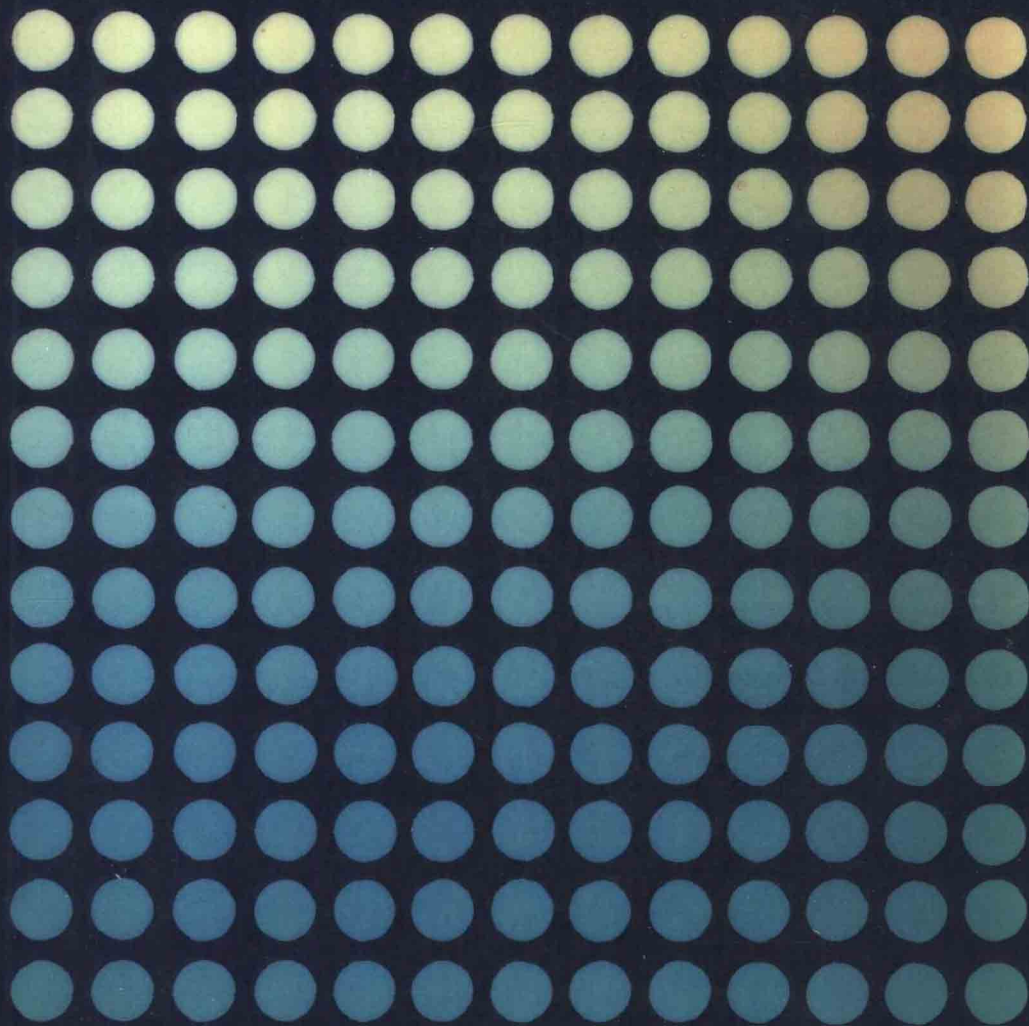


The Foundations of Economic Method

Lawrence A. Boland



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TO MY FAMILY

Brenna, Alana and Irene

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Preface

Given that most textbooks on neoclassical economic theory begin with a chapter about methodology, one might easily conclude that most economists think that the methodology of economics is absolutely fundamental. This is an illusion. The view that the appropriate methodology must be in hand *before* we begin our analysis of the facts is an artifact of an old-fashioned philosophy of science (viz., Inductivism) that was long ago discarded. According to the currently accepted philosophy of science (viz., Conventionalism), the nature of neoclassical theory is supposed to be quite independent of any individual economist's opinion of the appropriate methodology of economics. Today, we are supposed to believe that there is no need to discuss methodology simply because it does not matter. I shall endeavor to show that it does matter - and that, furthermore, methodology cannot be easily detached so as to be simply dispatched in an introductory chapter. The pressing theoretical problems that continue to challenge neoclassical theorists today are direct consequences of implicitly accepted views of the appropriate methodology for neoclassical economics.

