of a culture to the new entrants. What is taught is current practice, but that practice is the result of the life history of the culture, to use Veblen's term, as that life history is currently perceived by the members of the culture. To understand this system of beliefs it is necessary not only to understand the culture's version of its life history (which is likely to contain a combination of actual historical events and myths), but also to understand that life history according to actual historical events and processes.[57]

Another implication of this complex of culture is the mutual effectivity that exists between various processes within culture. Mutual effectivity here suggests that causality is complex and overdetermined by a host of different prior causes. One cannot specify the *essential economic process* that causes and delimits economic outcomes in the social organism (as a sort of first or proximate cause of economics). Nor can one isolate "the economic" from all other processes in understanding economic outcomes.

While Veblen believed in cumulative causation, by which he meant "mutual cause and effect," he thought the chain of reasoning was much wider (economic *and*

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57 Waller (1988, 668).

noneconomic) and longer in comparison with his neoclassical peers. The logic of Institutionalism is distinct from the deductive logic of neoclassical theory. Institutionalists believe that cumulative causation, or mutual effectivity, can be understood in processual terms, meaning that "social change is driven not by forces that are offsetting (equilibrium), but by forces that are reinforcing (cumulative causation)."[58] By "reinforcing" is meant the effect of the principle of natural selection or species adaptation.

There is a tension latent in Veblen's views of the nature of change in society. While *at a point in time*, the conditions that characterize a social phenomenon or historical period are the consequence of—i. e., are "caused by"—an infinity of interacting and overdetermined processes, *over time* the characteristic conditions are built upon what has occurred previously, as though guided by the Darwinian process of natural selection. Certain cultural processes are reinforced, even as they evolve, by their relatively favorable disposition with respect to the environment. Dugger and Sherman (1994) describe cumulative causation by emphasizing its "cumulative" aspect:

> Once a particular change has begun, it initiates or induces further changes that reinforce the original movement...Societies are continually changing in a cumulative fashion...moving in the direction of least resistance or in the direction of most power. This is blind drift.[59]

Process, or evolutionary social change is not simple; it is not linear; it is not synonymous with progress. In Veblen's writings, process is an appropriation of a Darwinian concept of adaptation and natural selection. Thus Veblen's notion of process constitutes a new scientific understanding of evolution in society. Also, if culture is the scene of institutionalist analysis, then Institutionalism's logic suggests that processes in society mutually effect one another and are not traceable to a first cause. It also differs from orthodox theory in that Veblen's notion of process does not imply a telos toward which society inevitably moves.

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58 Dugger and Sherman (1994, 110).
59 Dugger and Sherman (1994, 110).

2. Veblenian Dichotomy[60].

At the beginning of this section of chapter two, I argued that the short answer to the question, What is evolutionary economics (Veblenian institutionalism)?, is "the study of the economic life process." Following that brief answer, I outlined the meaning of the term "process" in Veblen's writings. Pointing out that Veblen's notion of process is rooted in Darwin's science of evolution, I argued that the key contribution of this term is the idea of "mutual causation," or "mutual effectivity," or "cumulative causation." These terms refer to the way in which the logic of Veblenian institutionalism differs from orthodox theory's logic: the latter constructs a theory of society based on deductionism. The latter, by contrast, develops its theory of society out of a logic of mutual cause and effect—a version of overdetermination.

Veblen's notion of process represents an important break from the aprioristic deductionism of orthodox theory. Veblenian process historicizes knowledge of the economy (or the theory of society) rather than treating such knowledge as a pre-existing yet hidden dimension of an essential reality. To construct a theory of society, Veblen argued, requires that the "life process" be examined again and again as a way of tracking the constantly changing power relations in society. The Veblenian dichotomy provides a structure in which changing power relations can be organized.The Veblenian dichotomy structures the basic institutional relationships in society. Process as the logic of efficient causation or mutual effectivity "tracks" the web of institutional relations within which the operations of society take place.

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60 This section and the next constitute the most difficult parts of the writing of the argument of this dissertation. After searching through at least a dozen discussions of the Veblenian dichotomy I have chosen to rely primarily on two essays: Waller (1982) and (especially) Neale (1987). Dugger (1980) and Dugger and Sherman (1994) provided the basis for my treatment of power in Institutionalism. These sources provide the clearest, cogent explanations of Veblen's conceptual scheme. The reader should be aware that there is considerable controversy concerning the internal consistency and contemporary applicability of the Veblenian dichotomy. On this point see Waller (1982, 765).

Clarification of a few terms is useful as a way of avoiding confusion. As mentioned earlier, the broadest category which can be used to define the Veblenian Institutionalist object of inquiry is culture: Institutionalists believe that cultures are a seamlessly woven fabric of institutions which are linked by institutional processes. That is, a culture is the collection of institutions (and processes linking those institutions) which together constitute a society. Cultures include past, present, and future elements that impact a culture's development. The network of instutions within a culture is woven together by the processes or mutual effectivities which link them and, for convenience, may be broken down into two categories: instrumental processes, or technology, which are those thoughts and actions that involve reasoning from cause and effect and that generate cultural development; ceremonial or institutional processes, or those processes that are "based upon considerations of rank and status" (Miller 1978, 14) or custom, to use a more familiar term. To minimize the chances that terminology will heighten confusion, I will refer to the two types of institutions-based processes as follows: There are two types of processes in the institutionalist theory of society—*instrumental* processes and *ceremonial* processes. Instrumental processes are those processes that center on future-oriented, technological change. Ceremonial processes are those processes that refer to past-oriented ritual or custom. It should be pointed out that both types of processes are aspects of *all* institutions.[61] Finally, before discussing each type of process I will define the word "institution." Neale (1987) says that all institutions can be identified by three characteristics:

> First, there are a number of *people doing*. Second, there are *rules* giving the activities repetition, stability, predictable order. Third, there are *folkviews* explaining or justifying the activities and the rules (emphasis in original).[62]

From this identification it is clear that rules delimit or structure activity. Through observation (empiricism) one learns the rules of the game in all institutions. Individuals are

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61 See Neale (1987, 1198).
62 Neale (1987, 1198).

shaped by institutions. They are "socialized" to participate in various institutions through transmission of the "folkviews" which contain institutional history. Rules provide order and detail so that through repetition and routinization over time the rules form habits for the members of the institution. The habits are observed in practice and retold in narrative myths which become the history of an institution. Since rules do not necessarily provide meaning,[63] folkviews answer the *why* of people doing. As important as rules, folkviews tell "how the ideas of a culture interpret or 'word' events and explain the world" (Neale 1987, 1183). Folkviews include the language used to convey meanings and, therefore, folkviews are as translatable as the language used. Also, institutions exist to establish a space that accomodates (through a positive or negative creative tension) the two types of processes taking place, thus assuring the continuation of the species.

Ceremonial processes are variously identified as the "mores" of society, or the beliefs and practices, the habits of thought, or the axiomatic and indispensable and generally accepted common-sense attitudes of society. Ceremonial processes are behavior patterns that take place in a structured context(s)—an institution. Ceremonial processes regulate institutions and cultures. Key to understanding a ceremonial process is the condition that the behavioral pattern is or becomes normal. Ceremonial processes manifest themselves as habits. That is, ceremonial processes are practices which are inherited or derived from the past and are used without first being tested for their usefulness. They have the authority of authentic "truth" or "value." Waller writes,

> The sense in which these behavior patterns are habitual is that they are used but not questioned. Their authenticity or appropriateness to the circumstance in which they are employed is generally explained by recourse to common sense or tradition. The appeal to tradition for verification is tantamount to religious justification of questioned beliefs or behaviors.[64]

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63 Neale provides as an example the inability to differentiate, on the basis of rules of dancing, dancing for fun at a party from dancing for rain in a religious ceremony from dancing for money (1183).

64 Waller (1982, 760).

Ceremonial processes structure—and partly *cause*—power in society. This follows from the way in which authority is established by virtue of custom. Waller continues, "This authority organizes society into a hierarchical structure of privilege and subservience" (763). Also, ceremonial processes are "backward-looking" in the sense that they are the preconceptions of the present which have their "authority" in the past.

In contrast to ceremonial processes, instrumental processes are "forward-looking." Instrumental processes, or technology, are those processes which promote the continuity of the life process. Neale (1987) refers to instrumental processes as "problem-solving" processes because instrumental processes are the dynamic forces that lead to new institutions and altered ceremonies (1198). Instrumental processes represent, in Veblen's writings, the emerging dominant forces of industrial society. In the Institutionalist theory of society, instrumental processes are the sites where value is produced. In ceremonial processes, value is derived or inherited from the legacy of past instrumental processes. For ongoing instrumental processes, by contrast, value is determined in productive *use*, in the application of technology to problem-solving. What is "true" or "correct" is that which is "useful" in securing and reducing conflict in the conduct of human affairs. Value is not given metaphysically in the form of an appeal to abstract, universal principles. Value is produced within the cultural context.

Instrumental processes may be broadly defined as "the state of the industrial arts." This includes the stage of development of technique, know-how, machines, and implements used by members of a society. Instrumental processes structure the productive activities in institutions and cultures. Technology in this sense is commonly owned, although access to use of technology is constrained by custom, law, and other ceremonial codes. In Veblen's dichotomy, instrumental processes tend to be dynamic, active, and productive and reproductive of the material means of life; ceremonial processes are conservative, passive accomodators of instrumental ones. Ceremonial processes explain the sluggishness with which culture changes. Instrumental processes provide the active

development of "new methods of provisioning and changes in quantity, quality, and composition of goods and services produced" (Miller 1978, 15). Together these types of processes define the social organism as it seeks to survive through adaptation and natural selection.

Two points are highlighted in the Veblenian dichotomy: First, change is a necessary, inevitable consequence of the Veblenian dichotomy as a means of organizing society. Change occurs because ceremonial (conservative) processes seek to routinize culture; instrumental processes seek to expand and constantly reinvent culture. The tension between instrumental and ceremonial processes means that the social organism can never achieve an immutable, "natural" condition, similar to an "equilibrium" state. Flux, or process, is the hallmark of Institutionalist logic. This explains why Institutionalists advocate social engineering as a means of taming chaos which may result from too rapid changes in the technologies of production. The social structure must be ordered (mostly through ceremonial means) in order to perpetuate and preserve itself. But it must also adapt to the environment to insure its survival. In this sense Institutionalist theory is a theory of social evolution.

The second important point in this discussion of the Veblenian dichotomy is that not markets but power and the mechanisms for reproducing or redistributing power are situated at the center of any institutionalist analysis of society. Power is the essence of the Institutionalist theory of society. The tension and complementarity between and within ceremonial and instrumental processes produce opportunities for the powerful to acquire more power or for the powerless to seize power. The laws and customs based in property rights (in institutionalism private property is not natural; it is a condition emerging out of discernible historical conditions and previous power struggle and is, therefore, subject to change) valorize conventional distributions of power and income. But because technological change is open-ended, because changes in the way in which cultures

reproduce the life process are not predetermined as the result of cause and effect, power relations are, at different times, unstable.[65]

3. Power

Power is the central concept which defines social relations in Institutionalism. It is the essence of the Institutionalist understanding of society. Power is produced in the conflict between the two types of processes; it is produced within each type of process, as institutions vie for control over changes in the life process. No Institutional analysis is complete without a specification of the role of power in society.

How is power produced within each type of process? Consider ceremonial processes. Religious and national institutions may be classified under the rubric of ceremonial processes. For example, conflict between religious and national authorities over which will exercise the most power in the lives of individuals and groups constitutes an ongoing source of change in the power relations in society. [66] The reproduction of "authority" on the part of religious and national authorities becomes important as a condition of existence of continued power. Instrumental processes also play a role in this. Through private ownership of technology, for example, religious institutions can exercise power over state and local government, thereby imposing its will on elected officials.

Myths and ideologies become necessary to "legitimize" the distribution of power in society. This distribution of power tends to be reproduced for two reasons: First, individuals with power have the instruments to maintain power, thereby securing their

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65 In working toward a summary of this section I was struck by the striking similarity between the Veblenian dichotomy and the traditional base/superstructure model of determinist Marxism. The concern on the part of Institutionalists with methodological issues is part of an attempt, as in Marxism, to restore the epistemological distinctions to the paradigm. Contemporary theorists in each case argue that, without the antifoundationalist epistemology, the theory of society is crude and truncated.

66 In the United States, the contemporary debate over the role of the family and family values in the so-called "social decline" in contemporary culture is an example of the battle between the federal government as arbiter of society's values, on the one hand, and the role of religious "voluntary institutions" as the provider of values, on the other.

position. Second, over time possessing power (in the form of ownership of technology) influences and creates ceremonial authority for those individuals to continue to possess power over others. Control over technological development secures future control over that development and in the process, valorizes that control and all the power it provides.

Institutionalists define power as "the ability to get others to do what you want them to do," despite the fact that it may not be in their best interest to do so. Dugger (1980, 897) defines power as "the ability to tell other people what to do with some degree of certainty that they will do it. When power wielders must coerce others, power is tenuous and obvious. When coercion is unnecessary, power is secure and unnoticed." On this definition, institutions within a culture are the sites where power is negotiated. Ceremonial and instrumental processes provide the conditions of existence for exploitative relations of power in society as a means of reproducing given power relations. To clearly expose the central place of power in instutionalist analysis, the Vebelenian dichotomy can be redescribed as a dual categorization of "socially useful activity" (instrumental processes) and selfish activity (ceremonial processes). Of course, selfish activities are "overlaid with ceremonial justification," while useful activity is "simply matter of fact."[67] Ceremonial processes become the means whereby social memory and social hierarchies are maintained. Although ceremonial processes represent "old" patterns of society, successful enculturation is a key form of reproducing power relations in society. Without enculturation (through public education, national religion, etc), power relations are threatened, as individuals will not submit to one form of institutional authority or another.

Seen in this way, ceremonial processes are important because they minimize the chances that coercion will have to be used to secure power. Vital ceremonial processes are those processes that allow power to be exercised smoothly. It is also true that in this formulation, control over instrumental processes (by law or custom or good fortune)

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67 Dugger and Sherman (1994, 103).

becomes critical to acquiring more power. Crisis is said to exist when ceremonial processes are "demythologized" and questioned as a justification of power.

The role of power in the Veblenian dichotomy is the basis for some of the divergent schools within Institutionalism. There are "new institutionalists," "radical institutionalists," and "liberal institutionalists." All base their versions of institutionalism in the work of Veblen. These schools emerge during the years of the first generation of his students. According to Dugger and Sherman (1994), radical Institutionalists advocate a policy of taking collective action against ceremonial justifications of the distribution of power. Liberal Institutionalists, by contrast, believe that ceremonial processes evolve "naturally" and are "weakened" as a result of an increasingly enlightened, educated citizenry. The question at the center of this conflict is whether there is simply a "cultural lag" which explains the slow adjustment of ceremonial processes, or whether there is a status quo "resistance" to change. If it is the latter, the implication is that there is no impetus for changes and human agency is necessary as the means to liberation. Proponents of the former view maintain the more conservative view that customs and mores adjust gradually over time.

How do power relations in society operate? How do those in power secure it or maintain their "institutional hegemony"? How do the ceremonial processes operate? Dugger (1980) has a "determinist" view of power relations. He argues that the overall institutional structure of society has six basic "clusters" of institutions: economic, educational, military, kinship, political, and religious. Further, "each of the five noneconomic clusters is linked to the dominant economic institution, the corporation, in a kind of means-end continuum. That is, the corporation uses other institutions as a means for its own ends. This is important, because it provides the first glimpse at the true source of power" (898). The cluster of economic institutions seems to be, in the last instance, the most important or basic cluster. Except for isolated crises, this sphere dominates all other spheres. It is "infrastructural." This understanding of power, it being an essence, seems to

betray the nondeterminist logic of institutionalist theory. Dugger views power as an essence of the social totality. He seems to be an economic determinist. On close examination of his analysis of the clusters of institutions, however, he seems instead to argue for power as a "strategic essentialism," one which is governed by the necessities of a particular historical conjuncture. The military provides his example:

> During a cold war, [the military] protects corporate interests at home and abroad by underwriting corporate research and development and by buying corporate commodities. During a hot war, military institutions become dominant. Instead of being means for corporate ends, they become the ends, and corporations temporarily become means. Yet, hot wars are infrequent and are the occasional price paid for the more useful periods of cold war.[68]

For Dugger the mutual effectivity between the military cluster of institutions and the economic cluster requires that one cluster be privileged over another, depending on the particular social conditions. One cluster is not necessarily or permanently dominant. Rather, the cluster of say, kinship institutions may also, at different periods, become dominant relative to the typically specified "ultimately" dominant cluster of economic institutions. Consider what happens, for example, when there is a "crisis of the family." The cluster of kinship institutions must (re)produce consumers for the economy. That is their primary function and obligation to hegemonic corporations. Households must provide laborers and consumers to corporations. Because of this, households must also insure that "discipline" is internalized so that the "desire" to sell labor-power and the "need" to consume are accepted without question. If households (consuming family units) decide to consume or work less, a crisis of production and employment may result. A political movement like the current environmental movement, for example, constitutes a threat to the institutional hegemony of economic institutions to the extent that it discourages consumption and criticizes the pursuit of satisfying supposedly insatiable needs. At that moment, "kinship institutions" become dominant relative to economic ones. Heightened

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68 Dugger (1980, 899).

"environmental consciousness" on the part of consumers and laborers undermines the power of the institutions in the economic cluster (even as it creates new opportunities for profit and exploitation in those same institutions). Consequently, resources are wasted on advertising designed to persuade individuals to abide by the "corporate imperative" (Thou Shalt Consume) and on "reskilling" laborers to shift into new "waste management" industries. Also, the cluster of governmental institutions must formulate policies to control environmentalism and to encourage profit opportunities. In this way, the power of economic institutions is threatened by another set of institutions.

Examining the role of educational institutions provides still another example of the way in which power determines institutional and cultural change. Educational institutions train inputs for economic institutions. Laws that stipulate private property ownership guarantee this. Educational institutions also depend for their success on kinship institutions (or religious institutions for some, or on the military—the GI bill—for others). If a crisis is engendered in one cluster, the mutual effectivity of institutions in society means that the crisis will encompass other clusters as well. For example, teenagers who drop out of school, abuse drugs, or engage in "criminal" activity are seen as "misfits" (literally) or unemployables in the cluster of economic institutions. This means that the cluster of political institutions, which may receive its funds from the same source as the military, must receive more funds for policing, outlawing, imprisoning, the youths. The additional resources required to control and incarcerate deviant teenagers drains resources that the military, for one, has available for supporting the economic cluster, or that households, for another, have for spending income on commodities. The demand for weapons systems might fall as a result. Also, pressure may be brought to bear on religious institutions to allocate more (tax-exempt) resources to resolve the kinship crisis. In this context, a resurgence of religious fundamentalism would "discipline" those who seek to acquire or at least redistribute power in society. In doing so, resurgence of religious fundamentalism would also reinforce the ceremonial processes, like nationalism, which teach that the

individual's "duty" is to the nation-state. In all these ways power is reproduced and contested according to the institutionalist paradigm. Here again, we see that depending on the historical conditions which prevail at a particular conjuncture, "strategic essentialism" is an explanatory tool in Instutitionalist analysis.

It is clear that in such a theory of soceity, understanding culture as a seamless web of institutions suggests that crisis—not equilibrium and steady state growth—is the norm. This is evident from the fact that the interrelationships among and within clusters of institutions are determined by the constant negotiations and renegotiations of power. To prevent endless power struggle from "deteriorating" into chaos (a complete loss of authority in a culture's existing institutions), various "superstructural" instruments of domination are required to minimize suspicions of the powerless. Dugger lists four social mechanisms which are especially important: subreption,[69] contamination, emulation, and mystification. These superstructural elements are positioned in a contradictory relation to the infrastructural element. They simultaneously resolve and produce crises.

Institutionalism is the study of the relations of power. These relations take place in an environment structured by two types of processes. The logic of ceremonial and instrumental processes suggests that power relations are not secure, nor are they fixed in the possession of some and not (to any degree) in the possession of others. This summary of the institutionalist alternative contrasts with orthodox theory's static model. That static model reappears in the work of Milton Friedman and the Chicago School, which is discussed in the next chapter.

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69 A good example of this is the ideology of liberal education. The cliche is that education is for education's sake. Enlightened self-interest holds that education has positive externalities which all members of society enjoy. What is veiled, however, in this "truth" is the fact that certain types of education are strongly discouraged (class knowledge, say) while other types of education are strongly encouraged.

C. Veblen's Theory of Knowledge: Pragmatism as Scientific Method

> [Pragmatism] is a continuation of empiricism. The novel, constructive element is the contention that all beliefs and knowledge are bound up with action—in the wider sense, that man is, first of all, an active being and that the other sides of his manifold nature, including reason, can be understood only in relation to this. In a word, pragmatism is an active empiricism (Lee 1949, 190).

> Pragmatists turned philosophy from the construction of finished metaphysical systems to an experimental study of the uses of knowledge. Pragmatism was an application of evolutionary biology to human ideas, in the sense that it emphasized the study of ideas as instruments of the organism (Hofstadter 1944, 124-5).

The preceding discussion of Institutionalism as a critique of orthodox theory and as a study of contemporary culture makes one point quite clear: Institutionalist economists have always sought to be actively engaged in the world of human affairs. They have insisted that the role of economic knowledge, indeed all scientific knowledge, is to guide the evolutionary development of culture. Their theoretical insights are grounded in the attempt to reconstruct and redirect the patterns and practices of everyday life in American society around the relations of power between individuals and institutions. Forged in the "frontier spirit" of its founder, Thorstein Veblen, Institutionalist economists sought to remake American society according to the image of its democratic ideal.

Institutionalist social theory is fused with a *realist* philosophical outlook. Their method calls for constant observation, evaluation (based upon observation), and further observation. The method privileges empiricist forms of knowledge. In institutionalist ontology, institutions are the site of cultural dynamics (institutional processes), and individuals are produced by the various groups in which they have membership (either by birth or social custom). Culture, or society, is viewed in Institutionalism as a biological organism. As such, Institutionalism articulates a theory of social adaptation, a theory in which the social organism adapts according to the basic Darwininan principle of survival.

No other pre-existing generalizations or laws need exist; indeed, institutionalists abandoned the philosophical quest for a priorist first principles. The dynamic nature of

change in society meant not that some universal law was discovered to be in operation, but that whenever empirical regularities were found, they were more than likely a reflection of ceremonial processes or custom and habit. Rather than assuming a given "natural" order of the kind imagined by orthodox theorists, culture-centered social scientists like American Institutionalists sought to find and establish order in the flux of history. Control was not over humankind. Control was (or, at least, could be) by humankind. The means of imposing order in human history were, in the Institutionalist worldview, within reach of humankind. Institutionalists believed that although the changing world was not well-ordered, it could be. In short, they sought fully to make their discipline, and the world described by it, "scientific" as a way of insuring control over the unexpected, random, and uncertain of human events.

Institutionalists believed that security, if not complete certainty, against the elusive unknown could be achieved in time through understanding of and control over the unknown forces of nature. The nonteleological evolution of society—institutionalists viewed society as a biological organism—meant that economists did not have to search for abstract, universal laws of economic motion or any other forces of inevitability. It also meant that since society did not have the security of "natural forces" guiding it to some pre-determined end, there was a necessity for social control. Institutionalists fell in step with the optimism of the early modernist era when they embraced the idea of progress through a complete scientization of cultural processes. In their theory of society and, not coincidentally, in their theory of knowledge, American Institutionalists in the tradition of Veblen were thoroughgoing modernists. Their faith in the grammar of science as a key to unlocking the "nature" of reality, and their belief in the possibility of "picturing" that "true" nature, are hallmarks of modernist social science. Tugwell (1924) summarized the ascendant view of his generation of institutionalist economists,

> [w]e may think ourselves in different metaphor, not as a leaf on the tree of time but as an historical force, with power over time, over space, over mankind itself. We may master our fate with the help of that precious spark

> of reason that glows within the human mind, hidden by prejudice and superstition, buried under layer after layer of primitivism, threatened by the surging impulses of a dead past. For that spark is known sometimes to glow with a light that shines through the covering layers; and it sometimes burns with a clear flame that illumines the past, the present and the future. It is this flame that must be fed. It is the hope of mankind.[70]

Not only were Tugwell's remarks written in the period of ascendance for modernism in the social sciences, but his comments also reflect the analysis of the thrust of modernist social science as reviewed by Ross (1991) and Amariglio (1990). The irony is that the desire to create order out of disorder in human experience simultaneously generated the threat of disorder. The ability to "master" human fate simultaneously constitutes, in dialectical form, the harsh reality that chaos was an ever present companion. For a world redescribed through the world picture of science was also a world which defined the unimportant spaces of "non-science" and non-knowledge. In short, retrospection suggests that the attempt to modernize economic science—to historicize economic theory by taking seriously the challenge of measuring the dynamism of the economy through the tools of science—also made clear the limitations of the modernist orientation.

What was modernism's promise? Why was the project of modernity so alluring? Why, indeed, does it remain so? I would like to suggest a partial answer to this problematic. The emergence of the view that through industrialization and "machine technology" nature could be tamed provided a renewed sense of the meaning of human freedom. This view suggested with renewed vigor—following the Civil War and end of Reconstruction—that the democratic ideal of human freedom on which the United States was founded was still within reach. If the "redeemmer nation"—Europe's promised land—was not on a self-perpetuating course to becoming a "city on a hill," to use Perry Miller's expression, it could get there through good government and wise control.

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[70] Tugwell (1924, 421). See also the discussion of 'the advent of scientism' in Ross (1991, ch. 10) for a rich treatment of the rise and decline of American Institutionalism.

As a consequence of the dramatic impact of industrialization on existing industries (and the creation of the need for new opportunities, new industries, which was a direct by-product of rapid industrialization), there developed a sense that the United States could remake itself as a land of opportunity for all. New possibilities for leisure and "pursuit of happiness" became conceivable. But new forms of tyranny also threatened to overshadow that freedom and create a society of individuals enslaved by capital and technology. Ross (1991) details that one of the dangers and appeals of modernity was that "to the extent that it opened America to change it triggered the fear of change, as well, so that many social scientists hastened to subject history to scientific control" (xv). Social scientists like the American Institutionalists sought to establish and describe *controllable* processes. The idea of progress came with its opposite, infinite "regress, falling into the mad desuetude of ruin that overtook Assyria and Egypt, Greece and Rome."[71]

This mood of expectation and fear, of optimism and skepticism, of unfailing faith in science and radical doubt about the loss of freedom associated with social control, defines the main currents of the modern mood at the beginning of this century. Amid all the questions was the search for a new method, a fresh approach to human understanding and endeavor. In a sense, the institutionalists clearly recognized that the "control" problem over *society* was one and the same with the "control" problem of *knowledge* of that society. If a method could be found which would make knowledge sure and simultaneously make "known" the world, social science could achieve its lofty goals of security and order whether in control over society or control over knowledge of society. For Veblen and American Institutionalists, the method was John Dewey's pragmatism.

Importantly, the institutionalist version of pragmatism did not require yet another rehearsal of the mind versus matter split. They agreed with Dewey that the Cartesian anxiety was a trap to be avoided. Their version of pragmatism, however, was based on (a)

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[71] Tugwell (1924, 421).

an uncritical faith in science and the scientific method, and (b) a naturalist belief that human beings individually and society as a whole "mirrored" the biological properties of lower organisms. These two features of institutionalism's version of Deweyan pragmatism are the key elements of my answer to the question, What is the role of pragmatism in American institutionalism and in what ways is it a modernist philosophy? These two elements define the nature of institutionalism's *naive empiricism* and its vulnerability to the epistemological problem of cognitive modernism. Their version of pragmatism paradoxically imported the very Cartesian mind/body dualism that they otherwise rejected. The remainder of this chapter is devoted to answering these issues.

Ross (1991) argues that the manner in which pragmatism was understood by institutionalists as a form of scientific method had much to do with the fact that economics, unlike the other social sciences, was not just discovering science in the early 1890s. Unlike the other social sciences, economics already had a scientific legacy. The neoclassical orthodoxy was scientific, even if that science was outmoded. Institutionalist economics represents a change from one form of science to another, not a move from non-scientific concepts to scientific language. This "legacy" influenced the degree of appeal Darwinian science had on Institutionalists. The opportunity for pragmatism in economics was influenced by its determination to apply a "new" science rigorously and thoroughly to accumulate facts about the changed world. Institutionalist assent in the discipline of economics depended on their success in making two arguments: the unrealism of the assumptions of orthodox neoclassical theory and the availability of a more modern mode of scientific inquiry to put economics on higher scientific ground.

Institutionalists argued that pragmatism as a scientific method was a superior scientific theory of society because it rejected the inherited, Newtonian and Cartesian vision of the world. American Institutionalism differed from orthodox neoclassical theory not only in its theory of society. It differed from orthodox neoclassical theory in its theory of knowledge. Along with rejecting Newton's picture of the natural world as a root metaphor

for the economy, Institutionalists also rejected the Cartesian epistemology implicit in the Newtonian economic system. According to Institutionalists, orthodox theory offered an "inaccurate" picture of the world; it offered an essentialist and nonscientific theory of knowledge.

The version of Dewey's pragmatism embraced by Institutionalists as being consistent with the institutionalist view of "process" was based in the new science of Darwin. Pragmatism to Institutionalists was free of the "baggage" of the orthodox economics tradition—its theory of society and its theory or knowledge. Since institutionalism stood in critical contrast to the orthodox neoclassical tradition, it promised to produce a different picture of the world.

The excitement of a new school of thought included the view that since Institutionalism was free of orthodox tradition, it was possible that it could achieve a "more accurate" picture of the world than neoclassical theory. The new social science was the grammar for a new world. "No one could tell what social science could do until it was tried...Past failure was only a sign of past incapacity. This was a new world." Mitchell and other second generation institutionalists believed that the use of scientific method (by which they meant the theory of a unified, limitless, objective, "box of tools" which could be used to measure, predict, and control reality) would provide cultural authority and power for social engineers and would increase understanding and control of human behavior. Mitchell, in fact, believed that the use of statistics would provide "factual certainty" on par with natural law. He encouraged the widespread use of the scientific method of statistical theory in the hope that "new light" in a wide variety of disciplines would unite and "give fresh meaning" to *all* scientific endeavor:

> The old distinction between economic theory as a peculiar avocation and the study of special problems is wearing thin, like the walls that shut off one social science from another. This does not mean that there is less specialization in current work than there used to be. Quite the contrary, the expansion of factual knowledge and the refinement of technical methods make whatever problem a man feels drawn to a more exacting mistress. But in dealing with his special problem, however intensively, the man who

> grasps the modern view sees how the bit he is doing fits into the program as a whole. Thus specialization gains in significance, while cooperation among the specialists, like cooperation among the several social sciences, becomes easier.
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> The acceptance of this conception of economics as one of several sciences of human behavior does not lead to the rejection of any of the several types of theory now current. Rather, this conception unites, interprets, and gives fresh meaning to these types. Obviously, institutional economics, such as Veblen stood for, has a conspicuous place in the study of human behavior. Widely current habits of thinking play a leading role in social activities; we must learn all we can about the cumulative changes that have brought these habits to their current form and about the trend of the further changes they are now undergoing.[72]

Mitchell believed that the proliferation of scientific theories could only hasten the arrival of a "harmonious" and "constructive" totalizing framework for knowledge. The new framework, he argued, was emerging out of specific problem-solving scientific studies. New factual discoveries in a variety of different areas were "straining" orthodox theory's ability to "contain" them. Mitchell believed that Science and the Scientific Method had the power to unify not only the social sciences, but also the biological sciences. The reason was that a single, true scientific method produced the same "kind" of truthful knowledge of the real. This uniform knowledge was authoritative because it derived from a uniform methodology—the scientific method. But as Amariglio (1987) reminds us, the idea of a single Method of doing a single, uniform Science presupposes an independently given discourse of Science. This "transcendent Logic" of scientific method stands in privileged relation to other forms of knowledge. It is superior to them. Moreover, this privileged discourse *guarantees* that the knowledge produced through its proper application is scientific and true knowledge.

The reification of science, however, does not resolve the epistemological problem of knowledge. In fact, viewing science as the "province of certifiable knowledge proper" is just a long-winded way of trying to solve the unsolvable problem of epistemology. Science and the Scientific Method, in other words, do not escape the epistemological problem of

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[72] See Ross (1991, 405) and Mitchell (1937, 411).

cognitive modernism because the Scienctific Method operates as an "epistemological norm" of Science, or what Amariglio calls a "master norm."[73]

What does Mitchell's considerable faith in a single, uniform science have to do with Deweyan pragmatism? Although Mitchell's new framework had not crystallized at the time Mitchell gave his 1931 address, he did recall a voice from his past who had "pointed out the path on which all the social sciences seem to be entering." It was the voice of Dewey. As Mitchell understood him, Dewey had advocated the wide application of the scientific method as a way of gauging "how men think." In his studies of human consciousness, Dewey ([1938] 1986, 108) determined that the purpose of inquiry was "to transform an indeterminate situation into a determinate one and to convert the elements of the original situation into a unified whole." Problem-solving and the unification of the elements of the problem through the language of science was the major function of human inquiry. As Mitchell understood Deweyan pragmatism, it was a philosophy which called for the widespread application of the "scientific habit of mind." Wible (1984, 1052), quoting Dewey, adds that on the basis of Dewey's "instrumental theory of inquiry" the Deweyan notion of truth may be defined as "the opinion which is fated to be ultimately agreed to by all who investigate is what we mean by truth, and the object represented by this opinion is the real."

Here the epistemological problem of cognitive modernism emerges in the program of the American Institutionalists. Their version of pragmatism is a version of the essentialist epistemology known as empiricism. I dispute the presumption that the scientific community is uniform, and "all who investigate" will "agree" on what the truth is. How is agreement formed? What is the basis of "agreement"? Is it race? Gender? Class? Power? Status? In other words, the "agreement" reached by the community of informed inquirers is actually "agreement" about a particular theory of the real. The

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[73] See Amariglio's (1987, 163-75) excellent Althusserian critique of scientism and classical epistemology.

"agreement" reached is a "religious" one: it is "agreed" that the theory of the real will be religiously transformed into the real. Classical empiricism is the epistemology which provides evidence on which "agreement" is achieved. Hence, the epistemological problem of cognitive modernism, as outlined in chapter one, is present in the Institutionalist theory of knowledge which they call Deweyan pragmatism.

Veblen's call for economists to embrace "modern science," is another instance where it is assumed that science is a discourse and scientific method a method which exists prior to intellectual activity, prior to the work of theorizing. In institutionalism, Deweyan pragmatism, because it is understood as scientific method, is a "theoretical ideology" in that it promises that whatever knowledge is produced by correct application is scientific knowledge. It indirectly relies on a naive empiricism as proof of its scientificity.[74]

Finally, as in the evolving processes which result from the tension in the Veblenian dichotomy, Deweyan pragmatism is understood to be organically connected to the larger cultural site. As Wible (1984, 1054) reads Dewey, "inquiry is an active, patterned, evolving life process that reduces indeterminacy." For Wible, inquiry was "organistically" structured because "the human mind and consciousness are real" and there is a relationship of mutual effectivity between the mind or consciousness and the habits, patterns, and life process. Wible contends that Deweyan pragmatism is evolutionary in the same sense that Veblen's pragmatism is evolutionary. Human consciousness shapes the social self who, in turn, shapes the institutions in society. The institutional processes of society then shape human consciousness. In this sense, Deweyan pragmatism is part of the social organism and the mind/matter split of classical empiricism is rejected. Wible writes,

> The human mind is a tool or instrument of evolutionary adaptation that actually operates through a real-life process called inquiry.[75]

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74 I take up the deeper related problem of subjectivity in the final chapter.
75 Wible (1984, 1054).

Again, institutionalists regard the method of knowledge acquisition as an instrument which is part of the social organism. The action-oriented approach to inquiry requires that the tools and solutions to problems be delimited by those problems.

I view the institutionalist version of Deweyan pragmatism as modernist because (1) it uncritically accepts the authority of science and (2) it relies on an essentialist epistemology to confirm its truths. As discussed above, a "supra-discursive" notion of science—an understanding of science in which scientific discourse exists prior to scientific practice, and hence there is a method "out there," which can be applied to different areas of human experience—betrays itself, in the last instance, in forms of empiricism and/or rationalism. If someone who subscribes to this notion of science is asked to prove the necessity of "scientific" (truthful) knowledge from the mere application of its "method," that person will have to appeal to "the fresh facts" (science's legacy of success in forecasting, organizing, producing, etc.) or to "first cause" arguments about the cumulative "growth and progress of knowledge" in the endless quest for "certainty" and "truth." These appeals position this understanding of science in the cognitive modernist tradition. The split between Subject and Object is implicit in the idea that there is *one* science.

