# Toward a Reconstruction of Utility and Welfare Economics

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Individual valuation is the keystone of economic theory. For, fundamentally, economics does not deal with things or material objects. Economics analyzes the logical attributes and consequences of the existence of individual valuations. "Things" enter into the picture, of course, since there can be no valuation without things to be valued. But the essence and the driving force of human action, and therefore of the human market economy, are the valuations of individuals. Action is the result of choice among alternatives, and choice reflects values, that is, individual preferences among these alternatives.

Individual valuations are the direct subject matter of the theories of utility and of welfare. Utility theory analyzes the laws of the values and choices of an individual; welfare theory discusses the relationship between the values of many individuals, and the consequent possibilities of a scientific conclusion on the "social" desirability of various alternatives.

Both theories have lately been foundering in stormy seas. Utility theory is galloping off in many different directions at once; welfare theory, after reaching the heights of popularity among economic theorists, threatens to sink, sterile and abandoned, into oblivion.

The thesis of this paper is that both related branches of economic theory can be salvaged and reconstructed, using as a guiding principle of both fields the concept of "demonstrated preference."

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## Demonstrated Preference

*A Statement of the Concept*

Human action is the use of means to arrive at preferred ends. Such action contrasts to the observed behavior of stones and planets, for it implies purpose on the part of the actor. Action implies choice among alternatives. Man has means, or resources, which he uses to arrive at various ends; these resources may be time, money, labor energy, land, capital goods, and so on. He uses these resources to attain his most preferred ends. From his action, we can deduce that he has acted so as to satisfy his most highly valued desires or preferences.

The concept of *demonstrated preference* is simply this: that actual choice reveals, or demonstrates, a man's preferences; that is, that his preferences are deducible from what he has chosen in action. Thus, if a man chooses to spend an hour at a concert rather than a movie, we deduce that the former was preferred, or ranked higher on his value scale. Similarly, if a man spends five dollars on a shirt we deduce that he preferred purchasing the shirt to any other uses he could have found for the money. This concept of preference, rooted in real choices, forms the keystone of the logical structure of economic analysis, and particularly of utility and welfare analysis.

While a similar concept played a role in the writings of the early utility economists, it had never received a name, and it therefore remained largely undeveloped and unrecognized as a distinct concept. It was generally discarded in the 1930s, before it had even achieved recognition. This view of preference as derived from choice was present in varying degree in the writings of the early Austrian economists, as well as in the works of Jevons, Fisher, and Fetter. Fetter was the only one who clearly employed the concept in his analysis. The clearest and most thorough formulation of the concept has been the works of Professor Mises.[1]

[1] See Alan R. Sweezy, "The Interpretation of Subjective Value Theory in the Writings of the Austrian Economists," *Review of Economic Studies* (June 1934): 176-85, for an historical survey. Sweezy devotes a good part of the article to a criticism of Mises as the leading exponent of the demonstrated preference approach. For Mises's views, see *Human Action* (New Haven, Conn.: Yale University Press, 1949), pp. 94-96, 102-3; *Theory of Money and Credit* (1912, 3rd ed; New Haven: Yale University Press, 1951), pp. 46ff. Also see Frank A. Fetter, *Economic Principles* (New York: The Century Co., 1915), pp. 14-21.

*Positivism and the Charge of Tautology*

Before developing some of the applications of the demonstrated preference principle to utility and welfare theory, we must consider the methodological objections that have been levelled against it. Professor Alan Sweezy, for example, seizes on a sentence of Irving Fisher's which very succinctly expressed the concept of demonstrated preference: "Each individual acts as he desires." Sweezy is typical of the majority of present-day economists in not being able to understand how such a statement can be made with absolute validity. To Sweezy, insofar as it is not an empirically testable proposition in psychology, such a sentence must simply reduce to the meaningless tautology: "each individual acts as he acts."

This criticism is rooted in a fundamental epistemological error that pervades modern thought: the inability of modern methodologists to understand how economic science can yield substantive truths by means of logical deduction (that is, the method of "praxeology"). For they have adopted the epistemology of positivism (now dubbed "logical empiricism" or "scientific empiricism" by its practitioners), which uncritically applies the procedures appropriate in physics to the sciences of human action.[2]

In physics, simple facts can be isolated in the laboratory. These isolated facts are known directly, but the laws to explain these facts are not. The laws may only be hypothecated. Their validity can only be determined by logically deducing consequents from them which can be verified by appeal to the laboratory facts. Even if the laws explain the facts, however, and their inferences are consistent with them, the laws of physics can never be *absolutely* established. For some other law may prove more elegant or capable of explaining a wider range of facts. In physics, therefore, postulated explanations have to be hypothecated in such a way that they or their consequents can be empirically tested. Even then, the laws are only tentatively rather than absolutely valid.

