Robbins as Innovator: the Contribution of *An Essay on the Nature and Significance of Economic Science*

Robert F. Mulligan
Western Carolina University
mulligan@wcu.edu

Lionel Robbins's *An Essay on the Nature and Significance of Economic Science* made at least three important contributions:
(1) constructing a more modern, focused, and general definition of economics, which continues to inform the best contemporary practice, (2) exploring the legitimacy of, and relationship between, empirical and a priori analyses in economics, and (3) demonstrating the fallacy of interpersonal utility comparisons, laying the groundwork for Hayek's subsequent critique of the mirage of social justice.

1. Introduction

Robbins's definition of economics proposed in the *Essay*, "the science which studies human behaviour as a relationship between end and scarce means which have alternative uses," is so perfectly-phrased as to seem unremarkable today. Definitions proposed by Robbins's teachers and contemporaries such as those of Edwin Cannan, Hugh Dalton, Gustav Cassel, and Alfred Marshall, were singularly limited by modern standards, and unsatisfactory to Robbins.
Though we might take his definition for granted, it represented a great, and far from obvious, leap forward in the discipline's self-concept.

Robbins's view of economic methodology was somewhat schizophrenic - he insisted on the complementarity of empirical and a priori analyses, but his main preoccupation seems to have been to preserve the acceptance of a priori argument.
One of his justifications of the a priori was that it would sometimes be subject to empirical verification, but he also insisted it was valuable in itself and was especially necessary to address certain questions which do not lend themselves to empirical applications.
Robbins proposed a fundamental distinction between judgments of value and judgments of fact. Ideally economics should aim at being value-free al la Mises, but the conventional assumptions underlying quantitative economic data, especially aggregate data, call for implicitly evaluating facts according to arbitrary measurement, convention, and inarticulate and unarticulated interpretation. Far from eschewing quantitative empiricism, Robbins merely required extensive interpretive analysis of the underlying assumptions which are generally taken for granted. He also felt qualitative laws could generally hold a higher level of abstraction than the quantitative laws of statistical analysis, which would tend to be probabilistic rather than absolute.
His position was so roundly criticized and misinterpreted he was led to extensively revise his chapter on methodology for the second edition.

Robbins was an important precursor of Hayek in establishing the impossibility of interpersonal utility comparisons.
He lucidly exposits the simple and intuitively appealing basis for socialist economics and social engineering, and proceeds to show the difficulties it leads to.

Since utility measures can only be ordinal, they cannot be transferred across individuals in any consistent manner.
Without intertemporal utility comparisons, welfare economics is reduced to the very restrictive appeal to strong Pareto efficiency. Attempts by Kaldor, Hicks, and Scitovsky to formulate more flexible welfare criteria were doomed from the outset.
Robbins's position anticipated certain features of Arrow's Impossibility Theorem.

2. Defining Economics

The kernel of both the *Essay*, and the 1930-32 lectures on which Robbins based the *Essay*, is his definition of economics as "the science which studies human behaviour as a relationship between end and scarce means which have alternative uses." This is a definition no economist would find remarkable today, and it seems too narrow only in light of a specifically Misesian
critique involving the treatment of entrepreneurship and uncertainty (Kirzner 2000:19). It was pathbreaking in its time.

Definitions then current in English universities included Marshall (1890): "Political Economy or Economics is a study of mankind in the ordinary business of life. It examines that part of individual & social action which is most closely connected with the attainment & with the use of material requisites of well-being." In Marshall's view, not all human action aims at material well-being, and thus not all human action can have economic significance.
Clearly, even the act of going to worship services or an art gallery, which aim at spiritual well-being, are now understood to have economic significance, both because of the opportunity cost in terms of wealth accumulation forgone, and because of the broader view now taken of the aims of economic behavior. Pigou's (1920) view was even narrower, in that, "the range of enquiry becomes restricted to that part of social welfare that can be brought directly or indirectly into relation with the measuring rod of money."

To Cannan, the most influential on him of Robbins' teachers, "the aim of political economy or Economics is the explanation of the general causes on which the material welfare of human beings depend." Robbins found these welfare definitions unsatisfactory partly because they circumscribe the discipline to examinations of some behavior while arbitrarily excluding others. Robbins saw through the prevailing superficiality of focusing on what is done externally, and saw that what was interesting from an economic perspective, is the internal valuation which motivates external action.

Kirzner (2000:17) restates Robbins definition:

> Robbins identified the perspective of the economist as that which focuses on the allocative aspect of human behavior.
> Because man desires many goals, and because he possesses only limited resources with which to achieve these goals, it is necessary for him to economize, that is, to apportion his scarce means among his multiple ends in such a way as to reflect faithfully his own ranking of the importance of these ends....Earlier definitions had held that it was possible to identify certain acts and activities as being "economic." Robbins, however, saw this adjective not as describing specific kinds of activity, but as identifying a particular point of view from which actions (and their social consequences) could be examined.