Institutionalism's version of Deweyan pragmatism was successful for a short period of time in reducing the prestige of neoclassical theory's "unrealistic assumptions." This second tactic, used to secure a permanent position of respect in the profession, was much less successful than the first. The main reason is the 1953 essay of Milton Friedman. His sweeping dismissal of all "unrealistic assumptions" charges was a powerful contribution to the marginalization of institutionalism in the profession.

In fact, institutionalists were a primary target of Friedman's when he wrote the essay. Richard Lester (1946) published an article in the *American Economic Review* which summarized his findings from a survey of Southern businessmen. Lester sent a questionnaire which was designed to test the relative importance of determinants of labor demand. Quoting Lester (1946, 65), "The executives were asked: 'What factors have

generally been the most important ones in determining the volume of employment in your firm during peacetime?'" Lester's objective was to determine if marginal analysis was a significant determinant in the employment decision. If marginal analysis was a factor, then the effective wage should be a significant determinant of the level of labor demand. Lester found that:

(1) market demand was a more important factor than wage rates in determining the volume of employment.

(2) in response to rising wages firms will generally improve management practices and increase sales efforts and will *not*—again contrary to conventional theory—reduce output and employment.

On the basis of these results, Lester concluded that marginal analysis suffered shortcomings, the prime one being its failure to correspond with reality. Lester's was but one among several empirical surveys done in the 1930s and 40s to determine the "realism of assumptions" of neoclassical theory. Citing Lester's essay in his now famous 1953 essay, Friedman wrote,

> The lengthy discussion on marginal analysis in the American Economic Review some years ago is an even clearer, though much less important, example. The articles on both sides of the controversy largely neglect what seems to me clearly the main issue—the conformity to experience of the implications of the marginal analysis—and concentrate on the largely irrelevant question whether businessmen do or do not in fact reach their decisions by consulting schedules, or curves, or multivariable functions showing marginal costs and marginal revenue.[76]

American Institutionalists embraced Deweyan pragmatism as a way of insisting on philosophical realism in economic science. They rejected orthodox neoclassical theory as being irredeemiably unrealistic. Friedman's response virtually singlehandedly secured the dominance of neoclassical theory for most of the twentieth century. The demise of institutionalism's version of Deweyan pragmatism did not mean, therefore, the demise of pragmatism in economics. Deweyan pragmatism as scientific method soon gave way to Deweyan pragmatism as neo-positivism. Mitchell, in closing his 1931 lecture, remarked,

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[76] Friedman (1953, 13).

If we do not reorganize the framework of our science as we move forward, it will be because the scheme excogitated by our predecessors proves more adaptable to changing needs than many of us now venture to believe.[77]

In this, Mitchell, was right.

[77] Mitchell (1937, 415).

CHAPTER III

MILTON FRIEDMAN, NEOCLASSICISM, AND PRAGMATISM

A. Introduction

> In American economics, however, a methodology of modernism and scientism is particularly associated with the Chicago School. The main texts of economic modernism after Terence Hutchison's *The Significance and Basic Postulates of Economic Theory* (1938), such as Gary Becker and George Stigler's "De Gustibus Non Est Disputandum" (1977) or, above all, Milton Friedman's "The Methodology of Positive Economics" (1953) bear a Chicago postmark; and the more extreme interpretations of the texts flourish among economists bearing a Chicago degree.
>
> This is odd. It is odd that a group so annoying to other economists in most of its activities should have their assent in the matter of official method. Yet, a watered-down version of Friedman's essay of 1953 is part of the intellectual equipment of most American economists, and its arguments come readily to their lips (McCloskey 1985, 8-9).

> Marshall took the world as it is; he sought to construct an "engine" to analyze it, not a photographic reproduction of it (Friedman 1953, 35).

The meaning of pragmatism has been struggled over ever since Peirce, James, and Dewey conceptualized it. The struggles have taken place in philosophy, history, law, psychology, education, and economics. Dewey scholars in each of these disciplines have argued over the precise nature of John Dewey's experimental philosophy of human experience. Even though the struggles have had profound consequences for the development of each discipline, these consequences have failed to resolve most of the disputes.[78] I argue in this chapter that in the discipline of economics, one of those consequences is that pragmatism, once the chosen methodology of American institutionalists, now functions—controversially—as a justification for the theory of competitive, democratic capitalism as articulated by Milton Friedman. Half a century before

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78 In philosophy, for example, Arthur Lovejoy once counted thirteen versions of pragmatism. Fredrich Schiller, in response, remarked that theoretically there were "as many pragmatisms as there were pragmatists." See Thayer (1981, 5).

before Friedman's "pragmatist" defense of neoclassical economic theory, Dewey's philosophy of pragmatism combined with Veblenian institutionalism to offer an alternative paradigm for "modern" economics. But in Friedman's now famous 1953 essay, the pragmatism of John Dewey serves as an epistemological authority for Friedman's (and the Chicago School's) social theory of competitive, free-market, democratic capitalism—the canonical text of mainstream economics which institutionalists had campaigned so diligently against.

In recent readings of Friedman's 1953 methodological defense of orthodox neoclassical economic theory, Dewey emerges as the philosopher saint of American capitalism in general and of neoclassical economic theory in particular. By claiming that Deweyan pragmatism is identical with his own methodological views, Friedman uses Deweyan pragmatism to ground his own economic vision of a democratic, individualist, market-based capitalism as the *sine qua non* of the American Dream.[79] In the end, Friedman's claim is that Deweyan pragmatism "proves" that the *only* set of institutional arrangements that accords with human nature, democracy, and freedom is the free-market system in which the role of government is kept to an absolute minimum. Through

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[79] Hirsch and de Marchi (1990, 6) write that Friedman wrote a letter to Donald McCloskey in January 1984, a copy of which Friedman sent to Hirsch, which includes an acknowledgement by Friedman that "my own methodological views are almost identical with those of John Dewey." Two points should be made. First, it should be noted that, according to Hirsch, Friedman's knowledge of Dewey's views is only secondhand. It is not clear that Friedman has systematically read Dewey. Rather, Friedman has read papers by other authors which compare his methodological arguments with Dewey's. Based on these comparative surveys, Friedman concludes that his views are like Dewey's. Second, it is important to note that for Hirsch and de Marchi, Friedman's comments are not intended to settle the matter once and for all. That is, they do not rely on Friedman's "latest" word as proof of what he really believes. In taking this position, Hirsch and de Marchi confess that they are suspicious of the reliability of "authorial intent" in Friedman. Since the publication of the 1953 essay, he has made many conflicting statements regarding his methodology. Friedman has never systematically responded to the criticisms and to requests that he clarify his position. The 1953 essay is the only extended discussion of methodology in Friedman's published writings. Even so, such an approach—interviewing Friedman to pry out of him what he really meant in 1953—is unnecessary for a critical appreciation of the essay.

Friedman, Deweyan pragmatism further establishes that this system is best theorized in neoclassical theory's marginalist analysis of agent maximizing behavior. Hence, Friedman weds the ideology of the American Dream (as theorized in neoclassical economic theory) to pragmatism, the preeminent American philosophy. The result is an essentialist (modernist) economic theory of American capitalism which rests upon an essentialist (modernist) reading of America's most well-known and respected philosopher, John Dewey. Friedman's Deweyan pragmatism, then, serves as a philosphical *justification* for a conservative, free-market capitalism that is characteristically "American."[80]

This chapter continues the dissertation's focus on the epistemological problem of modernity in economic thought and methodology by examining the philosophical prescriptions of Milton Friedman's approach to economics. In 1953 Friedman published "The Methodology of Positive Economics," unquestionably the single most influential essay on the philosophy and methodology of economics to appear in the latter half of this century. The reach of this article has been enormous. If an economist has read, used, or cited any article on the methodological nature of mainstream economic science, it is this one. It is also important because its author is widely regarded as the chief proponent of the Chicago School's free market approach to economics, an approach that is most appropriately seen as a purist version of neoclassical theory. For most economists

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80 My sense of the Americanness of both Friedman's and Dewey's work, as well as Veblen's, emerges out of Ross's (1991) argument that in the history of the European migration to North America, especially the waves of immigrants who came in the late decades of the nineteenth and early decades of the twentieth centuries, intellectuals and those who aspired to become intellectuals were attracted to the social sciences expressly because of the "erasure" offered by objectivist knowledges. Becoming "American," becoming "white," involved making an ontological "break" with the European past, a break facilitated by the emergence of the "neutral observer" engaged in value-free, objective social sciences. These new disciplines promised immigrant intellectuals an objective, dispassionate, "de-ethnicized" scientific observer (much like the new "American") and a view of society that stressed analysis and specification of the conditions of social manipulation and control. This modernist promise was especially important following World War 1. See Ross's discussion of professionalization in the social sciences, pages 390-200.

Friedman's essay *defines and delimits* the methodological nature of and scientific grounding for mainstream economic research.[81]

What are the consequences of the struggle over the meaning of Deweyan pragmatism in Friedman's economic methodology and economic theory? I argue that reading Friedman's methodological insights as a version of Deweyan pragmatism has consequences not only for the kind of Deweyan pragmatism understood in economics, but also for the kind of economics that is erected on this philosophical foundation. It is the argument of this chapter that the modernist reading of Deweyan pragmatism, found in Friedman's 1953 essay, produces a version of Deweyan pragmatism which is epistemologically linked to, and therefore an instance of, the epistemological problem of cognitive modernism in economics. The epistemology articulated in the 1953 essay serves *de facto* as a foundation for the Chicago School's modernist theory of society. Following McCloskey's (1985) and Amariglio's (1985) claims that Friedman's Chicago School economics is to be seen as the quintessential expression of mainstream theory and *not* as an instance of aberrant theory, I argue also that Friedman's widely accepted essentialist epistemological defense of neoclassical theory grounds or justifies an essentialist and modernist theory of society which, in turn, has had a profound influence on the disciplinary form and content of mainstream economics, including the terms of its methodological debate.

It is hard to gauge the full impact of Friedman's 1953 essay on methodology. Its role in preserving the objective status of the discipline of economics has been enormous. The essay helped to liberate economics from the realist assaults of institutionalists and other such "heterodox" economists, while simultaneously preserving the scientific prestige of the dominant paradigm in the discipline. It also helped to articulate and launch an

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81 This is true despite the fact that most commentators on the essay reject its main arguments concerning the nature of positivism and the role of assumptions in constructing theory.

empirical research program for postwar U. S. economists. In doing so, however, Friedman's essay also paid a heavy price of affirming a philosophical *essentialism*. As this chapter will show, Friedman's firmly established commitments to modernism of and in theory reveal an *essentialist vision of the economy* (a picture which is commonly referred to as the "Chicago view" and is associated with the Chicago School of economics). His commitments to modernism of and in theory also reveal an *essentialist epistemological approach* to doing economics (an approach known as Deweyan pragmatism). I will show that the Chicago view that is associated most often with Friedman's work, as well as the pragmatism endorsed by his 1953 essay, are exemplars of modernism in economics. As such they are susceptible to the chronic instabilities characteristic of the ongoing crisis of cognitive modernism in the theory and practice of modern economics.

It should be noted at the outset that although many economists regard the work of Friedman and his followers in the Chicago School tradition as extremist and (therefore) marginal to economics, I argue instead that this tradition, as a *purist* version of neoclassicism, lies at the *center* of orthodox theory. The Chicago School view is important because of its central role in defining the boundaries of research in orthodox economic theory. That is, economists who seek greater "relevance" for their work by striving for greater "realism" of theory do so by differentiating themselves from the "extremism" or "pure theory" of the Chicago view.

The extremism of Chicago School economists is believed to consist in their heroic faith in the efficacy of free markets; their supposed noninterventionist approach to macroeconomic policy (based on a monetarist theory implied by the strict quantity theory); their broad theoretical application of marginal economic analysis (evidenced by the work of Friedman and, notably, 1992 Nobel economist Gary Becker); their commitment to empirical testing of all hypotheses; their piercing essentialist assumptions about human nature. Add to these aims the fact that in most schools of thought in economics, research in the twentieth century has been dominated by the promises and precepts of *empirical social*

science, and the result is that while most mainstream economists chide Chicago economists for being "too theoretical" or "too unrealistic" in their persistent commitment to the view that change in the real world operates "as-if" the model were "true," Friedman and the Chicago School look less like fringe practitioners than theoretical purists of neoclassicism. They do not "misuse" the core propositions of neoclassical theory. Rather, they forthrightly consider those propositions to be "assertions" about the real world and conduct empirical research based on this highly specified outlook.

Even so, Friedman and Chicagoans in general have had a clearly defined, rigorous empirical research program, albeit one grounded in the a prioristic rationalism of price theory. In other words, along with Friedman and other Chicagoans, the vast majority of economists trained by and institutionalized in graduate schools in the United States participate in the modernist discourse of neoclassicism. A consequence is that many of the issues and challenges that divide modern and (emergent) postmodern economics are the same issues which must be confronted by the vast majority of neoclassical economists whose research methods and theoretical orientations are philosophically related to the views of Friedman and the Chicago School. The postmodern critiques of modernist thought extend beyond the work of Friedman and the Chicago School. The challenges must be confronted by many other schools or outlooks in modern economics.

This chapter is divided into three sections. In the first section I summarize the ontology of the Chicago School. I argue that the theory of society articulated by Chicago School economists is claimed by them to be a representation of the objective "concrete-real." As an assertion about the real world, the theory of society articulated in Chicago School economics is understood by its practitioners as the "true" picture of society. The "truth" of their reflection is based on a fundamental belief in universal, *natural* economic laws of human nature and social organization. For Chicago School adherents, these laws effectively ground truthful knowledge of the economy. On this foundation, the adherence of truthful knowledge of the economy to the Newtonian worldview or social physics

model reaffirms the scientificity of modern economics. That is, part of the justification for the scientificity of modern economics is the way in which the Chicago view mirrors the social physics model of Newton. The authority of Newtonian science verifies and legitimizes the "truthfulness" of the Chicago view.

The influence and controversial nature of Chicago School economics can hardly be overstated when one looks at many of the dominant debates in the profession over the past sixty years. From the fundamental causes of the Great Depression to the profitability of slavery, to the "real" effects of money and monetary policy, to the regularities in household consumption and business investment, to a critical perspective on the larger role of the state in managing the economy, the Chicago School has defined a default "natural" or "pure theory" position in orthodox economic research. As such, this outlook has served as the thesis—and *not* the antithesis—of much mainstream economics. Either implicitly or explicitly, it is the position *against* which a good number of economists define their more "realistic" empirical work. It is important to understand the modernism of the Chicago view since it represents the *essence* of the modernist outlook critiqued, defended, *and* preserved throughout the economics profession. Friedman's and the Chicago School's general theoretical work is, as McCloskey maintains, the "main text" of economic modernism. Friedman's 1953 essay on methodology is the central methodological component of this powerful modernist text.

In the second and third sections of this chapter, I turn to Friedman's 1953 essay. The essay is discussed in two separate sections for two reasons. First, I thought it most helpful to provide a thematic statement of the main arguments of the essay rather than a recapitulation of the development of the argument, an approach followed by most of the literature that has spawned around the essay. The primary reason is methodological. Most assessments of Friedman's essay are exegetical explorations of the internal inconsistencies, contradictions, ambiguities, and (lack of) philosophical rigor evidenced in it. These assessments lead the reader to the conclusion that Friedman is wrong (mostly), not about

the rhetorical force of neoclassical economics, but about the philosophy of science which serves as the absolute standard for determining "truthful" scientific economic knowledge. These assessments read like essentialist analyses of "true" positivism or "rigorous" instrumentalism, overlooking what is a very "pragmatic" rhetorical move by Friedman. Rather than produce yet another "correction," I thought it best simply to highlight the major questions raised by the essay, since the essay has been so influential in defining the research questions in economic methodology.

Second, since so much has been written about what the essay "really" means, a separate assessment of this secondary literature is warranted. Rather than provide a retrospective on the "moment of Friedman," however, I have instead chosen in the third section to highlight more recent debate over the meaning of the essay, debate which suggests a developing consensus around the view that the "real" meaning of the essay corresponds to John Dewey's philosophy of pragmatism. This consensus has developed despite ongoing debate over (a) the role of "realism" and (b) the practical influence of Popper, Kuhn, and Lakatos in economics. That is, in citing Friedman as the source for "what economists do," most economists regard their work as "relevant" and useful for practical economic policy and most economists measure their work against an empirical standard which enables them to assess the "truth" and "accuracy" of their empirical findings in relation to the concrete real. But the effect of privileging Friedman's 1953 defense of neoclassical theory in this way is to privilege also a version of Deweyan pragmatism which is an expression of cognitive modernism. The modernism of Friedman is, then, part and parcel of the modernism of mainstream economics.

Following Wong (1973) and Boland (1979), economists have come to regard Friedman as a Deweyan pragmatist or instrumentalist. The questions are, what is the content and consequences of this reading of Deweyan pragmatism? What insights does this version permit and sanction in economic theory? What does it obscure and negate for economic theory, and why? To understand and propose answers to this question I

investigate other issues like: How was the essay incorporated into ongoing discussions about the relationship between the methodology of economic science and regnant philosophies of science? Who was Friedman's audience? His opponents? His constituency? What are some of the consequences of his argument? Also, how was the essay received, critiqued, circulated, and rearticulated following publication?

The last issue, concerning the circulation and rearticulation of *Deweyan pragmatism as the meaning* of Friedman's 1953 essay, is the focus of the final section of chapter three. Here I confront the claim that Dewey's philosophy of pragmatism, and not positivism as the title of Friedman's essay suggests, is the correct philosophy advocated in the essay. This claim has been taken up most recently by Hirsch and de Marchi (1990), who argue that if Friedman's essay advocates a form of "Boland-provoked" Popperian instrumentalism, then that version of instrumentalism is different from *their* understanding of *Deweyan pragmatism*.[82] The primary consequence of reading Friedman's essay on methodology as one (among many) interpretations of pragmatism is that it opens the discussion to other fundamentally different and opposed ways of reading Dewey's philosophy of pragmatism within economics.

My critical appreciation of Friedman's essay and the worldview of the Chicago School echo and extend recent postmodernist reassessments of modernism in economics. Instead of rejecting the view that Friedman is either a logical positivist *or* a Deweyan pragmatist, however, I propose a more radical epistemological critique by arguing that

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82 Dewey, as opposed to James or Peirce or Mead, has become the philosophical parent in recent readings of Friedman's 1953 essay. This is largely because of the influence of Rorty, who cites Dewey along with Wittgenstein and Heidegger as twentieth century philosopher critics of foundationalist philosophical thought. Dewey's prominence is also attributable to the fact that Dewey was, as a public intellectual, the foremost popularizer and spokesperson of the American philosophy of pragmatism. His New England background and his religious outlook were considered "native" ingredients in what was an emergent, distinctively American outlook. Dewey used the terms pragmatism, experimentalism, and instrumentalism to designate the same philsophical outlook. See Thayer (1981) and Westbrook (1991).

whether Friedman is a positivist or an instrumentalist (in Boland's sense) or yet another kind of Deweyan pragmatist (as Hirsch and de Marchi contend) depends on the discursive context within which each epistemological position is constituted. There is no single, correct reading of Friedman's 1953 essay which constitutes what Friedman "really" meant. Thus, there is no single, correct version of positivism which, once established as the correct version, may then be applied as a litmus test "methodology" for organizing "scientific" economic knowledge. Nor is there a single, "true," transdiscursive version of Deweyan pragmatism which may be "applied" to the social sciences, including economics. There are context-bound readings of Friedman. There are positivisms and pragmatisms, each of which emerges out of a specific discursive context.

To argue that notions of positivism or pragmatism depend on the discourse within which each is constructed (i. e., that language and culture matter) is not to favor a simplistic, "unrigorous" relativism. Rather, it is to undermine not only the disinterestedness and objectivity of neoclassicism's world picture and its "rational economic agent," but also to call into question the general objectivist and universalist strategies of (epistemologically-oriented) cognitive modernist discourses in scientistic economics. In short, it is to favor economists being more rigorous and self-conscious about the "subjective traces" that are an inevitable part of all social scientific inquiry. That is the project of this dissertation.

Chapter three concludes with a summary of its main points and a preview of the implications of my argument for current methodological discussions of pragmatism in economics. I elaborate on these implications in the final chapter (4) of the dissertation where, along with the version of Deweyan pragmatism examined in chapter two, I critique the cognitive modernism of both schools as essentialist and therefore vulnerable to the challenges of contemporary postmodern critiques of knowledge.

B. Friedman's Theory of Society: The Chicago School

> Life is not fair. It is tempting to believe that government can rectify what nature has spawned. But it is also important to recognize how much we benefit from the very unfairness we deplore (Friedman 1980, 168-69).

> The discovery of modernity remains to this day the fundamental context in which to understand the social sciences, for the future of modern society remains their central question; diversification remains central to their understanding of modern society; moral and utilitarian goals continue to shape their programs; and diverse conceptions of the scientific method still bridge general law and particularistic investigation (Ross 1991, 8).

In the modern era, the American Experiment has distinguished itself from other western nation-states by constructing its society on the twin pillars of political liberty and economic freedom for all individuals.[83] The national ideology of America includes the belief that America occupies an "exceptional" place in the history of the West because of its unique combination of republican government and capitalist economic system. Unburdened by the historical weight of feudal and monarchic class and caste and able to imagine a new civilization in the midst of a wild and wooded frontier, European travellers to North America wrote of the moral, religious, political, and economic promise of the "New World." For European "settlers" Enlightenment ideals like the "religious liberty" and "universality of humankind" or the "natural right" of "individual freedom" found earthly fulfillment in the New World. Europeans who settled here were missionaries, called to participate in the prosecution of America's millenial role as Europe's redeemer nation. No other nation-state in the history of the world shone brighter than the beacon light that was the nascent United States.

Reading Friedman's popular work (1962, 1980) on the threats in late twentieth century United States to political liberty and economic freedom is like taking a walk into the yesteryear of this Grand History, with no drink to give respite to the journey, no alarm

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83 In Friedman, political liberty and economic freedom, respectively, are defined by two documents published in 1776: the American *Declaration of Independence* and Adam Smith's *Wealth of Nations.*

to provide escape from the dreamworld of the political unconscious. With mind-numbing and bold perfection the narrative suggests, in form and substance, so beautiful and well-ordered a world that one wonders how so many economists continue to miss the point. For Friedman, the same guiding force or free spirit of discovery and self-fulfillment that led early European immigrants to "carve out" a new society was available to their "heirs" in the final decades of the twentieth century. The promise of individual freedom came from within—in the principle of self-interest. The threat to individual freedom came from without—in the form of government.

Indeed, life is not fair. According to Friedman, in America one is "free to choose" poverty or, with a little luck and much determination, affluence. Individual choice is part of the natural order of society. In a free society like the United States, all of us choose all the time. An "invisible hand" guarantees a just and efficient outcome as an unintended consequence of individual commitment to self-interested pursuit, characterized by diligence and sacrifice, of self-determined ends. Political freedom is a consequence and complement of the economic freedom to engage in work of one's own choosing. Because of the efficacy of the market mechanism, no centralized planning is required. All that is needed is an unfettered market system and "rules of the game." If the world is so ordered in the manner described in the epigraph above, Friedman cautions, it is harmful and dangerous to try to use social institutions, primarily government, to alter or "correct" what Nature has "given."

Although Frank Knight is credited as the "father" of the Chicago view, Friedman's popular writings are as good a place as Knight's to begin to construct a knowledge of the Chicago View because Friedman, more than Knight, is mostly responsible for popularizing the ideas which collectively are known as the present-day view of the Chicago School. In his popular writings, Friedman succeeds in clearly and persuasively explicating the rhetorical strategies used by teaching economists to persuade students of the "truth" (*naturalness*) of neoclassical economic theory. Because neoclassical theory builds its

theory of society on certain fixed assumptions about human nature, those strategies are integral parts of neoclassicism's modernist theory of society.

Reder (1982) argues that it is reasonable to regard the Chicago School as a Kuhnian sub-paradigm and professional sub-culture within the general neoclassical framework. What distinguishes this sub-paradigm from the rest of the economics mainstream is the beginning set of assumptions ("good approximations" of the "truth" of empirical reality) which yield particular "testable hypotheses." Chicago School adherents are willing to accept "Tight Prior Equilibrium," (TP) or Pareto optimality, as a ground level assumption about the nature of the concrete real.[84] To produce testable hypotheses the following four assumptions are added: (1) actual transaction prices are market clearing prices, (2) information is acquired to the point where its marginal cost equals its price, (3) most economic agents are price takers, and (4) neither monopoly nor government intervention prevents marginal products and factor prices from being equalized across all uses. Reder labels non-Chicagoans as "Diffuse Prior Equilibrium" (DP) theorists, meaning that they do not follow strictly the additional four "prior" assumptions accepted by Chicagoans. The hypothesis of Pareto optimality and its supporting assumptions are "first approximations" of the concrete real. Chicagoans recognize that "random disturbances" and "transitory violations" may effect tastes, techniques, information, and resources but the changes are not systemic in nature. Hence, they can be ignored. Therefore,

> [i]n the Chicago view, however, these random disturbances are such that it is possible to devise a stochastic analogue of the exact (non-stochastic) competitive general equilibrium model that has the following property: if for all commodities, expected price and expected quantity are treated as proxies for the corresponding price and quantity in the exact model, all propositions concerning partial derivatives of prices with respect to quantities (and of quantities with respect to prices) in the exact model will hold for the stochastic model as well, provided that we substitute "expected price" and "expected quantity" for "price" and "quantity," respectively.[85]

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[84] I will use "TP theorists," "Friedman", and "the Chicago view in the Friedman era" interchangeably in this section.

[85] Reder (1982, 11-12) and Hammond (1992a, 114).

Chicagoans make a "simplifying" assumption that if the "stochastic analogue" (of the "true" model) predicts well, then the features of the "true" model will also characterize the stochastic one. As a "first approximation," it denotes the *entry point* for the Chicago School's theory of society. Inasmuch as it takes the core propositions of neoclassical theory as given, it is a "pure theory" expression of neoclassical theory. That is, in constructing an empirical research program, Chicagoans accept as tentatively "true" the substantive propositions that non-Chicago neoclassical theorists "test" before accepting. (As will be seen in the next section, this manner of demarcating Chicago from non-Chicago economists is consistent, because Chicagoans reject the notion of "realism of assumptions" as a test for the validity of a theory.) Reder writes,

> Hard use of the good approximation assumption is a hallmark of Chicago applied research; but the assumption is not tested directly. Instead of investigating the descriptive accuracy of this assumption, or the precise extent of the resource misallocations caused by its failure to hold exactly the Chicago style is to treat it as a maintained hypothesis and apply it, using the resulting research findings as a test of TP.[86]

As TP theorists, Chicagoans require that empirical work be assessed according to how well its conclusions "fit" with the conclusions or objects of price theory. The broad objective of TP theorists is to provide empirical "proof" of the propositions about human nature which constitute the entry point of neoclassical theory. Reder writes, "the subject matter of the tight prior is the adequacy of this approach to theory as an explanation of whatever behavior is considered as economic" (13). Wolff and Resnick (1987) identify three components of the Chicago School's entry point into its theory of society. Their description of the entry point holds not only for TP theorists, but also for DP theorists. This entry point constitutes, in part, the "conceptual break" which helps to distinguish one paradigm of economic knowledge from another. They define the entry points of neoclassical theory as:

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[86] Reder (1982, 12-13).

> (1) the concept of self-interested, utility-maximizing individuals who are (2) endowed with initial productive resources and (3) an inherent ability to use the available technology to transform nature by means of the initial resources.[87]

The self-interested individual (or utility maximizing economic agent) is constructed as the autonomous, whole Subject of neoclassical theory. As the entry point concept for neoclassical theory, this subject *causes* all other events in neoclassical theory. Hence, all events and processes theorized by neoclassical theory can be reduced to this entry point concept. The neoclassical subject has a natural tendency toward self-preservation which is understood as preservation of the individual, atomistic self. Nature, given as the ordering force of History, endows those subjects with initial endowments and with a rational map or design which holds the key to efficient use of those resources and technology. With these bare-bones givens, individuals enter into *market-based* voluntary exchanges. In these voluntary arrangements, individuals recognize that self-satisfaction emerges as a primary motive for and benefit of trade. By trading goods and services in free-markets, individuals receive information, incentives, and incomes through prices and are able to choose rationally among options in order to maximize their pleasure. As an unintended consequence, selfish pursuit of individual ends produces a cohesive social order that maximizes individual freedom for all and causes a general improvement in the wealth of nations. An entire social order emerges.

This "beginning" of theory in the neoclassical model requires a cultural frame of reference which explains how a distribution, given by nature, is both unfair (because of teh distribution of resources) and, because of that unfairness, beneficial to the individual and society. Friedman (1980) provides such a reference. In one chapter, notably titled "Created Equal," Friedman (1980) explains the historical tension between (economic) equality and (political) liberty. As an enlightenment idea, this tension functioned to preserve economic equality and political liberty. Recently, however, the social benefits of life's "natural"

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87 Wolff and Resnick (1987, 239).

unfairness have been threatened by the remedial efforts of government, efforts based on a harmful and wrong-headed notion of equality.

Friedman claims that throughout American history there has been a cultural and political consensus around three different notions of equality: equality before God (1776-1865), equality of opportunity (1865-1930), and equality of outcome (1930-present). He also claims that in the final decades of the twentieth century—especially since 1965—the tension between economic freedom or equality and political liberty, a tension which was designed to secure the maximum of both, is strained by the unprecedented expansion of the power of government. In postwar America, a consequence of the spread of government regulation and control is that a conflict between equality and liberty has emerged to threaten economic freedom, political liberty—in short, the reproduction of the American way of life.

Friedman traces the evolution of the concept "equality" in American history. Prior to the Civil War, equality stood for the equality of all persons before God. Despite the great contradiction of chattel slavery, the founding fathers saw the wisdom of placing equal value on all human life, recognizing that each person enjoyed certain God-given, inalienable rights to "life, liberty, and the pursuit of happiness." Hence, in early America, Friedman concludes, there was no *theoretical* threat in the tension between equality and liberty because "equality before God" implied a tremendous range of differences (values, tastes, capacities) among individuals. Equality before God does not imply sameness of human beings. Clearly there are differences of belief, appearance, capacities, etc. for all individuals. [If people were identical, equality would be self-evident.] Equality before God meant that all persons were bound to respect the right of others to live differently without imposing personal values or judgments on them. On a *practical* level, however, this notion of equality was threatened because it was in direct contradiction with the existence of American slavery.

After the Civil War abolished slavery, Friedman argues, equality evolved to mean "equality of opportunity." In this sense, equality stood for the removal of "arbitrary" obstacles to the practice of liberty. An essential component of liberty, equality of opportunity means that

> [n]o arbitrary obstacles should prevent people from achieving those positions for which their talents fit them and which their values lead them to seek. Not birth, nationality, color, religion, sex, nor any other irrelevant characteristics should determine the opportunities that are open to a person—only his abilities.[88]

This secular notion of equality is similar to the earlier notion of equality before God, except that it substitutes one metaphysical term (God) for another (Nature). It emphasizes the foundational role of natural laws of the social order (which are just and efficient if allowed to operate) in Friedman's discourse. Moreover, because this notion of equality is rooted in the belief in the social as a "mechanized system," this notion of equality is not at odds with "natural" liberty. In fact, they may be viewed as analogous or homologous complements of each other.[89]

In the organization of economic activity, equality of opportunity and political liberty have combined to stress performance of the individual as the only determinant of success or failure. Economic processes like laissez-faire, competition, and free enterprise assume this meaning of equality. By relying on individual self-interest to produce a social order, Friedman endorses the positive benefits of competition and free enterprise. Nonetheless, Friedman admits, the inability in the United States to realize the ideal of equality of opportunity, evidenced best in the case of workers (including women and children) and

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88 Friedman (1980, 163).

89 On the use of Newtonian science and philosophy as identity, analogy, homology, and metaphor in the social sciences, see Cohen (1994, 56-60). He describes analogy as a "similarity that centers on an equivalence or likeness of functions or relations or properties." Homology, by contrast, denotes a "similarity in form as distinguished from similarity in function." Metaphor, being the extreme opposite of identity, is defined as "the act of assigning the name or the quality of something to something else to which it does not properly or normally belong."

blacks, led to the expansion of government; of privately held "extralegal arrangements" (e. g., exploitation) and of "social practices" (e. g., segregation and bigotry). They combined to undermine economic freedom and political liberty, thereby "interfering" with the freedom of some individuals to pursue liberty.

According to Friedman, first in the 1930s and again in the 1960s and 70s, the desire to redress social inequalities for workers and then blacks, women, and the poor led to a shift in the meaning of equality. No longer did equality stand for equality of opportunity. Government went too far in seeking to play a remedial role. Equality came to stand for equality of outcome. For Friedman, this notion of equality is but a contemporary version of the "Marxist" dictum, "to each according to his needs, from each according to his ability."[90] Equality of outcome means that all members of society should finish the race at the same time. For Friedman, this notion of equality as fairness of outcome is in conflict not only with the American ideology of liberty, but also with the given order of Nature:

> The point is rather that there is a fundamental conflict between the *ideal* of 'fair shares' or of its precursor, 'to each according to his needs,' and the *ideal* of personal liberty. This conflict has plagued every attempt to make equality of outcome the overriding principle of social organization. The end result has invariably been a state of terror: Russia, China, and, more recently, Cambodia offer clear and convincing evidence.[91]

Instead of trying to legislate and manipulate (through well-meaning but flawed policy) a "just" social order, economists and policymakers should "return" to the basic natural principles of the economic order. In a world characterized by unfairness and imperfection, Friedman argues, to be "free to choose" is to place liberty before equality. When combined with a free-market economic system, *liberty produces equality* because it reduces success (or failure) to *individual* effort and allows individual efforts to produce the natural social order.

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90 Friedman (1980, 166).

91 Friedman (1980, 167), emphasis in original.

In placing, instead, equality before liberty, as occurs when equality is understood as equality of outcome, the coercive power of government can only fail to establish equality of outcome; in fact, it has only led to "a state of terror." The coercive power of government has only led to abuse and inefficiency. Friedman claims that this sacrifice of liberty in the attempt to secure equality of outcome may be well-intentioned, but it has not yielded the desired results because it violates a basic human instinct which is "the uniform, constant, and uninterrupted effort of every man to better his conditions."[92] Left alone, this basic human instinct acts in free markets to determine economic outcomes and insure the maximum of individual liberty. It does what government seeks, but ultimately fails to do. This instinct or human nature is given to individuals in their genes or God-given natures. The government cannot do better than nature in determining economic outcomes. To attempt to do so is to interfere with natural processes and hence to undermine liberty.

The fact that in Friedman's view of society government undermines liberty rather than secures or increases it is an important one because it is the policy principle in Friedman's economic theory. Indeed, Friedman has devoted much of his career to arguing that government interference in voluntary and informed economic arrangements, under the auspices of "equality of outcome," only undermines liberty and, ultimately, even prevents equality (of opportunity). How does government interference undermine liberty? The answer lies in understanding the "natural" process which produces (economic) liberty.

The natural process in Friedman is described by Adam Smith's "invisible hand" metaphor. This fundamental principle of neoclassical economics states that a stable, beneficent social order is produced as a consequence of self-interested pursuit of individual desires and dreams. Individual human actions lead to good outcomes for society. But the magic or unseen aspect of this principle is that the individual human actions of millions of

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[92] This quote in Friedman (1980, 177) is from Adam Smith's *Wealth of Nations.*

persons produces a cohesive social order as an *unintended* consequence of selfishness. No coercion is necessary!

The invisible hand concept guarantees a self-ordering system. It is a version of the Enlightenment idea that "private actions can have beneficial public effects that were not intended by the actors." Smith founded the invisible hand concept on the belief that "man is motivated by self-love." Vaughn (1987) writes,

> [F]or Smith, self-love was the "principle of motion" in social theory much as attraction is the principle of motion in Newton's physics. Those who believed that government was free to make any laws it chose to regulate society, Smith believed, did not understand a most basic feature of human nature.[93]

The principle of motion is part of human nature. As such it mirrors the more encompassing "laws" of Nature described by Newton. The spontaneous social order that emerges out of the practice of "engaging one's own self-love" is rooted in—is a translation of—Newton's physical universe. Newton's mechanical system is an analogy for the social order.[94] Newton's theory of the physical universe, in the development of neoclassical theory, is representative of a "travelling theory" in that it is reconstituted as a fundamentally different idea in economics than in physics. Cohen writes,

> The example of Adam Smith is particularly interesting because it brings us to a significant feature of many interactions between the natural sciences and the social sciences...I have called this innovation "creative transformation," an intellectual leap forward that often occurs when a concept, a method, a principle, or even a theory is transferred from one domain to another. From this point of view, the creative act is seen to be more than merely a direct transfer of an idea to a new domain, more than the exact prelication of an idea in a new subject area. Rather, a basic intellectual component of the creative act is the transformation of the original idea.[95]

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93 Vaughn (1987, 997).

