

The Philosophy of Economics

A History of Science, Method and Ethics

Book Abstract

The goal of this reader is to help you to understand the relation between the realm of philosophical ethics and the academic field of economics, within the context of the liberal arts education. Notice that the goal is not to teach any certain system of ethics. Nor is this a book on business ethics. Rather the goal is to explain whether ethics is possible at all within the field of economics as it has emerged over the past century.

The introduction at the beginning of the book as well as the introductions to the three sections of this book will also attempt to tie the material together as you progress through this line of economic thought. We will find that among these eminent economists, there are many definitions of what economics “is” and also of what economics “should be.” From these famous definitions of economics, these chapters will begin to make the logical connections between economics and the possibility of ethics.

Introduction

I. Early Definitions and Methods for Political Economy

“Two Treatises on Civil Government”: The Rational and the Industrious
John Locke - 1722

The Wealth of Nations: Self-Interest and the Common Good
Adam Smith - 1776

On the definition and method of political economy.
John Stuart Mill - 1836

Principles of Economics: Book I The Social Context of Economics
Alfred Marshall - 1890

Objectivity and understanding in economics.
Max Weber - 1904

The nature and significance of economic science.
Lionel Robbins - 1935

II. Logical Positivism as the Method for Economic Science

A Logical Positivist - *“On Verification in Economics”*
Terence Hutchison - 1956

A Logical Empiricist with an Instrumentalist Twist - *“The Methodology of Positive Economics”*
Milton Friedman 1953

Response:

A Necessary Evil in Economic Science - *“Testability and Approximation”*
Herbert Simon - 1963 A Critical Response to Friedman

III. Values, Conversations, Rhetoric and Ethics

What is an Economic Fact? - *“Implicit Values in Economics”*
Gunnar Myrdal - 1954

An Assessment of Adam Smith, John Maynard Keynes & Karl Marx: *Science and Ideology.*
Joseph Schumpeter - 1949

“The Rhetoric of Economics”
Donald McCloskey - 1983

Conversations with Economists - (Lucas '95, Tobin '81, Modigliani '85 & Solow '87)
Arjo Klamer - 1984

“Rhetoric and Ideology”
Robert Heilbroner - 1988

Eminent Economists: Their Life Philosophies.
Michael Szenberg - 1992

1) Kenneth Arrow - *“I Know a Hawk from a Handsaw”*

2) James M. Buchanan - *“From the Inside Looking Out”*

3) Paul A. Samuelson - *“My Life Philosophy: Policy Credos and Working Ways”*

INTRODUCTION

This book sets out on new ground. There are many economic textbooks and many ethics texts available. However, there are very few texts which attempt to explain the relation between these two very important parts of modern life, modern economics and the liberal arts education. There are no economic readers currently available which address these issues at the introductory or intermediate level. The goal of this reader is to help you to understand the relation between the realm of philosophical ethics and the academic field of economics, within the context of the liberal arts education. Notice that the goal is not to teach any certain system of ethics. Nor is this a book on business ethics. Rather the goal is to explain whether ethics is possible at all within the field of economics as it has emerged over the past century. Many economists will claim that ethics has no part in economics by definition. This, however, does not necessarily mean that they do not value ethics or the common good or social welfare. We will study these type of claims. We will also find that many Nobel prize winning economists have written in one way concerning ethics within their field, but have commented quite differently on ethical matters outside of their formal journal articles.

While I will try not preach any particular ethics, I do have an agenda. This agenda is to illustrate, by the internal logic of economics alone, that the dominant methodology in economics is in serious question, if not dead. However, I and the people who have helped me to write this book, view these problems within the context of a much longer history than do most economists. Western Philosophy has been around for 3000+ years. Western Theology is nearly the same age. These are the old dogs on the block. By comparison, the field of Economics is a very very young puppy. So while many economists are very nervous about the methodological problems in their field, the theologian and philosopher are very used to seeing their fields collapse every few hundred years. Perhaps this knowledge and wisdom can be brought to bear on the economic transformation which is under way.

Economic Method

To study the issues in economic method, we will examine many of this century's most prominent economists and their writings. The book is arranged in chronological order so that you will be able to trace a continuous line of thought when you reach the end. Each chapter will introduce a famous text from economic history or methodology. Many of the main points and issues will be summarized and highlighted up front in each chapter so that you can follow the actual text more easily. The introduction at the beginning of the book as well as the introductions to the three sections of this book will also attempt to tie the material together as you progress through this line of economic thought. We will find that among these eminent economists, there are many definitions of what economics "is" and also of what economics "should be." From these famous definitions of economics, these chapters will begin to make the logical connections between economics and the possibility of ethics. I will serve as a guide throughout this text, introducing terms and ideas which will make these readings more accessible to the first time reader.

The book begins by introducing two giants who stand at the beginning of our modern

economic age. They are John Locke and Adam Smith. Both of these writers represent the height of Enlightenment thinking, and an understanding of this revolutionary period will set the stage for the more critical period of science which follows. The book will then introduce one of the earliest treatments of economic methodology, which in this period was called political economy. Political economy was considered a part of the moral sciences and economists such as Adam Smith were trained and made great contributions in the field of moral theory. John Stuart Mill's famous essay "On the definition and method of political economy" will serve as a summary statement on the mode of analysis in this early period of political economy. Max Weber's essay, "Objectivity and understanding in economics" will also illustrate the breadth of knowledge required for a sociological "understanding" of economic phenomena in these earlier analyses. Weber will locate the cultural and value components of economic science within an infinitely greater realm of "reality."

The transition will then be made to the more modern conception of economics which was marked by the neoclassical or marginal revolution of about 1870. This new conception of economics would attempt to shed all traces of moral theorizing and would instead focus more narrowly on the economic problem of how to achieve desired ends with scarce resources. Political economy would disappear as the field of economics took on its own distinctive character. Lionel Robbin's classic, "Essay on the Nature and Significance", will illustrate two features of import. First, it will illustrate the uniquely "Austrian" point of departure for economic methodology.¹ Second, it will begin to define economics in neoclassical terms. It will seek to understand all behavior in "economic terms." This is far different from the "understanding" of "reality" which Weber sought.

The second section of this book will introduce the ideas of logical positivism, a philosophical movement at the beginning of this century which laid out a very precise and rigorous set of rules for achieving meaningful scientific statements. This section deals more with questions of what "method" economists would follow and less with the economic problem mentioned above. We will introduce these ideas by using the texts of leading economists who believed that this method of science, logical positivism, would define **the only acceptable rules** for economic theory. As it turns out, these rules as applied to economics were so rigorous and demanding that true economic science would not have been possible had these rules been applied

¹ For the sake of brevity, I have included only Robbin's essay as an example of Austrian method. Mises and von Hayek are critical figures in economic method, but they pull us away from the central line of thought under development in this reader.

consistently. You will see why.

Revisions were made to logical positivism and a new and closely related “method” emerged which is called “logical empiricism.” This philosophical school has been dominant in the field of economics up to this day. Logical empiricism is the method which most eminent economists currently use to construct their economic theories and models. Thus if we come to have a firm understanding of this philosophy and its requirements, the rules of modern economic science will follow immediately. An understanding of what type of ethics is possible within this context will also be evident. The texts of Terence Hutchison, “On Verification in Economics”, and Milton Friedman, “The Methodology of Positive Economics”, will set this Positivist theory forward in detail. Other articles by Nobel winning economists will challenge Hutchison’s and Friedman’s understanding of Positivism in economic science. These include comments by Fritz Machlup from, “On Indirect Verification”, and the essay by Herbert Simon, “Testability and Approximation.”

The third section of this book will critically examine the philosophy of science as it currently exists in economics. The first objective of this section is to be positive, by ascertaining the positive contribution of logical empiricism to the modern social sciences. The second objective will be to follow through on the mission of the logical empiricists and to draw the logical conclusion which must be drawn at this time in history: **the field of economics is far from achieving the unity of science which it holds so dear.** The fact that we are indeed in such a place will be set forth clearly by several eminent economists and Nobel laureates. The implications of this state of affairs will beg the question of the relation between economics and ethics, and upon this final question, we will offer a tentative bridge to the future of economics and ethics.

This tentative bridge is merely a description of what is currently taking place in the field of economics. Several methodological writers have written modern histories of scientific progress in the field of economics. I have chosen to follow another avenue. Donald McCloskey has opened up a new view of economic method which is called the “Rhetoric of Economics.” McCloskey shows that economists do not in fact come close to following the rules of logical empiricism. Instead, he claims that in their “actual scientific work” economists argue about the aptness of economic metaphors, the relevance of historical precedents, the persuasiveness of introspections, the power of authority, the charm of symmetry, and the claims of morality. For McCloskey, the surprising point is that there is nothing wrong with this type of “persuasion.” They simply are not Positive, and that is what is being claimed by most mainstream economists.

The philosophical program for McCloskey is to reinstate “rhetoric” and to reinstate wider and wider reasoning. This is the bridge which we want to build in this reader. We want the liberal arts student to be able to think broadly and to analyze economic life in its fullness. To help in building this bridge, this reader closes by providing the student with several “conversations” with highly influential economists. These conversations will provide a more realistic vision of how economists actually blend their personal and professional lives. It serves to illustrate the connection between ethical reasoning at the personal level and the apparent disconnect and lack of ethical reasoning within the most prestigious economic journals. It also reveals the tension between the “ideal” of obtaining Positive economic knowledge and the “realistic” acknowledgment by most economists that Positivism is in decline.

The “conversations with economists” provided by Arjo Klamer provides a technical

discussion of a specific economic controversy in macroeconomics. Klammer shows that the resolution of this controversy does not seem to follow the method suggested by Positivism. Several Nobel Laureates admit as much. Only these conversations reveal such admissions. The next section of conversations with "*Eminent Economists*" by Michael Szenberg provides a more personal look at these economists and "*Their Life Philosophies*." This section provides a striking contrast between the "professional writings" of these economists and their "personal comments" or reflections later in life. These reflections contain elements which are considered "strictly off-limits" within the profession and include comments on political thought, ideology, religious reflection, moral and ethical reasoning, institutional and University affiliation and even their early upbringing. Their comments clearly reflect that these factors have shaped their thinking and their economics. The Rhetoric of Economics allows us to analyze these very important relations within the field of economics as it is practiced today.

In this reader, I have tried to introduce you to what I consider to be the main line of thought in economics and method over time. By focusing on this line, many readings have been left out and the field of economic methodology itself has not been examined thoroughly. To remedy this situation, I close this introduction with an excellent chronological introduction by an expert in the field. Roger Backhouse neatly partitions modern economic methodology into three sections. Method before 1980, the defining work of Mark Blaug, and Method after 1980. Not only is the introduction to the field excellent, but it will provide you with an excellent Bibliography for later use in your economic work.

While this work is difficult reading and may lose you at times, I encourage you to make your way through it. I have included it as an introductory aid, but also as a conclusion. It is a built in pre-test and post-test. After you have made it through the reader itself, I hope that you will come back to this introduction with a sense of accomplishment. I predict that after your careful reading and study of the chapters included, you will come to this review with the tools required for understanding. This is my hope. Good luck.

PART ONE - EARLY DEFINITIONS AND METHODS FOR POLITICAL ECONOMY

John Locke (1632-1704) The stature of John Locke is unquestioned. While Newton's place is also certainly in this highest tier, he had little to say about politics and economics. These matters were left to his disciples. Among them, the eighteenth century recognized John Locke as the greatest. Voltaire rated Locke more highly than Plato, while the French Encyclopedia portrayed him as having done for the "science" of philosophy what Newton had done for the science of physics.²

As is true with most great figures in history, this sense of greatness is largely derived precisely because they have brought together many of the dominant strands in intellectual history. This is certainly the case with Locke. It is worthwhile to spend some time with Locke because we will find that many of the "ambiguities" in Locke's own thought remain for us to this day. In addition, we begin with Locke because Locke provides us with an interesting historical blend between the Medieval world and the Modern world of economics which will be the subject of most of this book. We begin with some history and make our way toward method.

Although the early eighteenth century regarded the social philosophy of Locke as a bold new step forward in human understanding, it would later become apparent that (as the historian R.R. Palmer writes) the core of Locke's thought was "carried over" from the Middle Ages, where it had already been "formulated in the 13th century by St. Thomas Aquinas." John Courtney Murray explains that Locke redeveloped "the great political truths that were the medieval heritage" and reflected "the fundamental positions of the natural-law philosophy of the state."³

Locke believed that scientific reasoning could be applied successfully to virtually every concern of man. He shares with Aquinas the belief that even the existence of God can be rationally proved. He likewise advocated principles of nature law, explaining that "the state of nature has a law of nature to govern it,...and reason....is that law." He argues that morality falls "amongst the sciences capable of demonstration...from self-evident principles." Locke follows

² Nelson, p.90.

³ Nelson, p.90.

Aristotle and Aquinas in rejecting the independent existence of universal ideas outside the mind. He follows Aristotle and Aquinas in finding that “nature...has put into man a desire of happiness and aversion to misery.” Ethics for Locke are defined by a utilitarian standard.⁴

⁴ Nelson, p.91.

Yet, despite all the debts to Aquinas and this tradition, there is another important side to Locke. He was brought up in a strict Puritan family, at a young age entertaining the possibility of entering the ministry. This Protestant element reinforced the “insistence of the individual that his conscience must not be surrendered to the authority of the state or Church.” The Puritan theology of a life lived as the fulfillment of a series of “covenants” or “contracts” before God would take a secular form in the political and economic theories of Locke. Locke’s extremely influential theory of the state as a “social contract” is, in essence, the Puritan society of covenants in a secular dress. The modern theory of democratic government represents a development and enlargement of “the political principles of popular sovereignty which had arisen largely through the Puritans.”⁵

The Puritans also taught, as Walzer writes, that labor is a highly desirable activity in itself; hard work develops “social discipline and self-affirmation,” which in turn yield “an effective guarantee of social order.” The high Puritan regard for labor in the pursuit of a “calling” is secularized by Locke to become the argument that labor is the true source of productive value in society. As Nelson shows, this “labor theory of value” does not originate in the medieval world’s idea of the just wage but is rather a derivative of the Protestant view that labor in the service of a calling is the highest purpose of earthly existence. It is this theory which takes its place through Locke, Adam Smith and then to Karl Marx.⁶

The thinking of Locke thus offers a blend of both Aquinas and Calvin. If Augustine brought Plato into Christianity, and Aquinas then merged Aristotle with Augustine, it would fall to Locke to synthesize Aquinas with Calvin. The impact of this “grand synthesis” would be heightened all the more by one further element. The Puritan view of society as a set of individuals bound by covenant (or contract) bore a distinct similarity to the Newtonian universe in which there were forces of nature governing the interactions of material objects. Locke portrayed a political and economic world that consisted of independent individuals, who were now drawn together and linked to one another by the force of self-interest. **And with this**

⁵ Nelson, p.93.