In human action, however, the situation is reversed. There is here no laboratory where "facts" can be isolated and broken down into their simple elements. Instead, there are only historical "facts" which are complex phenomena, resultants of many causal factors. These phenomena must be

[2] See the methodological treatises of Kaufman, Hutchison, Souter, Stonier, Myrdal, Morgenstern, *and so on.*

explained, but they cannot be isolated or used to verify or falsify any law. On the other hand, economics, or praxeology, has full and complete knowledge of its original and basic axioms. These are the axioms *implicit in the very existence of human action*, and they are absolutely valid so long as human beings exist. But if the axioms of praxeology are absolutely valid for human existence, then so are the consequents which can logically be deduced from them. Hence, economics, in contrast to physics, can derive absolutely valid substantive truths about the real world by deductive logic. The axioms of physics are only hypothecated and hence subject to revision; the axioms of economics are already known and hence absolutely true.[3] The irritation and bewilderment of positivists over the "dogmatic" pronouncements of praxeology stem, therefore, from their universal application of methods proper only to the physical sciences.[4]

The suggestion has been made that praxeology is not really scientific, because its logical procedures are verbal ("literary") rather than mathematical and symbolic.[5] But mathematical logic is uniquely appropriate to physics, where the various logical steps along the way are not in themselves meaningful; for the axioms and therefore the deductions of physics are in themselves meaningless, and only take on meaning "operationally," insofar as they can explain and predict given facts. In praxeology, on the contrary, the axioms themselves are known as true and are therefore meaningful. As a result, each step-by-step deduction is meaningful and true. Meanings are far better expressed verbally than in meaningless formal symbols. Moreover, simply to translate economic analysis from words into symbols, and then to retranslate them so as to explain the conclusions, makes little sense, and violates the great scientific principle of Occam's Razor that there should be no unnecessary multiplication of entities.

The crucial concept of the positivists, and the one that forms the basis

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[3] On the methodology of praxeology and physics, see Mises, *Human Action*, and F.A. Hayek, *The Counter Revolution of Science* (Glencoe, Ill.: The Free Press, 1952), pt 1.

[4] It is even dubious that positivists accurately interpret the proper methodology of physics itself. On the widespread positivist misuse of the Heisenberg Uncertainty Principle in physics as well as in other disciplines, cf. Albert H. Hobbs, *Social Problems and Scientism* (Harrisburg, Penn.: The Stackpole Co., 1953), pp. 220-32.

[5] For a typical suggestion, cf. George J. Schuller, "Rejoinder," *American Economic Review* (March 1951): 188. For realization that mathematical logic is essentially subsidiary to basic verbal logic, cf. the remarks of Andre Lalande and Rene Poirier, on "Logique" and "Logistique," in *Vocabulaire technique et critique de la philosophie*, Andre Lalande, ed., 6th ed. (Paris: Presses Universitaires de France, 1951), pp. 574, 579.

for their attack on demonstrated preference, is that of "operational meaning." Indeed, their favorite critical epithet is that such and such a formulation or law is "operationally meaningless."[6] The test of "operationally meaningful" is derived strictly from the procedures of physics as outlined above. An explanatory law must be framed so that it can be tested and found empirically false. Any law which claims to be absolutely true and not empirically capable of being falsified is therefore "dogmatic" and operationally meaningless—hence, the positivist's view that if a statement or law is not capable of being falsified empirically, it must simply be a tautologous definition. And consequently, Sweezy's attempted reduction of Fisher's sentence to a meaningless identity.[7]

Sweezy objects that Fisher's "each man acts as he desires" is circular reasoning, because action implies desire, and yet desires are not arrived at independently, but are only discoverable through the action itself. Yet this is not circular. For desires exist by virtue of the concept of human action and of the existence of action. It is precisely the characteristic of human action that it is motivated by desires and ends, in contrast to the unmotivated bodies studied by physics. Hence, we can say validly that action is motivated by desires and yet confine ourselves to deducing the *specific* desires from the real actions.