94 It is interesting to note here that Cohen (1994, 65) regards much of economics (and the social sciences generally) to be guilty of borrowing an "incorrect" science of physics from Newton. Adam Smith is an exception. Cohen maintains that what Smith "took from Newton's physics is perfectly correct *up to a point*; it was merely incomplete" (emphasis in original).

95 Cohen (1994, 66).

The key consequence of Newton's travelling theory of a mechanical universe is that in neoclasscal economics a theory of society is produced which *essentializes individual human nature* as the ultimate cause of economic performance and economic change. This essentialist theory is not "incorrect" Newtonian science. Rather, it is a rereading of Newton which produces an economic science (known as the Friedman-era Chicago School).[96] Friedman, therefore, has an essentialist theory of society. He draws on Adam Smith's invisible hand metaphor, which is based on Newton's mechanical system, to establish a "gravitational" law of social interaction which functions effectively to produce a social order that does not require active government intervention, relying instead on the benefits that result from individual self-interest. Friedman's arguments about the meaning of economic freedom, the superiority of free-market economics, the restraint of government, and the complimentarity between economic and political freedom are based on his assumption that the social order is "ordered" by nature as a reflection of Newton's physical universal system.

Friedman and Smith are not the only economists to transcribe Newton in the attempt to uncover governing social laws. In fact, Cohen (1994) cites several different versions of Newtonian science in economics.[97] Indeed, in modern thought the search for an

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96 This strategy of analogous or homologous rereading, as opposed to literal and identical transcription, is important because in the next section—and in chapters two and four—I argue that the same strategy has been deployed to produce different Deweyan pragmatisms in economics. I find Cohen's assessment that most economists use the "wrong" physics to be in conflict methodologically with his assessment that Smithian economics is "correct but incomplete." Despite the fact that Smith wrote on Newton and other economists (e. g., Carey and Walras) who have used Newtonianism did not, all "appropriations," I would argue, are *partial* readings of Newton. Furthermore, an implication of Cohen's reading is that only the canonical reading of Newton is the undisputed, "correct" reading. But even canonical readings, in my commitment to epistemological antiessentialism, become legitimate (or are "black boxed") only *after* disputes, controversies, and radical alternatives are suppressed (rather than proven false) by practitioners. See Latour (1987) and Kuhn (1962) on "progress" in science.

97 Cohen concludes that these versions "prove" that the social sciences inappropriately use Newtonian science as analogy, identity, or homology. In his view, the only appropriate use of Newtonian science in the social sciences is through metaphor. See Cohen (1994, 75-9).

appropriate analogy for ordering society has its beginning in the days of Newton and Berkeley. Toulmin (1990) writes of the emerging "civilization" in Europe during the time of Newton,

> Between 1660 and 1720, few thinkers were *only* interested in accounting for mechanical phenomena in the physical world. For most people, just as much intellectual underpinning was required for the new patterns of social practice, and associated ideas about the *polis*. As a result, enticing new analogies entered social and political thought: if, from now on, "stability" was the chief virtue of social organization, was it not possible to organize political ideas about *Society* along the same lines as scientific ideas about *Nature*: Could not the idea of social order, as much as that of order in nature, be modeled on the "systems" of mathematics and formal logic?[98]

For Newton, the answer was "yes." According to Toulmin (1990), Newton used Descartes' split between mind and matter to postulate a mechanical "system" that was Nature's scheme. The Cartesian dichotomy placed the world of human experience on one side and the world of natural phenomena on the other. Physical laws of *causal necessity* defined the world of natural phenomena. Objects in Nature could be left unattended to unfold and evolve—to reveal their essential or true natures—according to "cosmic clockwork." Toulmin describes six fundamental beliefs that constituted the modern, Newtonian understanding of Nature:

> Nature is governed by fixed laws set up at the creation; The basic structure of Nature was established only a few thousand years back; The objects of physical nature are composed of inert matter; So, physical objects and processes do not think; At the creation, God combined natural objects into stable and hierarchical systems of "higher" and "lower" things; Like "action" in society, "motion" in nature flows downward, from the "higher" creatures to the "lower"ones.[99]

Newton's idea that natural objects are composed of inert matter (and therefore do not think, yet do "reflect" higher and lower stages of development), is a consequence of the Cartesian insistence on a radical split between the two worlds. Thinking, or rationality/Reason, was the sole province of humans. Therefore, objects in Nature could not

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98 Toulmin (1990, 107).
99 Toulmin (1990, 109).

exhibit this characteristic. The world of human experience, Newton's *sensorium commune* (Inner Theater), was a realm of *mental* activity which included processing sensations and ideas that came from the outer world of Nature. But the processes and laws which defined each world constituted separate laws and processes that were connected only by *intentional* human action. Humans experience and act within Nature but *cannot* alter its fundamental laws. Consequently, humans are to some extent controlled by or subject to those laws. What distinguishes human beings from other life forms in Nature, however, is their ability to reason and to then act upon that reasoning by choosing. Rational choice is the essential element in human nature that distinguishes them as the highest life form in Nature. Toulmin (1990) writes that over time six "similar" beliefs about human nature developed to complement the doctrines of Nature:

> The "human" thing about humanity is its capacity for rational thought or action; Rationality and causality follow different rules; Since thought and action do not take place causally, actions cannot be explained by any causal science of psychology; Human beings can establish stable systems in society, like the physical systems in nature; So, humans live mixed lives, part rational and part causal: as creatures of Reason, their lives are intellectual or spiritual, as creatures of Emotion, they are bodily or carnal; Emotion typically frustrates and distorts the work of Reason; so the human reason is to be trusted and encouraged, while the emotions are to be distrusted and restrained.[100]

The third belief—that the social order can be like the mechanical systems found in nature—establishes the presence of a natural "principle of motion" shared by all humans. It serves as the map or design for the optimal social order. Reason-based choice becomes the key to discovering these immutable principles and unleashing them to order the social world. But reason must overcome and control emotion.[101] Emotion, unreason, or

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[100] Toulmin (1990, 109-10). It should be pointed out that the view that "thought and action do not take place causally" and, therefore, "cannot be explained by any causal science of psychology" is one that was not rejected until after Kant, when neurological science was developed. This view, too, was part of the insistence that the realm of human experience was empty of scientific content.

[101] Note the parallel between the two realms: in the realm of humanity, reason must control emotion; in the realm of nature, physical laws must control chaos.

"irrationality," threatens the natural social order with disorder. The "passions" threaten to overtake the "interests" and reduce humanity to a lower (animal) life form. As long as the "interests" are trusted, human beings, while still subject to natural laws (from which they benefit), can exercise a degree of freedom as expressed by their rational choices.

These root notions about the physical and social order are the basic principles of the modern world view. Together these notions form a world view in which the ability of human beings to reason and act upon their reasoning leads to an infinity of self-interested economic choices which, in turn, produce the best possible social order. In economics, these root notions constitute the essentialism of the neoclassical economic theory of society. The core propositions of neoclassical theory capture the *essence* of the social order. Reason, manifested in well-ordered preferences, individual endowments, and productive capabilities, via the invisible hand or "principle of motion," cause all other processes in the social order.

By the time of Adam Smith, these "doctrines of modernity" (Toulmin's phrase) were accepted as common sense notions about the world. The development of the human sciences in the eighteenth and nineteenth centuries century represent widespread acceptance of the view that immutable laws are innate in individuals and in the social order. By using the rules and formulas of mathematics and logic, the study of these laws became "scientific." Social science developed as a new "authority" for social knowledge. The economic form of this knowledge placed ultimate authority for social order in atomistic, individual behavior—specifically *not* in the hands of governing authorities. Quoting Smith, Vaughn writes,

> The "man of system," as Smith called him, seems to imagine that he can arrange the different members of a great society with as much ease as the hand arranges the different pieces upon a chess-board; he does not consider that the different pieces upon a chess-board have no other principle of motion besides that which the hand impresses upon them; but that, in the great chess-board of human society, *every single piece has a principle of*

> *motion of its own*, altogether different from that which the legislator might choose to impress upon it.[102]

Smith's "man of system" is government. He clearly states that government's visible hand, attempting to arrange pieces on a chess-board—attempting, that is, to order and maintain soicety—violates a natural principle of motion that exists *within* each individual. Government, in this sense, acts against nature and is, therefore, wrong in trying to promote a vision based on equality of outcome. Friedman's understanding of government and economic system is like that of Smith's. He writes,

> The key insight of Adam Smith's *Wealth of Nations* is misleadingly simple: if an exchange between two parties is voluntary, it will not take place unless both believe they will benefit from it...Adam Smith's flash of genius was his recognition that the prices that emerged from voluntary transactions between buyers and sellers—for short, in a free market—could coordinate the activity of millions of people, each seeking his own interest, in such a way as to make everyone better off. It was a startling idea then, and it remains one today, that economic order can emerge as the unintended consequences of the actions of many people, each seeking his own interest.[103]

For Friedman, the principle of motion captured by the invisible hand metaphor is a basic principle expressed not only in economic behavior, but in many different processes. The fundamental operation of this natural law in human society is so omnipresent that it is easily overlooked by social engineers. As testament to its universality, the principle of motion extends beyond economics to include the development of other human constructs—language, scientific knowledge, musical styles—in short, "a society's values, its culture, its social conventions—all these develop in the same way, through voluntary exchange, spontaneous cooperation, the evolution of a complex structure through trial and error, acceptance and rejection." Moreover, this human instinct connects humans to each other. "The structures produced by voluntary exchange, whether they be language or scientific discoveries or musical styles or economic systems, *develop a life of their own.*"

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102 Vaughn, (1987, 997), emphasis added.
103 Friedman (1980, 31-2).

There is a natural social order that removes the need for government (beyond very basic services like national defense, defining and umpiring the "rules of the game," and providing for those who cannot provide for themselves). Whenever government "interferes" with this natural order it limits individual freedom.[104]

Ironically, in Friedman's view of the economic and social order, individuality is conditioned by a universal characteristic which in turn provides the conditions for a cohesive society made up of individuals. The power of the market is that it coordinates all *individual* activities and produces the unintended consequence of a well-ordered *society*. Individual differences by birth and social circumstance result in diversity, inequality, and opportunity. These differences of birth are unified by the civilizing processes of the market mechanism. The market disciplines individual activity, making a unified whole out of individual and random activity.

The market creates a well-ordered society by disciplining individual activity. Markets *civilize* human activity. Importantly, this cultural assumption implies that government "interference" with the market's civilizing forces lead to decadence, degeneration, and the destruction of civilization. How does the market provide for individual improvement and the increase in the wealth of nations? How does the market simultaneously produce diversity and order? Allowing all agents to be free to allocate their time and resources according to their preferences creates diversity. Economic freedom for each individual allows them to reveal their preferred means of using their time and their emotional, physical, and mental energy. But the result of allowing individual freedom to produce diversity is that individuals must secure their own survival. The desire to improve the conditions in which they live, according to Friedman, is innate. Free individuals, therefore, are driven by their own nature to modify their actions according to how those actions are rewarded or punished in the market.

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104 Friedman (1980, 46-7), emphasis added.

In neoclassical economics, for any given resource endowments and technology, individual freedom (the freedom to choose rationally) is the cause of all events. Agents restrain or discipline each other because it is assumed that all agents pursue their self-interest and choose rationally according to their self-interest. That is, individual agent behavior is constrained by the reactions and (self-)interests of all other agents in the market. Consequently, the following are achieved as the rudiments of a social order: (1) resources are allocated efficiently, providing cost minimization, (2) incomes are distributed efficiently, meaning that each individual is rewarded for the productive use of his/her resources, (3) consumer choice is protected, (4) information regarding incentives is transmitted efficiently through prices of factors and outputs, and (5) those who discriminate are punished by the lower costs (and prices) offered by those who don't discriminate.

By permitting efficient allocation, consumer choice, productivity-based income distribution, information flows, and a natural reward for those who do not discriminate, the market insures that individual and societal growth will be orderly and stable. It creates a social order that allows individuality of expression (part of human nature) and yet imposes discipline on that behavior. An individual may choose to spend his/her time and resources making toilet paper out of glass, but the market price—the supply and demand for such a product—will reward that individual appropriately. In sum, the market mechanism, backed by the invisible hand, organizes chaos while preserving the natural desire to be free. The innate principle of motion, if unfettered, will unintentionally and inevitably civilize, discipline, and improve individuals and society.

The principle of motion which Smith and Friedman believe to be innate in all human beings is the key to understanding Friedman's modernist theory of society. By reducing all economic events to individual preferences and productive capabilities, Friedman defines individual preferences and productive capabilities—both aspects of human nature—as the *essence* of society. These factors of human nature are more than a

beginning for Friedman's theory of society. They constitute the *origins* of his theory of society. That is, every event or process can be causally reduced to individual choice and technology. Friedman's theory of society does not explain where these "givens" come from. They are metadiscursive causes of the social order. The object of this essentialist theory of society—capitalism in the United States—is then erected as a reflection or expression of these givens. Friedman's articulation of capitalism in the United States "proves" the truth of the essences, which delimit the articulation in the first place. In Friedman's theory, individual preferences and productive capabilities constitute the "minimum driving forces—*essences*—that determine economic events."[105]

Friedman warns that no amount of government effort can undo what nature has done. The essential features of, and God-given abilities in, human nature are universal and eternal. Some will be born blind, and some with sight; some will be born to parents who care and nurture, and some to parents who are uncaring. There is *no* way to make identical these differences without significantly restricting the liberty of some individuals. What distinguishes those societies in which inequality is minimized or, at least short-lived, from those in which inequality is more like a caste because it is intergenerational, is the presence and operation of the free market. On this fundamental point Friedman writes,

> Wherever the free market has been permitted to operate, wherever anything approaching equality of opportunity has existed, the ordinary man has been able to attain levels of living never dreamed of before. Nowhere is the gap between rich and poor wider, nowhere are the rich richer and the poor poorer, than in those societies that do not permit the free market to operate.[106]

For Friedman it is the free market that protects and secures individual liberty and that allows individuals, through their own efforts, to correct or "overcome" Nature's initial unequal distribution of endowments. As the site of voluntary exchange, the free market insures that if an exchange takes place, it does so because both parties, pursuing self-

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105 Resnick and Wolff (1988, 56).
106 Friedman (1980, 179).

interested ends, believe they will benefit from that exchange. In the aggregate, by promoting voluntary associations all members of society eventually benefit. Equality of opportunity is maximized since the price mechanism rewards the best producer or the best worker, regardless of that individual's endowments, race, nationality, religion, or sex. In general, all decision makers in a free market economy are assumed to be guided by Smith's basic human instinct, i. e., they act in a rational, self-interested manner. The invisible hand of Adam Smith's market guarantees that all exchanges will reflect the desires of participants.

In *Capitalism and Freedom* (1962, 14), Friedman argues that the competitive private enterprise economy is *superior* to all alternative economic arrangements. He writes, "the central feature of the market organization of economic activity is that it prevents one person from interfering with another in respect of most of his activities." Policies that promote equality of outcomes are wrong precisely because they go against the natural order. Hence they produce inferior social outcomes. In this first popular work, written nine years after his essay on methodology, Friedman discloses his standard of value, his standard of right and wrong. That standard is nature. As stated above, nature—human nature—is the essence of Friedman's theory of society. Hence human nature is the defining element of Friedman's modernism.

Since it is nature which has given "modern man" a distribution of predetermined desires, talents, endowments, and technologies, public policy should not interfere with nature by redistributing income or regulating (market) human acitivity. The policy implication of Friedman's theory of society is a policy of noninterference. It is a status quo politics. Friedman's understands the "future of modern society" to be dependent on adherence to nature's distribution of talents. Nature guarantees growth characterized by diversity and stability. Nature's distribution is a set of given human characteristics and natural instincts which ultimately necessitate the American forms of organization of economic and political institutions.

The form of organization that is optimal is one in which a maximum of economic freedom is combined with political liberty. For Friedman, our human nature implies the type of economic order that will be most compatible with economic freedom and political liberty. One of those natural instincts is man's desire to increase, to live better, to behave "as-if" he were a maximizer who enjoys individual liberty. Friedman writes,

> Historical evidence speaks with a single voice on the relation between political freedom and a free market. I know of no example in time or place of a society that has been marked by a large measure of political freedom, and that has not also used something comparable to a free market to organize the bulk of economic activity.[107]

And,

> A free society releases the energies and abilities of people to pursue their own objectives. It prevents some people from arbitrarily suppressing others. It does not prevent some people from achieving positions of privilege, but so long as freedom is maintained, it prevents those positions of privilege from becoming institutionalized; they are subject to continued attack by other able, ambitious people. Freedom means diversity but also mobility. It preserves the opportunity for today's disadvantaged to become tomorrow's privileged and, in the process, enables almost everyone, from top to bottom, to enjoy a fuller and richer life.[108]

According to Friedman, capitalism is the ideal form of economic organization because it mirrors nature; it best expresses human nature; it is the proper societal *reflection* of private rationality and technology; it is the most efficient and just arrangement we can achieve in a world in which "life is not fair." Individuals are not bound by racial, gender, or class caste at birth. Instead, each individual has the mobility and freedom to choose productive use of her/his resources. In Cohen's (1994, 75) view of the Smith/Friedman "analogy," the neoclassical model is based on a reading of Newton in which the goal is to create "a science of society or of human action founded on an 'experimental (i. e., experiential or empirical) base." The result is a model "for producing a 'moral' science on

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107 Friedman (1962, 9).
108 Friedman (1980, 182).

an empirical Newtonian foundation.[109] That is, Friedman's theory of society is based on the belief in empirical regularities that are "almost as certain" as mathematical law.

The Smith/Friedman analogy is the same as the Chicago School's stochastic analogy. In the Friedman era at the University of Chicago, as economists are well aware, Friedman's popular analysis of the superior workings of the free market blended well with TP as a "first approximation" to doing theory. Friedman had the effect of popularizing the Chicago School's world view. In simple, concise language, Friedman has been unique in characterizing the Chicago view. Friedman (1974) identifies two broad elements of the Chicago view. He writes,

> In discussions of economic policy, "Chicago" stands for belief in the efficacy of the free market as a means of organizing resources, for scepticism about government intervention into economic affairs, and for emphasis on the quantity of money as a key factor in producing inflation. In discussions of economic science, "Chicago" stands for an approach that takes seriously the use of economic theory as a tool for analyzing a startlingly wide range of concrete problems, rather than as an abstract methematical structure of great beauty but little power; for an approach that insists on the empirical testing of theoretical generalizations and that rejects alike facts without theory and theory without facts.[110]

In a debate with Stigler and Bronfenbrenner over whether or not such a distinct, separate "school" exists within the economics profession, Miller (1962) comments that Friedman and other members of the present-day Chicago School stress—even to the point

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[109] Cohen (1994, 76) is correct in pointing out that the key transitional figure linking Newton's and Smith's ideas with those of Friedman is David Hume. Of Hume, Cohen writes,

> he believed he had discovered in the psychological principle of "association" a "kind of attraction, which in the mental world will be found to have as extraordinary effects as in the natural, and to show itself in as many and as various forms." In short, he believed that psychological phenomena exhibit mutual attraction. If, as Hume believed, human behavior and social action are regulated by social laws, there is implied the possibility of a social science, one in which, as Hume wrote, "consequences almost as general and certain may sometimes be deduced...as any which the mathematical sciences afford us.

[110] Friedman (1974, 3).

of being dogmatic—a certain outlook shared by *all* neoclassical economists: a private-enterprise economy organized through markets with limited market restriction is the most efficient and equitable economic system possible. The important differences between Chicagoans and non-Chicagoans are differences more of degree than kind. Miller identifies five key features which characterize a present-day Chicagoan:

> the polar position that he occupies among economists as an advocate of an individualistic market economy; the emphasis that he puts on the usefulness and relevance of neoclassical economic theory; the way in which he equates the actual and the ideal market; the way in which he sees and applies economics in and to every nook and cranny of life; and the emphasis that he puts on hypothesis-testing as a neglected element in the development of positive economics.[111]

The insistence on the reducibility of economic analysis to individual natural attributes and behavior reflects the humanist essentialism (and modernism) of the Chicago view. It underscores the role of individual preferences and production capabilities as the entry point concept for neoclassical theory. The second and fifth features highlight the Chicago view, stated above by Friedman, that theory is only a tool for understanding and explanation of empirical reality. It is an epistemological point. The third feature echoes Friedman's belief in the centrality of markets as a way to allocate resources and protect liberty. The fourth feature reflects the formalism (read modernism or universality) of the logic of neoclassical theory. That is, with Friedman, Chicago School economists believe that the logic of individual self-interest causes not only economic outcomes, but also noneconomic outcomes like language, marriage decisions, family size, crime rates, etc.[112]

Bronfenbrenner (1962), a member of the Chicago School, in language which captures the form and content of modernist neoclassical theory, makes a similar point about the usefulness and effectiveness of the neoclassical model in the Chicago view:

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111 Miller (1962) in Wood and Woods (1990, 82).

112 See Becker and Stigler (1977). It is interesting to also note that a disproportionate number of American recipients of the Nobel prize in economics have been Chicago economists.

> Suppose an observed set of results R, explained with approximately equal accuracy (after allowance for varying degrees of freedom) by four hypothesis sets H_1, H_2, H_3, and H_4. Of these hypothesis sets, let H_1 be the 'simplest' in some agreed sense of the term, such as fewness of explanatory variables or parameters. Let H_2 be the most 'realistic,' as involving least violence to casual empiricism. Let set H_3 be the most general, in that it can explain alternative result sets R^1, R^2,...R^n ex post along with R, although it need not predict ex ante which of these result sets will occur. Let set H_4 be the minimal hypothesis, the weakest set of conditions (in the mathematical sense) from which R can be derived rigorously. *The essence of Chicago positivism, as I understand it, is to select H_1 as 'the' explanation for R over any of its alternatives.* To put a minimum of flesh on these symbolic bones, H_1 will often be neo-Marshallian *purely* competitive partial equilibrium analysis, H_2 imperfectly competitive partial equilibrium...H_3 Walrasian general equilibrium, and H_4 'modernized' general equilibrium.[113]

Marshall's purely competitive model (H_1) is preferred to the others—the more realistic one (H_2), the more encompassing one (H_3), and even the more technically sophisticated one (H_4)—because it has reduced the number of propositions to a minimum without sacrificing analytic power, and because in so doing it has maintained "simplicity." The reason is this model or picture of the world concludes that human beings acting in their own self-interest produce the maximum amount of freedom (utility, profit, and social good) possible in society. In the view of the Chicago School, perfect competition characterizes the U. S. economy.

A deconstructive critique of this model exposes the modernism of this world picture. Reder (1982) has characterized the Chicago view as an approach to theory which begins with the following hypothesis:

> In essence the Chicago View, or what I term "Tight Prior Equilibrium" theory, is rooted in the hypothesis that decision makers so allocate the resources under their control that there is no alternative allocation such that any one decision maker could have his expected utility increased without a reduction of at least one other decision maker.[114]

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[113] Bronfenbrenner (1962) in Wood and Woods (1990, 95), emphasis added.
[114] Reder (1982, 11).

In arguing that the allocation of resources given by nature is the most efficient and fair allocation, Friedman makes an anti-statist argument that any government reallocations will harm at least one other person. Thus, government intervention is *necessarily* non-optimal. Pareto optimality is a consequence of economic activity guided by human nature. As a modernist world picture, the Chicago view in the era of Friedman claims that the first cause of all economic events lies outside human experience. As a first cause, human nature produces a well-ordered and efficient picture of the world. In this picture, the (TP) model is assumed to contain the truth of the concrete real. A stochastic approximation of the model is tested to "validate" the assumptions about human behavior contained in the (TP) model. In the model and in testable hypotheses, human nature is an essential given, a form of objective knowledge. In a tautologus fashion, by taking human nature as given, TP theorists produce empirical evidence which shows the correctness of their understanding of human nature. Also, TP theorists resist paradigm-disturbing evidence. Reder writes,

> The paradigmatic nature of TP gives its adherents a particular perspective upon empirical evidence. A new finding is, and should be, screened to see how it bears upon the findings of research programs in a number of related fields. Because in "normal science" it is presumed that the currently accepted theory is valid, new findings are accepted far more readily if they are consistent with the theory's implications, than if they are not. In the Bayesian sense, the prior on the findings of any piece of empirical research is that they are consistent with the established theory; the strength of the evidence required for acceptance of a finding is greater than otherwise if any of its implications are inconsistent with TP.[115]

As a result, TP theorists are "distrustful" of behavior (evidence) that is "incompatible" with [neoclassical] economic theory. A classic example of this approach is the article by Stigler and Becker (1977). Rather than viewing the TP model as an exact replication of the concrete real, they view it as a collection of "tentatively accepted" assumptions about the real world, about how real-world human behavior can be explained.

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115 Reder (1982, 21).

They then test these assumptions and accept them because of their explanatory power. Stigler and Becker (1977) make the point,

> we are proposing the hypothesis that widespread and/or persistent human behavior can be explained by a generalized calculus of utility-maximizing behavior, without introducing the qualification "taste remaining the same." It is a thesis that does not permit of direct proof because it is an assertion about the world, not a proposition in logic.[116]

They can propose this hypothesis because they *assume* that utility-maximizing behavior to be part of human nature.

Cognitive modernists assume that their picture of the world contains the essential truth about the world. They rely on rational argument (logic) and/or empirical evidence to confirm or disconfirm that essence as the truth of the world. As part of the theory/reality split, cognitive modernists assume that the infinite number of processes and events in the concrete real can be reduced to a few empirical regularities and patterns or a few immutable natural laws which are the essences of the concrete real. The Chicago School certainly fits this approach to theory. Its theory of society defines human nature as the essence of the concrete real. Its theory of knowledge regards empirical evidence rather than rational argument as the test for the truth of its theory of society.

Adherents of the Chicago view, then, are vulnerable to the philosophical crises that plague essentialist knowledges. Chicagoans accept the paradigm-bound nature of their work. They recognize that almost all research done at Chicago embodies the "TP view." But Chicagoans go a step further and insist that empirical evidence confirms the objective truth of their essentialist theory of society. As will be seen in the next section, while the form of methodology (empiricism) used to confirm its truth is pragmatist (in the Deweyan sense), it is an essentialist, as opposed to antiessentialist pragmatism. It privileges the "facts" of human observation to "prove" the "truth" of rational principles of human nature. Hence a rereading of pragmatism which rejects empiricism as an extra-discursive

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116 Stigler and Becker (1977, 76).

form of "proving" the truth of a version of reality, also rejects the epistemological and ontological claims of the view commonly known (in the Friedman era) as the Chicago School of economics.

C. Positivism and Economic Methodology: The 1953 Essay

In this section I analyze Friedman's 1953 essay. In the next section I review reactions to it. The essay's key conclusion is that *predictive success*, as opposed to "truistic" or realistic description of the "real" economy, is the litmus test for the validity and value of a hypothesis or theory and, empirical testing of theories and hypotheses, therefore, *defines* the nature and content of *positive* economic science. This conclusion is important because it specifies the form of the problem of cognitive modernism in Friedman's "positivist" methodology. It is important also because it functions as a defense of the scientific truth of neoclassical theory. Understanding precisely what Friedman's essay says and does not say is also helpful in understanding how recent "Boland-provoked" debates over Friedman's "positivism" have prompted a new interpretation of the essay which holds that Friedman does not embrace a positivist methodology. Rather, following the short lessons in formal logic by Wong (1973) and Boland (1979), Friedman's positivism is to be read *really* as a version of Deweyan instrumentalism or pragmatism. This version of Deweyan pragmatism is different from the Deweyan pragmatism of the American institutionalists and can be distinguished from other "pragmatisms" that circulate in economics.[117]

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[117] My use of the phrase "positivism as a version of Deweyan pragmatism" is intended to convey the historical evolution of interpretations of Friedman's essay. Friedman regarded his task in the essay to be to provide a positivist methodological defense of neoclassical theory. Early critics accepted the view of Friedman as a positivist, albeit a "bad" one for the most part. Not until Boland's (1979) critique of the whole debate over the methodology of positivism in Friedman is the essay reread as an instrumentalist defense of neocalsssical theory. Boland's critique of Friedman's critics triggered a new debate which has led to the current view that Friedman's positivism is a "version of Deweyan pragmatism." My use of the phrase is intended to remind the reader of the ongoing debate over what Friedman "really" meant in the essay. This query after Friedman's true "intent"—through

The version of Deweyan pragmatism advocated by Friedman is one in which theory is an *instrument* for measurement of and control over human events. TP theory, for example, should not be accepted or rejected on the basis of the realism of its assumptions. Rather acceptance or rejection of the "Chicago view" should depend on how well hypotheses, based on the "tentatively accepted" TP model, predict economic change in the concrete real. As a version of Deweyan pragmatism, Friedman's methodological position calls for economic scientists to rely on empirical generalities or regularities in human behavior, because those regularities are harmonious with a prioristic natural economic laws (e. g., the invisible hand) which govern economic behavior. The policy consequences of such an approach imply a minimum of interventionist policy to strengthen the effectivity of those laws and patterns of group behavior and a maximum of reliance on harmonious laws of society.

Friedman states his objective at the beginning of the essay:

> ...this paper is concerned with certain methodological problems that arise in constructing the distinct positive science Keynes called for—in particular, the problem how to decide whether a suggested hypothesis or theory should be tentatively accepted as part of the "body of systematized knowledge concerning what is."[118]

Responding to Mitchell, Hutchison, Lester, and other American institutionalists and heterodox economists who rejected neoclassical theory because of the belief that the assumptions of "perfect competition" projected a "false image of reality," Friedman's purpose is to establish that since "the implications of marginal analysis" generally

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interrogation of his "applied" work or through a "deep" reading of the 1953 essay—is part of the cognitive modernist problem of searching for *the* truth of Friedman, and by implication, *the* correct version of Dewey's pragmatism. In addition to preserving the privileged status of abstract, scientific discourse in economics, this mode of inquiry also undervalues the influence of the changing context in which Friedman is read and reread. This tendency toward "disembodied" knowledges is part of the cognitive modernist problem.

[118] Friedman (1953, 3).

"conform" to experience, the body of "substantive hypotheses" known as neoclassical theory should be accepted—at least until a model with greater explanatory power and more precise predictive ability comes along. In Friedman's view, economists who insist that in order to be valid a theory must accurately reflect or describe the objective economy at the level of assumptions have "misunderstood" the role of empirical evidence, "impeded" the progress of economic inquiry, impeded the "attainment of consensus on tentative hypotheses," and caused "much mischief" and confusion in economic investigation. An insistence on descriptive accuracy, or "realism" of assumptions, reflects a basic misunderstanding of the nature of *positive* economic science. As a proponent of positive economic scientific research, Friedman's goal is to lay to rest once and for all the primary challenge to mainstream theory—it's *assumptions* were "irrelevant" and, hence, neoclassical theory was *invalid* as scientific knowledge of the economy.

Three main themes highlight the theoretical and political consequences of Friedman's methodological intervention. Highlighting these themes gives historical context to Friedman's essay, explaining why it is the most frequently cited essay by economists on the methodology of economic science. Rather than a section by section reconstruction of Friedman's argument—the voluminous literature on controversies in economic methodology surrounding "what Friedman *really* meant" does this—I concentrate on the consequences of its main themes for the thesis of this dissertation. The themes are:

(1) The role of positive economic science is to make useful predictions about phenomena in the objective world. The validity of a proposition in positive economic science is determined by how well it predicts, not by how accurately it reflects the truth of the concrete-real. Positive economics is different from normative economics in that the latter is concerned with evaluative issues having to do with "the way the world *ought* to be," while the former focuses instead on "knowing" the economy as it really *is*. Although normative economics is guided by the conclusions of positive science, positive economics can and should exist independently of normative economics, because positive economics is

an objective science much like physics is a science. Positive economics is intended to provide policymakers with greater ability to predict accurately and control effectively the effects of unintended changes in economic circumstances. Positive economics, in short, is the name for the empirical branch of neoclassical economic research. Whether or not an economic theory is accepted as part of the body of knowledge of positive economic science should depend on how well it predicts, on how well hypotheses based on the neoclassical model predict change in the real world. Neoclassical theory, both because of the "legacy of success" of its predictions—predictions which cover a wide range of activities—and because its foundation is a set of *a priori* truths—suggesting that we "already know" or "know intuitively" the Truth of those truths—which constitute a "true" social physics model of the economy, has greater explanatory power and fits well with the cultural precipitates of western nations.[119] Neoclassical theory, therefore, is a superior theory and should be accepted because its implications are, generally, empirically verified.

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119 In discussing the relationship between positive and normative economics, Friedman writes the following about the "cultural precipitates" of western society,

> I venture the judgment, however, that currently in the Western world, and especially in the United States, differences about economic policy among disinterested citizens derive predominantly from different predictions about the economic consequences of taking action—differences that in principle can be eliminated by the progress of positive economics—rather than from fundamental differences in basic values, differences about which men can ultimately only fight.

Aside from the thinly veiled cold war, anti-communist rhetoric in this statement, Friedman indicates that he is relying on the consensus of "local culture" as a buttress for his argument. The overdetermined social network of beliefs, knowledge, technology, discourses, resources, etc. that constitute, however locally, the universally held "cultural precipitates" of western society are deployed to ground Friedman's position. I single out that among these "cultural precipitates" is the idea that rationality and self-interestedness are part of universal human nature, and that these human attributes contribute to the actualization of the utilitarian goal of the greatest good for the greatest number. Hence, neoclassical theory is "true," though not verifiable empirically, because it conforms to real human nature. Friedman illustrates this extremely important point of the givenness of cultural precipitates by citing the debate over minimum wage legislation. He argues that there is an "agreed-on" end—achieving a living wage for all—but disagreement over how best to achieve that end. After such normative clarity, the role of positive economics is to

(2) The criterion that a theory should be accepted or rejected according to the "realism of its assumptions" is a straw man. Because of the impossibility of any theory to be completely "realistic" and still be meaningful or useful, the "realism" of assumptions cannot be the criterion of validity for a theory. Trying to meet the criterion of realistic representation of the objective economy in theory would require infinite detail. Such a precondition paralyzes theoretical inquiry in a futile, infinitely regressive quest back to "first causes." The entire "realism of assumptions" debate, then, misses the point of scientific inquiry into the dynamics of the economy—the point of scientific inquiry is prediction and control. Bearing this point in mind, descriptive accuracy is less important than predictive adequacy. An economic theory could *not* picture or photographically reproduce the "truth" or essence of the world in finite detail (indeed, for Friedman this is an impossible task). Rather, theory should reflect in abstract, simplified form the essential nature of the world which is given by the physical laws of nature which govern the social realm. Hence, positive economics offers a description of the observed world which suggests that changes in economic circumstances occur "as if" they operated in the "hypothetical and highly simplified world of the neoclassical model." For Friedman, Alfred Marshall's neoclassical theory represents an "engine" that motivates economic inquiry; it does not represent a "photographic reproduction" of the economy. The

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resolve policy disputes through empirical testing. Progress in economic science will "settle" the debate over minimum wages for once and for all. The assumption that "harmony" exists concerning the "basic values" of western society is not itself empirically verifiable or verified. Yet it is crucial to his "positivist defense" of neoclassical theory because it takes as given what the "realists" rejected—the retinal image or picture of the objective economy, including the form and content of human nature. For Friedman the unintended harmonious consequence of self-interested, maximizing behavior in the concrete-real economy is "given" as a priori "true" *in the same sense* that Newton's universal generalizations about the nature of the physical world are "true." This expresses a form of rationalism—i.e., Friedman is suggesting that there are some ideas that do not need testing to be valid. They are necessarily true because they capture the logic of reality. See Friedman (1953, 5), Hirsch (1980, 106-13), and my discussion in the previous section of this dissertation on this point.

importance of this second and most important theme is that Marshall's "engine" is supposed to serve as a guide to economic inquiry, a framework for economic research. This *analogy* takes as *given* the notion that economics is an objective science *just like physics*. In fact, it uses the physics model as the conceptual grid or foundation for neoclassical theory. Friedman argues, therefore, that neoclassical theory should not be rejected on the basis of the unrealism of its assumptions for these assumptions are merely that—assumptions in thought that motivate further thought.[120]

(3) Even with the previous two themes there is still more than one way to capture the essential nature of economic phenomena. The question remains, How do we decide among competing theories which is true, when all claim to offer the essential truth(s) of the real world? There is no reason to believe that there is only *one* way to picture or theorize the economy, one set of assumptions about the economy which might compel belief. Therefore, criteria must exist for choosing among alternative scientific descriptions of the nature of the objective economy. Friedman's criteria are: *simplicity* (economy and clarity of the theory's statements and its aesthetic appeal) and *fruitfulness* (predictive precision and applicability to a wide range of issues). The growth of economic knowledge, consequently, depends on "tentative" acceptance of the body of generalizations known as neoclassical theory and on continued empirical testing of neoclassical theory's suggested hypotheses. On the basis of these criteria, Friedman maintains that neoclassical theory is a superior theory. He also insists that it has demonstrated a wide range of applicability and predictive success. Neoclassical theory has demonstrated its resilience in allowing fairly broad enumeration of its generalizations. These generalizations are based on the strength of its a prioristic foundations—i. e., the generalizations accord with human nature and on the strength of empirical evidence which "confirms" those generalizations. Friedman concludes, therefore, that neoclassical theory is a preferred, "better" theory.