⁶ Nelson, p.94.

synthesis of Locke, we find our way into the distinctly modern world of economics.⁷ One can hear Adam Smith in the not to distant future.

⁷ Nelson, p. 94.

Locke's position in the History of Western thought rests upon *The Essay Concerning Human Understanding and Two Treatises of Government*. Before introducing the latter reading, a few words on the former may better help us to understand the overarching philosophy of Locke. The purpose of the first "Essay" was largely to see "what objects our understandings were, or were not, fitted to deal with."⁸ While Locke was by no means the first British empiricist, he nonetheless gave empiricism its firmest roots in British soil, where it still proudly flourishes. It must also be remembered, however, that Locke was also a rationalist, though one quite different from such Continental thinkers as Descartes, Spinoza or Malebranche. As Clapp has further noted, "in Locke many strands of traditional thought are rewoven into a new fabric. Subsequent thinkers, notably Berkeley, Hume and Kant, perhaps fashioned more coherent and consistent systems, but it is doubtful whether they were more adequate to what Locke might have called the plain facts. Locke's tendency toward inconsistency can be seen **in his definition of knowledge** as the "perception of the connection and agreement of any of our **ideas**.....this is plainly **incompatible** with his later contention that we have intuitive knowledge of our own existence, demonstrative knowledge of God's existence and **sensitive knowledge** of the existence of particular things."⁹

Without getting overly engrossed in the philosophy of Locke, it is important to highlight those aspects and ambiguities in Locke which have remained with us to this day, particularly in economic method. Among these we might include Locke's affirmation of the real objective existence of things or substances. What he denied was that the human understanding could know with certainty the real essences or substances. **Ideas were to stand between these "real things" and "our understanding" in order to link them.**¹⁰ Thus Locke is arguing that the real world does exist, but we cannot have certain knowledge about it. This issue is very important for economic method because "**science depends above all upon the claim of knowledge**" and for science to make its claims, it must first of all define what knowledge is. Most economists simply glide over the entire issue and "assume" a world of common sense. This is a large assumption. For Locke, this assumption of "common sense" rested largely upon on the wisdom of God and the fact that our knowledge is suited to our purpose. Most modern economists do not rest their claims upon this ultimate foundation, or any ultimate foundation, at least not in print. Locke's emphasis on reason was circumscribed. Reason must be followed where possible, **but it does not carry us far enough itself.** It remains to see if the economists in the following pages will similarly circumscribe the use of reason in the realm of economics.¹¹

The Two Treatises of Government

The *Second Treatise on Government* follows below. This *Treatise* is of course pre-Adam

⁸ Clapp, *The Encyclopedia of Philosophy*, p.489.

⁹ Clapp, p.489.

¹⁰ Clapp, p.490.

¹¹ Clapp, p.502.

Smith and therefore reflects an earlier period of economic reasoning, which many today would call political economy. In this *Treatise*, Locke builds the case for private property on high moral ground. He defends the right to accumulate property as intrinsically moral rather than a merely prudentially necessary concession to human nature. Locke also sketches the outline of a new ideal human type - the “rational and industrious.” Locke’s “rational and industrious” live the logic of the “Protestant ethic,” the religiously rooted moral ideal which helped to drive early capitalism.¹²

While Locke provides many arguments which do deal in economics proper, it is perhaps more important to see in Locke the assumptions and method underlying his arguments, particularly those dealing with First Principles. For example, Locke begins his *Treatise* with the assumptions that property is God given and that individuals are and should be treated as equals. If one views Locke in terms of the Medieval-Protestant line of thought discussed above, these assumptions **seem routine**. However, these assumptions are far from routine. One sees the radical nature of these assumptions if one looks for such foundations in the current economics literature. **It is by no means apparent why humans are or should be treated as equals in the modern world of economics!** Make sure you reread that sentence. In fact, modern economics by definition refuses to make such normative claims. Nevertheless, modern economics does make the assumption that we should model the world in terms of rational individual actors who seek to maximize their utility. The lines of thought become very blurred as such details are brought to the surface. These are precisely the lines of thought which are in need of careful analysis.

¹² Combee, p.55.

With these ideas in mind, Locke's argument in the reading below is fairly straight forward. Locke places man in the Garden of Eden or what he calls a "State of Nature" where being rational and being a creature of God, man must be governed by the law of nature. In this State of Nature, all things are held in common. God created the world for all people in common. While in this "State of Nature", Locke introduces the labor theory of ownership and value. This theory states that when an individual mixes "his own" labor with the raw material of nature, that part of nature with which he has combined his labor becomes "his private property." This labor power transforms the original common possession into private possession. Labor power places nature **justly** into the hands of the one who has added their labor. If someone steals property without adding their labor, then that person is guilty of theft and is in violation of the laws of nature and the God of nature.¹³

As Locke's argument unfolds, the chief problem becomes one of protecting the "industrious and rational worker" from the quarrelsome and contentious thief. If the industrious are protected, the total amount of wealth will increase. Crime constitutes a serious practical limit on the accumulation of property and wealth in Locke's State of Nature. **The protection of private property provides the main motivation for leaving the state of nature and establishing civil government.**¹⁴

Second Treatise

Of Property

¹³ Combee, p.57.

¹⁴ Combee, p.57.

Adam Smith (1723-1790) With the work of John Locke as foundation, in the next century it remained for Adam Smith, often called the “father of economics” to write *The Wealth of Nations* (1776) - the economic treatise for the emerging capitalist economic order. *The Wealth of Nations* has all the appearance of a technical scientific treatise on economics. Yet a view of economic philosophy and method is clearly present - and not surprisingly, since Smith’s intellectual roots lay in moral philosophy (his first work, published in 1759, was entitled *The Theory of Moral Sentiments*). “In the *Wealth of Nations*, Smith’s moral vision focuses on the paradoxical contention, ever after fascinating to advocates of *laissez faire*, that in economics the public interest emerges from private interest and justice emerges from selfishness - that the common good is best achieved not by the benevolence of an overseeing government but by the impersonal forces of a free market.”¹⁵

This is a revolution. In earlier history, the common good was much different. For Aquinas in the Catholic tradition, or Calvin in the Protestant tradition, the common good would always have been defined with respect to God. No distinction between God’s will and the good could exist. As we move forward to Locke, this world view changed in degree. Self-interest as natural and rational, the individual pursuit of happiness, the advantages of property rights, all these and other elements were present in Locke, and yet even these modern elements were still circumscribed by the overarching wisdom of God.

With Smith, we continue to move in the direction of modernity. Smith’s God is still present, but now the common good becomes defined in more purely human terms, such that the “division of labor” is actually responsible for the greatest good. Certainly, God’s providence still lies behind this great design for “efficiency” in the world, but now individuals are discerning their own self-interest independently. The common good becomes much more centered on the material realm. In Smith, the individual “will” could actually be far from good, while in the end producing the greatest good through their work. Smith intentionally deferred from an analysis of “the good” or “human nature”, even though he used these terms regularly. As Smith says, “it belongs not to our present subject to inquire.” This is new. In earlier periods, every possible subject required a theological or at least a philosophical foundation. Indeed, the Ph.D. in economics literally reads, “Doctor of Philosophy in Economics”. Modern economics has deferred from many of these foundational questions.

¹⁵ Combee, p.69.

In fairness, many economists have explored the significance of Adam Smith. In fact, as we will see below, a deep commitment to the ideals of “science” would raise many questions about Smith’s analysis. Schumpeter judged Adam Smith harshly by this demanding standard of science. He wrote that Smith’s success in the *Wealth of Nations* was in the manner of a “great performance.” As far as technical innovation or the advancement of theory, Schumpeter considered that “the *Wealth of Nations* does not contain a single analytical idea, principle, or method that was entirely new in 1776.” Instead, Schumpeter assessed Smith’s essential significance for economic thought as providing the key “channel through which eighteenth century ideas about human nature reached economists.”¹⁶ **The great irony is that this is precisely the area from which Smith ultimately deferred.**

Something is missing from our puzzle concerning Smith. The resolution to this seeming paradox comes through an understanding of the time in which Smith lived. This time was characterized by two great forces, the Enlightenment and the expanding New World. The world of John Locke was the rural, self-contained environment of England in the late seventeenth century. By the middle of the eighteenth century, a whole new world was emerging. Population growth would soon explode. Inventions were booming. Logic was improving. New forces and laws of nature were being discovered daily.

Adam Smith’s “division of labor” through the mechanism of self-interest in the market was one of these forces. If this theory could now illuminate the true Newtonian mechanics of “society”, men would finally have in their possession a proper understanding of the real workings of nature. **With this knowledge**, the valid route to human happiness, the path to future social progress - indeed, the very means of achievement of heaven on earth - would be revealed. All these conclusions followed directly from the central faith of the Enlightenment.¹⁷ One might say that for the first time, salvation came to be associated with the economic progress of society. **The religion of the Enlightenment became an economic faith.** In the section on Smith which follows, examine for yourself the economic claims being made. **Then ask if these claims are science.**

The Wealth of Nations

Of the Division of Labour

Of the Principle which gives Occasion to the Division of Labour

¹⁶ Nelson, p.102.

¹⁷ Nelson, p.99.

Of the Component Parts of the Price of Commodities

John Stuart Mill (1806-1873) was an English philosopher, economist and administrator. In the mind of Schneewind Mill was the most influential philosopher in the English-speaking world during the nineteenth century and is generally held to be one of the most profound and effective spokesmen for the liberal view of man and society.

Mill's education is famous in that he was completely controlled by his father, starting Greek at three, learning most of Latin by eight and having mastered much of the Classics, History and mathematics by fourteen. At the age of fifteen, Mill had something of a religious revelation while reading Bentham's philosophy. He would seek to be a reformer of the world. By twenty, he was in depression from too much analytical work. He sought the capacity for emotion by turning to the poetry of Wordsworth and found meaning for his philosophy in the social writings of Saint-Simon and Auguste Comte.

On the definition and method of political economy - 1836

In this essay, Mill sets forth one of the first classic discussions of methodology in political economy. As the reader progresses through the readings which follow, the Legacy of Mill will become clear. Let us build up our base of knowledge. Mill begins with the claim that "Political Economy" is a branch of the science, "speculative politics". This science is solely concerned with that part of man which desires to possess wealth and with the efficient judgements needed to obtain this wealth. As a science, it abstracts from all other areas of life, so as to focus on two principles related to wealth; the avoidance of labor and the utility gained by obtaining goods. The science then proceeds to investigate the laws which govern these operations.

The chain of science for Mill runs from laws to causes to effects to prediction. Mill believed that it was very important to study only one cause at a time, however, so as to avoid confusion between various causes and the effect under study. Thus, Mill sought to study all the laws which lay behind a particular cause. These laws and a single cause would then determine a certain effect. Once certain of this causal chain of events, prediction of these events becomes possible. The chain of science is complete.

For Mill, the definition of science is inseparably connected to the "philosophical method" of the science. This is because differences in opinion or in method will always be related to differences in the philosophic method of science. Two of the most discussed methods in science are the inductive and deductive methods. Mill refers to the deductive as "theory" and refers to the inductive as "practice". If you read carefully, you will understand what Mill means when he says that "although both classes of inquirers do nothing but theorize, and both of them consult no other guide than experience, there is a difference between them." The method of induction draws conclusions by building "upward" from particular facts to a general conclusion. The deductive theorists seek to build a bridge from facts to general principles and then argue "downward" from these general principles to a variety of specific conclusions.

The method of induction is also referred to as the method "a posteriori", meaning from experience. But the method of science for Mill is not to verify a hypothesis by simply analyzing all the facts related to it. This gathering of facts is simply the application or working out of science. For Mill, true science used the method "a priori". This method is a combination of induction and reasoning, what Mill calls ratiocination. Thus Political Economy is an abstract

science. It reasons from assumptions, not from facts. As Mill states, “Political Economy presupposes an arbitrary definition of man, as a being who seeks to gain as much as possible with as little effort as possible. You should recognize this definition of economic man from your micro-economics courses. Modern economists call this the assumption of “the maximizing individual” or the “utility maximizer.” The remainder of this book will deal with this concept.

Mill’s conclusions are striking to the modern economist’s ear. For Mill, the conclusions of Political Economy are only true “in the abstract”. Mill states that this should not be denied. On the other hand, Mill states that the “a priori” method of abstraction is the only method by which truth can possibly be attained in any department of the social science. How can both of these be true? For Mill, hypotheses are true without qualification, only in a case which is purely imaginary. The relation of Political Economy to the real world is then given by Mill. As the actual facts from the real world recede away from the abstract hypothesis, the scientist must allow a corresponding deviation away from the strict letter of the conclusion.

As an example, in theory economists claim that individuals maximize their utility. In the real world, economists claim that people “seem” to be maximizing their utility. Any hypothesis built using this assumption of “maximization” would have to leave room for some doubt or error due to this gap between theory and the real world. The hypothesis would be true in theory, but would only approach this truth in the real world.

While Mill’s methodology foreshadows modern economic methodology in many ways, one departure is quite significant. Mill refers to the entire project of Political Economy in Moral Terms. His Utilitarian ethics are part and parcel of his entire methodological mission, to help to construct a happy society, by using science. Mill is in this respect “normative” from the beginning. He is claiming how the world ought to be. In the moral sciences, Mill affirms that the method “a priori” is the only mode of philosophical investigation possible. The property which distinguishes the moral science from the physical sciences (physics etc..) is that it is seldom in our power to make experiments in the moral sciences. We cannot form governments and run experiments in the laboratory. It is thus almost impossible to conduct what Mill calls the “decisive experiment” where one cause can be isolated so as to obtain certainty between this cause and its effect. In the moral realm of political economy, an infinite swirl of other variables is constantly clouding the waters around the single case the scientist is examining. It is therefore difficult to draw certain cause - effect conclusions.

Along these lines, Mill also anticipates the problem of uncertainty in economics. When the scientific waters are clouded by factors unknown to the scientist, Mill maintains that the laws for these “disturbing causes” must also be sought just as the laws for any other phenomenon. Then the effect of the special “disturbing causes” is either added to or subtracted from the effect of the general causes already under study.

Thus far Mill has only advocated the “a priori” method in Political Economy, where abstract assumptions are connected within a scientific theory. All of this may be scientifically and logically true, but how do we know whether the theory has taken into account all the relevant facts for the particular case? Here Mill claims that the “a posteriori” method of experience or testing is of great value in the moral sciences. While this method is not used to discover the truth, it is of great help in “verifying” the truth. This theme of Verification will be central in the second section of this book on Positivism.