Although I have written this book for economists - it has not been tailored to the tastes of philosophers - it is presumed that the reader is aware of the more elementary views of methodology found in standard textbooks and books on the history of economic thought. Since I cannot see how one can understand economic methodology without understanding economic theory, I shall presume that the reader has successfully negotiated a course through intermediate micro- and macroeconomic theory.

My argument in this book is rather straightforward. I shall argue that every neoclassical research program is designed (1) to be consistent with acceptable ways of dealing with the Problem of Induction, and (2) to provide a methodological individualist explanation of economic behavior of the economy, that is, one which is based on the methodological prescription that allows only individuals to be posited as the locus of decision-making. With this in mind, I shall argue that neoclassical economists have thereby made their research program an impossible task because the Problem of Induction cannot, and need not, be solved. They compound this difficulty with psychologism, that is, by erroneously identifying individuals with psychological states. I will not press the additional point that the Conventionalist view of methodolo-

gy (viz., that an individual's view of methodology does not matter) is inconsistent with a neoclassical theory which is supposed to see the individual as the center of everything - but this point does show that usual reluctance to discuss methodology might lead to certain inconsistencies.

If my argument concerning the design of neoclassical economics and its reliance on psychologism is correct, then it will be seen that most of the leading *theoretical* problems are impossible to solve. However, I shall also attempt to show that the essential individualist spirit of neoclassical economics can be preserved if the Problem of Induction is rejected and the concept of individualism is freed of its usual psychologism. All of this is a matter of fundamental methodology and thus for theoretical reasons we need to examine the foundations of economic method.

L.A.B.

Burnaby, British Columbia

8 October 1981

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Introduction

UNDERSTANDING THE METHODOLOGY OF ECONOMICS

It has often been said, and certainly not without justification, that the man of science is a poor philosopher. Why then should it not be the right thing for the physicist to let the philosopher do the philosophizing? Such might indeed be the right thing at a time when the physicist believes he has at his disposal a rigid system of fundamental concepts and fundamental laws which are so well established that waves of doubt cannot reach them; but, it cannot be right at a time when the very foundations of physics itself have become problematic as they are now. At a time like the present, when experience forces us to seek a newer and more solid foundation, the physicist cannot simply surrender to the philosopher the critical contemplation of the theoretical foundations; for, he himself knows best, and feels more surely where the shoe pinches....

Albert Einstein [1936]

How to Study the Methodology of Economics

In this book we shall examine the neoclassical economists' methodology. By the term 'methodology' we mean their view of the relationship between their theories and their methods of reaching conclusions *about the nature of the real world*. To many this endeavor may seem to be an easy task. But we shall argue that the methodology of economics is not as obvious as it might first appear because the actual practice of methodology is taken for granted. We shall argue that what is usually discussed under the topic of 'economic methodology' is more concerned with the interests of philosophers of science than with the interests of economic theorists and therefore that a proper study of methodology should be concerned with the actual role of methodology as manifested in the nature of neoclassical theories.

Few economists find it necessary to question what they call their 'methodology'; most are quite convinced that they can survive without ever examining their methods of analysis. As fads go, methodology is

not considered to be a 'mainstream' research topic. Where actually offered in a economics curriculum methodology is more an intellectual 'luxury' item for which there is little demand. Why, then, would anyone want to increase the supply of such studies?

The absence of a demand for new methodology does not preclude there being an old methodology that is still being used like a set of old tools. The prevailing views of methodology in neoclassical economics are, in effect, part of our intellectual capital. The reason why there is no market for new methodology is that the potential demanders are quite satisfied with the productivity of their methodology and they cannot see any potential for improvement. However, it is still necessary to examine the tools occasionally to see if they are doing their job. Our central concern here will be that what is often taken for granted in methodology is what is most important to examine.

Before we assess the productivity of the prevailing views of methodology, we shall examine the role of methodology in neoclassical theory. We shall argue that although our methodological capital is often taken for granted, the prevailing methodology of neoclassical economics plays an essential role in *theoretical* questions considered quite topical today. Neoclassical methodology plays a role both by affecting the nature of the theoretical questions which have the highest priority and then by affecting the viability of the solutions to those problems.