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120 Friedman (1953, 40). See also Mirowski (1988, 11-30).

Examining two of Friedman's own examples allow me to elaborate on these themes.[121] The first example is one which Friedman chooses because it is "an analogue of many hypotheses in the social sciences." It is the example of leaves on a tree:

> I suggest the hypothesis that the leaves are positioned as if each leaf deliberately sought to maximize the amount of sunlight it receives, given the position of its neighbors, as if it knew the physical laws determining the amount of sunlight that would be received in various positions and could move rapidly or instantaneously from any one position to any other desired and unoccupied position.[122]

In this example Friedman's "hypothesis" is that leaves on a tree are guided by the logic of sunlight maximization, subject to density and position constraints and blessed with the ability for rapid adjustment (i. e., leaf movement takes place in logical, not historical, time). That is, each leaf on a tree behaves as if it "knew" the laws of science which describe sunlight maximizing behavior for leaves. The hypothesis clearly is not "true," since leaves do not deliberate over or reason to the conclusion that the best chance of survival and happiness is to "know" the laws which determine optimal conditions for sunlight maximization. Nor is the hypothesis "falsifiable," given that leaves cannot rationally express their "true motives." Instead, leaves behave "as if" they were motivated by these laws. Moreover, *experience confirms the hypothesis*. Friedman writes, "despite the apparent falsity of the 'assumptions' of the hypothesis, it has great plausibility because of the conformity of its implications with observation.[123] The hypothesis 'sunlight

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121 The third example provided by Friedman concerns the "law of falling bodies." The law states that "the acceleration of a body dropped in a vacuum is a constant and is independent of the shape of the body, the manner of dropping it, etc" (Friedman1953, 16). The implied formula is given as $s = 1/2(gt^2)$, where s is the distance travelled in feet, t is the time in seconds, and g is the acceleration of a body dropped in a vacuum. In this example, Friedman discusses the "assumption" of a perfect vacuum as a perfect analogy for perfect competition as a way of arguing analogically that it is impossible to test a highly useful assumption—perfect vacuum or perfect competition—for its realism. Successfulness of predictions is the reason both assumptions are accepted as hypotheses. "The formula is accepted because it works, not because we live in an approximate vacuum—whatever that means" (18).

122 Friedman (1953, 19).

123 Friedman (1953, 20).

maximization subject to density and position constraints' is acceptable not because it is true, but because it has great explanatory power:

> We are inclined to "explain" its validity on the ground that sunlight contributes to the growth of leaves and that hence leaves will grow denser or more putative leaves will survive where there is more sun, so the result achieved by purely passive adaptation to external circumstances is the same as the result that would be achieved by deliberate accomodation to them.[124]

We don't know the "true motivations" of leaves but that does not matter. What matters is that this anthropomorphism, this expression of the tyranny of the Subject, is confirmed by the fact that leaves behave "as if" they deliberately chose to "accomodate" external circumstances.

An important element in the persuasiveness of "as if" theorizing is the set of givens that support it. One such piece of "background information" that Friedman relies on is our scientific knowledge of the relationship between leaves and sunlight. His example of sunlight seeking leaves on a tree "works" as a metaphor for economic behavior because we have a noneconomic scientific knowledge called photosynthesis. Friedman appeals to another science—botany—to establish the scientificity and authority of economic behavior. Our explanation of the behavior of leaves derives from past experience and subsequent scientific understanding in botanical science of how leaves behave. The idea that sunlight is necessary for the survival of trees is generally accepted as scientific "fact." It is a "fact" because past scientific investigation suggested it as a hypothesis and subsequent experience has not disproven it. Latour (1987, 22-3) refers to statements like Friedman's as *positive modalities*. A positive modality is a statement which leads the reader "away from its conditions of production, making it solid enough to render some other consequences necessary." Friedman's metaphor leads us away from the conditions of production of his *economic* hypothesis—we do not know how sure our footing is in accepting his "as if" hypothesis—by his appeal to "other," more authoritative scientific "facts." If we accept the

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[124] Friedman (1953, 20).

logical "truth" of the metaphor, Friedman argues, we can transcribe the entire example from botanical science to economic science.

Received scientific knowledge of the behavior of leaves constitutes a collection of statements which were "discovered" in the past and existed amid controversy, but which are now generally accepted as "fact." These "truths," however, are hypotheses which were formerly controversial but which are now "settled" or "black boxed."[125] The authority of positive modalities like Friedman's is independent of context because it is based on the larger narrative called Science. Friedman's analogy about the relationship between leaves on a tree and sunlight has the discursive power of *certainty* because it permits Friedman to demonstrate the "truth" of an *economic* argument by appealing to the "truth" of an argument from physics or botany. Friedman's discursive strategy strengthens the "truth" or authority of natural law and he, in turn, borrows from that authority to "prove" *analogically* his point about neoclassical economics. Friedman is explicit about basing his position on the authority of universal law:

> This alternative hypothesis [that sunlight contributes to the growth of leaves and that hence leaves will grow denser or more putative leaves survive where there is more sun] is more attractive than the constructed hypothesis [leaves behave as if they seek to maximize the amount of sunlight absorbed] not because its "assumptions" are more "realistic" but rather because it is part of a more general theory that applies to a wider variety of phenomena, of which the position of leaves around a tree is a special case, has more implications capable of being contradicted, and has failed to be contradicted under a wider variety of circumstances. *The direct evidence for the growth of trees is in this way strengthened by the indirect evidence from the other phenomena to which the more general theory applies.*[126]

Disinterested inquirers know that the "alternative hypothesis" is a "special case" of a more general theory of *natural* behavior. The "evidence" from other phenomena in nature indirectly "confirm" the "evidence for the growth of trees" which, in turn, strengthens the "direct evidence" from the general theory of nature. Positive scientific

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125 See Latour (1987, 21-9) for a discussion of "fact-making" and "black boxing" in science.

126 Friedman (1953, 20), emphasis added.

inquiry provides the evidence of how objects in nature behave. In each scientific discipline, the positive branch of the discipline confirms the truth of natural laws. The alternative hypothesis is not more realistic as a description of what takes place, it simply accords with what is trivially obvious about nature. The constructed hypothesis, on the other hand, because it captures the *essential* dynamic of natural selection, is also valid since it "yields 'sufficiently' accurate predictions." For Friedman, a realistic description that includes details like the "kind of tree," or the "character of the soil," may contribute to understanding the range of applicability of the hypothesis, but does not bear on the truth or falsity of the hypothesis.[127]

The process of "black boxing" the uncertainty of scientific knowledge concerning leaf behavior in relation to sunlight is tantamount to asserting that scientific certainty exists with respect to the behavior of plants. In Friedman's essay, this is not an unimportant point. The uncontroversial status of "plant behavior"—the givenness of the scientific truth of plant life—corresponds analogically to the uncontroversial status of human behavior—the givenness of essential human nature. In Friedman, both logics are truistic givens. The neoclassical model of agent maximization is "true," after the fact, not only because it predicts well, but also because it "reflects" the harmonious working of the immutable, scientific laws that govern all life. Consequently, the attempt to describe "realistically" the details concerning leaf behavior misses the point. The *essence* of leaf behavior is captured in the model of how leaves behave. Similarly, the core propositions of neoclassical theory capture the essence of human nature.

A high degree of confidence in both cases is warranted because of predictive success. In this sense the "as if" theory of sunlight maximization is an engine for understanding the movement of leaves in the observable "real" world and the neoclassical model of individual maximization is an engine for expression of desirable human ends.

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[127] Friedman (1953, 20).

Hence, Friedman argues that "realism of assumptions" is not only uninteresting, it paralyzes the progress of knowledge because it requires matchmaking detail between "theory" and "reality." Also, because the hypoythesis of sunlight maximizing behavior on the part of leaves is "fruitful" and "uncomplicated" it is a preferred theory among other theories.

In a second example, Friedman takes a final step toward an explicit epistemological defense of neoclassical theory:

> Consider the problem of predicting the shots made by an expert billiard player. It seems not at all unreasonable that excellent predictions would be yielded by the hypothesis that the billiard player made his shots *as if* he knew the complicated mathematical formulas that would give the optimum directions of travel, could esitmate accurately by eye the angles, etc., describing the location of the balls, could make lightning calculations from the formulas, and could then make the balls travel in the direction indicated by the forumulas. Our confidence in this hypothesis is not based on the belief that billiard players, even expert ones, can or do go through the process described; it derives rather from the belief that, unless in some way or other they were capable of reaching essentially the same result, they would not in fact be *expert* billiard players.[128]

In this example, the high degree of confidence associated with the predictions of the hypothesis "confirms" the validity of the hypothesis. Therefore the hypothesis should be accepted. The descriptively false assumption that expert billiard players are first expert Euclidean mathematicians is useful because it serves as a sufficiently good approximation of behavior "for the purpose at hand."[129] Friedman insists that in general,

> truly important and significant hypotheses will be found to have "assumptions" that are wildly inaccurate descriptive representations of reality, and, in general, the more significant the theory, the more unrealistic the assumptions (in this sense). The reason is simple. A hypothesis is important if it "explains" much by little, that is, if it abstracts the *common and crucial elements* from the mass of complex and detailed circumstances surrounding the phenomena to be explained and permits valid predictions on the basis of them alone. To be important, therefore, a hypothesis must be descriptively false in its assumptions; it takes account of, and accounts for,

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128 Friedman (1953, 21).
129 Friedman (1953, 15).

> none of the many other attendant circumstances, *since its very success* shows them to be irrelevant for the phenomena to be explained.[130]

The predictive success of the hypothesis is sufficient to conclude that a descriptively false assumption is useful. The evidence shows that a "wildly inaccurate representation of reality" is still important and significant because the role of a hypothesis is not to picture the concrete-real, it is to capture the *essence* of the concrete-real. Theories that explain "much by little" are theories that express the kernel of truth of objective reality. Such theories effectively order thought-concretes, giving them a high degree of certainty in prediction by virtue of the fact that they contain the "common and crucial elements" which are most relevant. Furthermore, predictive success also tells us which elements are unimportant. Since the hypothesis yielded successful predictions, only the factors contained in the hypothesis matter. If this were not true, Friedman argues, the hypothesis would have been less useful or a bad predictor.

The elements of the hypothesis which are most relevant are determined by the success or failure of its predictions. If a hypothesis yields "bad" predictions, it is probably because either it has been applied to a problem for which it is not suited or it has not captured the essential causal relationship between factors in the economic environment—i. e., the hypothesis is a false assertion about the nature of the objective economy, as evidenced by its limited usefulness. If, on the other hand, it yields good predictions, then it will be highly useful and, consequently, used over an increasingly wide range of problems and applications.

Friedman argues that acceptance of the hypothesis concerning an expert billiard player is further warranted by the process of natural selection. Recall that in the first example of leaves trying to gain as much sunlight as possible, Friedman appeals to scientific knowledge of nature as an explanation of the a prioristic "truth" of the general theory of movement and survival among leaves. In a similar way, Friedman again appeals

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130 Friedman (1953, 14-5).

to nature—in this instance the process of natural selection. Confidence in the billiard player hypothesis is warranted because theories are naturally selected—bad theories, theories which predict poorly, are driven out by good theories, theories that predict well. Having established that there is a distinct role for positive science (gathering evidence which confirms or disconfirms hypotheses and separates "good" from "bad" theories), and that the "realism" of assumptions is unimportant and, indeed, an impediment to positive scientific research, Friedman uses the second example to complete his defense of neoclassical theory:

> It is only a short step from these examples to the economic hypothesis that under a wide range of circumstances individual firms behave as if they were seeking rationally to maximize their expected returns and had full knowledg of the data needed to succeed in this attempt; as if, that is, they knew the relevant cost and demand functions, calculated marginal cost and marginal revenue from all actions open to them, and pushed each line of action to the point at which the relevant marginal cost and marginal revenue were equal.[131]

Friedman explicitly exports an entire argument from botany and geometry into economics. Friedman maintains that the important point is not that businesses actually behave in this manner, any more than it is relevant that billiard players explicitly go through complicated mathematical calculations. The relevant "fact" is that

> confidence in the maximization of returns hypothesis is justified by evidence...in part similar to that adduced on behalf of the billiard player hypothesis—unless the behavior of businessmen in some way or other approximated behavior consistent with the maximization of returns, it seems unlikely that they would remain in business for long. Let the apparent immediate determinant of business behavior be anything at all—habitual reaction, random chance, or whatnot. Whenever this determinant happens to lead to behavior consistent with rational and informed maximization of returns, the business will prosper and acquire resources with which to expand; whenever it does not, the business will tend to lose resources and can be kept in existence only by the addition of resources from outside. *The process of "natural selection" thus helps to validate the hypothesis—or, rather, given natural selection, acceptance of the*

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131 Friedman (1953, 21-2).

> *hypothesis can be based largely on the judgment that is summarizes appropriately the conditions for survival.*[132]

Not only does natural selection operate to ground theory, it also, as part of the role of grounding theory, forces theories to compete for consensus. Neoclassical theory is true because tests have failed to disprove it. Neoclassical theory has out-competed other theories in terms of predictive success. Indeed,

> the continued use and acceptance of the hypothesis over a long period, and the failure of any coherent, self-consistent alternative to be developed and widely accepted, is strong indirect testimony to its worth...[the hypothesis] tends to become part of the tradition and folklore of a science revealed in the tenacity with which hypotheses are held rather than in any textbook list of instances in which the hypothesis has failed to be contradicted.[133]

The predictive success of neoclassical theory has given it "folkloric" or "conventional" status in the discipline. Neoclassical theory is "true" by the consensus that exists in its useful application. Its modality is that of a paradigm: its practitioners collect and assemble empirical facts which validate the "first principles" of neoclassicism.[134] Generations of articles, books, supporting theories, and like-minded economic scientists have erected edifices of economic knowledge which borrow without qualitification the basic assumptions of neoclassical theory. The essentialist propositions and methodology of neoclassical theory, following Friedman's defense, became "black boxed" among economists. Hausman (1992) quotes Lee Hansen, who told him that "he recalls economists in the 1950s reacting to Friedman's essay with a sense of *liberation*. They could now get on with the job of exploring and applying their models without bothering with objections to the realism of their assumptions."[135] After Friedman's defense of neoclassicism, positive economic science, organized around the core propositions of neoclassical theory, was once again on firm ground as a science like physics.

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132 Friedman (1953, 22), emphasis added.
133 Friedman (1953, 23).
134 See Becker and Stigler (1977).
135 Hausman (1992, 164).

One final word on the role of prediction in determining the validity of a theory or hypothesis. Friedman revised the methodological principles of positive economic science. His 1953 essay is a direct response to Richard Lester's survey testing of neoclassical theory's assumptions (agents behave as if they maximize returns and markets are perfectly competitive) and the ensuing debate between Lester and Machlup over whether the basic propositions of neoclassical theory, having been falsified in empirical tests, should be rejected. Friedman's essay is also an indirect response to Hutchison's (1938) more forceful Popperian argument that *only* those propositions which were falsifiable be admitted as part of economic science. Referring directly to the controversy sparked by Lester's research, Friedman writes,

> The lengthy discussion on marginal analysis in the *American Economic Review* some years ago is an even clearer, though much less important, example. The articles on both sides of the controversy largely neglect what seems to me clearly the main issue—the conformity to experience of the implications of the marginal analysis—and concentrate on the largely irrelevant question whether businessmen do or do not in fact reach their decisions by consulting schedules, or curves, or multivarable functions showing marginal cost and marginal revenue.[136]

The increasingly persuasive critique of the abstract formalism of neoclassicism offered by American Institutionalists and Marxists led many economists to question the policy relevance of research based on the underlying assumptions of "perfect competition" and marginalist analysis. In Friedman's view, for example, the widespread acceptance of the theory of monopolistic and imperfect competition was *a direct consequence* of the mistaken view that the basic assumptions of neoclassical theory projected a false image of reality. Accordingly, the theory of imperfect competition was intended as a "truer" or more descriptively accurate picture of reality. He argues that the search for a "truer" theory of reality is based on economists' "neglect" of the distinction between a theory that works (or provides "sufficiently good approximations for the purpose in hand") and a theory that is

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136 Friedman (1953, 15).

descriptively realistic (a feature which theories could never share, in Friedman's view). Friedman's strong and persuasive rebuttal to the "realism of assumptions" critique effectively "resolved" the empiricist epistemological problem of "realism."

As suggested earlier, by claiming that predictive success (realism, but at the point of theory application) rather than realism of assumptions (realism, but at the point of theory construction) was the litmus test for the validity (not truth) of a theory, Friedman seems to accomplish two critical tasks. Both tasks had the effect of securing the hegemony of neoclassical theory at the theoretical center of the discipline. First, Friedman redefines the rule for establishing the validity or acceptance of a theory or hypothesis. He argues that it is not truthful correspondence with the real world that matters; instead it is predictive success. If neoclassical theory predicts well, we may conclude that it does so because its propositions contain the essential truths about the real world. Second, under the new criteria for a theory's validity Friedman seems to offer a way out of the cognitive modernist problem of proving "extradiscursively" the truth of empirical statements. That is, by rejecting the requirement that assumptions be realistic, indeed that the more unrealistic and simple the assumptions the more valuable the theory as a tool for prediction and control, Friedman seems to argue that the modernist problem of representing the real world in theory is not a problem for economic scientists. Friedman finds the philosophical problem of modernism (finding the truth of objective reality) to be beside the point. Neoclassical theory's assumptions, Friedman argues, are not photographic reproductions of the real world, nor are they truistic simplifications of reality (the version of Friedman's positivism that survives in most textbooks today). Rather, assumptions are assertions, heuristic devices, which facilitate economic measurement and control of behavioral dynamics. Whether or not they are true is irrelevant. The only relevant issue is whether models based on the assumptions predict well by capturing the essential dynamics of economic behavior. Hence, Friedman seems to avoid the epistemological problem of finding the truth of the concrete-real.

These two implications of Friedman's essay, however, suggest a more modest interpretation than one which suggests that Friedman's methodology evades the problem of cognitive modernism. I argue that Friedman revised, rather than revolutionized, the methodological principles of positive economic science. It is true that at the level of assumptions he detaches the epistemological link between theory or thought-concretes and the real world or concrete-real. That is, the assumptions of a theory do not matter when constructing a theory. To be sure, at the end of the essay Friedman claims that progress in economic science occurs as a "creative act of inspiration, intuition, invention; its essence is the vision of something new in familiar material." Implicitly then, assumptions have a reduced role in Friedman's argument. In trivializing the role of assumptions, Friedman seems to overcome the imperatives of realism. The highly imaginative nature of the neoclassical model—the assumption that all relevant information is known (and utilitized) by all interested agents—does not imply anything about usefulness and applicability of that model, nothing about its *validity*. Certainly the unrealistic assumptions of neoclassical theory is not grounds for its rejection. Testing its predictions is the only way to determine whether or not neoclassical theory is valid.

As opposed to meeting criteria of realism, the assumptions of a theory serve the constructive purpose of (a) being an economical mode of describing a theory; (b) facilitating indirect testing of a theory; (c) specifying the conditions under which the theory applies. Aside from these functions, assumptions have no greater significance to theory. This reconstruction of the role of theory leads Friedman to a set of remarks that critically inform my reading of his project. The epistemological problem of cognitive modernism, I argue, is *not* avoided by Friedman because instead of trying to photographically reproduce the real world in theory, Friedman maintains that the epistemological link *is important* at the *end* of theory construction—at the level of prediction and empirical testing. A theory is valid if and only if it predicts well for the range of phenomena for which it is designed. It is invalid if it does not. Friedman *does* maintain an epistemological commitment to realism—

the economic change a theory predicts will occur must correspond to actual economic change that occurs in the concrete-real! If it does not correspond, the theory is invalid. If it does, and Friedman argues that neoclassical theory is a good predictor and certainly the best game in town, the theory is valid. Friedman is *not* uninterested in the realism of theory! Quite the contrary, he places the validity of a theory on empirical testing. He writes,

> We can regard the hypothesis as consisting of two parts: first, a conceptual world or abstract model simpler than the "real world" and containing only the forces that the hypothesis asserts to be important; second, a set of rules defining the class of phenomena for which the "model" can be taken to be an adequate representation of the "real world" and specifying the correspondence between the variables or entities in the model and observable phenomena.[137]

Rather than requiring realism as the level of assumptions, Friedman looks for descriptive accuracy between the theory's predictions and the "real world." That is, the epistemological problem of cognitive modernism enters into Friedman's methodological prescription at the end of inquiry rather than at the beginning. Friedman's positivist methodology, therefore, relies on the epistemology of empiricism as proof of the truthful relationship between thought about the "real world" and the so-called "real world" of TP theory. Instead of evading the problem of cognitive modernism, Friedman resituates the problem to the point of testing theoretical propositions. Models are "adequate" representations of the "real world" as long as they "specify" the correspondence between the model and "observable phenomena" in the "real world." In effect, Friedman postpones, rather than overcomes, the epistemological problem of cognitive modernism in mainstream economics.

In the cognitive modernist tradition, predictive power/accuracy as a litmus test for loyalty to a particular theoretical outlook is a variation of traditional empiricist work in economics. Evaluating the truthfulness of a theory by judging how well it "works" is another way of cataloguing whether a theory conforms to "actual history." As a form of

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137 Friedman (1953, 24).

cognitive modernism, the hypothesis or model which is tested still contains an assumed order which functions as an essence in that theory of how the world works. The hypothesis still assumes that the human mind can completely "grasp and express" this essential order. Empiricism as predictive adequacy still rejects the notion that theories are never complete, "total" stories about the concrete real or even a small piece of the concrete real. The cognitive modernist tradition, by insisting on the subject/object split, cannot overcome the search for ultimately "true" and "false" theories. Knowledge products in this tradition reject the very possibility of "constitutivity," insisting instead on singular truths of the world and essential components of that world.[138]

In summary, the emergence of Friedmanian "positivism" in economics corresponds with an attempt to divorce positive economic science from the speculative and metaphysical nature of the discipline. Progress in science in the first half of the twentieth century was based on the widespread application of the explanatory scientific method, a method called logical positivism or logical empiricism. Grounded on a (Newtonian) conception of the physical and social universe, orthodox economists sought a method or rationale for both preserving the core propositions of neoclassical theory and of incorporating "advances" in the methods of empirical scientific research. Since most of the improvement in the methods and application of scientific method focused on empirical research rather than refinement of a priorisitic generalizations or laws of order, orthodox economists faced a contradiction. The burning question was, How could they hold on to price theory and adopt "verificationism" or "falsificationism" as primary criteria for scientifically valid statements? If orthodox theory was to advance with other social sciences, it had to survive self-testing. It also had to survive Popper's attack on positivism. By 1953 surveys of business behavior suggested that marginalist analysis, the logic of price theory, was false as a description of "reality."

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[138] Resnick and Wolff (1988, 50-3).

Friedman's methodological revision rescued orthodox theory by separating economic theory from economic practice and grounding economic theory—price theory—in the "authority" of Natural Science. He suggests a divide between the philosophical and moral *foundations* of economic science (what Friedman terms normative economics) and (positive) economic science. In effect, Friedman redefines economic *s*cience as a particular branch of Natural Science. In this way, the work of neoclassical economists is grounded upon, and is therefore an instance of, the general work of Scientific inquiry. The quest for certain scientific foundations, given by Science, is detached from the research agenda of economic scientists. The fundamental truth of economic science is given analogically from Science. This is the method of Friedman's apology for neoclasscial economic theory. This review of the main arguments in Friedman's 1953 essay outline the terms of the debate which followed its publication. Although Friedman shifts the attention away from the quest for correct *a priori* laws of the concrete-real and toward the expansion of an empirical research agenda for orthodox economists (operating with the view that theory is a tool useful for prediction and control), it remains to be seen whether recent *rereadings* of Friedman's positivism as a version of Deweyan pragmatism shed new light on whether "pragmatism" overcomes or "evades" the problem of cognitive modernism. After a brief summary of the major reactions to Friedman's essay, I turn to this question in the final section of the chapter.[139]

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139 The term "evades" is taken from West (1989). He argues that American pragmatism—in the work of Dewey, James, and other mid-twentieth century intellectuals like Trilling, DuBois, Mill, and Hook, and most recently, in the work of Rorty—constitutes itself as a refusal and rejection of "epistemology-centered philosophy." Epistemology-centered philosophy has been dominant in the western philosophical tradition ever since Descartes. The American "evasion," in West's usage, refers to a refusal to defend, positively or negatively, the idea that knowledge can be grounded with any certainty. More than a skeptical outlook, the American philosophy of pragmatism, West argues, represents a form of philosophical antiessentialism. The philosophy of pragmatism, as a philosophy of evasion, is acceptance of the conception of philosophy as a form of context-specific cultural criticism in which "meaning" is constituted "in response to distinct social and cultural crises." See West (1989, especially 5-8 and 211-39). The question is whether

D. Versions of Friedman's Methodology: From Positivism to Pragmatism

> Milton Friedman's "The Methodology of Positive Economics" is a peculiar piece of scholarly achievement. A quarter century after its publication, it continues to hold the attention of economists as well as specialists in the methodology of economics, probably more so than any other text on the topic. Many economists find Friedman's message appealing, whereas most methodologists are critical of it. In any case, both critics and defenders seem to be under the spell of the essay. They find it necessary to return to the essay over and over again, either as an authoritative point of reference in support of their own ideas or as an object of critical (or, more often today, of neutral interpretive) analysis. This situation raises a problem: why is this so? (Maki 1992, 171).

> If Friedman's methodology were dead, it would not be so widely practiced (Boland 1987, 299).

The literature interpreting Friedman's 1953 essay on methodology is vast. Over seventy articles and books which focus primarily on his essay were published between 1957 and 1992. In this thirty-five year period, special sessions and symposiums in scholarly journals and at professional meetings have been devoted to "Friedman's methodology." In many respects, Friedman's essay and the literature devoted exclusively to it represent a coming-of-age for the study of economic methodology as a respectable sub-field in economics. Questions like, What methodology did Friedman "really" mean to endorse in his 1953 essay?, have given rise to other questions which form the core research issues in economic methodology: What is the history and contemporary form of empirical economics? Of positivism in economics? When did economics have its "Newtonian revolution" and "become" a science? What is the Popperian or Kuhnian or Lakatosian influence in economics? How is scientific progress in economics defined? In what ways is economics indebted to philosophy of science for its scientific authority? Why is realism considered to be the ultimate "policy" concern in economic methodology? What are the consequences of privileging one version of realism over another? What is the consequence

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Friedman's version of Deweyan pragmatism "evades" the epistemological problem of cognitive modernism. I argue that it does not.

of rejecting "realism" completely? Or the consequence of rejecting universalist, modernist forms of knowledge? To what extent is economic discourse "rhetorical" or "context-bound" as opposed to "objective" and "transdiscursive"? If the two main goals of any science are explanation and prediction, then how well does *economic science* a lá Friedman meet these twin criteria?

The renewed interest in economic methodology over the last twenty years has occurred in large part because of the continuing controversy over exactly how Friedman's 1953 essay on methodology has been and should be interpreted in light of these and other questions. These questions, in other words, reflect the growing significance of epistemology to neoclassical economists. The authority and status of neoclassical economic science rests almost entirely on the epistemological *foundations* of positivist or Popperian or instrumentalist or pragmatist theories of knowledge.

The "spell" of Friedman's essay, then, underscores the extreme importance to economists of theories of knowledge. Theories of knowledge are important to economists for intellectual as well as porfessional reasons. The primary intellectual benefit of objectivity and scientistic theories of knowledge and of society is that economic knowledge products have the veneer of expressing *the* truth of our economic system. But this benefit also bears the burden of (unsubstantiable) belief in epistemological essentialisms in and of theory. It is alluring to believe that a unified science, constructed out of a single and unifying scientific method, can deliver on its promise of objective, democratic knowledge which will guide us in our efforts to create well-engineered, democratic institutions. But the burden of modernist science is that while it tempts seekers after certainty, order, and truth (in the singular) with the possibility of an answer, it deceives them into believing that such answers, indeed the positionality required to receive such an answer, are possible.

As disinterested engineers of the American Dream, economists in the twentieth century have enjoyed the privilege of arguing over the precise nature of the "good society," never having to worry long over whether or not their project was achievable. The only

question has been how America was to get there from here. Pictures and visions of how the economic system was (and is) organized have "grounded" policy debates, serving as "blueprints" for sustaining growth and a rising standard of living for all members of society. Rooted in cognitive modernism's promise of providing an ultimate, transdiscursive context for the truth of empirical and rational knowledge, these pictures have served to marginalize the philosophical doubts of skeptical, "interested" economists. Only occasionally have questions about the philosophical foundations and epistemological implications surfaced in these discussions.

Since the end of the second "world" war, empirical economic science has appeared to deliver on its promise. The growth and imperial expansion of the United States has served as evidence of the unanimity among disinterested neoclassical economist's of their picture of the world and its evolution. The promise of growth without class strife or poverty seemed to be one that could be fulfilled. It seemed that the basic laws of economic motion were "understood" and could be "managed" via the models and formal systems of the economic builders of heaven on earth. As Friedman wrote at the beginning of his famous essay on methodology in 1953,

> I venture the judgment, however, that currently in the Western world, and especially in the United States, differences about economic policy among disinterested citizens derive predominantly from different predictions about the economic consequences of taking action—differences that in principle can be eliminated by the progress of positive economics—rather than from fundamental differences in basic values, differences about which men can ultimately only fight.[140]

An examination of the history of interpretations of Friedman's essay on methodology, however, reveals a more modest picture. The instability which cognitive modernism was supposed to eliminate has proved to be resilient, as indefatigable as cognitive modernism's celebrated stability. Versions of Friedman's essay on methodology reveal the anxiety of economist's Cartesian ego. They have searched for *the* method, *the*

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[140] Friedman (1953, 5).

philosophy of science, *the* truth about the world which would, once and for all, resolve debate about whether the American model of democratic capitalism was superior to all other visions (especially, of course, the communist alternative in Soviet Europe). A critical and appreciative look at the "spell" of Friedman's methodology—that is, at the various interpretations of his 1953 essay—in the years between 1957 and 1994 provides an opportunity to look back at how economists have attempted to justify, through the search for an ultimate scientific method, the neoclassical vision of an individualist and democratic market-based society.

In a useful review of the evolving context of the "moment of Friedman," Hammond (1992b) lists several "firsts" associated with Friedman's 1953 essay. These "firsts" illustrate that attempts to "correctly" interpret his essay have fundamentally shaped the trajectory of research in economic methodology. While it is commonly held today that a version of Deweyan pragmatism is the real methodological position taken by Friedman in his 1953 essay on methodology, such a reading is not only recent, it remains controversial. Hammond finds that in most recent discussions of Friedman's essay the controversy centers either on the internal consistency of Friedman's essay as an endorsement of Deweyan pragmatism, or, given that it is accepted that Friedman is a Deweyan, on the viability of Deweyan pragmatism as a philosophy of ultimate authority for economic science. Indeed, for some the history of the debate over the real meaning of Friedman's essay is dominated by controversy over whether or not there can be a single methodology for economic science and, if so, what that methodology is.

Hammond points out that these firsts also underscore the continually evolving controversy over the "correct" interpretation of and context for Friedman's 1953 methodological defense of neoclassical theory. Koopmans (1957) is the first scholarly work to reference Friedman's 1953 essay. The first commentary to formally introduce philosophy and philosophy of science into discussion of Friedman's 1953 essay is the Popper-influenced work of Klappholz and Agassi (1959). The first article to focus

exclusively on Friedman's methodology is Rotwein (1959). The first formal "special session" to look at the methodological issues raised in Friedman's 1953 essay is an AEA session in 1962 titled, "Problems of Methodology." This panel included papers by Ernest Nagel, Paul Samuelson, and Herbert Simon. The moderator was Fritz Machlup.[141] Nagel's paper was the first in which the methodology of Friedman's 1953 essay was described as "instrumentalist." A paper by Jack Melitz (1965) is the first one in which discussion of Friedman's 1953 essay is divided into two parts: (a) the relationship between the 1953 essay and philosophy of science (especially Popper and positivists) and (b) the broader philosophy of science literature that pre-dates Friedman (the logical empiricists, logical positivists, etc).

Although Nagel was the first to label the position in Friedman's 1953 essay as instrumentalist, Wong (1973) is the first to make the case that the methodology of Friedman's 1953 essay is instrumentalist (in Popper's, not Dewey's, sense of the term). Boland (1979) is the first to extend Wong (1973), concluding that the *only* way to read Friedman's 1953 essay as a coherent work is as a defense of instrumentalism. To this list may be added that Wible (1982) and Hirsch and de Marchi (1984, 1990) are the first to argue that Dewey, and not Popper, is the philosopher saint of Friedman's pragmatism.

Even Hammond (1992b) is part of a special symposium on Friedman 1953, published in the research annual, *Research in the History of Economic Thought and Methodology*. In addition to Hammond, participants in the symposium include some of the current period's leading methodologists, such as Bruce Caldwell, Tony Lawson, and Uskali Maki. Generally, books or review essays on the history and current status of economic methodology usually include a separate chapter or section on Friedman's 1953 essay on methodology. In short, every author I encountered who has commented on

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141 For a useful overview of this special session and the other contexts of discussion of Friedman's 1953 essay, see Hammond (1992b). For the papers presented by Nagel, Samuelson, Simon, and Machlup see *American Economic Review* 53 (May 1963): 204-36.

economic methodology in the era of neoclassicism has also cited Friedman's 1953 essay as a watershed in neoclassical economic methodology. Beyond universal agreement that Friedman's 1953 essay on methodology has had a profound impact on the research agenda of neoclassical economic methodology, however, there is no consensus regarding the nature of its impact and the meaning of the essay.

One of the main reasons why Friedman's essay is still much discussed is that consensus about its main conclusions has been hard to reach. Hammond (1992b), Maki (1992), and Stanley (1985) make the important point that the context of the *reader* has influenced the interpretation of Friedman's essay as much as—indeed as part of—any rational reconstructions of Friedman's argument or comparative surveys of Friedman's view with the views of his contemporaries. According to Hammond (1992b), as economists' understanding of the philosophy of science literature has grown, the interpretive context of Friedman's essay has been dominated increasingly by the terms, concepts, and critical questions of philosophy of science.

One important implication that emerges from a critical survey of the "moment of Friedman," then, is that philosophies of science (e. g., the work of Kuhn, Lakatos, Laudan, Toulmin, and others has been widely circulated among economic methodologists) as travelling theories have had enormous impact on neoclassical economics as a site where economic knowledge is produced. Their primary effect has been to lend scientific authority to neoclassical economics at a time of "professionalization" in the discipline. But despite the professionalization of economics—professionalization among whose conditions of existence are the very canons of philosophical and scientific modernism explored in this thesis—my argument is that it is *not* the case that each rereading of Friedman's methodology is progressive and represents a more "truthful" reading of it. Rather, each rereading has proven only to reveal the particularity and partiality of each reader, of each paradigm. Evident in all of these readings—usually under the name of realism—is the

cognitive modernist epistemological assumption that our knowledge of the world can capture the essential truth of that independent and outside world.

My perspectivalist understanding of the literature on Friedman's methodology represents a critique of the methodologists I researched because it emphasizes the failure of methodological investigation to provide a solid philosophical foundation which would guarantee the objectivity and value-free "truth" of neoclassical theory (or any theory, for that matter). Committed to the modernist idea of inevitable progress and Truth in science, the latest fad in economists' appropriations of philosophies of science is viewed by methodologists as the evolutionary high point toward which previous methodological controversy has been moving. Reading Friedman through this "progress of knowledge" approach, Lakatos supplants Kuhn (whose paradigm model of progress in economics far too explicitly devalued the privileged status of neoclassicism over Austrian economics, American Institutionalist economics, and, most of all, Marxist economics); Kuhn's paradigm model was an improvement over the insufficiently fluid "falsificationism" of Popper,[142] which was unambiguously superior to the verificationism of the logical positivists. Now, Popperian instrumentalism, which provided an escape from the cognitive modernist "problem of induction" by insisting that "theory is just a tool or instrument for explanation and understanding," has been supplanted by a fully articulated Deweyan pragmatism, an alternative philosophy which also avoids the cognitive modernist problem of induction. In each case, progressively superior philosophies of science are offered as "final," transdiscursive epistemological justifications of the scientificity of Friedman's methodological defense of neoclassical economics. But, as I have argued throughout these pages, these philosophies have not and cannot provide such a justification. From my perspective of the partiality of all knowledge products, all modernist discourses must, in the end, fail to deliver on this grand project.