Mill claims that we must be very careful to “verify” our theory, by comparing the

“results” which it would have us “predict”, with the most trustworthy accounts which have actually occurred in the real world. Thus, we must compare our predictions from theory with the best empirical data related to the scientific case. The gap between our predictions and actual fact will lead us to errors in thought. It may also show possible omissions of “disturbing causes” which were not anticipated in our theory. Our price theory hypothesizes that an increase in the price of coffee would lead to a reduction in quantity demanded. If we attempt to “verify” this hypothesis, we must gather data on both coffee price and quantity purchased, and then determine if as the price increased whether the quantity purchased in fact did go down, all else remaining constant. If the data do not support our hypothesis, we must go back to the theory to check for errors and omissions.

The Ethics implied by Mill’s Method.

The objective here is not to provide a summary of Mill’s Utilitarian ethics but rather to sketch out the implications of his economic methodology itself. As a strict empiricist, Mill ruled out all metaphysics. No knowledge transcended experience. As Schneewind has noted, Mill lived in a time characterized by the search for empirical laws of nature. In Mill’s mind, the phenomenon of social human life are no exception to the law of causation, and natural laws of human nature must follow. However, as we have seen above, in the realm of human behavior, there are so many interacting elements that the deduction of regularities from basic psychological laws would be difficult. This complexity is what led Mill to make the distinction between the physical sciences and the social sciences.¹⁸

Mill sought to construct and propagate a philosophical position which would be of positive assistance to the progress of scientific knowledge, individual freedom, and human happiness. This is the sense in which Mill would call this social branch of the sciences a “moral science.” When Schneewind asks how far social sciences had actually progressed in the time of Mill, he notes that Mill thought that at least one basic law of social change had been discovered and substantially proven: Auguste Comte’s Law of Three Stages, which states that man’s understanding goes through three distinct phases beginning with the more primitive theological terms, progressing to the philosophical and finally reaching the highest scientific or positive stage.¹⁹ The degree to which modern social science has reached this final positive stage of analysis is the subject of this book.

¹⁸Schneewind, Vol. 3, p. 317.

¹⁹ Schneewind, p. 318.

This positive view in Mill and Comte came together with the philosophy of Kant in Germany to deepen the split between science and ethics in academia. Kant sought to synthesize the empiricism of Britain with the rationalism of the Continent. While Kant had completed most of his writings by the time of Mill, it would take time before his philosophy made its full impact on the the sciences. Kant sharply limited the common sense empirical knowledge with which Mill seemed to be working. Whereas Mill would take the physical world as given, Kant would claim that our minds actually act upon and process the very facts we study. For Kant, “knowledge” must be composed of both our senses and our understanding. After Kant’s methodological influence made its mark on the world, scientists no longer believed that science and ethics shared the same status as knowledge, precisely because one could not use their senses to come to moral knowledge. Moral concepts seemed to be prior to or independent of our experience. So at this point in history, between Mill and the next generation of Political Economists, a severe split between reason and ethics occurred. Yet this split was ironic as Kant had sought to confine religion and ethics firmly within the bounds of reason alone. After Kant, science proceeded “as if” only phenomenon or objects from the physical world could be known for certain. This split has remained to this day in the distinction between the positive sciences which describe “what is” and the normative disciplines which describe what “ought to be”.

Alfred Marshall (1842-1924) In the MIT dictionary of modern economics, Marshall stands as a bridge between classical economic theory with its emphasis on the costs of production over time, the neoclassical subjective price theory of Jevons, and the general equilibrium theory of Walras based on a purely static theory of value. He stands as a pioneer of marginal analysis, while never totally abandoning his link with English classical economic thought. In this dictionary, the fundamental “idea” of Marshall’s work is the power of Demand and Supply to generate equilibrium prices in markets. Marshall derived the law of a downward sloping demand curve, introduced the concept of Elasticity of demand, and made several other seminal contributions to the field of economic theory.

This is clearly the modern economic view of Marshall. No mention is made concerning Marshall’s broader concerns or method. The purpose of this book is to place economists such as Marshall into a context which is truer to the historical record and to the intentions of the great man himself. So as not to bias my own case, I will refer the reader to the writings of Marshall himself. As Marshall states in his preface (1890), the general scope and purpose (of the *Principles of Economics*) are indicated in Book I. This reading follows for your analysis below.

Book I begins, not with diagrammatic presentations of the famous supply and demand curves, but rather with the contention that “economics is on the one side a study of wealth; and on the other, and more important side, a part of the study of man. For man’s character has been molded by his every-day work, and the material resources which he thereby procures, more than by any other influence unless it be that of his religious ideals; and the two great forming agencies of the world’s history have been the religious and the economic.” **This is page one of Marshall.** (The relation between these two is taken up in detail in Marshall’s appendix A.) Nor is this page an anomaly. In the next 12 pages of Chapter one, Marshall takes up the issue of good and evil no less than 12 times.

Marshall begins section two by proclaiming that it was the Christian religion which proclaimed “the dignity of man” and goes on to “inquire whether it is necessary that there should be any so-called lower classes at all” in his discussion of poverty. He concludes that “the question cannot be fully answered by economic science. For the answer depends partly on the moral and political capabilities of human nature, and on these matters the economist has no special means of information; he must do as others do, and guess as best he can.” Only after relating economics to the broader social context of his day does Marshall begin to exercise his brilliance in economic analysis.

In section four, Marshall asks if “competition” is what distinguishes modern forms of industrial society from earlier societies, and concludes that this account is not satisfactory. Instead, the characteristics which truly distinguish the modern age from earlier ages include “a certain independence and habit of choosing one’s own course for oneself, a self-reliance; a deliberation and yet a promptness of choice and judgement, and a habit of forecasting the future and shaping one’s course with reference to distant aims.” This, of course, should remind the reader of the famous and controversial Weber thesis in which the Protestant characteristics above led in part to the modern capitalist revolution. Thus, Marshall sees economics in a social context that requires placing economics among the structural factors of cultural history.

This introductory chapter was followed in earlier editions by two short sketches: the one related to the growth of free enterprise and generally of economic freedom, and the other to the growth of economic science. They are now transferred to Appendices A and B. With this context

in mind, Marshall takes up the “Substance of Economics” in Chapter II.

While only chapter one is included below, a few citations from chapter two will clearly demonstrate that even in the “substance of economics”, Marshall never intended to split the world into positive (scientific) and normative (ethical) spheres. For Marshall, “everyone who is worth anything carries his higher nature with him into business...influenced by his conceptions of duty and his reverence for high ideals.” It is not clear that modern economists (i.e. Friedman) will make this claim. They surely would not make the following claim of Marshall. The economist “does not ignore the mental and spiritual side of life. On the contrary, even for the narrower uses of economic studies, it is important **to know** whether the desires which prevail are such as will help to build up a strong and righteous character.”

Marshall continues to press the case for what economists “should do” throughout the Principles. This is Marshall. This introduction is not meant to obscure Marshall’s contribution. You will learn plenty about his formal economic contribution in Introductory Micro. Marshall was a first rate mathematician, and believed greatly that “economic science”, with its ability to abstract and narrowly focus on a clearly defined range of behavior, would and should help in relieving the true burdens of mankind. Into this service, Marshall devoted his life.

Principles of Economics, Book I, Chapter 1. (1890)

Max Weber (1864-1920) was a German sociologist, historian, philosopher and economist. Weber was attracted to practical politics as well as to scholarship, and he had a vivid sense of the political and cultural significance of historical and sociological investigations. For Weber, social phenomenon involve the actions of agents who attach a sense (Sinn) to what they are doing. Correspondingly, sociology requires an “understanding” (Verstehen) of the sense of what is being studied. In this respect, Weber was squarely in the tradition of Hegel, Wilhelm Dilthey, and Heinrich Rickert, but he developed these philosophical ideas into a methodology and applied it to a vast spectrum of data. However, Verstehen is particularly open to the investigator’s subjective bias, and therefore Weber thought that this method should be supplemented by “causal explanation”. He argued that causal explanations were completely naturalistic and that the social sciences are distinguished by the addition of “understanding”.²⁰ The essay which follows is suitably titled, “Objectivity and Understanding in economics”. Up front, the reader should realize that all economic methodology does not focus on “understanding” the subject matter. Some economists say that only “prediction” matters. Others will claim that economics is merely “instrumental” in helping us achieve other ends. Understanding is not necessarily sought by all economists.

Objectivity and Understanding in Economics - 1904

For Weber, the question of the appropriateness of the means for achieving a given end is undoubtedly accessible to scientific analysis. We can answer the question: what will the attainment of a desired end “cost” in terms of the predictable loss of other values? To apply the results of this analysis in the making of a decision, however is not the task of science. Science can make one realize that all action implies in its consequences the espousal of certain values.

The type of social science Weber is interested in is an “empirical science” of concrete “reality.” Weber wishes to understand “both” the 1) cultural significance of individual events and 2) the causes of their being historically so and not otherwise.

The big problem which Weber and the scientist confronts is that the finite human mind has sought to explore an infinitely large universe of reality. How do we begin? Only a very small finite part of reality constitutes the object of scientific investigation. But what are “the criteria” by which this segment is selected?

Some have advocated that the scientist choose to study those events which are subject to regular causal “laws.” The problem still exists, however. Which events and which laws should be studied? Weber breaks this impasse by designating as “cultural sciences” those disciplines which analyze life in terms of its cultural significance. The “significance” of a configuration of cultural

²⁰ Peter Winch, Vol.4, p. 283.

phenomena and the basis of this significance cannot however be derived and made intelligible by a system of analytical laws, however perfect these laws may be, since the significance of cultural events presupposes a “value-orientation” towards these events. This is obvious in that out of an infinite number of possible studies, the scientist will choose to give value time and energy to only one. This is a value judgement. For Weber, the concept of culture itself is a value-concept. Empirical reality becomes “culture” to us because we relate this reality to value ideas. If you have understood this concept, you will be able to understand Weber.

Weber is not saying that the attempt to formulate “laws” is unscientific. Quite the contrary, the causal knowledge of historians is made possible by the imputation of concrete effects to concrete causes. For Weber, the more comprehensive our general knowledge the greater is the certainty of imputation. The key to understanding is that the establishment of such regularities is not the “end” but rather the “means” of knowledge. Thus the laws are not reality, but the laws may help us to understand reality.

The conclusion which follows from this is that an “objective” analysis of cultural events, made completely of these “laws” only, is “meaningless”. This is not the same thing as useless. It is meaningless for Weber because the knowledge of social “laws” is not knowledge of “reality” but is simply a means used by our mind to achieve this end of understanding reality.

With this introduction, Weber states that we can finally turn to the question which is “methodologically” relevant in the consideration of the “objectivity” of cultural knowledge. The question is: what is the logical function and structure of the “concepts” which our science uses? Or in other words, what is the significance of “theory” for our knowledge of cultural reality.

Economics was originally a “technique” which viewed reality from the standpoint of increasing the wealth of the population. On the other hand, it has always been more than a technique since it was part of the great scheme of Western civilization’s attempt to view the world in terms of natural law and rationality, what Weber called “Weltanschauung.” This scheme had such an optimistic faith in the power of rationality that rationality was assumed to be self-evident. Theorists and scientists forgot that this “rational” way of viewing reality was in fact a choice and also a value in itself. The grand scientific hope was to obtain a purely “objective” complete knowledge of the totality of reality and to capture this reality within a conceptual system of metaphysical validity and with mathematical form.

Weber believed that this over optimistic hope in rationality prevented economics from attaining a clear and full understanding of the relationship between economic concepts and reality. The problems remains to this day in the relationship between “theory” and “history”. The abstract-theoretical method takes it to be a fact that we always have a direct awareness of the structure of human actions in all their reality. They now claim empirical “validity”, in the sense of the “deducibility” of “reality” from “laws”. For Weber such a fantastic claim of deduction was clearly not possible. For this claim to be true, the totality of the existing historical reality must be assumed to be “given” and presupposed as known by the finite mind of man.

Finally, Weber introduces his conception of the “ideal type.” The perfectly competitive firm is an example of an “ideal type.” The concept of perfect competition is like a “utopia” which has been arrived at by the analytical accentuation or emphasis of certain elements of “reality.” It is not a description of reality but it aims to give unambiguous means of expression to such a description. Historical research faces the task of determining in each case, the extent to which this ideal-construct approximates to or diverges from reality. The ideal-type is no

hypothesis but it offers guidance to the construction of hypotheses.

MAX WEBER AND SOCIETY:

It is well known that Max Weber's methodological perspective was heavily influenced by neo-Kantianism. However, Weber took quite a different turn from most political economists of his day. As was just noted in the past chapter, Kantian philosophy had moved many scientists into an exclusive relationship with the physical world, precisely because the moral world was not as clear cut. Weber sought to be true to the entire Kantian system, however, and in this tradition, reality is perceived to be a complex flux of events and processes which can never be reproduced in "knowledge"²¹ While this subjectivity scared many scientists away, Weber maintained that running is not an option and that "we are inevitably forced to choose between competing intellectual frameworks. These choices are determined by issues of value relevance and our intellectual equipment will inevitably reflect our own values, political commitments, and the purpose of our research."²² Weber would maintain that at the same time, a scientist attempts to maintain value neutrality by exposing his or her own values to dispute, criticism, and empirical evaluation. In this sense, Weber's methodology promises an approximation to reality within certain limits.

Weber's stance was thus far removed from the "positivism" of Comte and Spencer in that Weber did not see a way for the scientist to stand "objectively" above his own values. There was no clear final stage of "science." Weber was similarly removed from the historical materialism of Marx and Engels. While Marxists have regarded historical materialism as a science, Weberian sociology is characteristically anxious about the status of scientific knowledge.²³ Comte, Spencer, Marx and Engels were all proposing new absolutes for the world in the form of a scientific culture. "Weber was forced to digest a good deal of Nietzsche's message and warning: the security which had been provided by an absolute authority (God) had disappeared, God is dead, leaving behind a world of endless value conflicts, and no new absolute basis for knowledge could fill the gap which had been opened up by God's death. The result is that we are

²¹ Holton and Turner, p. 7.

²² Holton and Turner, p. 8.

²³ Holton and Turner, p. 8.

compelled to live in a world of perspectivism.”²⁴ Weber remained faithful to the neo-Kantian creed, questioning the objectivity offered in the midst of what appeared to be a new and subjective world.

²⁴Holton and Turner, p. 10.

