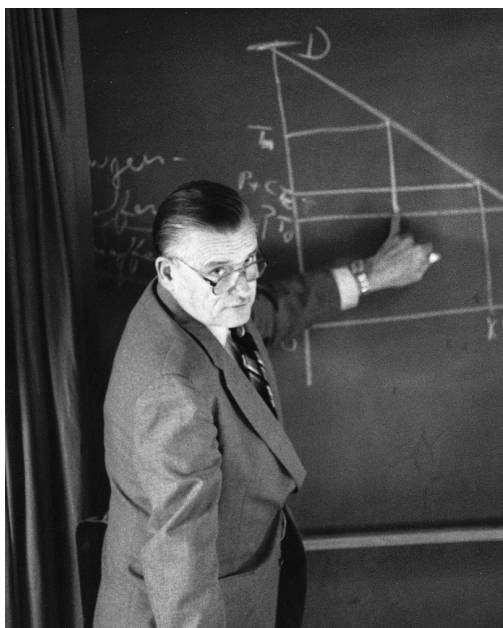


The Collected Works of  
James M. Buchanan

VOLUME 12

*Economic Inquiry and Its Logic*





*James M. Buchanan, Witten/Herdecke University,  
Witten, Germany, October 1986*



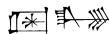
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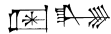
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## *Foreword*

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Throughout his career James M. Buchanan has been a creative economic theorist, and he has always been interested in how we go about “doing” economics and what we presuppose as economic theorists. Moreover, in the tradition of the University of Chicago, where he took his graduate training in economics, Buchanan has also had a strong interest in microeconomic theory and its uses in explaining the pattern of economic behavior and institutional evolution. In this regard I would characterize him as an “armchair” theorist. He has never been interested in empirical research in the sense of econometric testing of hypotheses. Instead, he has sometimes been critical of such efforts, likening them to proving that “water runs downhill.” Nonetheless, he has an abiding interest in the explanatory power of economic theory in the sense that such theory explains the world around us. For example, does the application of economic self-interest in a given situation lead to sensible inferences and predictions? This is the methodological consistency that Buchanan expects from economic theory, and many of the papers in this volume are written in this spirit.

With respect to this volume, which collects some of Buchanan’s work in economic method and analysis, it should be stressed that many of the better-known papers in this area appear elsewhere in his *Collected Works*. For example, much of his work in public economics and public finance was quintessentially price-theoretic in nature. I need only mention here Buchanan’s theory of clubs or his various papers on externality theory. The exceptional quality of all of this research, including the papers in this volume, is the expression of a truly creative economic theorist.

Buchanan’s contributions to the discussion of economic method are, for the most part, well known. Reprinted in this volume are some of his most often cited works on methodology, including papers reflecting his emphasis

on the subjective nature of opportunity costs and the implications of this subjectivity for economic analysis.

This volume also demonstrates Buchanan's continuing interest in the ideas and issues posed by economic theory. For example, we see that in recent years he has returned to the classic literature on increasing returns and made an important contribution in observing how this literature relates to ethical norms and to the work ethic in particular. And the pattern is the same across the other areas covered in this volume. The puzzle is always deep, perhaps related to an earlier classic literature on the subject. And it is basically the idea or the challenge of the idea that drives the analysis. The level of the analysis is rarely very technical in a mathematical sense, but it is always useful in terms of the level of insight applied to a difficult problem.

The volume begins in part 1 with many of Buchanan's classic papers on the methodology of economic science. The essays in part 2 consider the role of the entrepreneur in several unusual contexts. The papers in part 3 represent various contributions to the theory of monopoly pricing. The papers in part 4 consider the pricing of inputs, sometimes in novel ways. The papers in part 5 explore various points in the economic theory of efficient pricing. The papers in part 6 represent the results of Buchanan's recent return to the theory of increasing returns. As noted earlier, his papers on the work ethic are new and provocative. Finally, the papers in part 7 reflect Buchanan's views on the role of economic theory in a postsocialist world. His pessimism and feeling that economics has lost its way provide interesting reading and food for thought.