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142 See Redman's five point summary of why falsificationism in economics fails in Redman (1991, 32-5).

Hammond (1992b) takes issue with the fact that most, if not all, of the literature on Friedman's methodology has situated him in the context of philosophy and philosophy of science and not in the context in which Friedman wrote—the context of (Friedman's Chicago-school) neoclassical economics. Hammond argues that analyzing Friedman in the wrong context has led to fundamental "misreadings" of his methodology. Friedman's neoclassical economics is the proper context for any understanding and defense of Friedman's methodology because neoclassical theory is the *subtext* of Friedman's 1953 essay. Friedman's neoclassical economics is also the appropriate context in which to distinguish between "Friedman's methodology"—as argued in his 1953 essay on methodology, which has become standard methodology for introductory neoclassical theory textbooks—and the "methodology of Friedman"—which can be understood through an examination of what Friedman actually *did* in his published scholarly work. In short, Hammond (1992b) argues that there is a direct link between Friedman's theory of society and his theory of knowledge.

In Friedman's theory of society (see section one of this chapter), the Newton-based metaphor of a socially ordered universe governed by Adam Smith's principles of motion provides an essential truth about the economy, namely, that the economy is a naturally self-correcting, self-sustaining system which produces a social order superior to any social order producible by government. This given truth concerning the nature of the world effectively justifies Friedman's insistence that the inability empirically to test the assumptions of the model should not count against the "truthfulness" of the model. Neoclassical theory is valid and true because it is a good predictor and because it is compatible with certain elements of American ideology. This, I think, is the essence of the "intuitive appeal" of Friedman's methodology. Neoclassical economists "know" that the neoclassical paradigm is "true," so time need not be wasted trying to prove its veracity. Neoclassicism is "true" because it "fits" Americans' self-understanding of human nature—born free with the (individual) inalienable right to the pursuit of life and liberty.

Friedman, in effect, asks us to take this ideology of Americanism as a theoretical given. If it is granted that Friedman's theory of society (1) captures an essential truth of society and (2) is an entry point into social theory, then it follows from his theory of knowledge that as long as the neoclassical model predicts well, *prediction warrants belief* in the scientific authority of the Chicago view.

To resituate Friedman in the context of his economics, economists now increasingly seek to uncover the "real" meaning of "Friedman's methodology" by analyzing the "methodology of Friedman." A clear understanding of his theory of knowledge requires a clear understanding of his theory of society. In an attempt to recover and distinguish between the history of the writer and readers of Friedman's 1953 essay, Hammond urges methodologist's to recognize that Friedman's methodology had intuitive appeal to economists because

> Friedman drew methodology more directly out of economic theory than have his interpreters and critics. Neither philosophy nor the standard canons of economic methodology were referential benchmarks for him...His is an economist's (or perhaps a statistician's) methodology, as opposed to a philosopher's or methodologist's methodology...Thus "Friedman's methodology" took on a persona markedly different from the methodology of Friedman.[143]

The position taken by Hammond is supported by the fact that Friedman still insists that he has never systematically read any philosophy of science.[144] He was concerned only with specifying the empirical parameters—which elements were appropriate for testing and why—of neoclassical theory's research agenda.

If it is true that Friedman did not have methodologists and philosophers of science in mind as an audience or constituency when he wrote his essay on methodology, then, according to a recent symposium on Friedman's methodology, the logical place to look for

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143 Hammond (1992b, 143-4).

144 Friedman also does not remember ever reading or hearing a lecture about Viner's (1917) essay on method, an essay which Hirsch and de Marchi (1990) maintain is a useful background to Friedman's methodology.

the "true" meaning of his essay on methodology is in his published work.[145] That is, it is now argued that closing the gap between Friedman's methodology and the methodology of Friedman is possible if we interpret Friedman's methodology in the context of the methodology used in his published scholarly work. In a smug defense of this approach to settling the matter of identifying the "real" Friedman, Blaug (1992) chastises McCloskey's rhetorical readings of economics, arguing that such readings imply the devaluation of "truth" in economics:

> One can imagine a rhetorical analysis of the writings of Milton Friedman on monetarism. Friedman uses some explicit and implicit literary devices that seem to account for his enormous persuasive power and, hence, his influence on modern economics. Having studied these devices, I will probably ask myself at some time whether it is actually true that control of the supply of money is the key to the control of inflation in modern industrial economies. Silly boy, I can hear McCloskey saying, there is no such thing as truth in economics: "Economics, like geology or evolutionary biology or history itself is a historical rather than predictive science" (McCloskey 1985, 18). But geology, evolutionary biology, and history are retroactive sciences, that is, the validity of these propositions do depend *ex post facto* on empirical data (consider the importance of fossil evidence to the debates on Darwinian theory.) Is the same true of economics? Does the validity of monetarism depend, if not on the accuracy of its future productions, on the accuracy of its past retrodictions? Friedman did after all co-author a book on the *Monetary History of the United States, 1867-1960.* Did he verfiy monetarism by means of historical data on the money supply and the level of prices? Is this an important question to ask? Silly boy, you're doing Methodology again: off with your head![146]

Blaug takes issue with the view of Friedman's methodology which suggests that truth is partial. His insistence that the transdiscursive, Scientific quest for truth and falsity is the ultimate purpose of economic science prevents him from appreciating McCloskey's point about the context-driven, "rhetorical" nature of *all* economic inquiry. At some point, Blaug insists, economic knowledge must be iterative, available to any "disinterested" observer of the data. Blaug's insistence on resting economic science on empirical grounds, despite McCloskey's point that this insistence is itself a rhetorically persuasive and context-specific

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145 See Hammond (1992a, 1992b); Caldwell (1992); Lawson (1992); and Maki (1992).
146 Blaug (1992, xx).

attempt to "prove" extradiscursively what cannot be so proven, typifies the modernist epistemological commitments of mainstream economists.

It can hardly be doubted that Friedman's 1953 essay on methodology is a crucial document in the ongoing arguments over fundamental epistemological issues in neoclassical economics. Nor can it be doubted that the ongoing controversy over how Friedman's essay is interpreted reveals much about the determination of neoclassical economists to find ultimate grounds for the *scientificity* of neoclassical economics. Increasingly rigorous examination of his essay on methodology, however, has not "resolved" the issue. Forty years after the publication of the essay, it still is not clear what precisely is the Method for scientific economics.

After all the literature on Friedman's 1953 essay—most of which rejects Friedman's argument as being internally inconsistent or in violation of one or more of the principle tenets of the philosophy of positivism or Popperianism or instrumentalism or pragmatism—interest in the article remains. Friedman, the ongoing debate suggests, said something in his 1953 essay with which most economists agreed and in which they took refuge. But no one has been able satisfactorily to articulate exactly what that something is. This has led economists, philsophers, and philosophers of science to offer interpretations of Friedman's 1953 essay ranging from the sure-footed claim that "Friedman is 'quite evidently' an instrumentalist" (Wong 1973, 314) to the frustrated conclusion that Friedman's essay is "not clear, coherent, and unambiguous and can be too easily interpreted 'as you like it'" (Stanley 1985, 305). Moreover, whereas Boland (1979) shifted the consensus by claiming that *all* of Friedman's critics were *wrong* (guilty of reading Friedman's methodology as a positivist or falsificationist, rather than a "logically sound" instrumentalist, methodology), Stanley (1985) argued that *all* of Friedman's critics—including Boland—are *right* (because Friedman's methodology can be—and usually is—read according to whatever position the reader wants to support). There are even a few economists who, weary of the refusal of Friedman to "choose" a position and accept the

judgement of history, dismiss the essay as hopelessly tangled in its own ignorance and, hence, a "wrong turn" in economic methodology.

As an argument in support of a theory of knowledge, Friedman's 1953 essay has been interpreted as a defense of verificationism or *positivism* (Caldwell 1980; Rotwein 1959); falsificationism or *Popperianism* (Blaug 1974); *realism* (Lawson 1992); *conventionalism* (Samuelson 1963); Popperian *instrumentalism* (Caldwell 1982; Maki 1986, 1992; Boland 1979, 1982, 1987; Frazer and Boland 1983; Wong 1973; Nagel 1963; Pheby 1988; Blaug 1992); and, finally, *Deweyan pragmatism* (Hirsch and de Marchi 1984, 1990; Hammond 1992b; Maki 1992; Wible 1984; McCloskey 1985; Caldwell 1992).[147] In the remainder of this chapter, I examine four of these interpretations of Friedman's methodology. It is my argument that all of these readings—especially recent readings which suggest that Friedman is a "Deweyan"—are essentialist theories of knowledge and are, as a consequence, crippled by the problem of cognitive modernism in epistemology.[148]

Despite economic methodologists' persistent claims to be in pursuit of the "true" method for economics, I argue that the pursuit reflects the problem of cognitive modernism. The pursuit cannot provide the final solutions it seeks and offers as a reward because it is based on the assumption that "true," universal knowledge of the real world can be obtained in a ruthless truth-tracking pursuit of knowledge of the real world as it comes to us through the senses (espcially the sense of vision). This, the reader may recall from chapter one, is the cognitive modernist problem of social scientific knowledge. Most commentators on Friedman's essay on methodology assume that the "truth' is in the essay, or in the philosophy of "Science" represented in the essay. Ironically, rather than seeing the ongoing controversy as evidence of the *partiality* of any and all readings, most

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147 This list of sources is not meant to be exhaustive. It includes a few seminal articles and others with good references to the much larger literature on the subject.

148 To be "Deweyan" is not only to subscribe to the philosophy of John Dewey but also to be "American," meaning that one is "more interested in the uses of knowledge than in its foundations," one of the distinctive features of Dewey's rejection of the Cartesian philosophical tradition. See McCloskey (1985, 10); Rorty (1979); and West (1989).

commentators remain committed to the modernist idea that progress in knowledge is inevitable, that belief in one system of thought is justified until disbelief is warranted by the discovery of superior, "truer" system of thought, and that ever more precise versions of the truth is an inevitable outcome of their disinterested effort. And so the controversy over what Friedman "really-really" meant moves insistently on.

Each of the sections which follows represents an interpretation of Friedman's 1953 essay on methodology. Each interpretation is a response to two particular problems faced by empirical social science in this century. The two problems are characteristic of the cognitive modernist quest for certain, objective knowledge of the economy. They are: the demarcation problem, or how to distinguish between scientific or meaningful statements and non-scientific, meaningless statements; and the problem of induction, or how to move deductively from empirical evidence of particular tests to general theories which are logically and empirically true. Positivists, Popperian falsificationists, Popperian instrumentalists, and Deweyan pragmatists all viewed these problems as the central challenges to erecting a rigorous, scientific knowledge of the objectively real economy. Finding a method of discrimination between "political" belief and scientific fact and a corollary method of moving from the particular to the general were considered the hallmarks of a sound empirical science. In reviewing four readings of Friedman's methodology, I argue that they propose a solution to both problems, and that that solution is an instance of the cognitive modernist problem of knowledge.

The fourth reading of Friedman's methodology—as a version of Deweyan pragmatism—is of particular concern. I show how this reading is an outgrowth of the three earlier readings. I show also that it relies on empiricist epistemology to validate the truth of neoclassical economic science. In chapter four, this version of Deweyan pragmatism, along with the version of Deweyan pragmatism articulated by American Institutionalists and outlined in chapter two, is compared with an antiessentialist version which owns up to its

partiality and contextual specificity while simultaneously rejecting the cognitive modernist problem of knowledge.

1. Friedman as a Positivist

As a theory of knowledge, Friedman's positivist philosophy of science holds that only those statements which are verified by empirical testing are scientifically meaningful statements. This theory of knowledge is known as the verificationist or positivist solution to the demarcation problem. As a form of inductive reasoning, Friedman's positivism resolves the problem of induction by asserting that reasoned generalizations from particular empirical observations constitutes "proof" of a general theory.[149] Empirical correspondence is required of Friedman's positivist philosophy—either through the "realism" of a theory's assumptions or through the "closeness of fit" of a theory's conclusions or predictions. Friedman chose to base the test for the meaningfulness of propositions in neoclassical economic theory on its predictions about real world behavior. Understood as a defense of positivist methodology of economic science, then, *prediction is Friedman's link to the real world* in the 1953 essay. In this reading, Friedman's positivism expresses an empiricist form of the cognitive modernist problem in economics.

In seeking to distinguish between meaningful and meaningless statements, positivists believe that meaningful statements are those which are *formalizable in logic.* Redman (1991) writes that logical positivists [verificationists]

> aimed to form an *Einheiteswissenschaft*, an all-encompassing science joined by one method: the logical method of analysis. They assumed that science is rational and progressive. The spreading of science meant, in their view, extending rationality to culture...bringing science to the world meant not only liberation from the speculative and metaphysical but also exclusion of philosophical (that is, idealist), historical, psychological, and sociological factors, which cannot be confirmed or tested.[150]

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149 This distinction refers to synthetic statements only. See chapter one for more on the distinction between analytic and synthetic statements.
150 Redman (1991, 8-9).

For positivist philosophy of science, the search for universal knowledge—whether in the form of "laws" or strong empirical patterns or regularities—had to be based on a logical method of analysis which had two criteria: (1) general knowledge had to be induced *from human experience* and through the *senses* and, (2) knowledge had to be *testable*. The logical method of analysis was to be applied to all of culture as a way of ridding society of superstition and belief masquerading as scientific knowledge. Being able to code human experience in abstract, formal logic meant that the experience—or the essence of the experience—had the quality of transcendence. Not only was such an experience "true" in the immediate context in which it was "discovered" and tested but, because it had been verified empirically and because it was capable of being translated into abstract form, it was also "true" in general, across time and place.

Knowledge that met these criteria was "universally" true knowledge. This understanding of "positivism," with its origins in the work of the Vienna Circle intellectuals of the 1930s, functioned in orthodox economic science as the "received view" of a uniform methodology and scientific theory of knowledge. Positivism is rooted in a belief in a unified science organized around a *single methodology* for the physical and social sciences. It is the view of appropriate methodology shared by Eugene Rotwein (1959), whose positivist critique of Friedman's positivism is the first full-length article devoted strictly to Friedman's 1953 essay on methodology.

Rotwein (1959) understands Friedman's defense of the methodology of "positive economics" to be more about neoclassical economics than about philosophy, methodology, epistemology, or philosophy of science.[151] Rotwein insists that although Friedman argues in favor of a particular methodology, positivism, more at stake is a counter to "much of the criticism of two pillars of neoclassical economic analysis—the maximization of returns and the model of perfect competition" (554). These matters of

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151 His view is supported by Friedman's admission that he has never "systematically" read or studied philosophy of science or methodology. See Hammond (1992a).

"substantive doctrine" are defended *indirectly* through a restatement of positivism as a methodology appropriate for economic science. According to Rotwein, in his defense of neoclassical economic theory Friedman maintains that positivism reduces to a single criterion for assessing a theory's validity—predictive accuracy. Friedman's positivist theory of knowledge, then, is an epistemology in which the accuracy of a theory's predictions is the litmus test for scientific explanation of real world events.

Rotwein (1959) takes issue with Friedman's version of positivism. He argues that Friedman is wrong to claim that predictive accuracy is the *only* criterion for a theory's validity. The realism of a theory's assumptions also validates (or invalidates) a theory: "If methodology itself is to be treated in a meaningful and systematic fashion, it must be recognized that the "realism" of the "assumptions" is not irrelevant to the validity of a "theory" (570). The reason for Rotwein's insistence on the relevance of realism lies in his understanding of the distinction between a "law hypothesis" and a "theory hypothesis" in positive economic science. Drawing on Norman Campbell's *What is Science?* (New York: Dover, 1952), Rotwein argues that a law—defined as "constant association between observable entities"—consists of a hypothesis whose "assumptions" or antecedents can be verified *independently of the test results of the hypothesis.* Although laws "differ in their level of generality," Rotwein insists, "the task of science is to formulate and confirm such hypotheses, with the attempt being made persistently to frame hypotheses of increasingly greater degrees of generality" (571). What is true of all laws is that their antecedents or assumptions are capable of being verified empirically because they are assumptions about observable entities encountered in human experience.

Assuming that progress in scientific knowledge is inevitable, verified laws eventually reach a scope broad or general enough that "sooner or later we posit hypotheses consisting of entities which are not observable" (571). Confidence in the laws leads to the formulation of *theories*, which may or may not be observable. Since theories are not necessarily observable, they cannot be tested in the same way that laws are tested. A theory

may not be susceptible to being verified directly through empirical tests, but since theories are inductions or generalizations based on laws, the theories actually *explain by prediction* the implications of laws which have been tested. The predictions should allow the economic scientist to *deduce* other laws concerning the behavior of observable entities which *can* be verified empirically. Theories may or may not be valid depending on how well they predict behavior, not on how "realistic" the particular elements of a theory are. *This distinction is acceptable because the formulation of the theory comes from and leads to successful empirical verification of laws.* This is the key qualification in Rotwein's argument. Making the distinction between a "law hypothesis" and a "theory hypothesis" in this way, Rotwein maintains, is fundamental to progress in positive economic science:

> This approach enables us to give a general definition of the objective of science (or of all systematic inquiry into matters of fact). The purpose is simply to make experience intelligible. Put differently, the validated hypotheses of science "predict" by "explaining" experience. The explanation is of two types. Either it takes the form of actual associations (the Law), in which case the antecedent of the hypothesis explains the consequent in the sense that both are observed to be uniformly related. Or it takes the form of the Theory, in which case the antecedent explains the consequent in the sense that, when we *presume the actual existence* of the antecedent (since we cannot observe it), we can deduce laws both already established and new. A scientific Theory, so seen, is in an important sense the equivalent of "religion." Both deal with "unobservables"; but in the former case the standards for acceptance or "validity" are far higher than in the latter. To the extent that relevant existing Laws cannot be deduced from the Theory or any hypotheses deducible from the Theory are falsified, the Theory is "invalid." In determining what is "valid" or "invalid," science cannot, consistent with its own objective, ignore the "unexplained."[152]

To a positive economic scientist, an unexplained—meaning empirically unverified—"theory" is like a religion. This is Rotwein's basis for rejecting the positivism of Friedman's 1953 essay on methodology. In arguing that the unrealism of assuming perfect competition and maximizing behavior on the part of agents is acceptable, Friedman "converts a law hypothesis into a theory hypothesis" for the purpose of establishing the "validity" of neoclassical economic theory. Friedman is wrong to argue that certain

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[152] Rotwein (1959, 573), emphasis in original.

propositions (assumptions) in neoclassical economics are not testable and therefore should not be tested. In Rotwein's view, they should be tested because they are testable. In fact, for economics to qualify as a *positive* science, the basic assumptions of neoclassical theory *must* be testable.

Recall Friedman's analogy of "leaves on a tree." This analogy "explains" the maximizing behavior of rational economic agents in a perfectly competitive environment by regarding the "as if" behavioral assumption as an unobservable. The assumption that leaves (rational economic agents) seek to maximize sunlight (returns) subject to the density of other leaves (cost constraints) cannot be tested. Rather than defending directly the implausibility of testing maximizing behavior, Friedman likens the maximizing behavior of human beings to the behavior of leaves on a tree. Then, being keen with the obvious, he states that we cannot "know" the behavior of leaves. But, if we assume that leaves on a tree act "as if" they are maximizing in their behavior, we may test the validity of the assumption by seeing how well it predicts. Analogously, if we assume that humans seek to maximize in the same way as do leaves on a tree, then whether or not humans acutally engage in maximizing behavior is irrelevant. The only relevant concern is the predictive accuracy of the "model." Yet, Rotwein insists, as an assumption maximizing behavior *must* and *can* be tested empirically. Hence, in Friedman's positivist methodology there is a contradiction. He argues that the assumptions cannot be tested, but to meet the criteria of positivist philosophy of science they must be testable. Whether or not a theory "works" or predicts well is not enough to satisfy positivist criteria for meaningful scientific knowledge.

My purpose is not to settle the debate between Rotwein and Friedman over the nature of positivism. The immediate consequence of their disagreement is that the search for a "correct" reading of Friedman continued unabated. In fact, inasumuch as Friedman considered his methodology a positivist one, Rotwein's critique discredited Friedman. If he was not a positivist, what was he? It does not matter whether we endorse Rotwein's or Friedman's version of positivism because both versions are rooted in empiricist

epistemology. The appeal to the "facts" to prove the "truth" of a scientifically valid statement or theory is an essentialist epistemological appeal. This appeal is also an expression of the problem of cognitive modernism. It presumes that the human mind can grasp and know the truth of the objective world. Cognitive modernists who appeal to empiricist argument to support their claims appeal to the incontrovertible "truth" of the "facts," since the "facts" contain essential knowledge of a reality which is epistemologically knowable through data-gathering. Friedman's positivism as a kind of essentialist empiricism assumes that the human mind can discover the "truth" of the concrete real through *verification* of hypotheses. The essentialist empiricism of Friedman's "positive economics" seeks to discover the singular truth or essence of the objective world. It seeks to do so by relying on ever more sophisticated empirical techniques which "purifies" knowledge of the world.[153]

Friedman rejects the criterion that "assumptions" be "realistic." But his empiricist positivism consists in his acceptance that the implications of the theory or model have a high degree of "predictive success." The modernism of Friedman's positivism is his belief in the ability of disinterested Science to secure "true" knowledge of the real world through testing. Neoclassical economic theory is the "true" knowledge which is "validated" by its track record of predictive sucess in empirical testing. Its predictions have been verified.

Rotwein, on the other hand, endorses a more rigorous form of positivism. He accepts Friedman's predictivist criterion but he also insists that the assumptions of a theory undergo testing to insure that the entities about which assumptions are made are observable (i. e., testable) entities. His standard of positivist economic knowledge adds to Friedman's. With this added requirement, Rotwein concludes that neoclassical theory has not been

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153 Friedman's favored and more general Marshallian notion of neoclassical theory being like an "engine" has the same implications. As an "engine" the component parts cannot be tested to insure that they correspond to the real. Doing so misunderstands the purpose of a theory which is an "engine." The validity of the whole "engine" depends solely on how well it works.

verified by the evidence. Rotwein's rejection of the model of perfect competition and the assumption of maximizing behavior is based on the same methodological (epistemological) grounds that Friedman's acceptance of these "first principles" of neoclassicism is based. Both forms privilege empiricist knowledge of the "facts" as the final arbiters of the truthfulness of neoclassical theory. Friedman's positivist defense of neoclassical theory, then, is an expression of the cognitive modernist tradition in economics.

2. Friedman as a Popperian Falsificationist

Rather than validating the truth of neoclassical theory by verifying empirically either its assumptions or its predictions, falsificationists argue that in Friedman's methodology the demarcation problem is solved by rigorously trying to *disprove* the core propositions of neoclassical economic theory. Acceptance and/or refinement of the theory results from *falsifying* or *refuting* hypotheses and clarifying the range of applicability of those hypotheses which are not falsified. This is the Popperian reading of Friedman's methodology of positive economic science.

Popperian economic methodologists accepted Popper's rejection of the problem of induction with its implied search for absolute truth and the unity of science. With Popper, they believed that scientific theory-creation is a never-ending process. Progress in economic science comes as a result of bold, highly falsifiable conjectures and (empirical) refutations or falsfications of tentatively accepted, provisionally true theories. With falsification as the criterion for resolving the demarcation problem, we can never know when theories are correct; we can only know when they are incorrect.[154]

The intervention of Popper in the history of economic methodology includes a critique of and alternative to positivism. Friedman's methodology as a version of

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154 An excellent discussion of Popperian methodology in neoclassical economics is Klant (1984, 33-40).

positivism suggested that hypothesis testing of the implications of neoclassical theory yields evidence which verifies the correctness of the theory. Reading Friedman's methodology as a version of Popperian falsificationism, however, counters that under verificationist criteria the only way a *general* theory can be validated is to test its predictions for *all* possible instances. Since the number of *possible* instances to which neoclassical theory may be applied is infinite, the problem of induction has no solution. There is always an infinite number of cases which have yet to be tested—namely, those cases which have not been tested in the time and place of those cases which have been tested. Hence, for economists the truth of neoclassical theory can never be proven according to verificationist criteria.

Rather than a theory of knowledge which seeks to verify neoclassical theory, Friedman's methodology is understood by Popperian economic methodologists as a theory of knowledge which takes neoclassical theory as given initially, and seeks to refute, or falsify, neoclassical theory. Work—testing—on neoclassical theory is urged until it has been disproven. But, importantly, empirical work must be designed to disprove and establish clearly the range of applicability of neoclassical theory. An implication of this approach is that neoclassical theory *has not been* disproven by empirical tests. Hence, neoclassical theory is "validated" (albeit provisionally) on the grounds that "it yields predictions that are good enough for the purpose in hand or that are better than predictions from alternative theories." That is, on the basis of its successful predictions, neoclassical theory provides the best description of objective reality.[155]

Economic methodologists and historians of economic thought credit Karl Popper with destroying positivism as the methodology which guaranteed that neoclassical economics could be a science like the physical sciences. Popper's revision of proper "scientific method" from verificationism to falsificationism is based on his staunch

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155 Friedman (1953, 41).

opposition to inductivism, opposition motivated largely by his anticommunism.[156] Because Popper wanted to find rational, scientific grounds for rejecting communism, he sought a method which would "expose" Marx's theory of history as false and dangerous. Popper believed that positivism, which uses empirical evidence to support observed hypotheses and theories, could be used to verify the "truth" of Marxism just as it verified other theories. For this reason he rejected positivism in favor of open, "critical rationalism" (rational discourse). He believed that his epistemology of falsification, if tied to critical, Socratic interrogation would, by virtue of repeated attempts to falsify knowledge, guarantee the growth of "depoliticized," true scientific knowledge. One instance of "bad" communism was enough to refute it.

Because he seeks to "expose" communism, Popper's methodology of falsificationism is one which privileges trial *and* error. He encouraged scientists to make bold hypotheses, ones which were very likely to be falsified. He encouraged mistakes in the scientific community because the more often theories were falsified, the more precise the knowledge which remained. Hence, the scientific community was better able to progress to a point—which it never reaches—where it could formulate universal, abstract theories. To do this required first that all scientific statements be "observation statements that, if found true, would contradict the hypothesis, thus falsifying it" (Redman 1991, 31). If a statement was not arguable—i. e., falsifiable in human experience—it probably contained very little information content and much pseudoscientific belief. Frequent rejection of hypotheses was a positive attribute of empirical work. Redman writes,

> As science grows, theories become more falsifiable and accumulate ever higher levels of information content. The criterion specifying that conjectures be highly falsifiable helps ensure that they are sharply formulated. Once a theory has withstood severe tests, it is said to have been "corroborated" or "confirmed" (which should under no circumstances be confused with the positivists' usage of *confirmation* to mean established as

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156 For a discussion of Popper's legacy in economics see Redman (1991, 27-76) and the essays collected in de Marchi, editor (1988).

> true). The history of a mature science, for Popper, is the piecemeal approximation of a group of theories ever closer to the truth.[157]

Despite the critical "negative" difference between Popper and (Vienna Circle) positivists, Popper shared with them a commitment to empiricism (falsificationism and verificationism are empiricist theories of knowledge) to prove the truth or falsity of a theory, and a commitment to the "scientific" or rational attitude (verificationists distinguished between meaningful and meaningless statements; falsificationists distinguished between pseudoscience and science) to determine which theory, among competing theories, was best. The major difference was that posivitism, in Popper's view, was prescientific because it did not provide a rationale for rejecting erroroneous theories.

Although he believed that economics was a science in the sense that it was modeled on the physcial sciences (i. e., rooted in the metaphor of Newtonian science), Popper was the first to point out that *positivist* economistsmade a fatal fetish out of *seeing*. Their empiricism went too far. His famous charge that "positivists, in their anxiety to annihilate metaphysics, annihilate natural science along with it," highlights the fact that verificationism in economics is so strict a criterion of meaningful knowledge, that it disqualifies the "indisputable," true laws of economics simply because those laws are unobservable and unverifiable.

Friedman is Popperian because he takes a Popperian view of testing. In Friedman there is a deemphasis on the importance of the realism of assumptions and an emphasis on the demarcation problem (falsification) for testing the implications of theories. Instead of arguing that the core propositions of neoclassical theory were verified, Friedman's 1953 essay is viewed by Popperian economic methodologists as an argument which says that on the basis of the available evidence, the neoclassical model is the best game in town and deserves to be accepted as "true" until it is "disproven" by the explanatory power of a "better" model. Friedman is seen as arguing that empirical testing does not prove the

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157 Redman (1991, 31-2).

"correctness" of neclassical theory. Instead, testing has failed to disprove neoclassical theory. In this reading of Friedman, realism of assumptions does not matter because the objective of inquiry is not to prove that neolcassical theory is true. What matters is that neoclassical theory's predictions have not been *disproven* by empirical testing. Hence, belief in neoclassical theory is warranted. That is, neoclassical theory is the latest "piecemeal approximation" to the truth.

Following the vogue of Popper in the 1960s and 70s, many commentators understood Friedman's methodology to be a defense of neoclassical theory based on Popper's philosophy of science. Popperian readings of Friedman's methodology include Blaug (1974, 1978) and de Marchi (1974). The classic reading of Friedman's 1953 essay as a defense of Popperian falsificationism is Bear and Orr (1967). Although Blaug (1978, 714) is the most widely quoted Popperian reading of Friedman—Friedman's methodology is "Popper-with-a-twist applied to economics"—Bear and Orr (1967) systematically examine Friedman's essay, concluding that Friedman's methodology is an apology for Popperian falsificationism. Also, Frazer and Boland (1983) have outlined similarities between Popper and Friedman such as their dismissal of the idea that theory can achieve absolute truth, their emphasis on falsifying predictions as proper scientific activity, and their unconcern with proving deductively that particular empirical successes implied the general truth of "theory."

As discussed in the previous section on the main themes in Friedman's 1953 essay, Friedman claims that neoclassical theory is valid because it accords with "natural laws" and because its predictions conform with experience. He writes,

> The only relevant test of the *validity* of a hypothesis is comparison of its predictions with experience. The hypothesis is rejected if its predictions are contradicted; it is accepted if its predictions are not contradicted; great confidence is attached to it if it has survived many opportunities for contradiction. *Factual evidence can never "prove" a hypothesis; it can only*

> *fail to disprove it, which is what we generally mean when we say, somewhat inexactly, that the hypothesis has been "confirmed" by experience.*[158]

Friedman is understood in this passage to endorse Popper's falsificationist criterion for demarcating between "science" and "pseudoscience." For falsificationists, Friedman's emphasis on prediction, coupled with his position that the realism of assumptions is irrelevant, is key in defining the *domain* of applicability of neoclassical theory. That is, Friedman's falsificationism delimits those aspects of human experience to which the theory *may* apply. This is consistent with Popper's notion of "progress" in science. For Popper, scientific progress involved greater and greater detail concerning what theory permits and what it bans. Klant writes,

> Popper has also argued that there are gradations of testability and of falsifiability. The easier it is to falsify a theory, the more stringently it can be tested. The more that a proposition precludes, the greater the number of potential falsifiers, that is, possible propositions by which it can be refuted. It is not for nothing, according to Popper, that we speak of 'laws' in science. They prescribe and in so doing preclude. *They forbid.* What is possible and what is impossible imply one another reciprocally...The more theories forbid, the more they mean. The more a theory declares to be impossible, the greater its empirical content and the more falsifiable it therefore is.[159]

Trying to refute theories *proves* them indirectly since failure to reject a theoretical hypothesis implies acceptance of the hypothesis. Friedman is understood to propose a theory of knowledge which *explains* those elements of the real world which fall within the domain of applicability. The bold hypotheses of neoclassical theory are intended to fail in empirical testing. That they have not failed, and have been predictively successful, is evidence of their "meaning" (in Popper) and "truth" (in Friedman). As testing proceeds, the range of applicability of neoclassical theory is better specified. Continued empirical testing extends this domain.

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158 Friedman (1953, 8-9), emphasis added.
159 Klant (1984, 35).

This leaves the "realism of assumptions is irrelevant" assertion—the most controversial issue in Friedman's essay on methodology—as the only unresolved issue in the reading of Friedman as a Popperian falsificationist. Bear and Orr (1967) argue that Friedman's opponents are wrong to reject Friedman's claim that theories with unrealistic assumptions may be valid. Bear and Orr maintain that when Friedman claims that unrealistic assumptions are irrelevant he is acknowledging the "fact" that the "truth of antecedents may be hard to ascertain" (195). Antecedents, initial conditions, or assumptions may not be capable of testing for a period of time. Rather than discard a "useful" theory whose assumptions cannot be tested, they endorse Friedman's "as if" condition, viewing Friedman as being more concerned to get on with empirical testing:

> Adoption of the procedure does not imply endorsement of the position that the truth of the assumptions is irrelevant; rather, it implies a concern to get on with the generation of testable prediction statements...Thus, acknowledging our imperfect ability to observe the truth of antecedents and conclusions, and given existing theories which apparently do not lead to hopelessly bad predictions, how can theorizing validly proceed? One can rely on the "as if" approach and the extensive application of the empirical method without endorsing the instrumentalist view that the truth of theoretical antecedents is inconsequential.[160]

Friedman's methodology understood as Popperian methodology assumes the importance of realism as seen in the primary role played by testing implications. But it also allows for the "unrealism" of assumptions. Bear and Orr conclude that bold, "as if" hypotheses are acceptable *if they predict well.* The implication is that if the hypotheses predict well it is because they are based on—and mirror—the essential truth of objective reality, however "piecemeal" or approximate that truth may be. Hence, the cognitive modernist problem resurfaces.

Popper's falsificationism is another form of empiricism. Bear and Orr accept that empirical correspondence between assumptions and the real world may be overlooked because testing assumptions is sometimes difficult. But they insist that testing its

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160 Bear and Orr (1967, 195).

predictions is important for validating neoclassical theory. Moreover, the assumptions of neoclassical theory may be tested indirectly—through successful testing of its implications—by basing the test on the "as if" condition used by Friedman. In this case, neoclassical theory does more than predict; it also *explains*. As explanation, it presumes a match between the version of human experience articulated by Popperian economic science and the objective real. As proponents of the view that Friedman's methodology is a methodology of falsificationism, Bear and Orr accept the cognitive modernist philosophical assumption that the mind is capable of knowing (some of) the truth of the objective world. They see the analogy between leaves on a tree and agent maximizing behavior as a comparison between the form *and content* of knowledge products. *Economic behavior is explained.* Despite the fact that this reading of Friedman's approach is more modest—truth is always approximate—the goal of scientific inquiry is determination, even in the last instance, of the descriptive truth of neoclassical theory.

Like positivists, Popperian falsificationists accept the *empiricist* criterion for scientific economic knowledge. They believe that the human mind can grasp the "true" nature of objective reality through the tools and techniques of science. But falsificationists insist that theory is not capable of being verified in any ultimate sense. Instead, economic science must engage in research whose objective is to disprove that which is believed to be true. In this way, economic science progresses, the ability to predict and control economic events is enhanced, and more "truthful" knowledge of the economy is obtained. Each of these goals is inscribed in the modernist project of American social sciences in the twentieth century.[161]

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161 Because of Popper's well-known hostility toward instrumentalism, Popperian readings of Friedman's methodology have often been called "conventionalist." Conventionalism is the belief in the conditional acceptance of a theory because that theory is the best model currently available. Convention, as opposed to empirically grounded truth, is the justification for theory preference. Once a theory is deemed "true by convention," then it becomes a filing system, a "convenient framework" for organizing empirical data. The theory remains true by convention as long as it maintains its legacy of predictive success. Samuelson (1963) is a famous argument in favor of conventionalism.

In falsificationist and verificationist readings of Friedman's methodology a form of philosophical or scientific realism is assumed. It is the assumption of realism *of* theory, if not realism *in* theory, that situates each of these philosophies of science within the cognitive modernist tradition. By realism of theory I mean that both philosophies of science postulate a structured and ordered world of being that exists externally to and independently of human thought about the objective world. Realism in theory would be the further assumption that the objects of theory are identically true of the objects in the real world to which they refer. Realism in and of theory are based on epistemological essentialism. Moreover, both philosophies of science assume that inductive empirical science is the grammar that decodes the external world, providing true, scientific knowledge of it.