As a result of this perspectivism, Weber defended the separation between the scholarly vocation of economics and the kind of political partisanship practiced by the state-oriented academics. This in turn was influential on subsequent generations of literalistically inclined economists in their attempt to insist on a distinction between fact and values in economic life. In particular, as the next chapter will show, Lionel Robbins' influential study, "An Essay on the Nature and Significance of Economic Science" (1935) served both to popularize Austrian economics and Max Weber's scientific methodology to an English audience. Weber's influence here was strong, even if his separation between science and politics has sometimes been **seized upon by "positivist" social scientists** as a plea for "value-free" science. Weber's position was of course that all science is value-relevant and thus selective in orientation, but that there is none the less a distinction between value-judgements and value-relevant scientific propositions.²⁵

As Holton and Turner noted, with the breakdown of the traditional normative communities and with the death of God, individuals were placed in the position of "creating secular meanings" for themselves. Our question throughout this book will be to discern whether "economics" itself is but one of these stories we have created to "create secular meaning". Or does economics have an "objective" and "identifiable" component which gives it a unique place in our Neo-Kantian world of knowledge.

²⁵ Holton and Turner, p. 36.

Lionel Robbins and Austrian Economics

Lionel Robbins (1898--) was an English economist. His “An Essay on the Nature and Significance of Economic Science” which you are about to read, is regarded as one of the classic essays in the area of economic methodology. It is also controversial. Thus far we have found that Mill defined Political Economy as the study of obtaining wealth. Max Weber located the cultural and value components of economic science within an infinitely greater realm of reality. Lionel Robbins sharply turns the tables on these two thinkers by redefining economics as “the science which studies human behavior as a relationship between ends and scarce means which have alternative uses.” So far this sounds like Weber, however, according to this definition, economics is not concerned with some particular class of social phenomena. It is instead concerned with a particular “aspect” of “all” human behavior. As Hausman further explains, one’s decisions to have children or to be unfaithful to one’s spouse are, on this definition, clearly part of economics. Robbins is, in effect, attempting to “define” economics as neoclassical theory.²⁶ Neoclassical theory, in contrast with the Classical school which preceded it, would focus exclusively on the rational individual agent and their subjective choices at the margin. NeoClassical theory began with the Marginalist Revolution of the 1870's and has dominated economic thought to this day. Robbins will seek to claim a particular agenda for neoclassical theory. This begs the question. Who has the right to define the study of economics? How does this definition occur? Is it the right of the profession? Is this entire process scientific or is it part of the social value system Weber introduced? This essay sets us clearly in the modern world of economic methodology. It will also set up the study of Positive Economics in Section II.

The nature and significance of economic science - 1935

If the reader is familiar with introductory micro economics, the introduction of Robbin’s essay will sound quite familiar. Robbin’s conclusions, however, should not have a familiar ring. Robbins begins with the definition of the “economic aspect” and its four fundamental characteristics. The goal of economics is not to explain all of reality. By itself, the multiplicity of “ends” or goals has no necessary interest for the economist. But when time and the means for achieving ends are limited “and” capable of alternative application “and” the ends are capable of being distinguished in order of importance, then behavior necessarily assumes the form of choice for the economist. Then it has an “economic aspect”.

Economics has always been slippery in this respect. It claims to have no interest in all the “ends” of life. Yet it does claim to have an interest in these ends “if” the preceding condition applies. Of course, this condition does apply to most all ends, excluding nirvana and oxygen which Robbins generously leaves for the theologians, and so Robbins does link the “economic aspect” to most all of reality, with the exception of nirvana! The Weber in you should be very interested in how Robbins will make this transition. Will it be value-free? Will it be open to

²⁶ Hausman, p.39.

“understanding” or will it simply be a set of “laws” which are meaningless to Weber.

Robbins begins as follows. Here, then, is the unity of subject of Economic Science, the forms assumed by human behavior in disposing of scarce means. However, we have not yet discussed “the nature and derivation of economic laws.” On what does the validity of theory depend. It cannot rest upon an appeal to History. The frequent occurrence of certain events does not imply a definite causal relationship. There is no sufficient reason for supposing history would repeat itself.

It is equally clear that our belief in theory does not rest upon the results of controlled experiment. It would be superficial to think that the “results” of these experiments could justify a proposition of wide applicability, let alone a general theory.

Rather, Robbins will argue that the examples he has examined in this essay should be sufficient to establish the solution for which we are seeking. The propositions of economic theory, like all scientific theory are obviously deductions from a series of postulates. And the chief of these postulates are all assumptions involving in some way simple and indisputable “facts of experience” relating to the way in which the scarcity of goods which is the subject-matter of our science actually shows itself in the world of reality. We do not need experiments as these postulates are the stuff of every day experience. They are obvious.

This is the controversial aspect of Robbins. As Caldwell has noted, there is a striking similarity between the writings of **the Austrian economists, Ludwig von Mises and Friedrich von Hayek**, and the positions espoused by Robbins. All agreed that the fundamental axioms of economics are obvious and self-evident facts of immediate experience. **Ludwig von Mises** would claim even further that the basic postulates of the discipline are necessary and unquestionable truths about the human condition, that they are “a priori” true, true prior to all experience. Robbins would not go this far.²⁷

Robbins, himself, claims that the truth of the deductions from this structure of theory depends, as always, on their logical consistency. Whether the theory applies to the real world is a matter for inquiry. There is a different perspective emerging here in that the theory is presumed to be true but this does not imply that the theory will match up with the real world situation which it was intended to explain. The truth of theory is supported by Robbins’ claim that no one will really question the universal applicability of such assumptions as those of valuation, production or dynamics. In fact, the “orthodox” conception of science since the time of Cairnes is overwhelmingly convincing. The attacks against this “orthodoxy” have not been scientific and philosophical at all. Rather they have been political in nature. Here again is the big question. What is science and who sets the rules for science? Section II will address these questions forcefully. Let us make one historical note concerning Robbins’ claims themselves at this point. Since Robbins, many economists and entire literatures have indeed questioned each of the

²⁷ Caldwell, p.104.

assumptions which Robbins claimed to be “obvious.”²⁸

At the time Robbins was writing, Professor Cassel was arguing that the scientific method demands that we should leave out of account anything which is not capable of direct observation. For example, valuation is a subjective process which is not observable. It is therefore not allowed in scientific explanation. Robbins notes that at first sight this seems plausible. However, if our business is to “explain” certain aspects of conduct, how can we come to “understand” terms such as “choice”, “indifference”, “preference” and the like in terms of inner experience. None of these are observable. For Robbins, these concepts are “purposive” and can never be completely assimilated into the physical sciences. Recognition of this does not in the least imply that we cannot achieve “objectivity” in Max Weber’s sense. All that such an “objective” explanation of conduct involves is the consideration of certain data, including individual valuations, etc.. Which are not merely physical in character. For Robbins, what is of relevance to the social sciences is not whether individual judgements of value are correct, but only whether they are made and whether they are essential links in the chain of causal explanation.

However, just as Robbins concedes in some sense to this realm of subjective valuation and its difficulties, he immediately recovers the full force of his project in Chapter V. Economic laws describe inevitable implications. If the data they postulate are given (even psychical data), then the consequences they predict necessarily follow. In this sense they are on the same footing as other scientific laws, and as little capable of “suspension.”

Robbins concludes his essay by asking what, then, is the significance of Economic Science? We have seen that it provides, within its own structure of generalizations, no norms which are binding in practice. It is incapable of deciding as between the desirability of different ends. It is fundamentally distinct from Ethics.

Surely it consists in this, that, when we are faced with a “choice” between ultimates, it enables us to choose with full awareness of the implications of what we are choosing. It makes it possible for us to select a system of ends which are mutually consistent with each other. Without economic analysis it is not possible “rationally” to choose between alternative systems of society. To such a situation, Economics brings the solvent of knowledge. It provides a technique of rational action.

Robbins closes with Weber in mind as he claims that in the last analysis, Economics does depend on an “ultimate valuation” - the affirmation that rationality and ability to choose with knowledge is desirable. Even more, Economics is the branch of knowledge which, above all others, is the symbol and safeguard of rationality in social arrangements.

The Method and Ethics of Robbins

²⁸ See Hollis and Nell for examples, p.54.

Robbins is controversial in many respects. The issue which jumps out at most readers is Robbins' claim that "the efforts of economists during the last hundred and fifty years have resulted in the establishment of a body of generalizations whose substantial accuracy and importance are open to question only by the ignorant or the perverse."²⁹ This is more the bluster of a tyrant than the dispassionate citation of scientific findings. At the same time, Robbins holds out economics as the science which ensures rationality and perhaps "life itself" in social arrangements. The conclusion must be drawn that Robbins believes in a particular sort of rationality, which while obvious to him, has been questioned by the next generation of economists.

This issue does get directly to the heart of this book's subject matter. If economists want to make the dispassionate claim of scientific certainty, with the ensuing claim of value neutrality, then it seems that this is what they should DO. It has been the claim of the scientist throughout history that the "theologian" and "philosopher" were "meta-physical", meaning concerned with ideas over and above the physical world, which are not observable. The scientist on the other hand would seek to explain the world more objectively without these references. It turns out that this is a very difficult requirement. The separation of values and ethics from science seems to place the burden of proof on those disciplines claiming the higher methodological purity. Thus, we will hold the economist and scientist to their own creedal statements. The politically charged and value laden rhetoric of Robbins will become the subject matter of Section III of this book - Economics as Rhetoric?

Economics seems to be in need of some method of defining "science" and "rationality" which itself is open to rational debate. It also seems to need a demarcation rule which clearly distinguishes between science and non-science (metaphysics). These definitions and rules are the subject of Section II - Logical Positivism. With such rules in hand, the sciences would surely claim the moral high ground by distancing themselves from the metaphysical statements which they find meaningless. We proceed directly to the defense of rationality and science.

²⁹ Caldwell, p. 100.

SECTION II - LOGICAL POSITIVISM AND THE METHOD OF SCIENCE

The introduction to this section will introduce a few new philosophical terms and issues to the reader. But philosophy should not scare one away from economics. To understand the philosophy of logical positivism, the reader does not need to have a background in philosophy. Nor does one have to understand all of previous philosophy to understand this modern movement.

In fact, the philosophy of Logical Positivism was born through a group of philosophically minded mathematicians and scientists in Vienna Austria in 1925. This group of philosophers took on the name “The Vienna Circle.” Some of the more famous of these philosophers include Bertrand Russell, Ludwig Wittgenstein, and Ernst Mach.

Mach proposed that all phenomena (even psychological) could be reduced to complexes of sensations. Mach dismissed all ideas which could “not” be explained in terms of one’s senses (sight, sound, touch etc.). He called such statements or ideas metaphysical. This laid a strong “positivist” foundation from which to build. Thus, positivism simply means that all phenomena would have a “positive” or identified source. Russell worked together with Alfred North Whitehead to form a “symbolic logic” which could be used in such empirical investigations. This logic separated these philosophers from the “empiricist” school which preceded them. The philosophy of “logical positivism” is simply the combination of this “positivism” and this “logic”.³⁰

The Logical Positivists felt that the true task of philosophy was to analyze knowledge statements with the aim of making such propositions clear and unambiguous. This school sought to show that many other philosophical methods, such as post-Kantian idealism, was meaningless. It is important to understand at this point that these terms require great attention and definition. Meaningless for the Positivists did not mean useless or bad. It meant that the statements of such idealistic philosophies could not be termed “knowledge.” They were opinion or belief or conjecture, but not knowledge. Knowledge required that the statement be confirmed by the senses, that it be positive and “meaningful.”³¹

Meaningfulness was strictly defined by statements which were 1) analytic or 2) synthetic. Analytic statements are tautologies or self-contradictions, such as circles are round, or rational agents act rationally. They do not include any new information. Synthetic statements are factual statements which may be verified or falsified by data or evidence. Therefore, metaphysical statements such as “God is good” or “Human Rights exist” are neither analytic or synthetic and

³⁰ Caldwell, p. 12.

³¹ Caldwell, p.13.

must be considered “meaningless.” This does not mean such statements are false.³²

The next task for the Logical Positivists was to provide an “objective criterion” for distinguishing science from non-science or meaningful statements from meaningless. How could one tell the difference between synthetic statements and metaphysical statements? One early solution became known as the “verifiability principle.” Verifiability means that the statement must be testable by using observational evidence. Only verified statements would qualify as meaningful. Ethical statements by contrast cannot be tested by using observational evidence and are therefore considered “meaningless.”

³² Caldwell, p. 14.

One major and famous problem remained for verifiability. What would scientists do about “theoretical” terms such as rationality or indifference or magnetic fields or atoms etc.. No one had ever seen these. Or what about the theory of “verifiability” itself? Have you ever seen a verifiability? Using this strict rule of verifiability would force the logical positivists to claim that their own theory was metaphysical or meaningless. This position was indeed taken by the physicist Ernst Mach.³³

From the 1930's to the 1950's logical positivism struggled and matured into what Caldwell has called “logical empiricism.” Many realized that the concepts of testability and verification were too strict. Complete verification ruled out all statements of universal form such as “all ravens are black” because they could not be completely verified. One would have to gather “every” black raven on earth to “verify” this statement! Also, one exception would falsify such statements. In economics, verification would have ruled out statements such as “all agents are rational maximizers” for the same reason. For these reasons, Karl Popper wrote that “Positivists in their anxiety to annihilate metaphysics, annihilate natural science along with it.”³⁴ This is an important comment to keep in mind as we proceed through this book.

Karl Popper suggested a new demarcation rule for science and meaningful statements, which is still highly influential in modern economics. Popper suggested that “falsifiability” and not “verifiability” be the criterion. With this criterion, statements or hypotheses are put forward and tested and remain “tentatively true” until they are “falsified.” If falsified, they are rejected. If not falsified, the hypothesis is not claimed to be “true” but stands as the best hypothesis available until another takes its place. This criterion of “falsifiability” has the advantage of allowing the “universal” statements above which are needed for theory. It fails, however, to accept certain affirmative statements as meaningful. Take the affirmative statement that there “are” abominable snowmen. This statement cannot be falsified, because no such snowmen exist to refute it.³⁵

³³ Caldwell, p.14.

³⁴ Caldwell, p.21.

³⁵ Caldwell, p. 21.