Buchanan, above all, is a creative economic theorist. He has provided us with insights across a broad range of issues, reflected in this and the other volumes of his *Collected Works*. The papers in this volume give us an idea of the theorist in his workshop. What is the nature of the issues that attract him? How does he deal with them? How do we profit from his efforts and insights? There are many gifts under Buchanan's tree.

Robert D. Tollison  
*University of Mississippi*  
1999

PART ONE

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*The Practice and Method of  
Economic Theory*



# Is Economics the Science of Choice?

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. . . from time to time it is probably necessary to detach one's self from the technicalities of the argument and to ask quite naively what it is all about.

—F. A. Hayek, “Economics and Knowledge.”

Robert Mundell commences his Preface to *Man and Economics* with the assertion: “Economics is the science of choice.”<sup>1</sup> Most professional scholars who check off the box marked “Economist” on the Register of Scientific Personnel find no quarrel with Mundell's statement. Despite some danger of once again being called iconoclastic, I propose to examine this assertion seriously and critically. In the process, I shall not discuss what economics is or is not, should or should not be, at least in any direct sense. My question is more elementary, and its answer is obvious once it is asked. I want to ask whether a *science of choice* is possible at all. Are we not involved in a contradiction in terms?

There is no need to go beyond the everyday usage of the two words. I am neither competent nor interested in detailed etymological inquiry. “To choose” means “to take by preference out of all that are available,” “to se-

From *Roads to Freedom: Essays in Honour of Friedrich A. von Hayek*, ed. Erich Streisler, Gottfried Haberler, Friedrich A. Lutz, and Fritz Machlup (London: Routledge & Kegan Paul, 1969), 47–64. Reprinted by permission of the publisher.

I am indebted to David B. Johnson, Roland N. McKean, Gordon Tullock, and Richard E. Wagner for helpful comments.

1. New York, 1968.

lect.”<sup>2</sup> Choice is the “act of choosing,” or “selecting.” In particular, “choosing” should be distinguished from “behaving.” The latter implies acting, but there is no reference to conscious selection from among alternatives. Behavior can be predetermined and, hence, predictable. Choice, by its nature, cannot be predetermined and remain choice. If we then define science in the modern sense of embodying conceptually refutable predictions, a “science of choice” becomes self-contradictory.<sup>3</sup>

This elementary proposition is recognized by those who accept the Mundell position. If this is the case, what are the reasons for adherence to what, at first glance, seems glaring methodological inconsistency? To the economist, choice seems to be imposed by the fact of scarcity. Given an acknowledged multiplicity of ends and a limitation on means, it becomes necessary that some selection among alternatives be made. It is in such a very general setting that economics has been classified as the study of such selection, or choice. Once this is done, replacing the word “study” with the word “science” becomes a natural extension of language. Is the science so defined devoid of predictive content? Some scholars might answer affirmatively, but surely there are many others who, at the same time that they acquiesce in Mundell’s statement, busy themselves with the empirical testing of hypotheses. Are such professionals unaware of their methodological contradictions? It seems useful to try to answer these questions in some detail.

## I. The Categories of Economic Theory

### 1. THE LOGIC OF ECONOMIC CHOICE

The legitimacy of a “science of choice” may be questioned, but there should be no doubts about the usefulness of a “logic of choice.” Much of orthodox economic theory is precisely this and is, therefore, concerned with choice, as such. This logical theory provides students with the “economic point of view,” and it can be posed in either a normative or a positive setting. In the

2. *Oxford Universal Dictionary*, 1955.