Concerning realism in theory, for example, verificationists seek exact replication in *language* of the objective real. The theory, if its particulars are empirically true, is identical to the objective real. The requirement that assumptions be tested for their realism implies a rejection of Friedman's claim that neoclassical theory is a Marshallian "engine" which contains the essential, if not exact, "truth" of the objective economy. Rather, realism in theory includes the requirement that a theory of society should "mirror" objective reality. Maki (1992) describes this type of realism as *semantic realism* to place emphasis on the one-to-one referential, representational, and veristic correspondence between language and reality. Semantic realism is a form of realism in which

> linguistic expressions may, should, or do *refer* to entities in the real world; that [linguistic expressions] may *represent* entities in the real world in that they attribute properties to those entities, that is, tell us what they are like, how they behave, evolve, and so forth; and that linguistic expressions may be claimed to be *true* or *false* partly by virtue of what their referents are like, that is, by virtue of the way the world is.[162]

See also Boland (1982, chapters 7-9). On the modernist project of the social sciences see Ross (1991, chapter 1).

[162] Maki (1992, 174).

Semantic realism implies ontological realism. That is, if a methodology stipulates that language refers to and, within the reference, seeks to represent (truthfully or falsely) objective reality, the implied assumption is that an objective real exists and has being. The beingness of the world, its ontological aspect, requires a theory of knowledge as a means of achieving semantic knowledge of the world. We must have a way of establishing the truth or falsity of semantic representations of the objective economy. Realism in theory implies realism of theory. Understood in this way, semantic realism is the criterion which, in Rotwein's view, Friedman fails to meet on positivist grounds. Testing the assumptions of neoclassical theory has shown that it should be rejected because its elements depict an unrealistic, false picture of reality.

The positivist reading of Friedman's methodology, because it requires realism in theory, flattens or oversimplifies too much of Friedman's argument. Friedman insists that assumptions may be "wildly inaccurate" and that "the more significant the theory, the more unrealistic the assumptions." This claim suggests that explanation does not require true descriptive representation. Rather, for a theory to explain an event in objective reality, it need only serve as an efficient, "analytical filing system for organizing empirical material and facilitating our understanding of it." As a language, a theory of society is not, nor is it intended to be, a truthful, detailed *picture* composed entirely of the "facts" of the objective real. Friedman believes that such a task for theory is impossible to accomplish. He even admits that the behavior of businessmen is not, in the literal sense, "like" the behavior of maximizing agents postulated in neoclasscial theory. Friedman recognizes that neoclassical theory gives a "false" representation of objective reality, yet he insists on a realist criterion for the implications or predictions of theory. It is obvious that the positivist criterion of realism of assumptions is too simplistic an interpretation of Friedman's essay.[163]

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163 Friedman (1953, 7 and 14).

Realism understood as semantic realism contrasts with the falsificationist sense of realism. Falsificationists seek to explain the essential nature of the objective real, whether or not exact replication is achieved. This more flexible understanding of realism matches Friedman's sense of neoclassical theory as an "engine" for the theorizing how the economy operates. Maki (1992) contrasts semantic realism, in which the elements of theory exactly match entities in the real world, with *essentialist realism*, which he describes as a form of scientific realism in which "scientific theories may have essences as their objects and that they may be true about those essences" (174). This type of realism combines Friedman's methodological (epistemological) defense of the truth of his theory of society.

Friedman seems to endorse essentialist realism in his discussion of the "use" of assumptions in stating a theory. He argues that theories are half-truths which specify rules of application (i. e. what, where, and how a theory may be appropriately applied). But since theory is only partially "true," there will always be room for judgment in applying the rules." He writes,

> The model is abstract and complete; it is an "algebra" or "logic"...There is no place in the model for, and no function to be served by, vagueness, maybe's, or approximations. The air pressure is zero, not "small," for a vacuum; the demand curve for the product of a competitive producer is horizontal (has a slope of zero), not "almost horizontal." The rules for using the model, on the other hand, cannot possibly be abstract and complete. They must be concrete and in consequence incomplete—completeness is possible only in a conceptual world, no in the "real world," however that may be interpreted. The model is the logical embodiment of the half-truth, "There is nothing new under the sun"; the rules for applying it cannot neglect the equally significant half-truth, "History never repeats itself."[164]

Friedman's methodology is regarded as a theory of knowledge which proves the truth of neoclassicism as a theory of the objective real. His falsificationist methodology provides empirical evidence which has explanatory power over the real world economy *because* neoclassical theory contains the essential truth of the real world economy even

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164 Friedman (1953, 24-5).

though its individual elements do not necessarily correspond or refer to objects in the real world economy. Because Bear and Orr's reading accepts Friedman's discounting of realism at the level of assumptions, Friedman's falsificationism is seen as a scientific theory of knowledge whose assumptions are hard to test empirically, but whose conclusions yield good predictions. Friedman's falsificationism calls for realism of, but not in, theory.

The difficulty of testing assumptions is not grounds for rejecting neoclassical theory as "unrealistic" because essentialist realism means that the essential truth of society—the basic laws of order and motion—are captured and explained in the neoclassical model of maximizing behavior and competitive capitalism. This is, in fact, what is meant by the claim that Friedman argues analogously for the unrealism of assumptions and the truth of neoclassicism. Assumptions need not be tested for their realism. Falsificationists accept Friedman's understanding of neoclassical theory as an "engine" that organizes and predicts change and events in the objective real. Under falsificationist criteria the test of acceptance or rejection of neoclassical theory is left to empirical testing of its predictions.

If it is accepted that essentialist, not semantic, realism is the appropriate sense in which Friedman's theory of knowledge "links" knowledge products of the human mind with the objective "real" world, then it follows that theory may be unrealistic yet maintain a degree of realism.[165] The philosophical or ontological sense of *realism*—concerned with theories as mirror images, *at some level,* of the objective real—should be distinguished from *realisticness*—which refers to the descriptive accuracy of specific "features" of the representations. Under this distinction, because the model captures the essential truth of the objective economy, neoclassical theory meets the essentialist version of realism, although

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165 See Maki (1992) for a discussion of his distinction between realism and realisticness. I regard his distinction to be similar to my distinction between realism *in* theory and realism *of* theory.

its constituent elements may be unrealistic. In other words, the neoclassical model may be accepted because it predicts well even though its featured assumptions may not pass empirical testing.

The failure to distinguish between realism and realisticness, Maki argues, led many economic methodologists to reject the conclusion that Friedman was a Popperian on the claim that neoclassical theory was not *semantically* realistic. In failing to make the distinction between realism and realisticness, or the distinction between realism of and realism in theory, many economists, assuming that semantic realism (realism in theory) was the only kind of realism, concluded that Friedman's methodology was muddled with internal inconsistencies and had no interest in truthful description of the objective economy *yet it sought to "explain" the way the economy works.* They argued that either Friedman contradicts himself and is wrong about the role of assumptions or that his methodology trivializes the role of *explanation* in science by being unconcerned with (semantic) realism. Friedman's methodology suggests that a theory could predict well without in any way explaining or referring to or representing its real-world object.

Economists began to move away from the view that Friedman's 1953 essay was an rooted in Popper's falsificationism. They did so for three reasons primarily. First, Popper's philosophy of science continued to evolve and his positions seemed to fluctuate and contain their own internal inconsistencies. Economists grew nervous about their commitment to a Popperian epistemology which seemed not to provide the secure scientific foundations which would enable economics to be a science like the physical sciences. For example, Redman comments that Popper does not fully escape the problem of induction. As Redman explains, there remains a "whiff" of inductivism in Popper's falsificationism:

> Popper does not believe we can ever know the truth; the goal of science is to botain not the truth but increasing verisimilitude, or increasing "truth" content. Then how does one know when one theory is better than another? Theory comparison depends on the degree of corroboration, or how well a theory has stood up to severe tests. So if theory A has passed one hundred

> severe tests, we infer that it will pass more and is hence reliable: induction. Popper realizes induction reappears, but does not modify his extreme anti-inductivist positition.[166]

Hence one of the rationales for preferring falsificationism to verificationism to justify neoclassical theory was plagued by an inconsistency.

Second, Friedman's "as if" condition notwithstanding, many non-mainstream economists challenged the idea that a methodology which called for ruthless testing to falsify neoclassical theory had failed to do so. American Institutionalists were prepared with numerous instances in which the model's predictions, let alone assumptions, *were* falsified. The question then was, Why is a falsified neoclassical theory still dominant in the profession?

Third, whatever modifications and developments in Popper's theory of knowledge, he was not committed to support a particular position, a particular outlook against all others. True, Popper was clearly and dogmatically *against* certain philosophies and philosophies of science. But that left him more like an intellectual wanderer, a scientist who never saw any theory as finally empirically verified. Notwithstanding its predictive success, there was no rationale within the Popperian system for remaining committed to the neoclassical model as the true model. But it was hard to view Friedman as someone who sought a method of *disproving* neoclassical theory. Friedman is viewed by almost all his readers as someone who believes strongly in the fundamental, *natural* truth of the core propositions of neoclassical economic theory. Doubt about Friedman's willingness to be intellectually homeless combined with the paradigm-centered "theory of scientific progress" of Thomas Kuhn to supplant falsificationism as the "correct" reading of Friedman's 1953 essay on economic methodology. Mainstream economic methodologists found Popper inadequate not only as a reading (defense) of Milton Friedman's

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166 Redman (1991, 32).

methodology, but also as a philosopher of science whose philosophy might justifiy neoclassical theory.

Ironically, it was the Popperian concern for realism and Friedman's failure to achieve semantic realism in theory which prompted many economic methodologists to look elsewhere for a coherent reading of Friedman's methodology. One of the contradictions of all essentialist theories of knowledge is that the same evidentiary criteria may work against, as well as for, the preferred theory. Positive, empirical evidence is offered as a way of building consensus, but may only succeed in fragmenting a community of investigators. Hence, while neoclassicals wanted to regard Friedman's defense as an ultimate defense of neoclassicism, they were forced to admit to the relevance of realism and to be open to empirical refutations of neoclassical theory. The cognitive modernist claim that empirical evidence "proves" the truth of neoclassical theory destabilizes neoclassical theory because it also makes it vulnerable to similarly constructed disproof. The problem of cognitive modernism was embedded in economists' falsificationist and verificationist philosophies of science; it stood in the way of their ability empirically to "prove" the ultimate truth of neoclassical theory. To provide a radically alternative rationale for the truth of neoclassical theory, some turned to Popper's anti-realist, anti-inductivist instrumentalism as a new context for reading Friedman's theory of knowledge as a defense of neoclassical theory.

3. Friedman as an Instrumentalist: Popper and Dewey

By Popperian instrumentalism I mean to distinguish one version of instrumentalism, Popper's, from another version, Dewey's. According to Popper (1956):

> By instrumentalism I mean the doctrine that a scientific theory such as Newton's, or Einstein's, or Schrodinger's, should be interpreted as an instrument, *and nothing but an instrument*, for the deduction of predictions of future events (especially measurements) and for other practical applications; and more especially, that a scientific theory should not be interpreted as a genuine conjecture about the structure of the world, or as a genuine attempt to describe certain aspects of our world. The instrumentalist doctrine implies that scientific theories can be more or less useful, and more

> or less efficient; but it denies that they can, like descriptive statements, be true or false.[167]

It is important to understand that this conception of instrumentalism is defined residually as a philosophy of science that is completely unconcerned with realism. It has served as one of the residual categories into which committed epistemological anti-realists and anti-inductivists have been lumped. In economics, Popperian instrumentalism differs from Deweyan pragmatism primarily in that the latter is more a social and historical way of worldmaking while the former is a negatively and narrowly defined philosophy of science. Also, the former prescribes the essentialist theory of knowledge known as predictionism—another form of empiricism—as the criterion for theory appraisal, while the latter adopts a more complicated approach.

Popperian instrumentalism seeks to explain how a theory may be valid without being true (or false). Instrumentalism as Popper understood it argues that a theory may be valid even though determination of its truth or falsity has not been made. The reason is that its sole purpose is to serve as a tool for scientific analysis. Accordingly, as long as a theory "works," it is valid. The analytical consequence of Popperian instrumentalism is that it is a philosophy of science which nullifies the problem of induction in economics. By refusing to defend realist claims for any theories of society, it relieves economists of the need to find essential epistemological grounds for the truth of their theory of society.

Recall that the twin goals of scientific theory are explanation and prediction. As a solution to the problem of induction—the problem of finding a way to move from particular empirical truths to general theoretical laws which imply new empirically testable particulars—Popper's version of instrumentalism reduces instrumental sciences (in our case, economics) to "mere technologies," mere tools whose "content" has no explanatory power over economic reality. Popperian instrumentalists do not seek to explain objective reality. They seek only to express in theory the consequences of observed empirical patterns

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167 Popper (1956, 111-2), emphasis in original.

patterns or "laws" in objective reality. Popper referred to "instrumentalist" theories as mere "computational rules" to underscore the fact that perfection of *techné* in the service of prediction, not explanation, was the goal of instrumentalist philosophers of science. Popperian instrumentalists do not concern themselves with the truth or falsity of theories, nor are they concerned with realistically representing objective reality. The criterion for a theory's validity is its usefulness in making predictions which conform to human experience as perceived in objective reality.

By interpreting Friedman's essay as a defense of Popperian instrumentalism, many of the tensions which emerged in trying to find the coherent argument in Friedman's essay on methodology start to ease. For instance, the Popperian instrumentalist view that a scientific theory is not a conjecture about or description of the real world gives philosophical and scientific coherence to Friedman's important claim that the realism of assumptions does not matter when appraising neoclassical theory. Popperian instrumentalism insists that any match between the assumptions of a theory and observable reality is coincidental and uninteresting. Also, a Popperian instrumentalist view that scientific theories are more or less useful tools for deducing predictions about change in the real world is, obviously, in concert with Friedman's claim that the most important criterion for establishing the validity of a theory is its predictive success. By limiting "positive economics" to those statements which are testable, a Popperian instrumentalist reading of Friedman's methodology makes it a theory of knowledge which offers another solution to the demarcation problem of distinguishing meaningful from meaningless statements in economic science. It separates objective, value-free economic statements from subjective, value-laden ones.

Popper's version of instrumentalism is the version meant by economic methodologists who have argued that Friedman's methodology is instrumentalist. In describing Friedman's methodology as instrumentalist, Wong (1973) uses the Popperian version, saying that "*instrumentalism* is the thesis that a theory in science is merely an

instrument for prediction of observable reality" (227). In a footnote to this sentence, he refers the reader to Popper's formulation and critique of instrumentalism. Wong concludes that "that Friedman is an instrumentalist is quite evident. The apparent ambiguities and inconsistencies in his essay can best be sorted out by considering his view as instrumentalist. All methodological prescriptions that Friedman makes are subsidiary to one overriding methodological maxim—that of successful prediction" (227). To Wong, Friedman's methodology is instrumentalist because it argues that the main purpose of theory creation is prediction and control, not description.

Lawrence Boland has written most extensively and forcefully about Friedman's Popperian instrumentalist theory of knowledge. Boland (1979, 1982, 1984, 1987), Frazer (1984), and Frazer and Boland (1983) make the case for Popperian instrumentalism as the theory of knowledge advocated in Friedman. Whereas Wong labelled Friedman's methodology "Popperian instrumentalist" by placing emphasis on the role of prediction as the key to understanding Friedman's instrumentalist methodology, Boland offers an interpretation of Friedman in which the issue of realism in theory becomes the litmus test for labelling Friedman's instrumentalism. When Boland (1979) declared that "*every* critic of Friedman's essay has been wrong," he was arguing in favor of Popper's version of instrumentalism, rereading Friedman yet again. Boland rejects the realism of verificationist and falsificationist readings of Friedman, arguing that,

> [t]he fundamental reason why all of the critics are wrong is that their criticisms are not based on a clear, correct, or even fair understanding of his essay. Friedman simply does not make the mistakes he is accused of making. His methodological position is both logically sound and unambiguously based on a coherent philosophy of science—Instrumentalism.[168]

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168 Boland (1979, 503). Popper is Boland's source for instrumentalism. Boland (1987, 300), in a rebuttal to a nasty critique by Dennis (1986), writes, "I...do not understand what a discussion of Dewey's instrumentalism has to do with my 1979 essay. Obviously, I carefully defined how I would use the term "instrumentalism" in my article and I adhered to my definition throughout in a most consistent fashion. Nowhere in my article did I

He elaborates what he means by the kind of instrumentalism which Friedman endorses. In his view,

> so long as a theory does its intended job, there is no apparent need to argue in its favor (or in favor of any of its constituent parts). For some policy-oriented economists, the intended job is the generation of true or successful predictions. In this case a theory's predictive success is always a sufficient argument in its favor. This view of the *role* of theories is called "instrumentalism." It says that theories are convenient and useful ways of (logically) generating what have turned out to be true (or successful) predictions or conclusions.[169]

As he understands Friedman's essay on methodology, Friedman was trying to find a way around the problem of induction. Boland defines this problem as one of

> finding a *form* of logical argument where (a) its conclusion is a *general* statement, such as one of the true "laws" of economics (or nature), or its conclusion is the choice of the true theory (or model) from among various competitors; and (b) its assumptions include *only* singular statements of *particulars* (such as observation reports).[170]

For Boland, as for most practicing economists, the problem of finding a method of moving from the particular to the general is not a trivial one. In the search for a theory of knowledge which would provide *the* blueprint for an empirical research agenda for neoclassical economic science, solving the problem of induction is a critical first step. In economics, a solution to the problem of induction has the high pay-off of making economics a science "like" the physical sciences, thereby allowing that

> the true "laws" or general theories of economics could then be said to be induced logically from the particulars.[171]

That is, it would be demonstrable *logically* that the truth of neoclassical theory's core propositions has been substantiated inductively through empirical testing. All of the realist

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mention Dewey or Dewey's instrumentalism. Nowhere have I said that Friedman's instrumentalism was in any way related to Dewey's instrumentalism."

169 Boland (1979, 508).

170 Boland (1979, 506).

171 Boland (1979, 506).

assaults on neoclassical theory would then be defeated through *logical* validation of neoclassical theory's empirically proven theoretical statements.

In arguing that Friedman is a Popperian instrumentalist, Boland identifies Popperian instrumentalism as one of three philosophies of science on the relationship between logic, truth, and theory.[172] It is easier to understand why Boland chooses Popperian instrumentalism as the "correct" reading of Friedman's methodology if it is contrasted with conventionalism. Conventionalism is an anti-inductivist view which says that there is no logical connection between truth status and theory. Theories *cannot* be either true or false. A theory is accepted and "used" because it is the best one available. It is a violation of conventionalist criteria, a "misuse" of theory, to ask whether a theory is true or false. Popperian instrumentalism, by contrast, is the view that theories *may* be true or false but *it does not matter.* What matters is the usefulness of the conclusions of the theory. The main point to be recognized is that in both cases the truth status or (semantic) realism of a theory is a non-issue.

According to Boland, Friedman recognized this keen distinction between necessary and sufficient correspondence between theory and reality, concluding that there is no way to solve the problem of induction—not even inductively—and that the impossibility of solving the problem of induction was of little consequence to economic science. Friedman urged economists to get on with the task of problem-solving, and to stop wasting time trying to be philosophers. Even economists like Keynes, who endeavored to find a solution to the problem of induction by distinguishing between positive statements (statements that can either be true or false because they are objective statements) and normative statements (statements that cannot be either true or false because they are subjective statements), failed to solve the problem. Keynes's idea was that if only positive statements came under the economist's microscope, then, because such statements were testable empirically,

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172 The other two are conventionalism and inductivism.

economic science could accumulate abundant evidence in support of the truth of neoclassical theory. If *all* of the key propositions of neoclassical theory were expressed in the form of positive statements, then indirect empirical testing of those statements—testing the predictions which follow logically from the positive statements—would validate the theory. But after decades of "success" in testing hypotheses based on neoclassical theory, and even assuming that those tests "failed" to disprove neoclassical theory, it still was not possible to conclude that neoclassical theory was true *in general* over a given and clearly defined range of applicability. So, Friedman tried to move "beyond" the inductivist problem implied in the normative - positive distinction.

In Boland's view, the purpose of Friedman's 1953 essay is to give "sufficient reasons for the acceptance of instrumentalism" (509). The movement "beyond" the problem of induction is seen to be a complete devaluation of the explanatory role of theory. In a Popperian instrumentalist reading of Friedman's methodology, Friedman avoids the problem of induction by denying the ability of a theory to explain the real economy. Interpreting Friedman's methodology as instrumentalist implies that it is a theory of knowledge in which the realism or truth status of a theory of society is irrelevant. Friedman's version of Popperian instrumentalism, then, stipulates that a theory's only criterion for validity is its predictive adequacy.

Truth content of—or realism *in*—theory may occur, but is, more importantly, beside the point. The two major claims made by Friedman seem to cohere in the Popperian instrumentalist interpretation of his epistemological essay. When Friedman argues that wildly inaccurate, unrealistic or false assumptions may yield good results, Popperian instrumentalists interpret this to mean that a theory need not be rejected because its assumptions do not fit with an empiricially or rationally determined objective reality. Unrealistic assumptions may lead to "true," constructive, or useful predictions. Also, when Friedman argues that the sole criterion for theory appraisal is predictive adequacy, Popperian instrumentalists interpret him to mean that neoclassical theory is a tool, and only

a tool, that works well. The implication of both these interpretations of Friedman's methodology is that Friedman's theory of society, his picture of a naturally ordered world, is completely devalued, left outside the realm of Friedman's concern.

Implicit in this understanding of Friedman as a Popperian instrumentalist is the view that he is uninterested in the substance, realism, or truth content of neoclassical theory. Put forcefully, it might be said that Friedman has no theory of knowledge whose truth content is at stake in the testing process. But this is not the case. Indeed, it is a strained and overly simplistic reading of Friedman's task. At best, Boland's is a naive interpretation of Friedman's methodology. Boland may have succeeded in finding an analytical philosophy which is a best fit with the logic of Friedman's methodology, but he misses the rather critical *political* objective of Friedman's essay. Friedman was quite explicit in his footnotes as well as in the text in stating that his audience is the "realists" who believed that economists could better fulfill the promise of modernity by jettisoning the "unrealistic" assumptions of individual maximizing behavior and economy-wide perfect competition. The American institutionalist call for throwing out the "old" model of classical and neoclassical economics and constructing a "new" theory out of freshly harvested empirical facts was an important condition of existence of Friedman's essay.[173] He sought to confront this issue squarely by rethinking the relationship between theory and fact, placing emphasis in the belief that neoclassical theory "worked" well at gauging economic activity.

Rather than seeing Friedman as motivated by a quest for coherent "epistemological purity," in which the cognitive status of a theory is irrelevant, I argue that Friedman's main goal in the 1953 essay on methodology is to provide a rationale for *acceptance* of neoclassical economic theory, the view of the Chicago School in Friedman's era being the representative form of neoclassicism. The importance of this distinction should not be overlooked. Aside from the fact that Friedman insists that he has never been interested

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[173] Saying that Friedman's essay is a defense of neoclassical theory is another way of saying that Friedman's essay was a response to American institutionalists.

"systematically" in methodological and philosophy of science issues (see Hammond 1992a), the search for a rationale for neoclassical theory was Friedman's purpose in his sole methodological essay because of the persistence of philosophical (essentialist) realism in Friedman's vision of how the economy is organized. Policy intervention in the real world has always been a primary aspect of Friedman's economic work. He has tried repeatedly to persuade policymakers of the presence and effectiveness of natural economic laws of society. Friedman is a policy-oriented economist who is interested in the *truth status* of neoclassical theory because he believes it to be a theory which *explains* the way the economy works. Boland neglects that political motivation and impact of Friedman's essay.

Frazer and Boland (1983) is another attempt to formulate strict parallels between Friedman's methodology and Popper's version of instrumentalism. Again, however, Friedman's theory of society is detached from his theory of knowledge in their attempt to resolve the problem of induction in Friedman. As Hirsch and de Marchi (1984) point out in a response to Frazer and Boland, however, in Friedman there is a trade-off between realism and the ability to link Friedman's theory of society to his theory of knowledge. They argue that if Friedman is a Popperian instrumentalist, then he is uninterested in "pure" theory—and realism—and is only interested in "applied," short run work. His work reduces to finding statistical correlations in an untheorized, objective reality. By definition, these correlations cannot logically validate—prove the truth of—theories.

Neoclassical theory is a tool and nothing more. Understood in this way, then, Friedman's methodology is a technological methodology for organizing and manipulating empirical data. In Frazer and Boland, Friedman has no theory of society. The naiveté of Boland (1979) extends to Frazer and Boland (1983). The consequence is that Boland (1979) and Frazer and Boland (1983) present a Popperian instrumentalist interpretation of Friedman in which the problem of induction is resolved, but the strategic and ideological significance of neoclassical economic theory is sacrificed.

Against this interpretation, I argue that Friedman is not concerned explicitly or even primarily with a theory of knowledge, *per se*. For instance, when Friedman wrote the essay he viewed it as a clarification of positivist methodology. When he had opportunity to compare his views with those of Karl Popper, he concluded that his theory of knowledge was best described as Popperian falsificationism. Later, when Boland presented his investigative findings—with the base line conclusion being that Popperian instrumentalism was the theory of knowledge which fit best with what Friedman wrote—Friedman was in full agreement, saying that (Popperian) instrumentalism was an "entirely correct" reading. Finally, when McCloskey suggested that Friedman's theory of knowledge could be more appropriately viewed as a variant of Deweyan pragmatism, again Friedman concurred, saying that his own views were "identical" with those of Dewey.[174]

The *only* constant commitment Friedman has demonstrated through the thirty-five years of interpreting his theory of knowledge is his steadfast commitment to his "pure" version of neoclassical theory. He has maintained throughout that this model is a basic outline or grid for the workings of the real economy. Hence, the "sufficiency" of predictive success must be viewed as a criterion for acceptance of his Chicago School version of neoclassical theory, not for acceptance of one theory of knowledge over another. The sufficiency of prediction must be understood as a clarification of how neoclassical theory—as a true theory of society—may be used for measuring and controlling economic dynamics in the real world.

This issue is important because the central problem of reading Friedman as a Popperian instrumentalist is that his Chicago School view of the real world is what is "proven" by his instrumentalist methodology. The central issue is the problem of cognitive modernism or, the possibility (and quality) of evidence in favor of one view of society versus another. Put differently, Popperian instrumentalism in Friedman *requires* realism in

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174 See Frazer and Boland (1983); Hirsch and de Marchi (1990).

and of theory. It is a variant of the essentialist empiricism of most cognitive modernist discourses in economics. As a version of empiricism, it claims to be a method for proving the truth of general, natural laws or regularities in the economy as described by the Chicago School's "as if" theorizing. Moreover, because *realism matters* in Friedman, his essentialist theory of society is more than a tool used for prediction. It also explains the nature of society. It offers the conclusion that the truth of society is described or pictured in theory—in particular Friedman's Chicago School theory of society. The Chicago view explains objective economic reality. Therefore, as an instance of essentialist empiricism, Friedman's methodology understood as Popperian instrumentalism is also an instance of the problem of cognitive modernism in (mainstream) economics. Boland's interpretation misses all of this.

I argued in section one of this chapter that in Friedman's view neoclassical theory is not merely a good predictor of economic events, it is also a powerful explanatory device because it captures the essential truth of the real economy. In my understanding of Friedman's 1953 essay on methodology, his theory of knowledge—Popperian instrumentalism—is a tool, an instrument, in his argument for *why* neoclassical theory is a *correct* representation of the objective, real economy while other theories of society are not. So, I disagree with Boland on Friedman's objective in the 1953 essay on methodology. Friedman was not in search of a pure epistemology for neoclassical theory. I argue that Friedman is not concerned with specifying the correct methodology for neoclassical economics. Also, I reject the implication of Boland's argument that since Friedman is a Popperian instrumentalist he is unconcerned with methods of proving the truth of neoclassical theory, or does not care whether or not neoclassical theory is true or real. The primary problem with the Popperian instrumentalism of Friedman, as argued by Boland, is that it only resolves the problem of induction (realism) in falsificationist and verificationist understandings of Friedman's methodology. It does this by denying the significance of this problem for economics. As a consequence, Boland devalues neoclassical theory's

explanatory power to Friedman. That is, Boland's interpretation does not explain satisfactorily the importance of Friedman's methodology *as a defense of the truth of neoclassical theory.*

Caldwell (1980, 1982, 1992) attempts to address exactly this issue. In his review of Friedman's methodology, Popperian instrumentalism as a theory of knowledge starts with the idea that a theory is "sufficient" if it "works" in predicting future economic events. But whereas in Boland this means that "realism doesn't matter," Caldwell (1992) proceeds to distinguish between types of instrumentalism. He now calls Friedman a *predictivist instrumentalist.*[175] In Caldwell there are subdivisions within Popperian instrumentalism. The basic principle that a theory is valid if it "works" is supplemented with modifications which allow for a greater role for explanation. Predictivist instrumentalism contrasts with Caldwell's (1980, 1982) earlier view of Friedman as a *noncognitivist instrumentalist.* Caldwell admits that in his earlier analyses of Friedman's methodology he equated realism with truth value. When the two are considered synonymous, then

> Friedman is saying that the assumptions of economic theory *can* be characterized as true or false: *namely, they are false.* However, their truth or falsity ("realism") *does not matter, because only predictive adequacy matters.* My error was to equate Friedman's claim that *truth and falsity do not matter* with the instrumentalist claim that theories *are not true or false.*[176]

The difference between noncognitivist and predictivist instrumentalisms centers on the importance given to the truth status, or realism, of a theory. Noncognitivist instrumentalists insist that truth *cannot* matter. They are "like" conventionalists in their utter unconcern for the truth or falsity of a theory of society. Predictivist instrumentalists,

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175 Popper is the authority for Caldwell's version of instrumentalism, too. In Caldwell (1980, 1982, and 1992) there are no direct or indirect references to Dewey, although Caldwell does cite Boland—who cites Popper—and other philosophers of science (Nagel, Morgenbesser, Popper, Machlup), who share the Popperian understanding of instrumentalism. In Caldwell (1982), for instance, there are thirteen references to Popper and none to Dewey or any of the American pragmatists influenced by Dewey.

176 Caldwell (1992, 121), emphasis in original.

by contrast, say that truth *may* matter; they simply do not care whether it does. If a theory of society is true, fine. If it is not, at least it predicts well. And, since that is all we *require* of our theory of society, it is a good theory. *En nuche*, Caldwell's (1992) understanding of Friedman's methodology is that it is a (Popperian) predictivist instrumentalist theory of knowledge, which he summarizes as follows:

> The only goal of science is the development of theories which are good instruments for prediction. Given this end, the best attributes a theory can possess are predictive adequacy and simplicity. The "realism of assumptions" (their truth-value) does not matter. Indeed, many of the "best" theories in economics have assumptions that are false.[177]

Since the only goal of science is predictive adequacy, instrumentalists are "agnostic" regarding the cognitive status of theories.

If Friedman is a Popperian instrumentalist as Caldwell understands the term, emphasis is still placed on Friedman's remarks that successful testing of neoclassical theory's implications is the *sole* criterion for validity. Prediction, not realism, is how neoclassical theory is to be judged. Caldwell's is an attempt to acknowledge the important connection between Friedman's theory of society and his theory of knowledge. Popperian instrumentalism justifies neoclassical theory. The empirical evidence from successfully testing hypotheses based on neoclassical theory prove that it is the true model. But, Caldwell's interpretation is a small two-step in the direction of establishing a role for explanation in science when he argues for agnosticism regarding the cognitive status of theories of society. He makes an implicit argument for the *de facto* truth of neoclassical theory.

According to Caldwell, in fact, we could still meet the epistemological criteria set out by Friedman's methodology if we tested the implications for Marx's theory of the production, appropriation, and distribution of surplus value in society. If it predicts well, fine. The realism *in* theory should not matter to Friedman. But we know better. It matters

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[177] Caldwell (1992, 124).

greatly to him. Although Caldwell's modification of his view of Friedman from noncognitive instrumentalism to predictivist instrumentalism is less crude than the conclusion that truth is completely irrelevant (Boland), it does not go far enough. The cognitive status of neoclassical theory does matter in Friedman's argument. [For emphasis, I repeat it should be kept in mind that Friedman's opponent in the essay on methodology is the group of dissident realists who argued that neoclassical theory should be rejected because it was too *unrealistic*.]

Maki (1986, 1992) acts as the transitional figure between Popperian and Deweyan versions of instrumentalism. Maki distinguishes between semantic and essentialist realisms (see previous section). Maki's (1992) insistence that Friedman is not a semantic realist extends Caldwell's "agnostic" reading. To his credit Maki is explicit in acknowledging that the explanatory power and cognitive status of neoclassical theory matters *at least as much* to Friedman as its predictive power. In fact, Maki argues that the *only* way to "neutralize" the inconsistencies in Friedman's argument is to adopt a [Deweyan] "pragmatic attitude" toward Friedman's methodology.

Maki (1986) sees three valid interpretations or "tendencies" in Friedman's methodology. Each of these three tendencies "contains a view as to the cognitive status of economic theory and as to the criteria for theory appraisal in economics" (128). Maki complains that Friedman is insufficiently self-conscious about the incompatible nature of these tendencies:

> *Positivism* ties economic theory closely to given empirical facts...a theory is about relations among given data, and it is tested in a rule-governed way by its predictive success in establishing those relations. *Pragmatism*, in its turn, does not admit the existence of any givens—economic theory is only about some subjectively constructed facts—and holds that acceptance of theories is dependent on their congruence with tradition, on the aims of theorizing, on scientists' decisions that are not governed by formal rules, etc. *Realism* is cognitively more ambitious: economic theories should

> represent some deeper realities, even though it is possible that theory appraisal does not rest on given facts according to strict rules.[178]

Having identified these three tendencies in Friedman, Maki proceeds to identify, on "the basis of several passages of [Friedman's] essay," the following basic thesis as the essence of Friedman's methodology:

> The realism of assumptions is irrelevant, and predictive power is relevant to the acceptance of economic theory.[179]

Maki argues that those who see this as the major point of Friedman's essay usually conclude that the explanatory role of theory is unimportant to Friedman. They also usually concur with Boland's bare-bones reading of Friedman's methodology. But Maki warns against such a hasty dismissal of Friedman's interest in the essential truth of his version of neoclassical theory. Semantic realism is unimportant to Friedman but essentialist realism is extremely important to him. Maki understands Friedman to argue that the essential truth of his version of neoclassical economic theory—which is a "core" form of most neoclassical theories of the economy—is proven by the success of its "predictive power."

To clarify his argument, an argument which reads instrumentalism as Deweyan, Maki explains how the three tendencies in the essay are seen to derive from "adding" a few "supplementary theses" to the basic one. These supplementary tendencies are "trajectories" of Friedman's methodology. To contrast Maki's reading of Friedman as a Deweyan instrumentalist, I provide a summary of his understanding of the positivist and realist tendencies in Friedman's methodology.

Concerning the positivist tendency in Friedman's theory of knowledge, Maki concludes that Friedman's text "distantly approximates" the following coherent whole:

> There are value-free and theory-free facts that are generalized, and the body of these generalizations is summarized in the form of a theory. The statements of scope or applicability are part of the theory. Thus, everybody familiar with the theory can apply it to phenomena in an unambiguous way.

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178 Maki (1986, 128).
179 Maki (1986, 129).

> All this means that economic theory becomes a summary of observed facts, its content is equivalent to a set of observed facts or empirical generalizations based upon them. Because of this, there is nothing in the substantive content of a theory (e. g., its assumptions) that could not be tested against the facts. You should obey the following methodological rules: test the implications, not the assumptions; if the evidence is favorable, accept the theory; if not, reject it. Or, if you happen to test both implications and assumptions, make the following conclusions from a negative result: in the case of implications, reject the theory; in the case of assumptions, take no action.[180]

In Maki's positivist reconstruction of Friedman's methodology, the sole criterion for acceptance of a theory is predictive power of that theory's implications; the primary task of empirical economic science is providing a system of "provisionally true" generalizations for the purpose of organizing empirical data; and, the demarcation problem is solved by the requirement that all statements in the theory be testable (directly or indirectly). But the problem of induction—which would be the *foundation* of the value-free and theory-free "nature" of "facts"—must be solved before "everybody familiar with the theory can apply it to phenomena in an unambiguous way." The positivist tendency—Maki calls it "Puritan empiricism"—in Friedman's methodology overlooks this crucial issue. Therefore, he concludes, it is less appealing as the "dominant" tendency in Friedman's methodology.

The realist tendency stipulates that there is a distinction between realism and realisticness. Neoclassical economic theory may serve as a representation of "unobservable economic realities" because there is a difference between essentialist and semantic realism. Maki argues that Friedman specifies that he means essentialist realism—realism—as opposed to semantic realism—realisticness—when he attempts to clarify the confusion between "descriptive accuracy" and "analytical relevance." Essentialist realism suggests that a theory of society may be analytically relevant and essentially true (depending on the results of empirical tests) without the stricter requirement of being descriptively accurate.