Since neoclassical economics is a discipline which is primarily concerned with the consequences of 'rational' decision-making, methodology - as a study of methods of assessing information and of changing knowledge - cannot be considered irrelevant. Any decision-maker must have some knowledge from which to determine, and by which to assess, the options available. What do we presume about the individual decision-maker's knowledge? Or, better still, what do we presume about the individual decision-maker's methodology that allows for 'rational' choices? If neoclassical economics is supposed to explain, or even just to describe, the process of making decisions, surely the methods utilized by the decision-maker must play a central role in the *process* and thereby in the outcome of the process.

If it is granted for the moment that decision-makers do depend on some sort of methodology in their decision-making process, is there any relationship between the neoclassical economist's conception of that practical methodology and the methodology utilized in forming explanations of that process? We shall argue that there is. And moreover, we shall argue that this unexplored relationship is the major obstacle in the further development of a successful neoclassical theory of an economy as envisaged by Adam Smith, Alfred Marshall or Leon Walras - that is, one which consists only of individual decision-makers.

But if methodology is so important, why is it not a high-priority research topic? *The answer to this question is that most economists think there is only one possible methodology or that all other approaches are irrational.*

Our study of the methodology of neoclassical economics involves the recognition of an uncommon distinction. Specifically, we shall distinguish between two different perspectives on the role of methodology in neoclassical economics. First, we shall examine the methodology embodied in every neoclassical theory or analysis. That is, we shall be concerned with the views of how neoclassical economists explain the behavior of the decision-makers in the economy. Although we shall examine the alternative views, we nevertheless argue that one view dominates the economists' explanation of their own behavior with respect to methodology. Second, we shall study the consequence of this dominance on the economic theorist's conception of the methodology of the individual decision-maker who is the object of economic studies.

What is important about this distinction is that there is always the possibility that the methodology practiced by neoclassical economists is inconsistent with the methodology assumed to be the basis of the individual decision-making process. What is interesting is that even without explicit discussion of methodology there is, nevertheless, a remarkable consistency between these two perspectives. However, we shall also argue that this is one of the major shortcomings of neoclassical economics. The view which dominates neoclassical theory, both in practice and in its conception of rational decision-making, is based on an inadequate theory of knowledge. Although at first this may seem to be a criticism of neoclassical theory, we shall also argue that the dominant view is not necessary to the neoclassical conception of rational decision-making and hence neoclassical theory can be easily improved by a broader view of methodology.

The second perspective, the neoclassical conception of the rational decision-maker's methodology, will be the primary topic of this book because it is here that the study of methodology can have a profound impact on the nature of specific neoclassical theories. Before we can examine the theoretical issues of the appropriate conception of the decision-maker's methodology, we need to develop a clear idea about the mainstream methodology embodied in neoclassical economics. But first, we have to do a little detective work because the embodied methodology is not very visible. On the one hand, few economists discuss methodology while they are using it because they take it for granted; and on the other hand, when it is discussed, few neoclassical economists practice what they preach.

Textbook rituals and relics

The explicit discussions of methodology which appear at the beginning of many undergraduate economics textbooks are poor reflections of the actual methods embodied in the economics theories presented later in those textbooks. The textbook discussions are nothing more than ritual exercises. They serve no other purpose and they have virtually no bearing on the nature of the theories which are presented.

In principle, the textbook methodology chapters should be a good guide to an understanding of the methodology actually used in economics. The ritual they serve would have us believe that by following the correct methodology we are guaranteed the avoidance of virtually all mistakes. We are told that economic theory is based on some principles of methodology, such as the recognition of the importance of distinguishing between 'normative' and 'positive' statements. The latter are supposedly scientifically superior to the former and are sometimes distinguished from 'tautologies'. Again, positive statements are to be preferred. We are sometimes told that economists agree that only 'testable' statements are scientifically important. Recent textbooks also urge us to recognize that all 'facts' are 'theory-laden' and thus that economic theory can never 'prove' anything.

Any textbook chapter on methodology that consists of such a collection of observations is useless because it is an *ad hoc* hodgepodge of relics from ancient methodological disputes. The difficulty with historical relics living in current practice is not that they are old but that they are taken for granted. Methodological problems can be fundamental. And to that extent it is rather dangerous to take them for granted. But worse than this, the items in the collection very often are contradictory. Not only are the textbook principles of methodology relics from old debates over the appropriate methodology to use in economics, but also often both sides of the debates are advocated.