*Professor Samuelson and "Revealed Preference"*

"Revealed preference"—preference revealed through choice—would have been an apt term for our concept. It has, however, been preempted by Samuelson for a seemingly similar but actually quite different concept of his

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[6] Paul Samuelson has added the weight of his authority to Sweezy's criticism of Mises and demonstrated preference, and has couched his endorsement in terms of "operational meaning." Samuelson explicitly rejects the idea of a *true* utility theory in favor of one that is merely hypothetical. See Paul A. Samuelson, "The Empirical Implications of Utility Analysis," *Econometrica* (1938):344ff; and Samuelson, *Foundations of Economic Analysis* (Cambridge, Mass.:Harvard University Press, 1947), pp. 91-92.

The concept of operational meaning was originated by the physicist Percy W. Bridgman *explicitly* to explain the methodology of physics. Cf. Bridgman, *The Logic of Modern Physics* (New York: Macmillan, 1927). Many founders of modern positivism, such as Mach and Boltzmann, were also physicists.

[7] The heros of positivism, Rudolf Carnap and Ludwig Wittgenstein, disparaged deductive inference as merely drawing out "tautologies" from the axioms. Yet all reasoning is deductive, and this process is peculiarly vital to arriving at truth. For a critique of Carnap and Wittgenstein, and a demonstration that inference is not merely identity to "tautology," cf. Lalande, "Tautoglie," in *Vocabulaire*, pp. 1103-4.

own. The critical difference is this: Samuelson assumes the existence of an underlying preference scale that forms the basis of a man's actions and that remains constant in the course of his actions over time. Samuelson then uses complex mathematical procedures in an attempt to "map" the individual's preference scale on the basis of his numerous actions.

The prime error here is the assumption that the preference scale remains constant over time. There is no reason whatever for making any such assumption. All we can say is that an action, at a specific point of time, reveals part of a man's preference scale *at that time*. There is no warrant for assuming that it remains constant from one point of time to another.[8]

The "revealed preference" theorists do not recognize that they are assuming constancy; they believe that their assumption is simply that of *consistent* behavior, which they identify with "rationality." They will admit that people are not always "rational," but uphold their theory as being a good first approximation or even as having normative value. However, as Mises has pointed out, *constancy* and *consistency* are two entirely different things. Consistency means that a person maintains a transitive order of rank on his preference scale (if A is preferred to B and B is preferred to C, then A is preferred to C). But the revealed preference procedure does not rest on this assumption so much as on an assumption of *constancy*—that an individual maintains the same value scale over time. While the former might be called irrational, there is certainly nothing irrational about someone's value scales changing through time. Hence, no valid theory can be built on a constancy assumption.[9]

One of the most absurd procedures based on a constancy assumption has been the attempt to arrive at a consumer's preference scale not through observed real action, but through quizzing him by questionnaires. *In vacuo*, a few consumers are questioned at length on which abstract bundle of commodities they would prefer to another abstract bundle, and so on. Not only does this suffer from the constancy error, no assurance can be attached to the mere questioning of people when they are not confronted with the choices in actual practice. Not only will a person's valuation differ when talking about them from when he is actually choosing, but there is also no

[8] Samuelson's analysis suffers from other errors as well, such as the use of invalid "index number" procedures. On the theoretical fallacies of index numbers, cf. Mises, *Theory of Money and Credit*, pp. 187-94.

[9] See Mises, *Human Action*, pp. 102-3. Mises demonstrates that Wicksteed and Robbins committed a similar error.

guarantee that he is telling the truth.[10]

The bankruptcy of the revealed-preference approach has never been better portrayed than by a prominent follower, Professor Kennedy. Says Kennedy: "In what respectable science would the assumption of consistency (that is, constancy) be accepted for one moment?"[11] But he asserts it must be retained anyway, else utility theory could not serve any useful purpose. The abandonment of truth for the sake of a spurious usefulness is a hallmark of the positivist-pragmatist tradition. Except for certain auxiliary constructions, it should be clear that the false cannot be useful in constructing a true theory. This is particularly the case in economics, which is explicitly built on *true* axioms.[12]