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180 Maki (1986, 132).

Confusion between these two interpretations of theory have led to the development of theories that seek to be "fully descriptive," which theory cannot be.[181] Friedman writes,

> If a class of "economic phenomena" appears varied and complex, it is, we must suppose, because we have no adequate theory to explain them. Known facts cannot be set on one side; a theory to apply "closely to reality," on the other. A theory is the way we perceive "facts," and we cannot perceive "facts" without a theory.[182]

This brief passage is the "textual evidence" of the argument that the semantic realist tendency is the dominant tendency in Friedman's methodology. In it Friedman seems to endorse the view that there is close correspondence—mutual effectivity—between "theory" and "fact." The weight of the textual evidence, however, is to the contrary. Two paragraphs later, Friedman objects to semantic realism or the ability of a theory to fully describe the facts. He embraces a Marshallian view of neoclassical economic theory in which theory abstractly describes unobservable economic realities. Friedman argues that the confusion between descriptive accuracy and analytical relevance, and the failure to distinguish between realism and realisticness has its origins in a *misreading* of Marshall. Realists who have sought to construct "realistic" theories incorrectly assume that they work in the spirit of Marshall. Friedman objects:

> Marshall, it is said, assumed "perfect competition"; perhaps there once was such a thing. But clearly there is no longer, and we must therefore discard his theories. Ther reader will search long and hard—and I predict unsuccessfully—to find in Marshall any explicit assumption about perfect competition or any assertion that *in a descriptive sense* the world is composed of atomistic firms engaged in perfect competition...Marshall took the world as it is; he sought to construct an "engine" to analyze it, not a photographic reproduction of it.[183]

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181 The examples cited by Friedman of attempts to create more realistic theories are monopolistic competition and imperfect competition. Friedman argues that these models are based, erroneously, on the belief that full description is possible and is the task of the economic theorist.

182 Friedman (1953, 34).

183 Friedman (1953, 33-4).

The Marshallian "engine" represents a deeper, essential reality of the economy which, because it represents "a more fundamental structure," cannot be tested directly. The unrealism of assumptions thesis in Friedman's methodology is the statement which warns us against trying to achieve semantic realism between theory and fact. By insisting that assumptions may by unrealistic, Maki interprets Friedman as urging essentialist realism over semantic realism.

With these two "tendencies" in mind, Maki maintains, we can more clearly see the pragmatist tendency in Friedman's methodology. According to Maki (1986, 1992), Friedman's Deweyan instrumentalism—the pragmatist tendency—is the "most strikingly colored" tendency in Friedman's famous essay. It is Maki's interpretation of the pragmatist tendency that places him closer to Dewey than to Popper. It also distinguishes his work from that of Caldwell and Boland. Of the pragmatist tendency in Friedman's methodology Maki writes,

> [a]ccording to this reconstruction it is theories, irreducible to facts or generalizations, with their *pretheoretical presuppositions and sociohistorical context*, that dictate what are the facts and what conclusions to draw from any test result. This is to raise the prestige of theory...instead of being totally determined by facts [as in the positivist tendency], theory now becomes the ruler of facts. With [the pragmatist tendency], the economist is not busy in critically testing his theories against hard facts according to methodological rules specifying conditions under which the theories will be considered to be refuted. Central to this view is to make acceptance or refutation of theories depend more on theoreticians themselves than on any objective evidence and well-defined rules. In the pragmatist spirit, theory appraisal becomes dependent on the varying purposes of theorizing and the interests of theoreticians (note Friedman's recurring phrase: "everything depends on the problem at hand"). All this is obviously more in accordance with actual scientific practice than [the positivist tendency], especially in economics.[184]

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184 Maki (1986, 136), emphasis added. In a footnote Maki states that the pragmatist tendency about which he writes is not rooted in the pragmatism of "such masters as Peirce, Dewey, or James." Rather, the sense in which he uses the term "pragmatism" is more general and is rooted in the work of such writers as Quine, Kuhn, Toulmin, and Rorty. This is confusing. In light of the fact that Toulmin and Rorty view their pragmatism as part of the Deweyan tradition, I situate Maki in Dewey's, as opposed to Popper's, version of pragmatism. This Dewey-Rorty-West-Toulmin tradition is referred to as the neo-

In this passage, Maki argues that in the pragmatist tendency there are two important contexts for theory appraisal which must be added to the notion of theory as a tool for prediction: (1) pretheoretical presuppositions and, (2) sociohistorical factors. The pretheoretical presuppositions are the inherited assumptions of a theory. The sociohistorical factors include the conscious and unconscious motivations and interests that "overdetermine" the act of theorizing.[185] We may infer from Maki's interpretation of Friedman's methodology that it is not possible to understand Friedman's theory of knowledge without an equivalent appreciation of his theory of society. That is, the distinction between "theoretical" and "practical" work, or between "mind" and "reality" is dissolved. These separate realms are revealed to be influenced by each other. Subjective traces shape, and are shaped by, objective knowledge claims.

Friedman's vision of an economy ordered and maintained according to the principles of Adam Smith (and Newton) becomes "pretheoretical evidence" in favor of the truth of neoclassical theory. Successful results from hypothesis testing "prove" the truth of the neoclassical model because the neoclassical model is the set of covering laws which enable economic scientists to get closer and closer to the truth of the economy. Neoclassical theory, having been proven through empirical testing, then provides "theoretical"evidence for the natural order that governs American capitalist society. In this sense, the assumptions of a theory are dependent upon the environment in which the activity of

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pragmatist tradition. Toulmin and Rorty are among the leading philosophers of the resurgent neo-pragmatism of Dewey.

185 Although it is not a focus of this dissertation, there is a growing literature on the history of cold-war social science. More than a study of the consequences of military spending, this literature examines the impact of anti-communist thought in intellectual culture. Friedman's political economy, formulated throughout the middle decades of the twentieth century, illustrates the impact of pervasive anti-communist thought in economics. His fetishization of markets and his "pragmatist" methodology may be seen to be the result of sociohistorical factors like "the communist threat." See Friedman (1980), where he discusses market versus "totalitarian" economic systems.

theorizing takes place, and the environment is then shaped by the assumptions of the theory. Foregrounding the importance of the immediate context of inquiry is the signature difference in Dewey's instrumentalism.

What are the conditions of existence of interpreting Friedman's methodology as a version of Deweyan pragmatism? Hirsch and de Marchi (1990) cite several. First, empirical knowledge is always partial. This follows from the Deweyan pragmatist claim that knowledge is context-driven; that sociohistorical and pretheoretical factors "dictate" the process of theory-creation. Given that empirical knowledge is partial knowledge, it follows that the purpose of inquiry must be directed by some problem, some question whose determinacy is also partial. The structure and content of the inquiry overdetermines the proficiency of empirical knowledge in effectively resolving social problems. Dennis (1986) writes that

> rather than describing *theories as instruments for generating predictions*, Dewey would have us believe instead that *the human mind is an instrument for solving problems*. And even though we do judge theories for their predictive success as one measure of their scientific value to us, this criterion alone is insufficient. Ultimately, we judge theories by their *relevance and effectiveness in solving problems that are important to us*. A theory may well be true, but if it does not address any problem, it is of no scientific value to us.[186]

In this understanding of Friedman's methodology, the truth (or falsity) and purpose of a theory of society (or its pretheoretical presuppositions) is influenced by the construction of the problem which is the conjuncture of its emergence. Universal knowledge may "well be true," but as abstract knowledge it has limited value since it does not (necessarily) address any problem.

Second, the notion of "proof" in empirical investigation is rejected. This follows from the Deweyan pragmatist claim that partial knowledge can never be universal knowledge. Hirsch and de Marchi observe that throughout Dewey's writings the idea that

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186 Dennis (1986, 261).

uncertainty is a pervasive feature of all processes of inquiry is central. If this is true, then the quest for universal knowledge is a futile quest. Friedman shows, according to Hirsch and de Marchi, that "the implications of a theory are not taken to be true because the premises are known to be true but rather the premises are *provisionally* taken to be true because the implications of a theory coincide with the facts" (135, emphasis added). The process approach to knowledge, in which *experimental* method is synonymous with scientific investigation, "takes on the central role in inquiry, whether scientific or common sense" (135). It is not a minor issue that Friedman's methodology of Deweyan pragmatism undermines his own theory of society. I return to this point below.

Third, an implication of the futility of the quest for certainty is that objects of knowledge are produced, not discovered, in the process of inquiry. There is no essential *isness* in objects which "exist" outside human experience. This implication follows from the contextual nature of all knowledge. The separation between the realms of existence—mind *versus* reality, subject *versus* object—collapses. The specific context in which inquiry takes place determines (partially) the quality of knowledge that is produced.

It is this consequence that Deweyan pragmatists refer to in explaining Friedman's position that the "realism of assumptions does not matter." As a Deweyan pragmatist, Friedman's position reflects an understanding that "precise truth" is not possible, and that serviceable truths may sometimes warrant our belief. Dewey ([1938], 1986) writes,

> It is notorious that a hypothesis does not have to be true in order to be highly serviceable in the conduct of inquiry. Examination of the historical progress of any science will show that the same thing holds good of 'facts': of what has been taken in the past as evidential. They were serviceable, not because they were true or false, but because, when they were taken to be provisional means of advancing investigation, they led to discovery of other facts which proved more relevant and more weighty...the history of science also shows that when hypotheses have been taken to be finally true and hence unquestionable, they have obstructed inquiry and kept science committed to doctrines that later turned out to be invalid.[187]

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187 Dewey ([1938], 1986, 144-5).

The reader may recall from section one of this chapter that Friedman embraces this view as well. Friedman writes,

> Progress in positive economics will require not only the testing and elaboration of existing hypotheses but also the construction of new hypotheses. On this problem there is little to say on a formal level. The construction of hypotheses is a creative act of inspiration, intuition, invention; its essence is the vision of something new in familiar material. The process must be discussed in psychological, not logical, categories; studied in autobiographies and biographies, not treatises on scientific method.[188]

The subjectve element is everpresent in the process of inquiry. Autobiographies, biographies and "creative acts of inspiration and intuition and invention" are part of the process of knowledge production. Rather than a world in which objects are given by nature of by a deity, a Deweyan pragmatist sees the world as being produced in an ongoing process in which there is no separation between human experience and knowledge of the world and the world "itself."

Viewing Friedman as a Deweyan pragmatist is not a minor achievement. While it offers a solution to the ongoing riddle of what Friedman "really"meant, it exposes certain contradictions in the kind of Deweyan pragmatism which Friedman's methodology is supposed to represent. What does it mean to view Friedman's methodology as a version of Deweyan pragmatism? In my discussion of Friedman's theory of society I argued that the atomistic, market-centered theory of society in which an individual's abilities and decisions result from individual choice—which is based on an innate "principle of motion in Newton's physics—reflects the essentialist theory of human nature in neoclassical theory. That essence produces economic outcomes for society as a whole. Regarding Friedman as a Deweyan pragmatist implies that that essence is also a cultural determinant of the essentialist methodology of neoclassical economics. The essentialism of neoclassical theory produces an essentialist epistemology called Deweyan pragmatism.

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188 Friedman (1953, 42-3).

The importance to Friedman's version of Deweyan pragmatism of *context* in constructing the assumptions and "facts" of a theory has several implications. One implication is that Friedman's methodology understood as a version of Deweyan pragmatism implies that the truth of a theory is always *partial*. The nonlogical and nonempirical criteria that determine and are determined by a "valid" theory are context specific and overdetermined by an infinity of other processes and practices in which neoclassical theory plays a role. T*he entire worldview or vision constitutes a deep structure of the economy both in theory and in "reality*." Maki writes,

> It would be in the spirit of this reconstruction to add that the criterion of predictive power works only within *the constraint of some nonempiricial presuppositions* that are themselves not to be tested. These presuppositions form a *Weltbild* or a "vision" upon which a whole research tradition is built. They are regulative principles that lay down what problems are to be investigated, what types of solutions are admissable, which items are to count as facts, how the symbols and correlations are to be interpreted, etc. Friedman's (1972) talk about the (oral) tradition of Chicago economics... gives support to this idea. If this were a correct interpretation, *the theoretical system as a whole* with all its background assumptions would become *the unit of economic knowledge*. This implies that there are not elements in the whole (e. g., single assumptions or predictions) which could be separately tested. It is the whole system that is to be appraised as to its congruence with tradition, its utility to our practical aims, etc.[189]

The power of reading Friedman's methodology as a version of Deweyan pragmatism is that it unifies Friedman's theory of society and his theory of knowledge. Deweyan pragmatism in Friedman's methodology differs from Popperian instrumentalism in that truth or falsity ceases to be understood in an objective, transdiscursive manner. An idea about or theory of society is true for the given parameters and environmental elements that define it. The parameters and elements "dictate" or determine the theory or society. The theory of society, in turn, shapes the parameters and elements. For this reason, Friedman metheodology as a version of Deweyan pragmatism

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189 Maki (1986, 134).

argues that truth is always partial, never transdiscursively or objectively true. The work of empiricism as a theory of knowledge is more modest.

This is the great contradiction in the Deweyan pragmatist interpretation of Friedman's methodology. Friedman's theory of society is an essentialist, universalizing vision of the naturally determined social order. Yet, his theory of knowledge implies that truth is partial and context-driven. Both interpetations cannot be true. Maki speculates on why Friedman allows for methodological inconsistencies in his rhetorical defense of neoclassical theory. He offers the following metamethodological hypothesis as a way to understand Friedman's essay:

> Perhaps Friedman thinks as follows. Just as one and the same business firm can be regarded as a perfect competitor and as a monopolist quite legitimately, economic theory can be analyzed on the basis of mutually incompatible philosophies of science. Just as there is ontological indifference on the nature of a particular firm, there is indifference on the nature of economic science: what it is about; how it is or should be structured and exercised. In this view there is no one descriptive or prescriptive methodology that could tell us what actually happens in economics or how we should proceed as economists. There is just a set of alternative methodological visions among which we may choose any one that best suits our purpose at hand, e. g., for a defense or a critique of a given economic theory...His maxim might be: "Anything goes if it is useful for my purposes." Perhaps he is simply in love with certain visions, theories, and policies which he wants to defend.[190]

McCloskey makes a similar point in his defense of the "harmless pragmatism" of Dewey, Rorty, and Friedman:

> The Chicago School believes that perfect competition, near enough, characterizes the American economy. Everyone else says perfect competition is "unrealistic." Perhaps what Milton Friedman was groping for in his famous dismissal of talk about realism was a rhetorical standard. What mattered, he was saying in a pragmatic way, was how a proposition was used, its human use in argument, not God's Truth...But Friedman's rhetorical suggestion got mixed up in positivism, with its supposition that "good prediction," like "empiricial observation" or "economic theory," is a simple thing that any child can detect. Positivism begs the main scientific issue.[191]

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[190] Maki (1986, 139).

[191] McCloskey (1988a, 288).

Even if it is granted that Friedman is motivated by the fact that "he is in love with certain visions, theories, and policies which he wants to defend," the contradiction between his *universalist* theory of society and his *partial* theory of knowledge remains. If his theory of society is true, then it should be possible to find a means of uncovering the universal principles in a manner that is duplicable across time and space. If his theory of knowledge is true, then there should be visions, theories which are different from one another. That, after all, is what it means for a truth-tracking theory of knowledge to be the correct theory of knowledge.In both cases, the epistemological problem of cognitive modernism remains. His essentialist theory of society demands an essentialist epistemology to "confirm" it and his partial epistemology achieves the heroic task of uncovering universal, "true" laws of the economy.

In the next and final chapter of this dissertaion I continue with the contradictions suggested by the partiality of Friedman's (and Veblen's) versions of Deweyan pragmatism. I emphasize another element in Dewey's work—pervasive uncertainty. By emphasizing this aspect of Dewey's philosophy of pragmatism, a third version of Deweyan pragmatism is suggested as compatible with a "postmodern" economics.

CHAPTER IV

MARXISM, POSTMODERNISM, AND DEWEY'S PRAGMATISM

A. Rethinking Cognitive Modernism in Economics

> Given this dichotomy between being-for-consciousness and being-in-itself, we seem to be necessarily confined to one side of the dichotomy. We can only know things as they are for us, and therefore, conversely, we cannot know things as they are in themselves. Accordingly, in the present case, where we are investigating the nature of knowledge, we can only know what knowledge is for us, not what it is in itself. The criterion which we apply to it is *our* criterion, one which we have to presuppose, and there can be no independent way of knowing whether it is an objectively correct one (Norman 1976, 19).

In this chapter I suggest an alternative to the epistemological problem of the cognitive modernist tradition in economics by offering an alternative reading of the pragmatism of John Dewey. The fundamental critique of cognitive modernism offered in the first three chapters is a critique of the *epistemological essentialism* of *modern economics* as expressed in two versions of Deweyan pragmatism. The rationalist and empiricist logics of proof which undergird modernist truth claims do not, despite claims to the contrary, provide the transdiscursive foundations for economic modernism's confident descriptions and prescriptions. The chief claims of economists working in one cognitive modernist tradition or another is that an epistemological foundation exists for constructing and confirming meaningful (i. e., empirically testable or rationally consistent) statements. On the basis of this epistemological foundation, modern economists prove empirically and/or rationally that *one* picture of the economy is absolutely true and reliable as a guide for policy predictions, while all others are false and, therefore, unreliable. I argue in this dissertation that the epistemological foundations on which the truth claims of modern economics rests do not exist, and that without those foundations the general project of

modernity—to accurately picture the world in the image of its true nature and then to reconstruct the world according to that image—cannot be realized.

To give context to the significance of epistemological issues as they relate to cognitive modernist discourses in economics, I examined two economic theories of knowledge which are exemplars of modern social science in the twentieth century in the United States. The hegemonic world pictures of the American Institutitionalism of Thorstein Veblen and the Chicago School economics of Milton Friedman, because they both accept the philosophical and scientific premises of modernity, are (proto)typical of *modern* economic theory. Sophisticated versions of Deweyan pragmatism serve as the philosophical and scientific ground which legitimizes and authorizes the truth claims of each theory. For example, an institutions- and power-based analysis of economic dynamics is "true" because an empiricist version of Deweyan pragmatism, properly applied, generates evidence which confirms institutionalist hypotheses. Institutionalist descriptions of economic dynamics, then, accurately capture the fundamental nature of economic relations and economic change in its description of society as an evolving, social organism.

By offering their particular world pictures as *the* universal truth of the economy, Veblen and Friedman go beyond making hypotheses about a particular issue or problem. In nontrivial terms, each offers assertions about the ultimate nature of economic reality and social being. Deweyan pragmatism, as each understands it, provides the method for proving the universal truth of those assertions. American Institutionalism is the "correct" economic theory—and neoclassicisms and Marxisms are wrong—because the overwhelming empirical evidence provided by the methodology of Deweyan pragmatism proves that it is correct. Because Deweyan pragmatism plays such an important role, special attention must be paid to a "methodology" which guarantees that "evidence" is worthy of its profound implications. Surveying the methodologies of Veblen and Friedman—both referred to as Deweyan pragmatism—suggests that both theories, to justify claims to have captured and expressed the ultimate "nature" of the economy,

confront the "dilemma of epistemology." As stated in the first chapter, the "dilemma of epistemology," according to Norman (1976), follows from Hegel's objection to classical philosophy's prescription for what counts as positive knowledge:

> Hegel's objection applies quite generally to epistemology as traditionally conceived. *Any* principle which specifies some criterion of what can and what cannot count as authentic knowledge must itself appeal either to that criterion (circularity) or to some other criterion (regress); and this is so because, as Hegel says, any such principle is itself a claim to knowledge.[192]

The broad implication of the dilemma of epistemology is that cognitive modernist economic theories do *not* rest on a secure epistemological foundation which establishes with absolute certainty specific rules of correspondence between being-for-consciousness (thought concretes) and being-in-itself (concrete real). Essentializing empiricist or rationalist proofs, as a means of underscoring the hegemony of one modernist vision over all others, does not resolve the Hegelian "dilemma." Nor is it the case that "modernism's fetishism with *science* and *truth* in the production of knowledge" holds the key to a resolution of the dilemma of epistemology.[193]

The dilemma of epistemology is of such elemental importance to my argument that more needs to be said about its implications for modern, and postmodern, economics. These opening remarks are a way of rethinking cognitive modernism in economics. The dilemma of epistemology emerges as part of the general epistemological problem of cognitive modernism. As discussed in chapter one, the epistemological problem is one of determining *how* we know that our rigorous, scientific knowledge of the world is accurate and true. The epistemological problem of cognitive modernism raises the twin problems of *correspondence* (between knowledge of reality and reality itself) and *representedness* (the form and content of the mind's picture of the world). How can we *know* that our knowledge of the world is the essential truth of the world?

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192 Norman (1976, 12).
193 Amariglio (1990, 19).

Implicit in the epistemological problem of cognitive modernism are two issues that are of central importance to how we assess and critique the overall project of modernity in the social sciences: (1) Can we *ever* access the independent reality which is presupposed in the very epistemological problem of cognitive modernism? (2) What are the rules or criteria for separating true and accurate descriptions of "objective reality" from "false," inaccurate ones? These two questions pinpoint the concerns of modernist economic methodologists who have sought to defend essentialist epistemologies in economics. These questions also lead to a direct confrontation with the dilemma of epistemology. Most importantly, however, these two questions serve as the starting point for a postmodern critique of cognitive modernism.

As was seen in the economic theories of Veblen and Friedman, the truth of each's economic theory was based on the authority of Science. Veblen built his evolutionary theory of society on the evolutionary biological science of Darwin, arguing that the economy was the central part of an evolving, social organism. Friedman built his economic theory on the science of Newton, arguing that economic forces were symptomatic of the deeper forces of Nature's Grand Design. In both cases, the authority of science—the truth of Science as the mind's map of the natural and social world—validates each's truth claims. The aesthetic value of the economic theories of Veblen and Friedman does not derive exclusively from the artistic quality of each's imagination. The imagined whole, or world picture, articulated by each theoretical tradition derives it persuasive power, its appeal, from its formalism, technical rigor, and statistical sophistication—all of which are hallmarks of modern science.

The discursive similarities between each theory of society and the physical (Newton/Friedman) and biological (Darwin/Veblen) sciences gives each an authority which elevates them above the status of being simply one description of the economy among several other such descirptions. Science, as the authority for each theory, is supposed to be a blueprint, a basic vocabulary, of nature. As a blueprint, economic science

is supposed to guide social engineers along the path to the construction of the good society. To secure their theories in the general discourse of Science, Veblenian Institutionalists and Chicagoans of the Friedman era offer their theories of society as Scientific—and authoritatively true—theories of reality and, offer versions of Deweyan pragmatism as the methodology or philosophy which proves the truth of Science (as blueprint), and economic theory (as Science and, implicitly, blueprint). Deweyan pragmatism, then, plays a pivotal role in Veblen's and Friedman's modern economic theories.

Briefly, in Veblen's version of Deweyan pragmatism, the philosophy of Dewey is organized around a theory of power. The production, appropriation, and distribution of power within and among social institutions was the object of analysis in Veblen's theory of society. Deweyan pragmatism measures the flows and consequences of power. As a "box of tools" methodology, Veblen's version of Deweyan pragmatism is a naive empiricism in which there is excessive faith in the Scientific Method. The effect is a naturalization of the economy according to the science of Darwin. By contrast, Friedman's version of Deweyan pragmatism is one which is organized around the essential attributes of human nature. In Friedman's theory of knowledge, the philosophy of Dewey acts as a litmus test which focuses on a theory's predictions, while claiming to de-emphasize the significance of philosophical realism. Friedman's version of Deweyan pragmatism contributes to the process of naturalizing Friedman's theory of society to the extent that his pragmatism provides empirical and logical evidence of the correspondence between Friedman's theory of society and the "real" world. Realism is unimportant for authorizing the basic propositions of neoclassical theory (propositions which are self-evident). Realism is critical as a component of Deweyan pragmatism when it comes to the success of a theory of society's predictions, however. Hence, Friedman does not escape the epistemological problem of cognitive modernism.

In both cases, the versions of Deweyan pragmatism were inscribed in a rhetoric of discourse of Science which is essentialist. Both epistemologies are essentialist

epistemologies. Both Deweyan pragmatisms aspire to ground the theories of knowledge with which each is associated. Both Deweyan pragmatisms authorize separate and privileged cosmologies for the economy. Both Deweyan pragmatisms make an fetishized essence out of empiricism and rationalism—the chief logics of modernity. For this reason, both Deweyan pragmatisms must confront the contradiction implied in the dilemma of epistemology: The versions of Deweyan pragmatism which are associated with Veblen and Friedman must prove transdiscursively that one or the other world picture is true, or it must be acknowledged that no such proof is available, and the truth claims of the Chicago School and of American Instutitionalism are true within their discurusive context, but not beyond. This is the challenge of the dilemma of epistemology.

What is my alternative to epistemological essentialism? Rather than creating a new mode of inquiry for solving the correspondence problem which lies at the heart of the "dilemma of epistemology," or resuscitating an old argument long presumed dead, I argue in this chapter that a third reading of Deweyan pragmatism is possible. This third reading of Deweyan pragmatism emphasizes the anticipations of postmodernism which can be found in the philosophical work of Dewey. In this reading, the correspondence problem inherent in the epistemological problem of cognitive modernism is viewed as alien to Dewey's overall philosophical project. That is, the very foundation on which modernist theories of knowledge rest are called into question by Dewey. By taking seriously the doubt and futility which Dewey expressed in his philosophical critique of classical epistemology, I understand that there is *a permanent tension or contradiction* in Deweyan pragmatism, one which overdetermines the empiricist scientism which informs most readings of his philosophy of pragmatism (cf. Veblen's or Friedman's readings of Deweyan pragmatism). In my third reading of Deweyan pragmatism, I argue that the modernism of Deweyan pragmatism exists in tension with "postmodern moments" in Dewey's work.

Put provocatively, I argue in this chapter that both versions of Deweyan pragmatism repress the revolutionary, "postmodern" moments in Dewey's writings. An appreciation of the postmodern elements of Deweyan pragmatism challenges the essentialism of these readings of Dewey's philosophy. I construct an alternative to the dilemma of epistemological essentialism by exploring the implications of the postmodern in Deweyan pragmatism. The postmodern moments of Deweyan pragmatism constitute a revolutionary moment in Dewey's philosophy to the extent that those moments represent *a fundamental rejection* of the following modernist and essentialist notions: (1) that there are two separate realms (being-for-consciousness and being-in-itself), in which the former pictures or maps the essence or truth of the latter, (2) that correspondence rules exist which guide the process of picturing to the absolute realization of the utopian vision of being's "real, true nature." The fundamental rejection of philosophical essentialism in Dewey's reconstruction of philosophy corresponds to the postmodern, antifoundationalist "neo-pragmatism" of philosophers like Richard Rorty (1979, 1982) and Cornel West (1989). The work of these two philosophers has been influential in contemporary reconsiderations of postmodern (or post-analytic) philosophy. Basing my reading of Deweyan pragmatism on their work, I argue for a postmodern version of Deweyan pragmatism in economics which shares epistemological affinities with the critique of economic determinism offered by Resnick and Wolff (1982). In the critique of essentialist Marxism offered by Resnick and Wolff, the determinist Marxist tradition is undermined by an antiessentialist, postmodern, class analytic social theory of social processes in which the "guiding" logic is the Marxist logic of contradiction and overdetermination.

The antifoundationalism of Deweyan pragmatism provides an opportunity to read pragmatism as a non-reductionist, "conversational," mode of inquiry whose chief aim is problem-solving in a context always circumscribed by its cultural conditions of existence. When understood as a postmodern (antiessentialist) critique of modernist (essentialist) philosophy, Deweyan pragmatism, as a process of thinking which is overdetermined by an

infinity of other processes in society, is more a non-reductionist, constituent *aspect* of social reality. It does not distinguish itself as a primary causal determinant of social reality, or as a privileged process of representation which stands outside or above other processes in social reality.

The postmodern version of Deweyan pragmatism advocated in this chapter rejects the versions of Deweyan pragmatism offered in the work of Veblen and Friedman. I reject both versions of Deweyan pragmatism because of their essentialism. A postmodern critique of the epistemological essentialism characteristic of the methodologies of Veblen and Friedman rejects the ontological priority of human thought about the world. It refuses to privilege one form of knowledge about the world over another, and it rejects the idea that nature's essence is singular and graspable for once and for all through the process of human inquiry. My third version of Deweyan pragmatism is radically distinct from the versions discussed in the previous two chapters. This third version is epistemologically antiessentialist; Veblen's and Friedman's versions of Deweyan pragmatism are epistemologically essentialist.

This chapter is organized as follows. In the next section, I situate the postmodern Dewey in the context of the work of Rorty and West. I argue that by stressing Dewey's doubt about finding an "ultimate context" for truth, the "neo-pragmatism" of Rorty and West provides economists with a way to re-imagine the role and status of economic science. What is lost in prestige and power by acknowledging the contextual nature of *all* knowledge and by rejecting universalist discourses, is offset by the gain in clarity and constructiveness which results from the various consequences of a broad range of theories. Rather than viewing any one theory as capturing the truth about the nature of the world (e. g., *the* economic laws, *the* anthropological essence), and rather than continuing the long, unproductive debate over which Dewey is correct, a postmodern Deweyan pragmatism approaches different theories of society as competing pictures of the world, all of which offer specific solutions to specific contexts and problems.

In the final section of this chapter, I compare the radical and refreshingly self-conscious approach to theory of Althusserian Marxists like Resnick and Wolff with my postmodern version of Deweyan pragmatism. Also postmodern in that it rejects classical, "bourgeois" philosophical essentialism in favor of the Marxist dialectical approach, the approach to theory of Resnick and Wolff, in response to traditional Marxism's static, reductionist approach to the study of the economy, is an approach in which social processes are overdetermined by each other. In their work, social reality is constituted by an infinity of processes. The result is a theory of society in which a complex, contradictory, and overdetermined web of processes effect and are effected by each other. Unlike the approach to theory of modern economists (Marxist and non-Marxist), Resnick and Wolff, like Dewey, reject the notion that there is a discoverable essence of social phenomena. Each process in society is overdetermined by an infinity of other processes, each of which, in turn, is overdetermined by all other processes.

I close by arguing that there is a convergence between the antiessentialism of Resnick and Wolff and the antifoundationalism of Dewey. In rejecting bourgeois epistemologies, Resnick, Wolff, *and* Dewey stress the contingent nature of *all* knowledge. As versions of the postmodern in economics, the final section suggests reasons for this convergence. In short, a postmodern approach to epistemology insists on the discursive nature of all knowledge. An antifioundationalist Deweyan pragmatism insists on the *partiality* of all knowledge products of human inquiry, the irreducible *difference* resulting from the conjuncture of an infinity of conditions of existence unique to each site where knowledge processes are active, and the endless *historical* determinacy of human inquiry into problem-solving. The postmodern Dewey shares these attributes with the Althusserian Marxism of thinkers like Resnick, Wolff, and Amariglio.

B. Postmodern Critique: Antifoundationalism and Deweyan Pragmatism

In presenting two different versions of Deweyan pragmatism, it should be clear that it is not possible to discover the *real* Deweyan pragmatism in economics. Rather, it is possible to highlight the differences and tensions that exist in each partial reading of Dewey. In presenting a third, postmodern version of Deweyan pragmatism, I argue that to justify or explain the *truth* of the Chicago view or the *truth* of the Institutionalist view by reference to its grounding in Deweyan pragmatism is not possible since "pragmatism," itself, has been contested. Hence, in offering a third reading of Deweyan pragmatism, I reflect my own partiality by departing from the essentialist readings of the pragmatisms of Veblen and Friedman. Instead, my third version stresses the postmodern, antiessentialist elements in Dewey's critique of classical philosophy. This version is offered as an alternative to the essentialist versions of Deweyan pragmatism explored in the previous chapters. The postmodern version of Deweyan pragmatism emphasizes Dewey's doubts about the cognitive modernist "quest for certainty" which motivates all modernist or foundationalist thought.

If the cognitive modernist understandings of Deweyan pragmatism involve privileging order over disorder, centering over decentering, and certainty over uncertainty, then the postmodern understanding of Deweyan pragmatism involves recognizing the different status of disorder, decentering, and uncertainty. Instead of order over disorder, certainty over uncertainty, centering over decentering, Rorty's postmodern Dewey see order *and* disorder, certainty *and* uncertainty, and centering *and* decentering—all within an antiessentialist framework in which there are no rational, scientific, or moral grounds for the necessity or dominance of one over the other. A postmodern version of Dweyan pragmatism is partial to an antiessentialist logic which is present in Dewey's later philosophical writings.[194] It rejects the modernist tendency to *ground* pragmatism as a

[194] See discussion in Rorty (1979, 1982) on the shift in Dewey's philosophical approach in his later years.

naturalized philosophy of science. Following recent readings of Dewey's philosophy by Rorty (1979) and West (1989), the third version of Deweyan pragmatism represents a turn away from the essentialist epistemologies of Veblen and Friedman.

The postmodern reading of Deweyan pragmatism has important implications for modern economics. A postmodern Deweyan pragmatism challenges the essentialist foundations of economic knowledge claims. It challenges economists to rethink essentialist strategies in producing economic theory and policy. If we take seriously Dewey's critique of foundationalism, then not only is the essentialism of Veblenian and Friedmanian economic theories inappropriate, it is, in the last instance, arbitrary. Rather than resting on absolute, ahistorical foundations, the truth claims of these modern economic theories are time and space specific, shaped by the cultural and social context in which their "universalist" truth claims are produced.

What is the postmodern moment in Deweyan pragmatism? In differentiating the thought of early pragmatists like Peirce, James, and Dewey, Rorty (1979) provides clues to an answer,

> 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. It was just this Kantian assumption that there was such a context, and that epistemology or semantics could discover it, against which James and Dewey reacted. We need to focus on this reaction if we are to recapture a proper sense of their importance.[195]

Rorty argues that a key aspect of Dewey's philosophical writings is his philosophical skepticism, his doubt about the quest for philosophical and scientific certainty. Dewey was skeptical of philosophy's claim to be the mode of inquiry whose sole concern was formulating the "ultimate foundations" of thought. Dewey rejected the idea that an ultimate context for thought even exists.

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[195] Rorty (1982, 161).

Dewey was severely critical of Kant's spectator theory of knowledge. He rejected the idea that the process of philosophical inquiry held special status above other processes in society. Opposed to this view of philosophy, Dewey offers that philosophy takes place within, and is a significant constituent aspect of, all the other processes in society. The function of philosophy was inquiry into the problems and questions facing contemporary society. Because the starting point for the process of inquiry was a specific problem faced by a specific community, Dewey posed this "public" view of philosophical inquiry over against the narrow, erudite endeavors of a few ivory tower academics.

Arguing against the modernist view that the goal of philosophical inquiry is to discover and/or develop "nature's own vocabulary" by searching for essential, certain knowledge, Rorty claims that Dewey, especially in his later writings, recognized that it was not possible to ground knowledge, and that much time was wasted as a result of trying to find certain foundations for knowledge. So, Dewey abandoned the quest for certainty. He recognized that the spectator theory of knowledge was structured around a set of erroneous assumptions concerning the existence of a world outside human language which was graspable if the "correct" language could be found.

Dewey's doubt about the quest for certainty reflects the influence of Hegel on his thought. It was Hegel who argued that "we are necessarily confined to one side of the dichotomy" between being-for-consciousness and being-in-itself. Hegel argued that there is not being-in-itself which is knowable apart from being-for-consciousness. The only side of the dichotomy that is knowable in human experience, Hegel maintained, is the side of being-for-consciousness. The knowledg of being-in-itself produced by human inquiry became the phenomenon of human investigation. That is, human knowledge of being-in-itself is itself a phenomenon of human investigation. In fact, it *is* the object of investigation for those processes of inquiry which *claim* to be investigations into being-in-itself.

In Hegel's understanding of epistemology-centered philosophy, the phenomenon of human investigation constitutes human knowledge of reality. There is not reality apart

from that knowledge: one can only know the economy as it appears to him/her, and can never compare personal awareness with the economy itself. Hegel's point is that it is impossible to abstract knowledge from the context of its production. Being-in-itself does not occur prior to being-for-consciousness. Since Dewey believed that knowledge was an overdetermined element of human experience, he argued, following Hegel, that knowledge and the knowledge process could not be separated from human experience. In short, Dewey expressed a "postmodern" doubt about the fundamental epistemology-centered nature of cognitive modernist thought.