As Caldwell notes, both the verification and falsification principles were rejected because they were too strict. Most logical empiricists have embraced instead Carnap's alternative notion of confirmation. While truth is an absolute concept, confirmation is a relative concept which may vary with the development of science at any given time. Thus, we may speak here of gradually increasing "confirmation" of the law or hypothesis. This notion soon became widely accepted as providing a workable approach to the questions of demarcation of science from non-science and theory evaluation. Hypotheses could be "ranked" according to their degree of "confirmation" relative to the available evidence or data.³⁶

In this review of Positivism, one last concept will be very important as we progress through the next readings. It is the problem of using "theoretical" terms. They are used in all branches of science, and yet they are not observable. From above, we recall that Ernst Mach proposed that science eliminate all such non-observable terms. However, the majority of scientists subscribed to another theory which allowed these terms to be used. This new theory was called the "hypothetico-deductive" or (HD) model of theory which emerged in the writings of Carnap and Hempel. Few views have had more widespread support than this model of the structure of scientific theories. In this model, Richard Braithwaite has suggested that theories are hierarchical in structure. There are several levels of theory and each level has its own characteristics and rules. It is worthwhile to review this HD theory because it is the last defense of positivist project in science. If it wavers or falls, the foundations for science do so as well.

We will consider three levels, high, intermediate and low. High level hypotheses refer to theoretical entities and only occur as premises in the system. Those at the intermediate level occur as conclusions from the higher level hypotheses and serve as premisses for deductions of the lower-level hypotheses. These lower hypotheses describe observable phenomena and are the propositions which may be tested against reality for purposes of evaluating a theory.³⁷

Since statements which make reference to nonobservable theories are now permitted in scientific discourse, the cognitive significance of such statements cannot rest on the possibility of directly testing each assertion. Statements containing theoretical terms would clearly fail this

³⁶ Caldwell, p. 22.

³⁷ Caldwell, p.25.

test. This HD model allows theoretical terms to “gain meaningfulness” indirectly. Even though theoretical terms may not be directly expressible in an observation language, they are accorded “cognitive significance” (not truth) in instances where they are imbedded in theory which has been “confirmed.”³⁸

³⁸ Caldwell, p.26.

Milton Friedman will make much use of precisely this language when he defends his highly influential methodology in the following chapters. In fact, Friedman will push a bit beyond this HD model. Friedman will claim that “the only relevant test of the validity of a hypothesis is comparison of its predictions with experience.”³⁹ Thus Friedman is concerned only with testing the low level hypotheses discussed above. This part of Friedman’s theory fits well with the HD model above. However, Friedman goes further by claiming that “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.”⁴⁰ The assumptions Friedman refers to belong with the high-level hypotheses of the HD model, where theoretical terms may be used. Thus Friedman is not only claiming that theoretical terms may be used but that they may be wildly inaccurate descriptions of reality. Friedman will be rightly challenged for making such a claim in the chapters which follow.

The importance of Friedman’s 1953 article on methodology can not be exaggerated. However, the interpretations given to this essay vary widely. Hollis and Hahn show that Friedman writes as an empiricist in general and as a positivist in particular. They follow Friedman from Positivism through Pragmatism to an impasse.⁴¹ Other notable economists have called Friedman, “Popper with a Twist”. Caldwell on the other hand claims that Friedman is not a positivist but rather a “methodological instrumentalist.”⁴² While Friedman himself has agreed with Caldwell’s characterization, Friedman has written within his own piece that he is concerned with methodological problems that arise in constructing the “distinct positive science” Keynes called for. By sentence end, however, Friedman has suggested the “tentative” acceptance of theories which can be traced to Popper’s influence.

Because of Popper’s significance in modern economic methodology, it is important to understand the distinction between his thought and Positivism in general. While the issues both systems confront are similar, it is important to realize that Popper was probably the most famous critic of Positivism.

In Positivism, the “desirability” of formulating an inductive logic is unquestioned. Karl Popper takes the opposite position, believing that a preoccupation with highly probable hypotheses is exactly the worst way to approach science. Popper believed that it is always “easy” to find confirming instances (verification) for one’s theory. This would not ensure a good theory. Popper used Marx and Freud to show how some theories which claim to have very high “explanatory power” are actually weak theories. Freud and Marx both worked out theories capable of explaining almost everything. Both could easily offer explanations for religion, political power and relations in the family. But which would be correct? Popper was more

³⁹ Hausman, p. 214.

⁴⁰ Hausman, p. 218.

⁴¹ Hahn & Hollis, p.47.

⁴² Caldwell, p.173.

interested in proving the “falsity” of such theories.⁴³

For example, Popper argued that generalizations like, “All large increases in the money supply lead to inflation” can be “falsified” by singular statements reporting the results of observations, even though they cannot be “verified”. Thus one counter-instance to a theory would falsify it, and theory would have to begin again from scratch. And on the other side, no general theory could be proven “true” because it is not possible to test all future cases of monetary policy at present. Thus a general theory can never be confirmed. As a result, Popper was prepared to argue that there is no such thing as confirmation!⁴⁴ Science proceeds by making bold conjectures and then eliminating errors. This is quite different from the Positivist goal of building up a “positive” and “logical” foundation of meaningful knowledge statements.

⁴³ Caldwell, p.41.

⁴⁴ Hausman, p.18.

We are now in a position to better understand the readings of Section II - Logical Positivism. In the first essay, Terence Hutchison will argue the Positivist case. He will claim that economics does not satisfy the logical positivist standards of theory assessment. He will argue that it should. In the second essay, Milton Friedman will respond with probably the most famous discussion of economic science in print. He will argue that economics does satisfy the tenets of logical positivism. As Hausman has noted, Friedman's defense of positivism was so successful that by the mid-1970s, Martin Hollis and Edward Nell could argue in their "Rational Economic Man" that standard economic theory "presupposes" logical positivism. These issues are still very much alive today in economics.⁴⁵ Finally, Herbert Simon offers a critical response to Friedman in the third essay.

Terence W. Hutchison

Terence Hutchison's first book, "The Significance and Basic Postulates of Economic Theory (1938), was the first sustained attempt to apply logical positivist philosophy of science to economics. As we can see by the title of the following essay, "On verification in economics", not only does Hutchison espouse a Positivist philosophy, but it is in fact an early and strict form of positivism. The introduction to Section II laid out the merits and flaws in this attempt at "verification." Let us review Hutchison's work itself.

"On verification in economics" - 1956

Hutchison opens his essay by introducing the terms of the Positivist debate. In a series of books and articles, Hutchison has been criticizing economics for refusing to verify its hypotheses and for failing to make statements about reality which are "measurable." Hutchison wants a thoroughly "observable" science of economics. This is Positivism.

Professor Machlup disagrees. He believes that economics has been living up to the demands of Positivist science by pursuing "indirect verification" of hypotheses. Machlup argues that "fundamental postulates, such as the maximization principle, are not subject to a requirement of independent verification. It is not necessary to go out and test whether people do in fact maximize. Instead, these assumptions are *considered verified*, together with the whole theory of which they are a part", when their deduced consequences are shown to correspond to observed events.⁴⁶ This "considered verified" phrase is the point of debate between Hutchison and Machlup. Machlup is arguing that it is proper science to accept this "indirect verification" of the profit maximizing postulate as long as the final conclusion one is testing can be verified. Machlup calls those who demand that the profit maximizing assumption itself be empirically

⁴⁵ Hausman, p.187.

⁴⁶ Hausman, p.199.

tested independently of the other propositions are to be called “ultra-empiricists” and this includes Hutchison.

If you search the introduction to section II for the first mention of the HD model, you will find the discussion where Richard Braithwaite suggests the hierarchical nature of theories. The high level hypotheses (which include theoretical entities and which only occur as premises in the system) are the subject of this debate between Hutchison and Machlup. Hutchison will argue that even these high level assumptions must be testable in some sense. Machlup considers these high level assumptions “as verified” if they allow one to “deduce” intermediate hypotheses and ultimately allow one to test observable low level hypotheses. Thus Machlup allows deductive statements at the high level without direct observation.

Let us return to Hutchison’s own comments. After laying out the charges of Machlup, Hutchison defends his position by citing his own work. While Machlup calls me an ultra-empiricist, I have actually written that if economics is to have any empirical content, then “these propositions must “*conceivably*” be capable of empirical testing or be “reducible to such propositions” by logical or mathematical deduction. Thus, Hutchison is arguing that not every statement or assumption “need actually” tested. However, if one wanted to test them, they should be able to. This seems obvious to Hutchison, although he notes that several economists, such as the Austrian von Mises, hold that economics should not be an empirical science but rather a “formal” science such as Mathematics or Logic. Hutchison is guarding against this by demanding at least “conceivable” empirical testing of all statements.

Hutchison explains that “Direct or indirect measurability (or the possibility of other factual testing) is a necessary condition for the avoidance of mystery, where everyone may have his own ideas as to the same words. Scientific statements about reality must be verifiable by others.” This requirement stands strongly in the Positivist tradition as it seeks to separate science from metaphysics. No religious icons can be left standing. Even basic claims such as “economic rationality” have to be tested to establish “just what content” they do possess.

Hutchison gets to the very heart of the Positivist agenda in his closing remarks. He is afraid that Machlup’s doctrines on “indirect verification” in economics may be used in defense of a kind of politico-intellectual obscurantism that seeks to avoid not merely the empirical testing of its dogmas, but even the specification of what would constitute tests.

In fairness to the position of Machlup, which has not been given equal access here, I will quote a brief summary of his position by Bruce Caldwell. “We come at last to Machlup, perhaps the most methodologically astute of the analysts. As he claimed in “The Verification Problem”, his position lies somewhere between those of the “a priorists” (von Mises) and the “ultra-empiricists”. He does not attempt to test the rationality assumption, for as an “ideal type”, it cannot be tested..... Machlup’s position is consistent with the HD model of theory.....On the other hand, Machlup is no “a priorist”; he does not insist that it is everywhere applicable. Rather he agrees with Friedman that the best “test” of a theory is its *usefulness, as measured by its applicability*. And indeed, his position regarding the role of empirical studies in economics (to see if a particular theory is applicable in a particular situation, rather than to test it, with the idea of rejecting it if it is disconfirmed) accords well with the positions of economists on the subject throughout the nineteenth century and into the third decade of the present one. If one takes the long view, Machlup is a contemporary representative of the *dominant view* of the role of empirical studies, whereas both Austrians and Positivists must be viewed as relatively recent

challengers.”⁴⁷

⁴⁷ Caldwell, p.166.

While Caldwell shares a sense of collegiality with Machlup, this author cannot leave this section without the impression that something has been given up with the move from Hutchison's strict Positivist standards to Machlup's "indirect verification." In terms of the profession, Caldwell may well be right in claiming that Machlup's "test" of a theory in terms of its *usefulness has been the dominant view*. The question is whether this "dominant useful view" is also the "scientific view." Elsewhere in his writings, Caldwell has made reference to the great American theologian, Reinhold Niebuhr, and his position on "original sin".⁴⁸ Would Caldwell be comfortable using this type of a high-level assumption, even if it turned out to be extremely "useful" as is the case with economic maximization. The present author sees these two statements as equally plausible. Niebuhr claimed that this religious doctrine of "original sin" is certainly one of the most empirically verifiable dogmas in the real world, perhaps because it is so related to individual maximization. Would a theory built upon the assumption of "original sin" qualify as science? Or is the maximization assumption privileged for some reason? It seems as though something has been given up with the departure from "Positivism." We will find an even greater departure from Positivism with the next essay by Milton Friedman.

⁴⁸ Caldwell, p.127.

Milton Friedman

Milton Friedman was awarded the Nobel Prize in economics in 1976. The following essay, according to Hausman, is the most influential work on economic methodology of this century.⁴⁹ Caldwell has called it a “marketing masterpiece.”⁵⁰ Hahn and Hollis have written that “one fierce, plainly philosophical argument is flourishing, however, and has long enlivened the pages of *The American Economic Review*. It was touched off by Milton Friedman’s essay “*The Methodology of Positive Economics*.”⁵¹ We have built up to an exciting discussion of mainstream economics. In this excitement, however, the careful student may soon become a bit hardened. Many contradictions will appear with no clear resolution. This should not worry the reader. The issue at stake is as old as Western Civilization, for what is at stake is really the question of what constitutes knowledge. And this is a difficult and perhaps unsolvable problem. To illustrate that a problem does exist, let us just summarize a few basic positions up front so that the reader will know what is coming.

Friedman’s essay is titled “*The methodology of positive economics*.” We have studied two schools of positivism so far. The first was logical positivism. This school required observation and “verification” of all statements and sought to clearly separate “science” from metaphysics. It turned out that this criterion of “verification” was so strict that it would not only have eliminated metaphysics but also science along with it. Have you ever seen a theoretical term? Thus, the more mild version of logical empiricism emerged which was characterized by the hierarchy of high, mid and low level hypotheses as well as a commitment to the HD model of scientific theory. In logical empiricism, high level hypotheses or assumptions were not required to be “verified.” Only the final conclusions of the lower level hypotheses were required to correspond with observable real world phenomena. It turns out that Friedman’s theory will be a *synthesis* between this milder form of logical empiricism and Popper’s method of falsification.

⁴⁹ Hausman, p.210.

⁵⁰ Caldwell, p.173.

⁵¹ Hahn and Hollis, p.2.

We remember from above that in Positivism, the “desirability” of formulating an inductive logic is unquestioned. Karl Popper took the opposite position, believing that a preoccupation with highly probable hypotheses is exactly the worst way to approach science. Popper believed that it is always “easy” to find confirming instances (verification) for one’s theory. It is easy to find one person who maximizes their utility. However, this would not ensure a good theory. As a result, Popper was prepared to argue that there is no such thing as confirmation of a theory!⁵² Instead, he would argue that science proceeds by making bold conjectures and then eliminating errors. The theories which hold even after such elimination have the status of “tentative truth.” This is quite different from the Positivist goal of building up a “positive” and “logical” foundation of meaningful knowledge statements. Friedman, along with most of the economics profession, stands solidly on this Popperian foundation as well.

The irony of this *synthesis*, however, is that Karl Popper is proud to have declared that he brought logical positivism to an end. So, how can Friedman claim to offer a positive foundation for economic knowledge when in fact positivism may be dead? Is logical empiricism still alive? Is this what Friedman is offering? These are the questions we will address in the following essay.

The Methodology of Positive Economics - 1953

Friedman opens with an important distinction which we have not covered thus far, the distinction between positive and normative economics. Positive science or economics is a body of knowledge concerning what “*is*.” For example, the following statements are all positive: the GDP *is* \$7 Trillion, the interest rate *is* 3%, the richest 5% own 40% of all assets etc.. This knowledge describes the world as it “*is*.” Positive economics is in principle independent of any particular ethical position. Normative science is a body of knowledge concerning what “*ought*” *to be* or how the world “*should*” *be*. It is prescriptive, not descriptive. It prescribes behavior, and is directly related to ethics. For example, the following statements are all normative: the Federal Reserve “*should*” pay more attention to unemployment instead of inflation, the rich “*ought*” to have a higher tax rate, economic agents “*should*” maximize their utility by following their highest religious principles.