*Psychologizing and Behaviorism: Twin Pitfalls*

The revealed-preference doctrine is one example of what we may call the fallacy of "psychologizing," the treatment of preference scales as if they existed as separate entities apart from real action. Psychologizing is a common error in utility analysis. It is based on the assumption that utility analysis is a kind of "psychology," and that, therefore, economics must enter into psychological analysis in laying the foundations of its theoretical

[10] It is Samuelson's credit that he rejects the questionnaire approach. Professors Kennedy and Keckskemeti, for different reasons, defend the questionnaire method. Kennedy simply says, rather illogically, that *in vacuo* procedures are being used anyway, when the theorist states that *more* of a good is preferred to less. But this is not in *vacuo*; it is a conclusion based on the praxeological knowledge that since a *good* is any object of action, more must be preferred to less while it remains a good. Kennedy is wrong, therefore, when he asserts that this is a circular argument, for the fact that action exists is not "circular."

Keckskemeti actually asserts that the questionnaire method is preferable to observing behavior in discovering preferences. The basis of his arguments is a spurious dichotomy between utility and ethical valuations. Ethical valuations may be considered either as identical with, or a subset of, utility judgments, but they can not be separated.

Cf. Charles Kennedy, "The Common Sense of Indifference Curves," *Oxford Economic Papers* (January 1950): 123-31; Kenneth J. Arrow, "Review of Paul Keckskemeti's *Meaning, Communication, and Value*," *Econometrica* (January 1955): 103.

[11] Kennedy, "The Common Sense of Indifference Curves." Kennedy's article furnishes the best brief explanation of the revealed-preference approach.

[12] This error again stems from physics, where such assumptions as absence of friction are useful as first approximations– to *known* facts from *unknown* explanatory laws! For a refreshing skepticism on the value of false axioms, cf. Martin Bronfenbrenner, "Contemporary Economics Resurveyed," *Journal of Political Economy* (April 1953).

structure.

Praxeology, the basis of economic theory, differs from psychology, however. Psychology analyzes the *how* and the *why* of people forming values. It treats the concrete content of ends and values. Economics, on the other hand, rests simply on the assumption of the *existence* of ends, and then deduces its valid theory from such a general assumption.[13] It therefore has nothing to do with the content of ends or with the internal operations of the mind of the acting man.[14]

If psychologizing is to be avoided, so is the opposite error of *behaviorism*. The behaviorist wishes to expunge "subjectivism," that is, motivated action, completely from economics, since he believes that any trace of subjectivism is unscientific. His ideal is the method of physics in treating observed movements of unmotivated, inorganic matter. In adopting this method, he throws away the subjective knowledge of action upon which economic science is founded; indeed, he is making any scientific investigation of human beings impossible. The behaviorist approach in economics began with Cassel, and its most prominent modern practitioner is Professor Little. Little rejects the demonstrated preference theory because it assumes the existence of preference. He glories in the fact that, in his analysis, the maximizing individual "at last disappears" which means, of course, that economics disappears as well.[15]

The errors of psychologizing and of behaviorism have in common a desire by their practitioners to endow their concepts and procedures with "operational meaning," either in the areas of observed behavior or in mental operations. Vilfredo Pareto, perhaps the founder of an explicitly positivist approach in economics, championed both errors. Discarding a demonstrated

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[13] The axiom of the existence of ends may be considered a proposition in philosophical psychology. In that sense, praxeology is grounded in psychology, but its development then completely diverges from psychology proper. On the question of purpose, praxeology takes its stand squarely with the Leibnizian tradition of philosophical psychology as opposed to the Lockean tradition upheld by positivists, behavorists, and associationists. For an illuminating discussion of this issue, cf. Gordon W. Allport, *Becoming* (New Haven, Conn.: Yale University Press, 1955), pp. 6-17.

[14] Thus, the law of diminishing marginal utility does not at all rest on some postulated psychological law of satiety of wants, but on the praxeological truth that the first units of a good will be allocated to the most valuable uses, the next units to the next-most valuable uses, and so on.