In contrast to epistemology-centered or modernist discourse, Dewey advocated a role for philosophy in which effective action and active engagement in the life of the community served as the proper context for philosophical inquiry. According to Rorty, Dewey believed that traditional western philosophy wrongly based its arguments on philosophical and historical necessity, on the idea that the criteria for progress in philosophy include finding "objective, verifiable, and clearly communicable solutions" to "deep" philosophical questions about the essential nature of human existence. Rorty's Dewey rejects this epistemology-centered philosophy, favoring instead the view that it is not possible to make philosophy a foundational discipline.

To stress the maturity of Dewey's embrace of an antifoundationalist approach to philosophy, Rorty offers three "sloganistic characterizations" of the main thrust of postmodern Deweyan pragmatism. Together these features form a sharp contrast to both modernist versions of Deweyan pragmatism discussed in previous chapters. They place the emphasis of the process of inquiry on the *consequences* of word pictures or theories. Instead of asking, "Is it true that reductions in increases in the money supply would cause an increase in prices?" Rorty's postmodern Dewey would ask, "What would it be like to believe a statement like that?, or, What are the consequences of believing that instead of something else?" If it is "useful" (where usefulness is determined within the respective discourse), and the "uses" are clearly specified, to believe in that there is a direct

relationship between the money supply and the price level, then that is the only criterion of its "truth." Above all, it is *not* true because it is the linguistic expression of an abstract principle or economic "law."

First, pragmatism is "antiessentialism applied to notions like 'truth,' 'knowledge,' 'language,' 'morality,' and similar objects of philosophical theorizing." Antiessentialism applied to such notions opens inquiry to the activity of doing and demotes the activity of deciding whether a picture is true or false. The stress is placed on usefulness and the consequences of usefulness. Rorty argues that Dewey regarded that concepts like truth, knowledge, etc., were not "the sort of things which have an essence."

Rorty's second sloganistic characterization of Deweyan pragmatism is that "there is no epistemological difference between truth about what ought to be and truth about what is, nor any metaphysical difference between facts and values, nor any methodological difference between morality and science." Here is Rorty's direct rejection of the Kantian spectator theory of knowledge and the associated hierarchy of forms of knowledge. Abstract thought is not a higher form of knowledge than normal decision-making.

The third and final characterization is expressed as the doctrine that "there are no constraints on inquiry save conversational ones—no wholesale constraints derived from the nature of the objects, or of the mind, or of language, but only those retail constraints provided by the remarks of fellow-inquirers." In Rorty's characterization there are no pre-set limits or rules for the process of inquiry, except those rules that facilitate the conversation. Thinking and conversing with rules that go beyond conversational constraints represent an attempt to become a "properly programmed machine." But a postmodern Deweyan pragmatism suggests that we are better off if we live without the "metaphysical comfort" of guidance from rules. The exciting aspect of letting go of metaphysical hope is that "our identification with our community—our society, our political tradition, our intellectual heritage—is heightened when we see this community as ours rather than nature's, shaped rather than found, one among many which men have made. In the end,

the pragmatists tell us, what matters is our loyalty to other human beings clinging together against the dark, not our hope of getting things right....James...reminds us that our glory is in our participation in fallible and transitory human projects, not in our obedience to permanent nonhuman constraints.

These three characterizations of pragmatism offer a sense of the post-analytic sensibility that was part of Dewey's thought. Although Dewey was a modern philosopher in many ways—he devoted much of his energy trying to find a naturalist philosophy of science which would enable the scientific method to be applied very broadly—this tension or postmodern moment continues to inform his writings. It would be unfair and incorrect to argue that a postmodern reading of Deweyan pragmatism was the correct interpretation of Dewey, just as it would be unfair and incorrect to make such a claim for any particular reading. Not because all readings are equally true. They aren't. But all readings are partial, and in articulating a postmodern reading of Deweyan pragmatism, I am emphasizing the partiality of Dewey's antifoundationalism. All knowledge claims, including this one, make such judgments on the basis of a variety of biases and interests. I respect the difference a different emphasis produces for Deweyan pragmatism. The appeal of my bias consists in the possibilities that follow from attempting to think without foundations. Rorty writes,

> [James and Dewey]...asked us to liberate our new civilization by giving up the notion of "grounding" our culture, our moral lives, our politics, our religious beliefs, upon "philosophical bases." They asked us to give up the neurotic Cartesian quest for certainty which had been one result of Galileo's frightening new cosmology, the quest for "enduring spiritual values" which had been one reaction to Darwin, and the aspiration of academic philosophy to form a tribunal of pure reason which had been the neo-Kantian response to Hegelian historicism. They asked us to think of the Kantian project of grounding thought or culture in a permanent ahistorical matrix as *reactionary*.[196]

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196 Rorty (1982, 161).

Dewey shares the same concern to break away from the need to ground knowledge either through the fiction of naturalism or through the certainty of statistical regularity. He writes,

> Any philosophy that in its quest for certainty ignores the reality of the uncertain in the ongoing processes of nature denies the conditions out of which it arises. The attempt to include all that is doubtful within the fixed grasp of that which is theoretically certain is committed to insincerity and evasion, and in consequence will have the stigmata of internal contradiction. Every such philosophy is marked at some point by a division of its subject-matter into the truly real and the merely apparent, a subject and an object, a physical and a mental an ideal and an actual, that have nothing to do with one another, save in some mode which is so mysterious as to create an insoluble problem.[197]

This skepticism toward the tradition of seeking certain philosophical foundations (chiefly through science) is an everpresent, yet often overlooked, thread that runs throughout Dewey's philosophical writings. Deweyan pragmatism stands against, not within, the classical, epistemology-centered tradition of philosophy. Taking seriously Dewey's skepticism toward the quest for certainty suggests that one difference between modern and postmodern versions of Deweyan pragmatism is that modern versions are, by definition, conservative. Despite the rhetoric of revolution in "rethinking power relations in society," or the rhetoric of the"revolutionary role of the market in ordering and stablilizing society," Veblenian and Friedmanian economics may be viewed as conservative in that they both seek to preserve a foundation for knowledge and social policy. An important consequence of the conservativism of Veblen's and Friedman's modernism is that their readings of Deweyan pragmatism distort and repress the "reality of the uncertain" in Dewey's work. By stressing Darwinian scientism and Newtonian naturalism in Dewey's writings, Veblen and Friedman produce a version of Deweyan pragmatism which stands in contradiction with Dewey's stated skepticism!

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197 Dewey (1929, 244).

The philosophical skepticism of Rorty's Dewey has two important implications for an understanding of postmodernism in Deweyan pragmatism. First, the inability to find transdiscursive grounds for determining the ultimate truth of any claim implies that all theorizing and picturing about the world is "theory-laden," or contextual. Rorty's Dewey relativizes the process of picturing the world. *Who* pictures? and *Why*? and *How*? all become coordinates of the "position" of an idea or theory. Theories don't exist in objective, value-free space, awaiting discovery through empirical techniques. Hence, postmodern Deweyan pragmatism, in turning away from the classical philosophical mode, drops all realist appeals to "the world out there as a final court of appeal. West (1985) writes,

> We cannot isolate "the world" from theories of the world, then compare these theories of the world with a theory-free world. We cannot compare theories with anything that is not a product of another theory. So any talk about "the world" is relative to the theories available.[198]

In resisting the temptation to claim that neutral, objective, unchanging, and formal truth claims have a transdiscursive foundation in Nature, West and Rorty have demonstrated the importance and pervasiveness of "uncertainty" in Dewey's pragmatic philosophy. Uncertainty in Deweyan pragmatism is a form of radical doubt about universalist, value-free truth claims. It calls into question the foundationalist, essentialist philosophical tradition in which cognitive modernism is inscribed. In Rorty and West, empiricist arguments like the ones put forward by Veblen and Friedman are revealed to be incapable of proving the universality of the truth of the objective economy. Not only is having knowledge of an "objective" economy impossible, but demonstrating that that knowledge is universal is, too, impossible. The cognitive modernist tradition in economics cannot be realized by appealing to Deweyan pragmatism as a foundation for a theory of society.

The epistemological essentialism of the cognitive modernist tradition compromises that tradition with the effect that the modernist project of remaking the world in the image

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198 West (1985, 264).

of (disinterested) Nature cannot be completed. Continued efforts to complete the project only give a false sense of security (and, for postmodern Deweyans, amount to a waste of time) against the uncertainty that looms just beneath the modernist veneer of certainty. McCloskey (1988) puts the point succinctly,

> While having a culture-bound conversation about whether knowledge is culture bound, they insist that conversation is not culture bound. They think they can assume an Archimedean point with which to lever the world of conversation. They do not want rhetoric, but rules of perfect knowledge for all time. They are not discouraged by the failure of 2,500 years of the epistemological conversation to find a single one.[199]

A postmodern version of Dewey's pragmatism is in conflict with the basic structure of modernist theories of society. Thought about the world is not separate from the world itself. Being-for-consciousness (thought concretes) shapes and is shaped by being-in-itself (concrete real). Dewey (1920) again expressed his frustration with epistemology-centered philosophy's subject/object split:

> Modern philosophic thought has been so preoccupied with these puzzles of epistemology...that many students are at a loss to know what would be left for philosophy if there were removed both the metaphysical task of distinguishing between noumenal and phenomenal worlds and the epistemological task of telling how a separate subject can know an independent object. But would not the elimination of these traditional problems permit philosophy to devote itself to a more fruitful and more needed task? Would it not encourage philosophy to face the great social and moral defects and troubles from which humanity suffers, to concentrate its attention upon clearing up the causes and exact nature of these evils and upon developing a clear idea of better social possibilities...?[200]

Dewey's insistence that philosophy be engaged in the world of human experience, that it be fueled by human *doing*, is a hallmark of his postmodern pragmatism. He viewed "vain metaphysics" and "idle epistemology" as an improper province for philosophy. He sought to transform philosophy away from its contemplative mode. His insistence that philosophy be engaged in the world meant that the content of philosophy was to be shaped

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199 McCloskey (1988, 252).
200 Dewey ([1920] 1957, 123-4).

by the world it shaped. Such a view of the role of philosophy is similar to the theoretical apporach of Veblen. Dewey and Veblen lived in the same period of American history. The modernism of Veblen's Dewey exists in tension, however, with the postmodern elements of this third version of Deweyan pragmatism. A postmodern Deweyan pragmatism would say, in regard Veblen, not that the evolutionary economic approach to modern, scientific knowledge is true because Darwinian science is true. Rather, Veblen would be understood to regard the evolutionary approach to be valued because of its implications, its usefulness.

A postmodern Deweyan pragmatism would include the argument that Veblen found a power-centered analysis useful for purposes of porducing a knowledge of the economy he saw. Power may have been a "strategic essence," but preferably, power was one aspect of a rapidly developing economy. In this sense, power is not an essence at all. It is a self-consciouly chosen "entry point" into an analysis of society. Veblenian Institutionalism produces a power analysis of society because that is its bias, not because power is, transdiscursively, the truth of the economic and social organism. In a postmodern approach to Dewey, the only possibility for theory is fragmented theory, localized theory, which produces fragmented, localized truths.

The postmodern Dewey anticipates, through his Hegelianism perhaps, the logic of overdetermination which informs antiessentialist Marxism. In his Imperial Lectures (Tokyo, Japan) in 1919, Dewey commented on the "disastrous" consequences of essentialist—as opposed to overdeterminist—philosophy:

> Indeed, it is incredible that the question of the relation of the "real" to the "ideal" should ever have been thought to be a problem belonging distinctively to philosophy. The very fact that this most serious of all human issues has been taken possession of by philosophy is only another proof of the disasters that follow in the wake of regarding knowledge and intellect as something self-sufficient. ...Yet the most obvious conclusion would seem to be the impotency and the harmfulness of any and every ideal that is proclaimed wholesale and in the abstract, that is, as something in itself apart from the detailed concrete existences whose moving possibilities it embodies...Philosophy, let it be repeated, cannot "solve" the problem of the relation of the ideal and the real. That is the standing problem of life. But it can at least lighten the burden of humanity in dealing with the problem by

> emancipating mankind from the errors which philosophy has itself fostered—the existence of conditions which are real apart from their movement into something new and different, and the existence of ideals, spirit and reason independent of the possibilities of the material and physical. For as long as humanity is committed to this radically false bias, it will walk forward with blinded eyes and bound limbs.[201]

Dewey did not find epistemological essentialism a trivial issue for the social sciences. The distinction between philosophical and nonphilosophical matters were not maintained in Dewey's "reconstruction" of philosophy.

A second implication of a postmodern Deweyan pragmatism, rooted in Dewey's philosophical skepticism, is a rejection of the ontological priority of "intuitive" or "prelinguistic" understanding. A postmodern Deweyan pragmatism refuses to privilege representations or pictures of the world that are based on propositions which are "innately or inherently" true. Axioms of human nature do not constitute an infallible authority for rational understanding. The certainty of Friedman's vision of the world, for example, neglects the meaning of uncertainty in Dewey's philosophy. To argue, therefore, that Dewey's philosophy is a basis for that worldview is to propose a truncated, partial understanding of Dewey. Friedman's modernist version of Deweyan pragmatism contradicts the postmodern moments in Dewey.

A postmodern Deweyan pragmatism runs counter to Friedman's version of Deweyan pragmatism. It runs counter to Friedman's modernist view of the world, too. As Maki and McCloskey have suggested, Friedman's preference for the Marshallian system or picture of the world is based more on his "love" for that particular vision, than on a version of Deweyan pragmatism which necessitates belief. For Friedman to embrace a postmodern version of Deweyan pragmatism, then, is for him to relinquish the certainty and intellectual comfort his particular worldview provides. Modernism in economics may be a "poor method," but it also allows Friedman to promote a vision of the world in which

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201 Dewey ([1920] 1957, 128-30).

the free market is the essential organizing mechanism.[202] It allows Friedman to believe in a world in which expression of the essence of human nature, through free markets, produces the ideal outcome. The quality of automaticity or inevitability in Friedman's view of the world—e. g., pursuit of individual self-interest *causes* social harmony—is undermined by a postmodern Deweyan pragmatism which "thinks without foundations." Also, the demonization of government as that which works against human freedom is shown to be "true" by virtue of its aesthetic appeal, not by natural law.

For the powerful picture of the world theorized by Friedman to be true by virtue of its appeal—and not by virtue of a rigorous scientific proof—contradicts the modernist claims put forward by Friedman and his disciples. Postmodern Deweyan pragmatism, because of the prominence of the role of uncertainty, rejects the "religiosity of absolutes" like Friedman's. Predictive adequacy—which fails to prove absolutely, yet does "falsify" on occasion—requires, as a final step, religious faith in the authority of modernist science. A postmodern Deweyan pragmatism delimits this faith, preventing Friedman's vision of the world from attaining transcendent truth on the authority of science alone. Hence, in addition to rejecting empiricist claims to truthful knowledge, a postmodern Deweyan pragmatism also rejects rationalist claims to truthful knowledge. A postmodern Deweyan pragmatism demotes without devaluing, and as a consequence permits a variety of conditions of existence to have "strategic" importance. This strategic importance implies that all knowledge products have subjective conditions of existence which overdetermine the insights and consequences the follow.[203]

This discussion of a postmodern Deweyan pragmatism provides an alternative to the cognitive modernism of epistemology-centered philosophy. In the next and final section, I look at parallel developments in the Marxist tradition to see the affinities between classical Marxism and mainstream or bourgeois economics.

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202 McCloskey (1985, chapter 1).
203 See West (1989, chapter 3).

C. Antiessentialist Marxism and Pragmatism: Overdetermination as Method

> For Lenin, Marxian science offered its particular truth against the other alternatives, building this truth around its set of most basic concepts, including a particular concept of knowledge, a particular concept of classes, and a particular concept of the social totality (Resnick and Wolff 1982, 54-5).

> For Dewey the task of a scientific philosophy is not confined to the formulation of a consistent system of the entities disclosed in sense-awareness. Nor is it limited to the analysis of the linguistic expressions that constitute science condisered as a body of ordered knowledge. For Dewey, science is ultimately a conscious and reflective method of guiding the process of changing beliefs, of using the digested lessons of past experience to clarify and learn from fresh inquiry...Philosophy is basically a phenomenon of human culture. Its very nature is the role it has played in the history of civilization (Randall 1977, 310-11).

In this section I discuss parallel developments in another tradition in political economy. The postmodern, antifoundationalist, Deweyan pragmatism of Rorty shares affinities with the postmodern, antiessentialist, Althusserian Marxism of Resnick and Wolff. Like bourgeois classical economics, the Marxist tradition has been plagued by an internal struggle over the cognitive modernist problem of knowledge. That struggle, I argue, has relevance for the problem of epistemology-centered modernism of mainstream economics (e. g., of Friedman and Veblen).

Why is the struggle within the Marxian tradition relevant for the modernist problem faced by non-Marxian economics? Because Althusser's epistemological critique of Marx's dialectic anticipates theoretical postmodernism, or "thinking without absolutes." Parallel to Rorty's version of Deweyan pragmatism, Althusser's Marx abandons the "religiosity of absolutes"; abandons the quest for certain knowledge of the world. The Althusserian Marxist rejection of the hunt for absolute causes of social development, and the related Althusserian Marxist rejection of the hunt for absolute foundations for knowledge, parallels similar rejections—my postmodern Deweyan pragmatism as an alternative to the modernist pragmatisms of Veblen and Friedman—in mainstream economic modernism. Since "thinking without foundations," without essentialist or foundationalist approaches in

theories of knowledge and theories of society, seems "intolerable" to most mainstream economists, the struggle in the Marxian tradition serves as a useful example of how theoretical research can be proceed from an antiessentialist standpoint.[204] It also strengthens the critique of modernism in economics by showing the religiosity of economic science.

There are several observations to be made as a way of showing the affinity between an antiessentialist Marxism and an antifoundationalist Deweyan pragmatism. First, the postmodernism or antiessentialism of the Marxism of Resnick and Wolff is based on an Althusserian epistemological standpoint. Althusser's epistemological critique and alternative to traditional epistemologies constitute the most radical element of antiessentialist Marxism because they are radically different from traditional, modernist approaches to the relationship between subject and object. According to Althusser, the totality of the social world is constituted as a "process without a subject," meaning that there is a "mutually effective interplay between thinking and being in which neither is the subject, origin, or independent cause of the other."[205] For Resnick and Wolff, this reconceptualization by Althusser define's the Marxist concept of history. They write,

> That concept begins from a notion not unlike Gramsci's concept of the "ensemble of relations. Althusser develops it further to arrive at a definition of the social totality as a complex structure of entities variously referred to as processes, aspects, instances, levels, moments, and so forth...Althusser [understood] this structure as one in which all the entities participate in the overdetermination of each, its contradictions and its dynamic...History is rather seen as the ceaseless interplay or mutual effectivity of aspects or instances. It is a process without a subject.[206]

The epistemological posture of Althusserian Marxism rejects any essentialist reading of Marx's dialectic. "There is no subject of which the social totality is the predicate: no essence and no origin" (67). In Althusser's understanding of Marx's dialectic, Marx rejected essentialist theories of society and essentialist theories of knowledge. Instead of an

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204 Resnick and Wolff (1988, 48).
205 Resnick and Wolff (1988, 67).
206 Resnick and Wolff (1988, 67).

essentialist approach, Althusser approach theories of knowledge and of society through the logic of overdetermination and contradiction.

Overdetermination and contradiction is the logic for a Marxist understanding of social and knowledge theory. Overdetermnation "transforms the idea of causality" (Resnick and Wolff 1988, 53). Any event or moment or instance in society is "caused" by innumerable influences, making it impossible to isolate the one, essentiali cause. Contradiction is the "other side" of overdetermination. Also an important element of Althusserian Marxism's epistemoiogical standpoint, contradiction

> emphasized the necessary complexity of all contradictions as against notions which hold contradiction to be a matter of dualistic opposition. Since each distinct soical process is the site constituted by the interactio of all the other social processes, it contains "within itself" the very different and conflicting qualities, influences, moments, directions of all those other social processes that constitued it. In this sense, argues Althusser, each social process is the site of the complex contradictoriness inseparable from its overdetermination. Each social process exists...only as a particular, unique concentration of contradictions in its environment.[207]

In this approach to the relation between thinking and being, thinking is a process among many other processes. The thinking process is overdetermined by many other processes which influence and contradict it. But, importantly, the thinking process cannot be separated from those other processes and its product—knowledge—analyzed in isolation from those other processes. What is thought, and how, is overdetermined by where thinking takes place, what other activities are taking place at the same time, and so on. No single factor can be isolated the most important determinant in the thinking process, as though that process can be understood for once and for all by capturing its essence.

Resnick and Wolff (1988, 61) view the rejection of essentialism in favor of overdetermination as a move which allows them also to commit to a "democracy of theoretical differences." In addition to rejecting the quest for certainty—in short, rejecting essentialism or foundationalism in favor of antiessentialism or antifoundationalism—a

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207 Resnick and Wolff (1988, 65).

democracy of theoretical differences accomplishes the task of demoting without devaluing particular theories, it stresses the differences between different theories of knowledge and of society, and it acknowledges that partiality of all knowledges of knowledge and of society. Consequently, a democracy of theoretical differences follows the logic of overdetermination, which leads to the view of "every theory as a story about the nature of society—never complete, never more or less true than other stories, merely different from them."

Nonetheless, essentialist thinking is difficult to overcome. Overdeterminist thinking has little appeal when compared to essentialist thinking for several reasons. The primary reason for a favorable attitude toward essentialist approaches to theories of society and of knowledge, Resnick and Wolff argue, is that

> we are all products in part of the historic influence of religions that proclaim the existence and power of absolutes. Science and the language of mathematics have become the new religion and its holy script. They give subtle aid and comfort to those who discount the "old" deities while they rush to discover godlike essences in social theory and in knowledge theory. To ask individuals to give up their beliefs in absolutes and in specific methods/rituals that capture such absolutes has always been one of the most dramatic, difficult, and personal requests that can be made of them.[208]

Given the deep historical roots of essentialist thinking, in bourgeois as well as Marxist economics, the resistance to rethinking cognitive modernism is not hard to understand. Reviewing the received (modernist) tradition within Marxism helps to illustrate the revolutionary quality of Althusser's Marx and of the postmodern moments in Deweyan pragmatism. What exactly does Althusserian Marxism react against?

In the history of the Marxist tradition, cognitive modernism has enjoyed the status of convention. Most Marxists have understood society as ultimately, or in the last instance, determined by a basic "mode of production." The mode of production is the basic combination of forces and relations of production which constitute the "totality" of society.

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208 Resnick and Wolff (1988, 61).

An economic base—capitalist, slave, feudal, communist—consists of a combination of forces and relations of production. A superstructure exists as a set of institutions which are produced by, and reproduce, the economic base. For example, a capitalist mode of production would "require" a certain level of sophistication of the forces of production (a ceratin level of technology) and a certain set of relations of production (namely, class relations). Together, these forces and relations of production constitute an economic base which, in turn, gives rise to a set of superstructural elements. The superstructure consists of the set of laws (private property), beliefs (individual freedom), institutions (schools and curriculums, language), and other cultural practices (e. g., nationalism) which reproduce the base.

The central relation of production in traditional Marxism's understanding of capitalism is the class relation, or class struggle. The struggle over the surplus product between the producers and owners of the surplus product (or surplus value) constitutes the most important social relation in society. The stability or destruction of capitalism depends on this struggle. Owners of the surplus exploit workers by extracting as much of the surplus as possible from them. Producers of the surplus resist being exploited by various means. The status of the surplus is measured scientifically by tracking "rates of exploitation," rising and falling "rates of profit," and other indeces of class conflict. The singular truth of the capitalist world is given by these empirical estimates of class struggle or conflict.

This traditional approach in Marxism has been characterized by an essentialist logic of deductionism. That is, the determining, primary, or sole causal force in society has been viewed, either immediately or in the last instance, as "the economic base," or "the class struggle." Relying on an essentialist logic, determinist Marxism has reduced all events to this single cause. Known as economic determinism, this traditional approach has "explained" events in society as the consequence of the economic mode of production, or as the consequence of the workers' class struggle against capital. Racism, sexism, class

exploitation all have the appearance of autonomy, but in actuality are epiphenomenal reflections of the basic economic relation between workers and capital. A traditional Marxist analysis of sexism in a capitalist society would proceed to reduce gender attitudes and practices to class relations. So that patriarchy is a form of false consciousness which facilitates (in a unidirectional way) the exploitation of workers, especially when patriarchy is practiced by exploited workers. The moral: If a revolutionary working class can "overthrow" the capitalist class (in the class struggle), then superstructural "social ills" like racism will disappear.

The logic of deductionism gives the economic base a primary role. It leaves a secondary role for all other aspects of society. In this respect, the logic of deductionism in Marxism parallels the essentialism of Friedman's neoclassical theory. Whereas deductiionist Marxists explain economic events as caused by the economic mode of production, Friedman's neoclassicism explains economic events as caused by human nature. Individual endowments, abilities, and preferences "produce" society in Friedman's worldview. For Friedman, the arrow of causality runs in one direction. Human nature creates society. Or, all events in society can be analyzed and reduced to, as a first cause, individual human choice.

Likewise, in Veblen's American Institutionalism all economic events are explained by reference to the power struggle in society. Institutions and institutional relations are produced by, and as a consequence of, the power struggle. The production, appropriation, and distribution of power constitutes the primary process in society. All other processes result from it. Or, as is also argued in Veblenian Institutionalism, human beings are constituted by the institutions in society. Institutions are given as the necessary form of "civilization." But, between institutions and human beings, the arrow of causality runs in one direction: Institutions create individuals.

The distinctiveness of essentialist epistemologies is that they allow adherents to believe that they have harnessed the essential causes of human events in a way that allows

for control over human events. This is why it is so tempting to think with foundations. It tempts adherents to "celebrate" the "facts of history" or the "laws of the universe," or the timeless attributes of "human nature." Grasping the essence of society allows the feeling that order, centeredness, and certainty are dominant over disorder, decenteredness, and uncertainty. Truth is not approximate. It is absolute.

According to Resnick and Wolff, the tyranny of the absolute is an alien presence in Marxism. As such a presence, it has had negative consequences in the historical tradition of Marxism. A major consequence of this alien presence, the reliance of Marxists on non-Marxian epistemology, is cognitive modernism. Marxists, too, have sought to resolve the dilemma of epistemology by finding the "correct" interpretation of history's logic, or by finding the ultimate scientific grounds for knowledge claims.

Like Deweyan pragmatism in mainstream economics, many essentialist Marxist dialectics are offered as recipes for determining the ultimate truth of Marxism. The dilemma in the Marxist tradition, according to Althusser, was the dominant reading of Marxism as an economism and, within that economism, as a form of economic determinism. The failure of some of that tradition to resolve the dilemma centered on the epistemological problem of modernist Marxism.

The postmodernism of Dewey and of Marx similarly reject the essentialist tradition. The antiessentialism of Marx, however, more courageously confronts the need to think without foundations. Whereas Dewey remained devoted to science, Marxists in the Althusserian tradition successfully demote science to the status of other knowledge forms. By reformulating the process of inquiry to one where an entry point defines the particular bias or difference or partiality of one theory, the Althusserian Marxism of Resnick and Wolff achieves a postmodern form of economic (class) knowledge of society. That knowledge does not present itself as the one and only truth of society, or even of Marxism. It presents itself as one truth among many others.

How to choose theory? In a postmodern approach in which thinking is done without foundations, preference for theory depends on the consequences or implications of the theory. There is still, in other words, a criterion for differentiating (and even ranking) theories. The difference is that the modernist veil of objectivity is removed and the preference for one theory over another is based clearly on the love one has for its vision. Picturing proceeds. But we do it without maps.

AFTERWORD: BEGINNING AGAIN

In the remainder of this section I would like to offer reasons why I think this project is important, reasons why I think it matters that economists critique the epistemological essentialism of cognitive modernist economic theory. In short, I want to talk explicitly about my strategic, "intentional production of meaning." Initially I was not interested in the role of Deweyan pragmatism in economics. It was only after I delved into an investigation of Friedman's economics, and after numerous consultations with my thesis chair, that I realized the pragmatic value of focusing on Dewey's philosophy, and doing so in the context of an exploration of modernist social science. Throughout the early stages of trying to find a thesis, I was mostly interested in two topics: the methodology of the social sciences and the religious origins of economic ideas. My interest in both topics is rooted in lifelong personal experiences, two of which bear review. First, the experience of being a racialized subject in twentieth century United States. Second, the opening up of intellectual possibility produced by the critique of economic determinism offered by Resnick and Wolff (1982).

Descended from slaves, I discovered early in childhood what my skin color meant to whitepeople. My DuBoisian "awakening" into the veiled life of double-consciousness produced dual "citizenship" for me: I was unquestionably a modern American, yet I was also, equally indisputable, a nigger—the antithesis of a modern American. What my raced, classed, and gendered subjectivity meant in terms of my everyday life, my routine encounters in white America, resonates with the overtones, passions, and rhythms that James Baldwin has described so well in his critical essays. I was forced to live—to perform—roles and wear masks which had very little to do with my emerging sense of

what it meant to be alive. Yet, those performances constituted, in a very basic sense, the totality of my emerging sense of what it meant to be alive.

In retrospect, DuBoisian double-consciousness, the necessity of seeing myself for myself *and* for others, produced in me a lingering question: What did white people think they were doing when I thought they were being racist? That inchoate sense of wonder at the personal and group bigotry and inequality that were inescapable for me led me to consider the "origins" of racist and racialist thought. As my understanding of the production of racialism increased, I began to see that its sources in the religious (Judeo-Christian) and scientific thought of Europeans contributed to racism's *reasonableness*. The logic of white supremacy, the value of whiteness, was justified on the scientific and religious grounds of the supposed moral and biological superiority of white-skinned people. Hence, the question was not so much what did they think they were doing. Rather, the question was, Why was I less than human? What was wrong with me?

The Civil Rights movement, with its social changes, group therapies and ideologies, and moral lessons filtering out of black churches (and those institutions *were* invaluable to my education during my first two decades), changed the focus of my quest and inspired me to pursue a passion I discovered as a child. That passion was the world of ideas, the imaginal power of the word. I decided to pursue a career based upon my love for books and ideas. An important lesson of the Civil Rights movement that shaped the direction of my intellectual development is the turn, toward the end of his life, Martin Luther King Jr. took toward an analysis of "class" or economic inequality in America. After 1963, King believed that economic justice, as much if not more than racial justice, was a precondition for blacks' full participation in American democracy. This lesson became King's legacy to me: my way of honoring his sacrifices was to extend the movement's focus on economic inequality, to add it to a sophisticated understanding of race and racism in America. This became especially true when King's life was ended

months before the "poor people's march" on Washington, which was slated for August 1968.

My interest in economics is rooted in the desire to understand economic inequality, economic behavior, and economic change as they relate to the experience of black people in the United States. In economics, I discovered the "theoretical ideology" known as neoclassical economic theory. I discovered the work—the vision, really—of Milton Friedman. It was Friedman who argued in 1962 that American capitalism was fundamental to human freedom. It was Friedman who argued that racial discrimination would be eradicated through the competitive forces of the free market. It was Friedman who argued that the there was a basic compatibility between individual choice and larger economic forces. It was Friedman who preached the magic of the free market, the importance of individual merit and choice, and the non-necessity of government.

It was also Friedman who articulated a picture of the world that I recognized as the same picture DuBois spoke about. That is, when Friedman wrote about the benefits of free-market capitalism, he was describing a world DuBois had described earlier as being on the "other" side of the veil. Friedman and DuBois wrote about the world of whitefolk. But, and here was the powerful (and stunningly naive) part of Friedman's articulation: race, like the millions of former slaves who lived in the United States, was invisible. Once I recognized this, I thought I understood better how to pose my initial question. It was not what did whitefolk think they were doing when I thought they were being racist. Rather, the question was, How can I render my invisibility in a world that, by its very constitution, cannot "see" me?

This is the first source of my focus on the epistemological problem of cognitive modernism. The lesson of race and invisibility is that pictures are powerful. Their insights and oversights have lasting consequences in seemingly unrelated ways and unrelated contexts. Because of the black experience of invisibility, being black and being American

seemed to be "two thoughts, two unreconciled strivings, two warring ideals."[209] The price of visibility seemed to be blackness and, of course, the price of blackness seemed to be invisibility. There seemed to be no conceptual space in Friedman's America for "black" people. Only Americans inhabited that world. Yet, "being" American meant fundamentally that one was not black, that one was, proudly, white. Whiteness is the color that does not name itself, the color that is normalized, unspoken. Its invisibility is conditioned not by its insiginificance and undesirability, but by its omnipresence in American culture.

Interrogating black invisiblility eventually led to my curiosity about picturing as a form of knowledge. Conflicting utopian images seemed to lie at the heart of the problem of the color line. I believed that if a way was found to point out the differences between the pictures, a solution to the problem of the color line would emerge. This particular interest in picturing as a form of knowledge led to a more general interest in the ways in which imagined worlds depended on *who* imagined them. DuBois and Friedman helped me to see that the America inhabited by whitefolk was different from, and in many respects alien to, the world I inhabited. Ellison makes the point very powerfully:

> Perhaps the most insidious and least understood form of segregation is that of the word. And by this I mean the word in all its complex formulations, from the proverb to the novel and stage play, the word with all its subtle power to suggest and foreshadow overt action while magically disguising the moral consequences of that action and providing it with symbolic and psychological justification. For if the word has the potency to revive and make us free, it has also the power to blind, imprison, and destroy.
>
> The experiences of Negroes—slavery, the grueling and continuing fight for full citizenship since Emancipation, the stigma of color, the enforced alienation which constantly knifes into our natural identification with our country—have not been that of white Americans. And though as passionate believers in democracy Negroes identify themselves with the broader American ideals, their sense of reality springs, in part, from an American experience which most white men not only have not had, but one with which they are reluctant to identify themselves even when presented in forms of the imagination. Thus when the white American, holding up most twentieth-century fiction, says, "This is American reality," the Negro tends

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209 DuBois ([1903] [1990, 8).

> to answer, "Perhaps, but you've left out this, and this, and this. And most of all, what you'd have the world accept as *me* isn't even human.[210]

These remarks by Ellison were published in an essay titled, "Twentieth-Century Fiction and the Black Mask of Humanity." The essay was published in the same year (1953) that Friedman published his essay, "The Methodology of Positive Economics." Both essays examine the contours and means by which *justification* is provided for the dominance of one word picture over another. As I pursued my interest in picturing as a form of knowledge, I came upon the second source: the Marxist epistemological critique of economic determinism.

Believing that pictures were powerful, I began to think about economic theory as a form of picturing. Viewing theory in this way helped me to see the subject of theory a little more clearly than before. This point was underscored in the antiessentialist Marxist epistemology of Resnick and Wolff (1982). More profoundly than Ellison, Resnick and Wolff maintained that truth was relative, that truth depended on its relative conditions of existence. They write:

> For Lenin, Marxian science offered its particular truth against the other alternatives, building this truth around its set of most basic concepts, including a particular concept of knowledge, a particular concept of classes, and a particular concept of the social totality.[211]

Rethinking Marxism in this way, Resnick and Wolff offered a way out of the divergent worlds of Friedman and Ellison. The problem with Friedman's world was not that it was too white or insufficiently black. Nor was the solution a combined world of white and black Americans. The problem was a problem of knowledge, a problem with the manner of thinking about race. It was an epistemological problem. As Resnick and Wolff argued concerning the consequences of importing "bourgeois epistemology" into Marxian analysis of class, a similar argument could be made concerning the ways in which

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210 Ellison (1953, 42-3).
211 Resnick and Wolff (1982, 54-5).

bourgeois epistemology cripples analyses of race. Rather than battling over whether Ellison's essence or Friedman's essence was the correct one, an antiessentialist epistemology rejects the very notion of a single truth, a single method.

This study of the epistemological problem of cognitive modernism, with its focus on essentialist readings of Deweyan pragmatism, is important because it carefully illustrates the general problem of thinking with absolutes. It challenges social critics to imagine the world without foundations. As Resnick and Wolff critiqued the modernism of classical marxism, my investigation into the essentialist Deweyan pragmatism of the theories of Veblen and Friedman is a critique of the modernism of bourgeois economics. In modernist worlds the gods of Science and Religion *order* the world. Either God or Science defines the world. In a postmodern world, there are no gods. There is no God. There is no Science. Instead, there are worlds produced and reproduced by diferent human experiences.

A postmodern critique of the essentialist epistemological problem of cognitive modernism is important because it shifts our focus away from the quest for certain foundations for knowledge, toward an appreciation for the plurality and diversity of knowledges. The antiessentialism of Deweyan pragmatism offers a more radical reading of Dewey's work than the ones offered by Friedman's and Veblen's methodologies. Rather than look for scientific knowledge products that "mirror" nature, in postmodernism knowledge is a consequence of a complex of processes which are overdetermined by one another. Thinking in this way offers a means of explaining the tension between significative racial worlds. It also offers creative possibilities for seeing new conjunctures, new opportunities, new options for rethinking race in America.

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