To Robbins, economics is a science, suggesting the discipline can arrive at perfectly rigorous knowledge through a priori reasoning.
Empirical investigation can suggest new directions for a priori theorizing, identify new problems, and uncover information specific to certain times, places, and actors in the past. Furthermore, the less universal information uncovered by statistical methods remains rigorous in a probabilistic sense. Economics does not

study certain activities in preference to others, it studies the relationships manifested in any activities between freely-chosen end and the means chosen for their attainment. The need for actors to economize comes from the relative scarcity of means with relation to desired ends. If a means has no alternative uses, there is no need for the economizing response, since no choice is possible or required.

Kirzner's (2000:19) Misesian
critique notes Robbins failed to identify the role of the entrepreneur in the economy. The economic "decision presumes the prior awareness by the decision maker of both the means at his disposal and his preference ranking among relevant (already identified) ends....For Mises the notion of human action itself includes the agent's determination of the facts of the ends-means framework relevant to his action." Few modern economists would go beyond Robbins in defining the discipline.

3. Quantitative Methodology

Robbins insisted on the complementarity of empirical and a priori analyses, but his main preoccupation seems to have been to preserve the acceptance of a priori argument. One of his justifications of the a priori was that it would sometimes be subject to empirical verification, but he also insisted it was valuable in itself and was especially necessary to address certain questions which do not lend themselves to empirical applications.
His analysis of the income elasticity of work effort was an a priori one, and one of his conclusions was that there was no way to measure the value of this elasticity a priori. Estimates could only be made through examining observed data.

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4. The Critique of Welfare Economics

Robbins was an important precursor of Hayek in establishing the impossibility of interpersonal utility comparisons. The emerging view in welfare economics, particularly developed by Edgeworth and Cannan, was that the law of diminishing marginal utility guaranteed that income redistribution would necessarily result in higher aggregate welfare.
If everyone has monotonically decreasing marginal utility in income, and if these utility functions are sufficiently generic to justify the assumption of a representative agent, then high-income individuals will be farther down the marginal utility function than low-income individuals. Forced redistribution of wealth results in a relatively small loss of social welfare to the rich, for whom diminishing returns to consumption have already become critical.
Redistribution of this wealth among the poor results in a relatively high gain in their total welfare per dollar redistributed, because their relatively low consumption expenditures prevent them from advancing as far in the direction of lowered marginal utility as the rich have already.

Robbins would have none of this.

One part of his critique was that valuation is unobservable, and thus the social welfare argument could never be verified empirically, just as it cannot be supported a priori. Since utility measures can only be ordinal, they cannot be transferred across individuals in any consistent manner. Utility is subjective because it is a form of value. Without interpersonal utility comparisons, welfare economics is reduced to the very restrictive appeal to strong Pareto efficiency.

Subsequent attempts by Kaldor, Hicks, and Scitovsky to formulate more flexible welfare criteria were doomed from the outset. Kaldor-Hicks efficiency, also known as potential Pareto efficiency, requires that parties made better off must be made sufficiently better off to enable them to compensate the parties made worse off. If the compensation is required and the parties made worse off do accept it, Kaldor-Hicks efficiency reduces to Pareto efficiency.
As long as the exchange is voluntary and there are no external costs, there would be no need for government coercion.

Robbins's position anticipated certain features of Arrow's Impossibility Theorem (1963). Applied to social welfare functions, Robbins argued that these functions, hypothetically defined by the vote of each individual, violated Arrow's non-dictatorship, unrestricted domain, monotonicity, and non-imposition criteria. Arrow completed the theorem by adding the independence of irrelevant alternatives criterion.

5. Conclusion

Robbins contributed the most definitive modern definition of the discipline. Although limited by his overly restrictive assumptions on information, his definition represented a great leap forward in the profession's self-understanding.
The major limitation of Robbins' definition is the implicit assumption that ends, means, and their relationships are known in advance with final certainty. This leaves no role open for entrepreneurial experimentation, and assumes knowledge which is only discoverable through entrepreneurial alertness and inquiry.

He articulated a methodological vision where a priori and empirical investigation would be complementary, and much of his own career included achievements in both forms of endeavor. His choice of both deductive and inductive logic can be seen as an application of his definition of economics. Since the means available are limited, economics can uncover more about the real world by employing both means. Although one type of inquiry may be more productive at the margin for certain applications, this is not a general condition, so both modes of procedure will always be valid.

Robbins' critique of interpersonal welfare comparisons also follows from his definition. In light of his definition of economics, "the science which studies human behaviour as a relationship between end and scarce means which have alternative uses," Robbins viewed external attempts to transfer or redistribute the burden of scarcity as unjustified by economic theory and unjustifiable given the scope of the discipline. Since economics does not chose ends for individuals, "socially desired" ends could not have any primacy in his schema and could only be justified by an appeal to individual, freely-chosen ends.

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