Friedman notes that the confusion between these two types of knowledge is common and has been the source of many mischievous errors. These errors are so common that many intelligent people may not notice them. Economists who claim to be doing “positive” science are often found on the nightly news making “normative” or ethical or political statements. This is fine as long as the economist does not blur the distinction between what the “science” has concluded and what the “scientist” is prescribing as policy etc.. It is fine if the economist claims that their model has determined that the optimal interest tax rate for business investment is 15%. However, the economist is not free to claim that this “should” be the rate, because many other factors come into play which the scientist has not modeled. For example, how would this tax rate affect the distribution of income? Science ends where the model’s predictions end. Ethics begins with claims of what “ought” to be.

Friedman claims that “this paper is concerned primarily with the certain methodological

⁵² Hausman, p.18.

problems that arise in constructing the “distinct positive science” Keynes called for - in particular, the problem of how to decide whether a suggested hypothesis or theory should be *tentatively accepted* as part of the “body of systematized knowledge concerning *what is*.” The language of tentatively accepted knowledge rings of Popper. Statements are accepted and then aggressively tested and falsified if possible.

The task of positive economics is to provide a system of generalizations that can be used to make correct predictions about the consequences of any change in circumstances. The *performance* of positive economics is to be judged by the precision, scope and conformity with experience of the predictions it yields. In short, positive economics can be an “objective” science in precisely the same way as the physical sciences. Note that this is perhaps the heart of Friedman’s message. Once the definition, task, and performance of positive economics has been given, Friedman only needs to be consistent within the definitions he has given. The definition of Friedman is quite narrow in that it’s task is “prediction”, not that of understanding economics or explaining economics, just predicting certain changes in economic phenomena. Friedman’s claim is that economics can be “objective” only in this narrow sense.

In section II, Friedman describes the features of “positive economics.” The ultimate *goal of a positive science* is the development of a “theory” or “hypothesis” that yields valid and meaningful predictions about phenomena not yet observed. Such a theory is composed of two parts. The first part is simply a “language” designed to promote “systematic and organized methods of reasoning. Using the terms of the logical Positivists, this language is called “analytic.” It has no substantive content; it is a set of tautologies. It serves as a filing system for organizing empirical material and facilitating our understanding of it. The second part is a body of substantive hypotheses designed to abstract essential features of complex reality. These are also referred to as “synthetic” statements. They convey new knowledge as they contain information not found in the predicate.

Viewed as a body of substantive hypotheses, theory is to be judged by its predictive power for the class of phenomena which it is intended to “explain.” Only factual evidence can show whether it is “right” or “wrong” or, better tentatively “*accepted*” as valid or “*rejected*.” The only relevant test of *the validity* of a hypothesis is comparison of its predictions with experience. The language used here combines both the tentative acceptance of hypotheses familiar from Popper as well as the concept of “validity” which was developed in the latter logical empiricist philosophy. Validity here does not refer to an hypothesis being true. Rather, theories are valid if they conform to this logical empiricist formulation of rules. The hypothesis is rejected if its predictions are contradicted “frequently” or more often than predictions from an alternative hypothesis. On the other hand, factual evidence can never “prove” a hypothesis; it can only fail to disprove it. If not disproved, the hypothesis remains and is called “confirmed” by experience.

For Friedman, the “validity” of a hypothesis in this sense is not by itself a sufficient criterion for choosing among alternative hypotheses. Observed facts are finite while the hypotheses available to explain these facts are infinite. Friedman admits that the choice of hypotheses equally consistent with the evidence (or data) must to some extent be arbitrary. However, concepts such as “simplicity” and “fruitfulness” help to make such choices. *Simplicity* means that the hypothesis being constructed requires less up front knowledge than a competing hypothesis. *Fruitfulness* refers to hypotheses which make more precise predictions and suggest

further lines of research. Friedman, with J.S. Mill in mind, notes that economics is also denied the dramatic and direct evidence of the “crucial” experiment which is needed for the adequate testing of hypotheses.

Friedman closes section II with perhaps the most famous and controversial claim in the history of economic methodology. Friedman notes that the two stages of 1) constructing hypotheses and 2) testing their validity are related in two different respects. First, the “facts” used in 1) constructing hypotheses are just as well used in 2) testing their validity. Second, there is an ongoing relationship between the 1) construction of hypotheses and then the 2) testing of their validity by finding contradictions in the “implications” of the hypothesis and then using this information in the 1) construction of new hypotheses. So the two methodologically distinct stages are always proceeding jointly.

Friedman cites a common misunderstanding which he believes has led to much mischief in economics. For Friedman, a single hypothesis is designed to explain only a certain class or range of phenomena. The hypothesis will have implications concerning this phenomena only. Economists, in order to gather further information, are often tempted to suppose that hypotheses have not only these “implications” but that they also have “assumptions” which can be tested against additional experience. This widely held view that “assumptions” can be tested is fundamentally wrong according to Friedman. With this statement, a firestorm in economics was set off.

Friedman is no coward. He restates his position in the strongest possible terms so that in Popperian fashion it may be falsified if possible. The restatement follows:

“Truly important and significant hypotheses will be found to have “assumptions” that are wildly inaccurate descriptions representations of reality, and, in general, the more significant the theory, the more unrealistic the assumptions (in this sense).”

At first glance this statement seems counter-intuitive, but if we remember that the goal of positive science for Friedman is “prediction” then the issue regains clarity. An hypothesis is constructed to predict only a certain range of behavior. Therefore, an hypothesis is important if it can abstract or select only the common and crucial elements from the complex world which help in making this single prediction. Because the economist has only focussed on these crucial elements, the theory itself may look simplistic or even wildly inaccurate when compared to “reality.” But this is not what matters. What matters is whether this hypothesis or theory will make proper predictions about a certain part of “reality” only. If the model is successful in prediction, then this very success shows that all the other parts of reality which were ignored by the model were in fact “irrelevant” for the phenomena to be explained.

Friedman’s example of the theory of “perfect competition” makes this methodological point easier to see. The *assumption* of “perfect competition” has been criticized as being a false image of “reality.” Critics claim that “perfect competition” cannot be found in the real world. Nor do businessmen act as if their firms are perfectly competitive. However, for Friedman, the assumption is not what should be tested. The main issue for Friedman is whether the theory’s predictions (marginal analysis) conform to experience - not whether businessmen do or do not in fact reach their decisions by acting in conformity with the theory of perfect competition.

Friedman devotes section III to this discussion of whether a hypothesis can be tested by the realism of its assumptions. Before approaching this section, it is good to remind ourselves of the methodology Friedman himself is using. We remember from the Hutchison vs. Machlup

debate that the fate of “logical positivism” would be largely determined by how strict the rules for “verification” would be. If every scientific term would have to be “observable” as Hutchison and others had argued early on, then the hope for an economic science would crash immediately. No one has ever observed “perfect competition” or “equilibrium” or even “rationality”. None of these terms could be called “meaningful” under the strict terms of logical positivism. However, logical empiricism loosened these requirements quite a bit.

Logical Empiricism in its mature form consisted of the three levels of hypotheses discussed above. Using Braithwaite’s terminology again, we remember the three levels. First, 1) high-level “fundamental assumptions” do not require “verification” or “observability.” These assumptions include terms such as rationality and profit maximization which are heuristic or organizing terms used in building an hypothesis. The 2) mid-level “specific assumptions” are empirically testable and include narrow or specific assumptions such as “assume the interest rate is 5% etc..”. Finally, 3) “deduced low-level hypotheses” are the predictions or implications of which Friedman is speaking. These final low-level hypotheses must correspond to “reality.”

Friedman seems to have this schema of logical empiricism firmly in mind as he makes his methodological case. He agrees with Braithwaite that science does not require that the first high-level assumptions be “testable.” Friedman goes way beyond Braithwaite, however, by claiming that **“truly important and significant hypotheses will be found to have ‘assumptions’ that are wildly inaccurate descriptions representations of reality, and, in general, the more significant the theory, the more unrealistic the assumptions (in this sense).”** Braithwaite and the logical empiricists left this area in an “unclear” state and it appears that Friedman has formulated a position consistent with logical empiricism, but which pushes it into a very questionable form. Perhaps Friedman wanted to expose this position and subject it to testing by the profession.

In section III, Friedman offers several examples to support his position. The famous “billiard player” example may help to make this argument a bit more concrete. “Assume” that an expert billiard player plays pool “as if” she knows the complicated mathematical formulas that would allow her to sink about every shot on the table. Our confidence in this hypothesis is not based on the belief that the billiard player actually “knows” all of this complex math; our confidence comes from the fact that the pool player achieves essentially the same excellent performance in pool “as if” she knew the calculations. Thus, the 1) high-level assumption is that she knows the math. This assumption does not require verification. However, the 3) low-level deduced assumption that she play pool “as if” she knew the math does require that the experience from the real world match up with the predictions of the theory. The theory would suggest that she sink a lot of billiard balls and her performance would confirm the theory with her excellent game.

Friedman closes section III by noting that the evidence “for” a hypothesis always consists of its repeated “failure to be contradicted.” It 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. In the final section of this book, McCloskey will make critical reference to the profession’s development of this “tradition and folklore.” The question will be whether the logical empiricist’s strict rules are being properly applied or whether in everyday research and teaching another type of persuasion and “Rhetoric” is being used to convince and persuade along less formally scientific lines.

In section IV, Friedman candidly admits that in his foregoing discussion of “assumptions”, there is too much smoke for there to be no fire. I will save much of this discussion for later writer’s comments. Friedman merely admits that as far as he can see, the “assumptions of a theory” play three different roles which he discusses in the following pages. 1) They are often an economical mode of describing or presenting a theory. For example, assume that people act rationally. This is a simple way of describing a very complex behavior. 2) Assumptions sometimes facilitate an indirect test of the hypothesis by its implications. Friedman admits that sometimes it is possible to interchange “assumptions” and “implications” and that this process is not always unambiguous; and 3) Assumptions are a convenient means of specifying the conditions under which the theory is expected to be valid.

In section V, Friedman discusses some implications for economic issues which follow from the methodological issues above. He begins with the perennial criticism of “orthodox” economic theory as “unrealistic.” For Friedman, criticism of this type is largely beside the point “ unless supplemented by evidence that a hypothesis differing from the theory being criticized yields better predictions for the same phenomena.” This is a scientific way of saying that if you don’t have any better theory to bring to the table, stay at home. The key point to remember here is that Friedman has convinced us that “prediction” is the task and goal of positive science. It is not required that we understand the behavior in question, only that we best predict it. This will be one of the larger criticisms waiting for Friedman in later writings.

In Section V, Hollis and Nell show that Friedman has a very difficult time maintaining the positions he has sketched out thus far. Friedman is trying to be consistent with Positivism as we have argued above. However in the fifth and sixth paragraphs of Section V, a few new strands of thought emerge. Friedman states that “A Theory is the way we perceive facts.” This statement runs against positivism. Earlier Friedman stated that a positive science consists of two parts; 1) a language or filing system and 2) substantive hypotheses. As Hollis and Nell ask, “if theory is only a filing system of 1) tautologies and a 2) body of hypotheses which confront the tribunal of experience, how can it be the way we perceive facts?”⁵³ Here we suggest that Friedman must choose. If he sticks to Positivism, facts are given and concepts are optional. No sense can be given to the notion of more fundamental structures of reality and there is no room for interplay between pure model building and experience. Prediction must remain the final criterion.⁵⁴ This is consistent with Positivism.

Hollis and Nell also illustrate that Friedman’s neo-Classical critics are well advised to agree with him that the realism of assumptions does NOT matter. The realism of assumptions

⁵³ Hollis and Nell, p.51.

⁵⁴ Hollis and Nell, p.52.

required for “the grand neo-classical synthesis” are very much needed according to Samuelson. Do supply curves really rise? Do firms really know their marginal revenue curves? Can inputs really be varied? The aim of Friedman is to preserve and defend this core of modern economic thinking and Positivism does not require that these “assumptions” be “realistic.” It only requires that the low-level deduced hypotheses be confirmed by experience.⁵⁵

⁵⁵ Hollis and Nell, p.49.

Following on this issue, Hollis and Nell then strike to the heart of the matter. “We now have a fine case of the inductive problem. Any particular statement is implied by many incompatible hypotheses. Which are we to prefer?? Having earlier dismissed the analytic aspects of theory as a mere filing system, Friedman now begins to claim that some filing systems are better than others. Friedman favors “more general theories” This generality involves abstraction and analogy. Assumptions are best simplified to a point where it is “as if” they were true. This analytic part of theory contains “ideal types” as discussed under Max Weber earlier. Ideal types, such as “perfect competition” do not exist in reality but are helpful abstractions in theory. As Hollis and Nell note, “we could see in these ideal types an answer to the Inductive problem, if Friedman were to claim that a hypothesis was strengthened by being expressed in a forceful “ideal type.” But he cannot do so, while remaining loyal to Positivism. Ideal types are not observable.⁵⁶

Friedman also attempts to use categories such as “economy, clarity and precision” to distinguish between hypotheses, but as Hollis and Nell again note, these concepts like Ideal types have no epistemological value. They are not observable facts for use in Positivism. However, these types of arguments do suggest that a well-entrenched and approved theory can be maintained against some part of experience and so hint that Pragmatism has something to offer. The philosophy of Pragmatism defends theories simply on the pragmatic or practical ground that any statement can be preserved in the face of experience and can defend “unrealistic” assumptions, *provided they are useful*. That is all. This criteria is obviously much easier to fulfill than the strict positivist rules. This allows Friedman to defend the abstract “as if” type of realism he has in mind. Concepts such as “perfect competition” are useful. However, if Friedman goes with Pragmatism, then he must give up the strengths of Empiricism and much of the scientific method he has sketched out so far.⁵⁷ Hollis and Nell argue that Friedman makes this shift from Positivism to Pragmatism late in the piece which follows. See if you can trace these elements for yourself.

In closing, Friedman notes that the construction of hypotheses is a creative act of inspiration and should therefore be studied in psychological categories, autobiographies and biographies; and promoted by maxim and example. McCloskey will argue that the entire economic and scientific program should be studied in similar fashion, not just theory

⁵⁶ Hollis and Nell, p.50.

⁵⁷ Hollis and Nell, p.50.

construction.

Herbert Simon

Herbert Simon received his Ph.D. in political science from the University of Chicago. Simon has made major contributions to a number of different disciplines including political science, psychology, philosophy and economics. He was awarded the Nobel Prize in economics in 1978. The following short essay was written for a symposium on Milton Friedman's methodology in 1962.