[15] I.M.D. Little, "A Reformulation of the Theory of Consumers' Behavior," *Oxford Economic Papers* (January 1949): 90-99.

preference approach as "tautologous," Pareto, on the one hand, sought to eliminate subjective preferences from economics and, on the other, to investigate and measure preference scales apart from real action. Pareto was, in more ways than one, the spiritual ancestor of most current utility theorists.[16] [17]

*A Note on Professor Armstrong's Criticism*

Professor Armstrong has delivered a criticism of the revealed-preference approach which he would undoubtedly apply to demonstrated preference as well. He asserts that when more than one commodity is being ranked, individual preference scales cannot be unitary, and we cannot postulate the ranking of the commodities on one scale.[18] On the contrary, it is precisely the characteristic of a deduced preference scale that it is unitary. Only if a man ranks two alternatives as more and less valuable on one scale can he choose between them. Any of his means will be allocated to his more preferred use. Real choice therefore always demonstrates relevant preferences ranked on a unitary scale.

## Utility Theory

Utility theory, over the last generation, has been split into two warring camps: (1) those who cling to the old concept of cardinal, measurable utility,

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[16] Vilfredo Pareto, "On the Economic Phenomenon," *International Economic Papers 3* (1953): 188-94. For an excellent rebuttal, cf. Benedetto Croce, "On the Economic Principle, Parts I and II," ibid.: 175-76. 201. The famous Croce-Pareto debate is an illuminating example of early debate between praxeologic and positivist views in economics.

[17] Vivian C. Walsh is an interesting current example of the combinations of both types of error. On the one hand, he is an extreme behaviorist, who refuses to recognize that any preferences are relevant to, or can be demonstrated by, action. On the other hand, he also takes the extreme psychologizing view that psychological states *per se* can be directly observed. For this, he falls back on "common sense." But this position fails because Walsh's psychological "observations" are ideal types and not analytic categories. Thus, Walsh says that: "saying that someone is a smoker is different from saying that he is smoking now," upholding the former type of statement for economics. But such statements are historical ideal types, relevant to history and psychology, but not to economic analysis. Cf. Vivian C. Walsh, "On Descriptions of Consumers' Behavior," *Economica* (August 1954): 244-52. On ideal types and relation to praxeology, cf. Mises, *Human Action*, pp. 59-64.

[18] Wallace E. Armstrong, "A Note on the Theory of Consumer's Behavior," *Oxford Economic Papers* (January 1950): 199ff. On this point, cf. Little's rebuttal, in I.M.D. Little, "The Theory of Consumer's Behavior—A Comment," ibid., 132-35.

and (2) those who have thrown over the cardinal concept, but have dispensed with the utility concept as well and have substituted an analysis based on indifference curves.

In its pristine form, the cardinalist approach has been abandoned by all but a rearguard. On demonstrated preference grounds, cardinality must be eliminated. Psychological magnitudes cannot be measured since there is no objectively extensive unit—a necessary requisite of measurement. Further, actual choice obviously cannot demonstrate any form of *measurable* utility; it can only demonstrate one alternative being preferred to another.[19]

*Ordinal Marginal Utility and "Total Utility"*

The ordinalist rebels, led by Hicks and Allen in the early 1930s, felt it necessary to overthrow the very concept of marginal utility along with measurability. In doing so, they threw out the Utility baby together with the Cardinal bathwater. They reasoned that marginal utility itself implies measurability. Why? Their notion rested on the implicit neoclassical assumption that the "marginal" in marginal utility is equivalent to the "marginal" of the differential calculus. Since, in mathematics, a total "something" is the integral of marginal "somethings," economists early on assumed that "total utility" was the mathematical integral of a series of "marginal utilities."[20] Perhaps, too, they realized that this assumption was essential to a mathematical representation of utility. As a result, they assumed, for example, that the marginal utility of a good with a supply of six units is equal to the "total utility" of six units minus the "total utility" of five units. If utilities can be subjected to the arithmetical operation of subtraction, and can be differentiated and integrated, then obviously the concept of marginal utility must imply cardinally measurable utilities.[21]

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[19] Mises's priority in establishing this in establishing this conclusion is acknowledged by Professor Robbins; cf. Lionel Robbins, "Robertson on Utility and Scope," *Economica* (May 1953): 99-111; Mises, *Theory of Money and Credit*, pp. 38-47 and *passim*. Mises's role in forging an ordinal marginal utility theory has suffered almost total neglect.

[20] The error began perhaps with Jevons. Cf. W. Stanley Jevons, *Theory of Political Economy* (London: Macmillan, 1888), pp. 49ff.