3. In a wholly determinist universe, choice is purely illusory, as is discussion about choice. I do not treat this age-old issue, and I prefer to think that the subject discussed as well as the discussion itself is not illusory.



former, the logic reduces to the economic principle, the simple requirement that returns to like units of outlay or input must be equalized at the margins in order to secure a maximum of output. In this most general sense, the principle is empirically empty. It instructs the chooser, the decision-maker, on the procedures for making selections without requiring that he define either his own preference ordering of output combinations or the resource constraints within which he must operate. Empirical emptiness should not, however, be equated with uselessness. If a potential chooser is made aware of the principle in its full import, he will weigh alternatives more carefully, he will think in marginal terms, he will make evaluations of opportunity costs, and, finally, he will search more diligently for genuine alternatives. The norms for choice can be meaningfully discussed, even if the specific implementation takes place only in the internal calculus of the decision-maker. Instructing the decision-maker as to how he should choose may produce "better" choices as evaluated by his own standards.

There is a positive counterpart to the logic of choice, and this extends theory to the interaction among separate decision-makers. Commencing with the fact that choosers choose and that they do so under constraints which include the behavior of others, the economist can begin to make meaningful statements about the results that emerge from the interaction among several choosers. Certain "laws" can be deduced, even if conceptually refutable hypotheses cannot be derived. Analysis makes no attempt to specify preference orderings for particular choosers. The "law" of choice states only that the individual decision-maker will select that alternative that stands highest on his preference ordering. Defined in purely logical terms, this produces the "law of demand." In this way, trade or exchange can be explained, even in some of its most complex varieties. Characteristics of equilibrium positions can be derived, these being defined in terms of the coordination between expected and realized plans of the separate decision-takers.

In the strictest sense, the chooser is not specified in the pure logic of choice. Under the standard assumptions, the analysis applies to the individual. But the logic requires no such limitation; it applies universally. The norms for efficient choice can be treated independent of the processes through which decisions are actually made. It is not, therefore, explicitly in error to present decision-making norms for nonexistent collective entities who do not, in fact, choose. Under some conditions, it may be helpful to discuss the economizing pro-

cess “as if” such entities existed, although, as we shall note in Section II, this is the source of much confusion.

In its normative variant, the logical theory of choice involves the simple principle of economizing, nothing more. This is the mathematics of maxima and minima. Much of modern economic theory is limited to various elaborations on this mathematics. By modifying the formal properties of the objective function and the constraints, interesting exercises in locating and in stating the required conditions for insuring satisfaction of the norms can be produced. Whether or not such exercises command too much of the professional investment of modern economists remains an open question.

The logical theory of interaction among many choosers may also be classified as pure mathematics. But this mathematics is not that which has attracted major interest of the professionals in that discipline, and there is some legitimacy in the economists’ preemptive claim. Game theory, as one part of a general theory of interaction, owes its origin to a mathematician, but the elegant theory of competitive equilibrium was developed by economists. Major strides are being made in this purely logical theory of interaction among many choosers, some of which are aimed at relating game theory, more generally the theory of coalition formation, to the theory of competitive equilibrium. The marginal productivity of mathematically inclined economists in this area of research appears much higher than that which is aimed at working out complex variations of the simple maximization problem.

## 2. THE ABSTRACT SCIENCE OF ECONOMIC BEHAVIOR

In the logical theory summarized, no objectives are specified. Choice remains free, and because of this, it remains choice. As we move beyond this pure logic, however, and into economic theory as more generally, if ambiguously, conceived, choice becomes circumscribed. Specific motivation is imputed to the decision-maker, and it is seldom recognized that, to the extent that this takes place, genuine “choice” is removed from the theory. What we now confront is *behavior*, not choice, behavior that is subject to conceptually predictable laws. The entity that acts, that behaves, does so in accordance with the patterns imposed by the postulates of the theoretical science.