Testability and Approximation - 1963

Simon heads straight to the problem in Friedman which we have just covered; the unreality of assumptions - what Professor Samuelson called the F-Twist. Simon heads directly into a logical assessment of Friedman's position.

In Friedman's theory, the relevant theory at the actor level can be approximated by the propositions:

X- businessmen desire to maximize profits;

Y- businessmen can and do make the calculations that identify the profit-maximizing course of action. The theory at the market level may be summed up as:

Z- prices and quantities are "observed" at those levels which maximize the profits of the firms in the market.

Defending the theory of X,Y and Z, Friedman asserts that it doesn't matter if X and Y are false, provided Z is true. Professors Nagel and Samuelson have already exposed the logical fallacy in using the validity of Z to support X and Y. The logical in Logical Positivism has been abandoned. But there are other equally serious difficulties in Friedman's position.

The logical fallacy in Friedman's principle of unreality above has exerted so much fascination that attention has been distracted from its other errors. Most critics have accepted Friedman's assumption that proposition Z is the empirically tested one, while X and Y are not directly observable. This, of course, is nonsense. No one has, in fact, observed whether the actual positions of business firms are the profit-maximizing ones; nor has any one proposed a method of testing this proposition by direct observation.

If Z is a valid theory, it must be because it follows from empirically valid assumptions. However, the vast weight of evidence shows that Y is false. The expressed purpose of Friedman's theory is to save classical theory in the face of the obvious invalidity of Y. The remedy is simple. Find new assumptions, X' and Y' and base Z on these true propositions. In the remainder of the essay, Simon proposes his own methodological principle to replace Friedman's. It asserts: if the conditions of the real world "approximate" the assumptions of an ideal type, the derivations from these assumptions will be *approximately correct*. This principle could be straight out of J.S. Mill in our earlier chapter.

PART III: IDEOLOGY, VALUES, ETHICS AND RHETORIC

While the title above sounds a bit ambitious, the final section of this book does have a coherent theme. However, you may not believe this until you have grappled a bit with this material. The material is not as obviously connected as the prior sections. I will introduce the material so that you will be able to make these connections for yourself. On the one hand, the following material is much less technical than the previous section on Positivism, and many readers have found it more interesting. On the other hand, the following material will require you to open your mind to new and broader philosophies about “knowledge” and “understanding” which are not common knowledge in most university settings at present. I believe these newer philosophies will prevail in the coming decades precisely because they help us to understand economics and our world more completely.

One theme which unites the following readings is their reaction against the Positivism of Section II. Positivism concerned itself with the possibility of constructing a value-free Positive science which could produce and differentiate “meaningful” scientific statements from meaningless metaphysics. As we have just seen, however, even mature positivism ran into serious philosophical problems. Many if not most writers in the Philosophy of Science literature consider Logical Positivism to be dead for this reason. Most students of economics would immediately make the logical leap and ask what took the place of Positivism. This is the correct question, but unfortunately there is no answer at present. The entire academic community is groping for a new way of viewing “knowledge”. Most students do not feel comfortable knowing that their own teachers do not have a secure foundation from which to impart “knowledge.” Worse yet, many teachers are not even aware of the problem.

Section III opens with two essays which address the relation between ideology and economics. Myrdal sharply attacks the idea of a value free science by providing example after example of ways in which values have shaped economics and economists. Schumpeter shares many of these views but still holds out the hope for an “objective” core of economic science.

Section III then moves in another direction which is very related to the issue of values and ideology. If economics IS shaped by values and if it is NOT possible to conceive of economics in Positivist terms, then how should we conceive or picture economics? This is the big question. In order to answer this question, many economists such as McCloskey and Klammer will argue that the best way to understand economics is by asking economists to explain what they are doing and how they are doing it, and then examine their claims. This “conversation with economists” can also be referred to as the “Rhetoric” of economics.

In the third chapter of Section III, McCloskey will explain that Rhetoric is the art of persuasion. By talking with economists and by examining the actual writing and teaching of economists, this new philosophy of “Rhetoric” claims that it can better explain what economics is all about. The irony of “Rhetoric” is that all economic positions are allowed, even Positivism. If a Positivist economist such as Friedman argues that only the Positivist philosophy produces “science”, then the philosophy of Rhetoric examines their claims to determine whether they are “persuasive” or not. In fact, McCloskey believes that Positivism has done a very good job of “persuasion.” He does not, however, believe that the one method of Positivism can limit all others types of discourse or persuasion. He believes that Positivism is very narrow in the type of knowledge it allows into the conversation. McCloskey enters into a debate with any school

which wishes to do “Rhetoric.”

In the next chapter, Arjo Klamer summarizes the findings from his book called “Conversations with Economists.” Klamer’s analysis is fascinating. He interviews several Nobel winning economists who all claim to work within the Positivist camp. But Klamer shows that the debate between the New Classical and NeoKeynesian economists has not been settled by using Positivist methods or tools. Klamer shows that many other factors including ideology, religion, political views, University rivalry and childhood upbringing have all shaped the so called “scientific” positions of these great economists. This work shows in concrete terms what the philosophical work in Section II tried to show in theory. The rules for Positivism are so strict that very few mortals can follow them. Instead, departures from Positivism occur very frequently and in many ways. These “Conversations with Economists” and the “Rhetorical” school of McCloskey help to bring these departures from Positivism to light.

The book closes with several biographical sketches from several additional Nobel winning economists. By this point, I believe I have given you enough introduction and tools to allow you to bring your creativity and knowledge to an independent analysis of these chapters. You and your professor should engage each other in “Rhetoric” over what is going on in these chapters. Several questions are provided to start you off at the end of this section.

Gunnar Myrdal

Myrdal was born in Sweden and educated at Stockholm University. He was awarded the Nobel prize in economics in 1974. The following excerpts are from the first chapter of his “The Political Element in the Development of Economic Thought.”

Implicit Values in Economics - 1954

Myrdal’s work is perhaps the best example in this book of excellent “liberal arts” teaching. Myrdal, along with McCloskey and Klamer, all have a broad world view which allows them to place economics within a certain context. They see economics as a narrow part of human understanding which came about only recently in human history. As such, economics will have to borrow many elements from the other disciplines. For example, economics had to borrow the language of the time, the general philosophy of the time and even the general ethical mode of thinking from the time in which it was created. It is not a science which fell from heaven with Adam Smith in 1776. Indeed, Smith was a moral philosopher who used a particular language, philosophical outlook and ethical world view to mold his economics.

Myrdal shows that later on in its development, economic theory became increasingly isolated from the other social sciences. For Myrdal, the effects of this evolution of economics has been harmful because economic research is bound to touch “constantly” upon psychology, jurisprudence, sociology, epistemology, and philosophy. Instead, by about 1870, economists were perfecting their theory as an explanation of economic behavior in general. Only at this late stage was the ancient ideal that economics should become an accomplished, all-embracing “calculus of pleasure and pain” realized. This calculus of course is the philosophy known as “Utilitarianism” and this philosophy reached its peak with the introduction of marginal analysis in 1870. This philosophy went hand in hand with the idea of “natural law” and these ideas together produced such common ideas as the “natural state” and the “state of equilibrium” and these “Norms” would in turn lead to the “maximum satisfaction of human needs.” Thus the Utilitarians had achieved their calculus of pleasure and pain through economics.

I hope that your trained eyes have exposed the major problem with this line of reasoning in the Utilitarian school of economics. The Utilitarians have combined both Positive description with Normative prescription. They have calculated pleasure which is Positive but they have also advocated pleasure, which is Normative. Under the orthodox method of economics, this combination of Positive and Normative is not allowed. Myrdal will argue that this mixture is still very present with us even in modern economics.

As Myrdal explains, from the beginning of economics and political economy, John Stuart Mill wanted to restrict the scope of economic science to the study of the factual and the probable. Similar views were expressed by Senior, Cairnes, Bagehot, Sidgwick and John Neville Keynes. Unfortunately, economists have not lived up to this creed. They have been airing views on what they considered to be socially imperative ever since Mill. They have proceeded to calculate, “immediately on the basis of their scientific findings”, the course of action which is economically “desirable or right.” They have sought to increase “social welfare” and have accused others of “neglecting economic laws” which would bring these blessings about. In other words, economists from the beginning to the end, have engaged in normative, ethical and moral

arguments which diverge greatly from the work of the “true” science which they espouse.

Myrdal’s greatest contribution in this essay has been to offer an analysis of how the world view of economists and the philosophy of their time led to this “blurring” between science and ethics. As a quick example, Myrdal shows that the theory of “free competition” is not intended to be “merely” a scientific explanation of what course economic relations would take under certain specified assumptions. It, at the same time, serves as a kind of “proof” that these hypothetical conditions would result in maximum “total income” or the greatest possible “satisfaction of needs” in society as a whole. Of course neither of these last two points is ever proven scientifically. It is hard to see how they could be. Thus the theory of “free competition” becomes more than a set of economic “assumptions”. It becomes a Political “Desideratum”, a desirable “end” or “goal” which is ethical, not scientific. Other economic theories have been devised to establish the “population optimum”, the “just distribution of income”, and even the system of taxation we “ought” to impose. The terms “optimum”, “just” and “ought” are all ethical, not scientific. Positivism would label these terms “metaphysical” and “meaningless.”

Myrdal concludes that economists appear to have access to a “sphere of values which are both objective and observable.” He claims that the situation cries out for a conceptual analysis of how this can be, and then in the next section, provides such an analysis. In the fourth paragraph of this section, Myrdal proposes a “methodological rule” for his critique. “We must try to lay bare the specific logical errors resulting from the insertion of valuations.” It should not be forgotten that the whole terminology of economics has been permeated with the maxims of natural law philosophy and, later, of utilitarianism. As a result, nearly all the general terms current in political economy have two meanings: one which explains what “is”, the second which explain what “ought to be.” Positive and Normative.

The word “principle” on one hand means 1) theory, or working hypothesis within a theory, but on the other hand principle means 2) an aim of conscious striving or the chief means for obtaining an end. The first is descriptive, the second is prescriptive. For Myrdal the dual meaning of our terms is not accidental; it is the expression of our world view or of the general philosophy which undergirds all our language. He calls this the “normative-teleological way of thinking” and states that this way of thinking has been traditional in the social sciences and especially in the philosophy of natural law upon which they were founded. The “normative” part is simply the ethical part of thinking or the way things “ought to be.” The “teleological” way of thinking is very Western. It assumes that our history and that our thinking has a beginning and an end and that there is a straight line connecting the two. We always think in terms of “ends” or “goals.” We work to get money. We go to college to get smart or to get a job etc.. Myrdal is claiming that our entire thought structure has been shaped by this “normative-teleological” mode and that this world view has greatly shaped modern economics. He offers many examples.

Other such terms with a double meaning are, “productivity”, “equilibrium”, “balance”, and “adjustment.” Should we be productive or in equilibrium or in balance? If you answered yes to any of these then you have fallen into the trap Myrdal is revealing. A scientific term such as “equilibrium” should only describe an observable reality. It should not carry with it a normative or ethical prescription that we should be in equilibrium. One would be doing economic policy before one knew the reality for the policy. Myrdal shows that without being aware of this process, many theorists tend to bolster up the objectivity of the “principle” (equilibrium etc..) in the sense of a “norm” by its objectivity just because it is an element of theory. The norm thus

acquires an air of being founded upon the “nature of things.” This precisely is the circular reasoning inherent in the philosophy of natural law.

So far Myrdal has not even mentioned the “directly” normative concepts which occupy a central place in economic theory. These are best eliminated altogether if one truly wants to build a value-free science. Myrdal refers to terms such as: *utility, value, real or subjective costs, welfare, social utility, real national income, minimum social sacrifice, economy, economical, right, natural equitable*, etc.. etc.. These terms represent a serious problem of involved structures of metaphysical ideas which are firmly anchored in our tradition of thought. One tends to overlook the premises on which the system is founded. A scientist who uses these “loaded” terms in scientific work is guilty of such an oversight. Myrdal has not overlooked this problem and he serves as an excellent example of how the liberal arts education should and can prepare economists to be truly critical and independent thinkers.

Joseph Schumpeter

Joseph Schumpeter was born in Austria and studied law at the University of Vienna. Schumpeter's "*History of Economic Analysis*" is perhaps the greatest work ever written in the history of economics. The essay reprinted here was Schumpeter's presidential address to the American Economic Association in 1948. The primary reason for including this essay is the excellent summary statement on Adam Smith, Karl Marx and John Maynard Keynes in section IV.

Science and Ideology - 1949

Schumpeter begins his essay with a different tact from Myrdal. Schumpeter states that he is not going to reopen the old discussion on value judgments. On the contrary, he wants to show that "in itself" scientific performance does not require us to divest ourselves of value judgments or to renounce the calling of an advocate of some particular position. The two "need" not conflict. Schumpeter states a methodological approach quite similar to Myrdal. "Our problem is to ascertain the extent to which ideological bias is or has been a factor in the development of what is called *scientific economics*." By scientific economics, Schumpeter is speaking of science which is "technique" which turns out the results. He is not speaking of value judgments and the recommendations themselves. Thus, the difference between Myrdal and Schumpeter may be largely semantic. Schumpeter seems to be saying that we should only look at the "ideal" form of economics as it "should" be practiced, and determine within this part if ideological forces are present. Myrdal looked at the profession's work as it exists in its totality, both real and ideal.

In Section III, Schumpeter notes that the possibility of ideological bias is not difficult to locate. The simple source of ideological bias is "in the initial vision of the phenomena we propose to subject to scientific treatment." The original vision "is" ideology. The scientific treatment of this vision is not ideological and can be "objective" in the sense that it is always possible to establish whether a given statement is provable, refutable, or neither.

In Section IV, Schumpeter looks for ideological elements in three of the most influential structures of economic thought, the works of Adam Smith, of Karl Marx and of Keynes. The analysis is straight-forward here and needs little introduction. However, the key distinction Schumpeter is making requires emphasis. For example, in Adam Smith's case, the interesting thing for Schumpeter is not the absence of ideology but the harmlessness of it. Schumpeter is referring here exclusively to Smith's analytical work itself - only to his indicatives, not to his imperatives.

To illustrate this point, he proceeds from the most strident articulation of ideological bias, that of Karl Marx. For Marx, history was a series of clashes between the classes and the ideology one held would always be determined by one's economic and social position. Thus, as a member of the privileged class who attends college, Marx would argue that you would struggle and even fight to maintain any economic benefit which resulted from your favored social position. To analyze Smith, then, Marx would want to know what social and economic position Smith was in as he would certainly defend his own class interest. After reviewing Smith's social position and the ideology which he did profess, Schumpeter concludes that "all this ideology, however strongly held, really did not do much harm to his scientific achievement."