Methodology vs. techniques

Anyone interested in studying the methodology of economics will have to look somewhere other than textbooks. The only other apparent sources are the explicit discussions of methodology which appear in econometrics articles. For our purposes these simply misuse the term 'methodology'. Presentations of methodology in typical econometrics articles are really nothing more than reports about the mechanical procedures used, without any hint of the more philosophical questions one would expect to find in a book on methodology. So-called 'methodological critiques' turn out, upon examination, to be critiques of the statistical definitions or statistical tests used in the study in question. Similarly, 'methodological issues' turn out to be questions of whether

to use 'comparative statics' or whether to use a 'moving average' or discrete observations, etc.

Of course, everyone is free to use the word 'methodology' in any way he or she wishes. All that is important here is to recognize that questions about appropriate research techniques are of little interest to those interested in the more traditional philosophical questions of epistemology or methodology; that is, questions about the relationship between our theoretical knowledge and our conceptions of the world around us. Specifically, studies of research techniques will yield virtually no clues about the objectives of a particular line of research or theoretical investigation. And above all, there is nothing involved in the questions of research techniques which could be identified as being 'neoclassical'.

Methods of understanding methodology

If we cannot be guided either by textbook methodology chapters or by econometrics 'methodology', how can we hope to understand economic methodology? Perhaps the answer can be found in the practice of the economics profession. But how can we bring to light the actual methodology practiced by neoclassical economists?

Traditionally, there has been only one approach to the understanding of economics methodology - one studies methodology by reviewing all of the famous past debates about methodology [Albert, 1979; Blaug, 1980]. This popular approach has its shortcomings primarily in that it contributes new life to old relics and skeletons which would better be left to rest in peace. The major shortcoming is that historians tend to focus on high-profile exceptions to the rule rather than on the more mundane, everyday methods that are tacitly employed by practicing economists.

At first blush one might consider the history of economic methodology as a special case of the history of scientific methodology. This approach begs the methodological question of whether there really is a unity of method in all sciences [Agassi, 1969b]. Those economists who do not ascribe to the unity-of-method philosophy are lost in the shuffle. And probably worst of all, few of the economics writers who ascribe to the unity-of-method approach are likely to be sufficiently competent in matters of physics or chemistry to draw meaningful parallels with economics and to avoid giving life to relics from the history of the physical sciences.

Note that the traditional approach is serial in nature, as is evident in the usual classification of methodology as a branch of the study of the history of economic thought (see, for example, the *Journal of Economic Literature* classifications). If we think of the history of thought approach to economic methodology as a 'time-series' explanation of

current practice, the obvious alternative would be a 'cross-sectional' explanation.

The major disadvantage of the time-series approach is that it presumes a certain continuity of the nature of economics and the concept of continuity begs certain questions that need to be examined. For example, why do economists continue to use one particular methodology or take one particular perspective when there are alternatives available? Such a continuity perspective does not always explain *why* economists adhere to their practiced methodology. One of the advantages of a cross-sectional study of current methodology is that it immediately requires consideration of the reason for consciously perpetuating a particular methodology or consideration of why it is taken for granted. This is important, as we wish to examine those problems which are 'hidden' because they are taken for granted and which are the foundation of most methodological strategies pursued by economic theorists and model-builders.

Obviously, even if one looked only at the current practice of economists, it would be impossible to avoid making references to philosophical relics, since much of everyday thought can be traced back to antiquity. One difficulty with the historical, or time-series, approach to methodology is that it gives life to all relics regardless of their relevance to current practice. There is no doubt that some relics do still live in the body of economic analysis today; but if they are still alive, their reason for existence must be found in current practice and not just in the fact that they existed many years ago.

The cross-sectional approach used in this book will be very different from the usual discussions of economics methodology. Rather than attempting to explain which philosophical problems troubled Sir Isaac Newton, we will be more concerned with the philosophical problems that directly or indirectly impinge on the theoretical and practical concerns of today's economists.

Methodology as Agenda

The study of neoclassical methodology presented here will focus on the *research agenda* of every neoclassical theory, analysis, article, etc. The idea of an 'agenda' is not novel. It is rather standard in theories of organizations [e.g., Arrow, 1974]. The idea of an agenda is also appreciated by anyone familiar with parliamentary procedures. The chairman of a committee, for example, runs a meeting according to an agenda. The agenda of a meeting is a list of items to be handled and their relative position on the list indicates their priority, in the sense that they are handled in the order of their appearance on the list.