The actor is, so to speak, programmed to behave in direct response to stimuli. The abstract science of economic behavior, as I have here classified this, has empirical content that is wholly missing in the pure logic of economic choice. This content is provided by restricting the utility function. Several degrees of restrictiveness may be imposed. Minimally, nothing more than a specification of “goods” may be introduced. From this alone, conceptually refutable hypotheses emerge. The acting-behaving unit *must* choose more of any “good” when its “price” relative to other “goods” declines.<sup>4</sup> Additional restrictiveness takes the form of specifying something about the internal trade-offs among “goods” in the utility function of the behaving unit. This step produces the *Homo economicus* of classical theory who must, when confronted with alternatives, select that which stands highest on his preference ranking, as evaluated in terms of a *numéraire*. The pure economic man must behave so as to take more rather than less when confronted with simple monetary alternatives. He must maximize income-wealth and minimize outlays. He must maximize profits if he plays the role of entrepreneur.

Confusion has arisen between this abstract science of economic behavior and the pure logic of choice because of ambiguities that are involved in the several means of bounding the utility functions of the acting units. In the pure logic of choice, the arguments in the utility function are not identified; “goods” and “bads” are unknown to the external observer. In any science of economic behavior, the “goods” must be classified as such. But under minimally restricted utility functions, specific trade-offs among these may remain internal to the acting units. The individual “chooses” in the sense that his selection from among several desirable alternatives remains unpredictable to the observer. What we have here is an extremely limited “science” of behavior combined with an extensive “logic” of genuine choice. We move beyond this essentially mixed framework when the trade-offs are more fully specified. Additional “laws of behavior” can then be derived; and, more importantly, predictions can be made about the results of the interaction processes. These predictions can be conceptually refuted by empirical evidence. If internal trade-offs among “goods” in utility functions are fully specified, be-

4. This approach may be associated with the work of A. A. Alchian and his colleagues. Cf. A. A. Alchian and W. R. Allen, *University Economics*, Belmont, Calif., 2nd edition, 1967.

havior becomes completely predictable in the abstract. Normal procedure does not, however, involve the extension to such limits.

As noted earlier, the pure logic of choice may be interpreted in either a normative or a positive sense. If choice is real, it is meaningful to refer to “better” and “worse” choices, and the simple maximizing principle can be of some assistance to the decision-taker. By relatively sharp contrast, there is no normative content in the abstract science of economic behavior. The reason is obvious. The acting unit responds to environmental stimuli in predictably unique fashion; there is no question as to the “should” of behavior. The unit responds and that is that. Failure to note this basic difference between the pure logic of choice and the pure science of behavior provides, I think, an explanation of the claim, advanced especially by Mises, that economic theory is a general theory of human action.<sup>5</sup> The logical theory is indeed general but empty; the scientific theory is nongeneral but operational.

At this point, it seems useful to refer to the distinction between the “subjectivist economics,” espoused by both Mises and Hayek, and the “objectivist economics” which is more widely accepted, even if its limitations are seldom explicitly recognized. In the logic of choice, choosing becomes a subjective experience. The alternatives for choice as well as the evaluations placed upon them exist only in the mind of the decision-maker. Cost, which is the obstacle to choice, is purely subjective, and this consists in the chooser’s evaluation of the alternative that must be sacrificed in order to attain that which is selected. This genuine opportunity cost vanishes once a decision is taken. By relatively sharp contrast with this, in the pure science of economic behavior, choice itself is illusory. In the abstract model, the behavior of the actor is predictable by an external observer. This requires that some criteria for behavior be objectively measurable, and this objectivity is supplied when the motivational postulate is plugged into the model. An actor behaves so as to maximize utility, defined in a nonempty sense. It becomes impossible, in the formal model, for an actor to “choose” less rather than more of the common denominator units, money or some *numéraire* good, when he is faced with such alternatives. Cost, in this objectivist theory, the pure science of economics, is measurable by the observer. This cost is unrelated to choice, as such, since the latter really does not exist. The opportunity cost of using a resource

5. Cf. Ludwig von Mises, *Human Action*, New Haven, 1949.