Marx was the economist who discovered ideology. However, Schumpeter claims that he

was blind to its dangers so far as he himself was concerned. Only other people, the bourgeois economists and the utopian socialists, were victims of ideology. At the same time, the ideological character of his premises and argument were present everywhere and obvious. Marx did not feel himself to be a professional economist until the end of the 1840's, but by that time, "before" his serious analytical work had begun, "his vision" of the capitalist process had become set and his scientific work was to "implement", not to correct it.

Keynes' vision - the source of Keynesianism - grew out of a world crisis which created the public mood for a message of this kind. Again it was the ideology - the vision of decaying capitalism that saw the cause of this decay - which appealed and won the day, and NOT the "analytic" implementation by the book of 1936, the "General Theory."

For Schumpeter, vision induces fact finding and analysis and since these tend to destroy whatever will not stand their tests, no economic ideology could survive indefinitely. Some ideology will always be with us and so, I feel convinced, it will. But this is no misfortune. Vision is the prerequisite of our scientific work. No new departure in any science is possible without it. And so - though we proceed slowly because of our ideologies, we might not proceed at all without them.

Donald-Diedre McCloskey

Donald McCloskey is a Chicago trained free-market economist who's field was initially economic history. McCloskey has since lit a firestorm in the area of economic methodology with his/her work on the "Rhetoric" of Economics.

McCloskey is an excellent communicator and teacher and will serve to summarize many of the methodological points made previously in this book. However familiar his critique sounds, it is most important to recognize that McCloskey has a unique world view from which he launches his assault on Positive or Modernist Economics. After some careful reading, you will begin to feel the unity of his argument. McCloskey refuses to be put in a box by other economists. His critics will claim that he must think in terms of school A or school B or school C. McCloskey will counter that he prefers to use A, a little of B and none of C, because his use of just these elements help him to "persuade" his audience in the best way. This act of persuasion is his goal. He refuses to be restricted by any one "method", particularly by the method of Positivism. The irony of McCloskey's position is that while he strongly condemns the positive emphasis of science so characteristic in modern economics, he will end up concluding that modern neoclassical economics is quite a good and convincing story - thank you very much.

The Rhetoric of Economics - 1983

McCloskey opens his piece with the claim in capitals that "ECONOMISTS DO NOT FOLLOW the laws of enquiry their methodologies lay down." A good thing too. If they did, they would stand silent on many issues. This has been the recurring criticism against a thorough-going Positivism as illustrated in the works of the Vienna Circle, the Logical Positivists and as expressed through the essays from Hutchison on up through Simon.

McCloskey states that economists claim to be arguing on grounds of statistical inference, positive economics, operationalism, behavioralism, and other "positivistic" enthusiasms of the 1930s and 1940s. They believe that these are the "only" grounds for science. You should have these lines down by now. Here is the novel aspect of McCloskey. He claims that in their "**actual scientific work**" **economists argue about the aptness of economic metaphors, the relevance of historical precedents, the persuasiveness of introspections, the power of authority, the charm of symmetry, and the claims of morality.** As we have seen earlier, crude positivism labels such issues "meaningless" or "nonscientific." Yet even Positivists "actually" behave as though these matters are discussable. In fact, most discussion in most sciences, and especially in economics, arises from these "nonscientific" statements. This is quite an indictment. Could it be true? This you will have to decide. In fairness to the Positivists, most of McCloskey's comments related to Positivism assume the crude or earlier version of Positivism and this "straw man" may be easier to knock down than the more mature forms cited above under the names of Braithwaite etc..

What is Rhetoric? This is the critical question for your understanding of McCloskey. Rhetoric on the street may refer to "hot air" or "political rhetoric" where the term rhetoric has negative connotations. That is not the case here. The "rhetoric" here is the rhetoric of Aristotle and the philosophers. For McCloskey, "rhetoric" is the "art of discovering good reasons, finding what really warrants assent, because any reasonable person ought to be persuaded". Rhetoric is exploring thought by conversation. The philosophical program for McCloskey is to reinstate

rhetoric and to reinstate wider and wider reasoning.

Rhetoric is a reaction against the narrowing of argument by the Cartesian program. If you remember your Descartes, this program began with the famous dictum that the only thing Descartes could be certain of was his own doubt. He was absolutely sure that he had at least this doubt. This is quite a narrow point of departure for a philosophical program. This line of philosophy stretched up through Locke, Hume, Kant, Russell, and Carnap and triumphed in the quest for “certainty” over “wisdom”. The faith and wisdom of the Jews, Christians and Greeks were all subject to the modern requirement of “certainty.” Since “faith” is by definition hope in things yet unseen, the modern project of knowledge had little patience with such concepts.

The Official Methodology of Economics is Modernist. The term “Modern” here does not just mean recent history, rather it refers to the historical project of the “Enlightenment” where “reason” would be unleashed to solve mankind’s most urgent political and social problems. The height of the Modernist project can be seen in the Project of Positivism, which allowed only “observable” and “logical” statements any meaning. Many philosophers are currently arguing that the Project of the Enlightenment, Modernity and Positivism have all come to their end. Post-Modernism follows, but this is another topic which we do not require at this point.

McCloskey lists ten of the modernist precepts of science. They should all look fairly familiar after studying the positivist writings earlier in the book. The major point of McCloskey in this section is that few in philosophy now believe as many as half of these propositions. A substantial, respectable, and growing minority believes “none” of them. But a large majority in economics believes them all. McCloskey wants economists to be more self-reflective about the foundations which they claim to follow.

Some of the main texts of economic modernism are Friedman’s 1953 piece which you have read and Becker and Stigler’s 1977, “Gustibus Non Est Disputandum.” Like Karl Popper, Friedman appeared to be struggling to establish the grip of positivism, though with only sporadic success. For McCloskey, modernism, with its devotion to objective evidence and positive analysis, is influential in economics not because its premises have been examined carefully and found good. Rather, **“It is a revealed, and a reasoned religion.”** The irony of McCloskey’s work is that he does not so much care that economists do not use the methods about which they preach, he only cares that they do not practice what they preach. He cares about honesty and consistent argument. The rest of his essay solidifies this case.

Arjo Klamer - *Conversations with Economists* - 1984

Thus far, most of our discussion has dealt mainly with economic method and less with economics itself. In the present chapter, Arjo Klamer interviews several of the world's best economists and allows them to explain their own work. In his book, "Conversations with Economists", Klamer interviews economists from two competing schools of thought. The Neo-Keynesian economists share the legacy of John Maynard Keynes and continue to argue that prices and markets are not perfectly responsive. On the other hand, the New Classical economists revive the older "Classical" position that in time, the market itself is very responsive and prices will coordinate market activity in a rational way. The final chapter of this book is reprinted here and serves to summarize the work of Klamer. Let us briefly introduce Klamer's "Interpretation of the Conversations."

Klamer raises the following problem. We have been listening to the very best of economists. These economists, however, disagree fundamentally on almost every issue, from theoretical and empirical questions, on policy proposals, and on the ways economic issues should be studied and settled. "Officially", of course (following positivism), theoretical disagreements should be handled by piling up more and more empirical evidence until the case is settled in the eyes of any "objective" economist. Science should have no problem in sorting out which theory is "valid." In fact, the primary purpose of science is to decide upon this very question of which theory is best. This picture of Positive economics is NOT borne out by our conversations with economists; relatively little of the argument in Klamer's book can be viewed as a simple citing of evidence as required by Positivism. The Neo Keynesians put out their line and the New Classicals follow, but neither school seems to shift their position significantly with the supposedly Positive and scientific evaluation of this mass of evidence. How can this be?

Klamer suggests that we understand this problem in terms of the "communicative" or "rhetorical" aspects of economics. This focus leads us to questions such as: How do economists argue and communicate? What factors lead them to agree? The orthodox answer to each of these questions would of course be Positivism. Klamer challenges this answer.

Klamer first sets out to identify the core claims of the two schools above. We want to know the "core" arguments which distinguish the New Classicals from the Neo-Keynesians. Unfortunately, the core claims in the New Classical discourse are not immediately obvious. When we ask what the arguments of Lucas, Sargent and Townsend are all about, the easy answer is "rational expectations." However, the "conversations" do not seem to show that the disagreements gravitate toward this theory. The disagreement from the Neo-Keynesians and Monetarists seems to converge on the claim that the New Classical economists derive with the "assumption" of "rational expectations": the claim that systematic policy is ineffective, sometimes called the "neutrality proposition." Perhaps this is the "core" claim. However, the New Classicals urge caution at this stage and do not claim this as their "core" claim.

Klamer suggests that perhaps we should look for a more general formulation of the competing "visions." The "vision" that is manifest in the New Classical argument closely resembles Milton Friedman's vision of a "faith" in the stability of the market. They are suspicious of government intervention. Neo-Keynesians clearly disagree. Tobin, a Neo-Keynesian, responds, "I think the basic issue is the question of whether there are market failures of a macroeconomic nature in a market economy..... A neo-Keynesian thinks there are and that

the government can do something about them.” The irony is that it is conceivable that the New Classicals, Lucas and Sargent, might accept neo-Keynesian conclusions if they were derived from models that are articulated in New Classical form. The main disagreement may well be one of how to argue; it would concern style, not substance. In any case, this is clearly not the Positive method of science. On the other side, the Neo-Keynesians including Tobin, Modigliani, Solow and Blinder all object to the equilibrium modeling strategy of the New Classical economists. The issue then for Klamer is the style of argument. His conversations have helped to illustrate what may be the true distinction between these two schools of thought. It is interesting to note that Klamer introduces the word “vision” to describe both schools of thought. This term, “vision”, should immediately trigger in your mind the concept of “metaphysics”. Positivism declared such statements “meaningless.” Thus, these economists who largely claim to be working in a Positive discipline, are not using this method effectively. So we are back to the foundational question of what constitutes “meaning” in economics.

To answer this question, we move to Klamer’s section on Epistemological arguments. Epistemological arguments are those arguments that justify or legitimate the “vision” on how to formulate arguments; they reveal how economists think that they can best improve their understanding of economic processes. For example, the New Classical school uses the “mathematical style” of argument to reveal their appreciation of rigor and precision. Lucas and Sargent talk about the technical developments which have allowed them to be precise in their theory beyond what previous economists could achieve. Klamer suggests that the New Classical school seems to imply that precision is the foremost standard of scientific argument. By comparison, the Keynesian models are allegedly “ad hoc”, or made up to suit the current need, because they do not lie up to that standard of precision.

However, the production of “testable hypotheses” is not the objective of pure theory. This is a major methodological problem as “testability” is the cornerstone of Positivism. Instead, the New Classical school urges “parsimony” as to the assumptions as the guiding principle: the challenge is to reach realistic results with a minimum of assumptions. Parsimony requires that these assumptions fit tightly and elegantly together into a whole piece of theory.

The neo-Keynesians also value rigor and precision, but they opt for “relevance” when the techniques fall short. Their “epistemological” justification is to attack Friedman’s argument that the realism of assumptions does not matter, an argument that they assume the new classical economists support. Tobin claims that Friedman’s positive methodology “has done great damage.” However, with candor, Tobin also admits to the ad-hoc nature of the neo-Keynesian method.

Overall, the economists with whom Klamer talked support the conventional epistemological argument that “empirical tests” can and should be the final arbiter in theoretical disputes. Klamer argues that if this is the case, economists give an inaccurate representation of what they “actually do.” The confidence in empirical arguments is overemphasized. The suppression of normative, ethical and philosophical discourse only serves to hide philosophical elements in economic discourse. Klamer cites Blinder as perhaps the most explicit refutation of the detached Positivist scientist. Blinder acknowledges that he is committed to a particular “vision”: empirical findings may force him to give up “some” specific Keynesian ideas, but that does not affect his general beliefs and concerns. Karl Popper and the strict Positivist theorists of an earlier day would be shocked by such an admission. However, this honest statement on the

actual practice of economists is just what Klamer will argue has always been the case beneath the cool facade of positive science. Klamer illustrates his theory with pages of examples which clearly show deviations from the positivist ideal. Klamer calls these deviations what they appear to be, “conversations with economists” or “rhetoric.”

Robert L. Heilbroner - *Rhetoric and ideology* - 1988

According to Klammer, who provides this introduction, Robert L. Heilbroner's authority does not need introduction. His "Worldly Philosophers (first edition 1953) is still widely read, and he recently completed a book entitled *The Nature and Logic of Capitalism*. His criticism of "Rhetoric" is an important one and we are therefore pleased that we could include his essay, which originally appeared as a review of McCloskey's book in the *New York Review of Books*.

I have included Heilbroner's small chapter as an example of how McCloskey's theory can be critiqued. After briefly introducing the contribution of McCloskey, Heilbroner makes his case. The main failure with economics is its failure to make "sense out of economic experience," to use the criterion that McCloskey himself selects as the proper objective for the profession. This "failure", however, does not derive from a tendency to carry on a conversation in the jargon of science. **It arises from a failure to ponder what the conversation is to be about.**

Heilbroner illustrates that this is indeed the case by examining the "sincere effort to explain society" from two different perspectives. First, he examines the conversation of the typical conventional economists today. Second, he imagines a historian of the future,

Michael Szenberg - *Prominent Economists - 1992*

Szenberg's book provides an intimate look at 22 of the most respected economists of this century. I have included three of these brief autobiographies in this volume. These include, Kenneth Arrow - "*I Know a Hawk from a Handsaw*", James M. Buchanan - "*From the Inside Looking Out*", and Paul A. Samuelson - "*My Life Philosophy: Policy Credos and Working Ways*". I have found that these three essays focus on many of the themes and issues covered previously in this set of readings. They are fun to read and do not require the formal introductions provided above.

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This bibliography was prepared by Daniel Hausman. His comments follow. I tried to make this bibliography compact and useful rather than comprehensive. Accordingly, I generally avoided separate citations for methodological essays in collections, and with few exceptions, I did not cite interdisciplinary work concerning normative economics or the theory of rationality unless it also discusses methodological issues. I also did not list separately the many essays on economic methodology from the special issues on philosophy and economics of *Philosophical Forum*, vol. 14, nos. 3-4 (Spring-Summer 1983) or *Recherche Economique*, vol. 43, nos. 1-2 (January-June 1989). Since there now exists a published bibliography of works on economic methodology through 1988 (Redman 1989), I was highly selective in listing books and particularly essays that can be found there. Essays on economic methodology are indexed in *The Journal of Economic Literature* and in the *Index of Economic Articles in Journal and Collective Volumes* under the number 036 before 1991 and under the number B4 since then.

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