We will employ the idea of an agenda as an ordered list of items to be

handled in any research program. Specifically, a research agenda is an ordered list of theoretical or philosophical problems that either are to be solved by the research conducted or are problems whose solutions play a necessary role in the solutions of the other problems to be considered.

Paradigms and research programs

Every essay, research report, article, book, etc., is written according to a specific 'agenda'. The agenda may be different for each, although many will have common items. The objective of a cross-sectional study of current practice in neoclassical economics is to identify those items which appear on every agenda.

Those readers familiar with the view of science advocated by Thomas Kuhn or Imre Lakatos will likely consider the common agenda items to be the 'paradigm' or 'research program'. Although such a consideration is quite compatible with what will be presented here, it can be a bit misleading, since their view of science is based on an historical or continuity view of natural science. Most applications of their view of science tend to identify the explicit assumptions traditionally used by neoclassical economists as the essence of the neoclassical paradigm. The most common example of a paradigm is the use of the maximization hypothesis in neoclassical analysis. We will argue that such *explicit* assumptions are not enough to specify the agenda.

The cross-sectional approach utilized here will go beyond the Kuhn-Lakatos view by considering any particular neoclassical research program or paradigm to be only one specific *implementation* of the neoclassical agenda. That is, we are concerned with the agenda which is the common foundation of many diverse research programs varying from that of Stigler and Becker [1976] to those of Alchian [1950], Clower and Leijonhufvud [1973], Solow [1979] or, perhaps more surprising, of Simon [1979] or Leibenstein [1979]. It will be apparent that what the followers of Kuhn or Lakatos commonly consider the 'paradigm' of neoclassical economic theory represents only a small subset of the items on any particular research agenda - usually they identify only the maximization hypothesis. For the purposes of this study of methodology, the concept of a research program will have to be expanded to require a complete specification of the research agenda by identifying the implicit as well as the explicit agenda items. The cross-sectional approach presented here will be distinguished primarily because the items on the agenda are considered as specific problems to be dealt with in any given article or research project.

An example of a neoclassical methodology agenda

Before this introduction becomes any more abstract, let us consider a

typical neoclassical agenda. Over the last thirty years the Ordinal Demand Theory of Hicks and Allen [1934] has been the subject of extensive analysis [e.g., Chipman *et al.*, 1971]. The purpose of the analysis is to identify a specific set of assumptions which together will be just sufficient to yield a traditional set of results. Stating the purpose this way immediately begs two questions. What is the traditional set of results? And, what assumptions are admissible into the set?

To keep this example straightforward let us follow Samuelson's lead and require that any given theory of demand at least be able to yield his 'Fundamental Theorem of Consumption Theory', namely the proposition that the slope of the demand curve for any normal good be negative [1953, p. 2]. The only limitations on admissible assumptions are that they must include (a) an assumption that an individual's utility function exists, and (b) an assumption that utility is being maximized subject only to the constraints of given prices and a given income. Beyond these simple requirements, virtually anything goes [cf. Bolland, 1974].

The problem which any particular neoclassical analysis of demand must solve is: how can the utility function be specified so as to yield the 'Fundamental Theorem'? For example, should we assume cardinal or ordinal utility or is it enough to assume diminishing marginal rates of substitution? These problems form the visible agenda of neoclassical demand theory; and its specification is the task of a broader methodological agenda, which is usually hidden because it is taken for granted.

The broader methodological hidden agenda is concerned with questions about why one would ever bother with individual utility functions, maximization hypotheses, etc. To discover the nature of a given methodological agenda, we need to ask questions such as 'What problem is solved by treating the individual as the sole possessor of a specific utility function?', 'What problem is solved by assuming the demander is a maximizer rather than, say, a "satisficer"?', 'What problem is solved by establishing that demand curves are usually downward sloping?', and so on.

Foundations as Problems on the 'Hidden Agenda'

It will be argued here that the foundations of neoclassical economic methodology, the hidden agenda, consist of two related but autonomous methodological problems. The first is the much discussed 'Problem of Induction'. The other is the less discussed but more pervasive 'Explanatory Problem of Individualism'. The nature and significance of these two methodological problems will be explained in Chapters 1 and 2. How the foundations influence the research prog-