[21] That this reasoning lay at the base of the ordinalists' rejection of marginal utility may be seen in John R. Hicks, *Value and Capital*, 2nd ed. (Oxford: Oxford University Press, 1946), p. 19. That many ordinalists regret the loss of marginal utility may be seen in the statement by Arrow that: "The older discussion of diminishing marginal utility as aiming for the satisfaction of more intense wants first makes more sense" than the current "indifference-curve" analysis, but that, unfortunately it is "bound up with the untenable notion of measurable utility." Quoted in D.H. Robertson, "Utility and All What?"

The mathematical representation of the calculus rests on the assumption of *continuity*, that is, infinitely small steps. In human action, however, there can be no infinitely small steps. Human action and the facts on which it is based must be in observable and discrete steps and not infinitely small ones. Representation of utility in the manner of the calculus is therefore illegitimate.[22]

There is, however, no reason why marginal utility must be conceived in calculus terms. In human action, "marginal" refers not to an infinitely small unit, but to the *relevant* unit. Any unit relevant to a particular action is marginal. For example, if we are dealing in a specific situation with single eggs, then each egg is the unit; if we are dealing in terms of six-egg cartons, then each six-egg carton is the unit. In either case, we can speak of a marginal utility. In the former case, we deal with the "marginal utility of an egg" with various supplies of eggs; in the latter, with the "marginal utility of cartons" whatever the supply of cartons of eggs. Both utilities are marginal. In no sense is one utility a "total" of the other.

To clarify the relationship between marginal utility and what has been misnamed "total utility" but actually refers to a marginal utility of a larger-sized unit, let us hypothetically construct a typical value scale for eggs:

Ranks in Value
___ 5 eggs
___ 4 eggs
___ 3 eggs
___ 2 eggs
___1 egg
___ 2nd egg
___ 3rd egg
___ 4th egg
___ 5th egg.

This is a man's ordinal value, or preference, scale for eggs. The higher the ranking, the higher the value. At the center is one egg, the first egg in his possession. By the Law of Diminishing Marginal Utility (ordinal), the

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*Economic Journal* (December 1954): 667.

[22] Hicks concedes the falsity of the continuity assumption but blindly pins his faith on the hope that all will be well when individual actions are aggregated. Hicks, *Value and Capital*, p. 11.

second, third, fourth eggs, and so on, rank below the first egg on his value scale, and in that order. Now, since eggs are goods and therefore objects of desire, it follows that a man will value two eggs more than he will one, three more than he will two, and so on. Instead of calling this "total utility," we will say that *the marginal utility of a unit of a good is always higher than the marginal utility of a unit of smaller size*. A bundle of 5 eggs will be ranked higher than a bundle of 4 eggs, and so on. It should be clear that the only arithmetic or mathematical relationship between these marginal utilities is a simple ordinal one. On the one hand, given a certain sized unit, the marginal utility of that unit declines as the supply of units increases. This is the familiar Law of Diminishing Marginal Utility. On the other hand, the marginal utility of a larger-sized unit is greater than the marginal utility of a smaller-sized unit. This is the law just underlined. And there is no mathematical relationship between, say, the marginal utility of 4 eggs and the marginal utility of the 4th egg except that the former is greater than the latter.

We must conclude then that *there is no such thing as total utility*; all utilities are marginal. In those cases where the supply of a good totals only one unit, then the "total utility" of that whole supply is simply the marginal utility of a unit the size of which equals the whole supply. The key concept is the *variable size* of the marginal unit, depending on the situation.[23]

A typical error on the concept of marginal utility is a recent statement by Professor Kennedy that "the word >marginal' presupposes increments of utility" and hence measurability. But the word "marginal" presupposes *not* increments of utility, *but the utility of increments of goods*, and this need have nothing to do with measurability.[24]

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[23] The analysis of total utility was first put forward by Mises, in *Theory of Money and Credit*, pp. 38-47. It was continued by Harro F. Bernardelli, especially in his "The End of the Marginal Utility Theory?" *Economica* (May 1938): 206. Bernardelli's treatment, however, is marred by laborious attempts to find some form of legitimate mathematical representation. On the failure of the mathematical economists to understand this treatment of marginal and total, see the criticism of Bernardelli by Paul A. Samuelson, "The End of Marginal Utility: A Note on Dr. Bernardelli's Article," *Economica* (February 1939): 86-87; Kelvin Lancaster, "A Refutation of Mr. Bernadelli," *Economica* (August 1953): 259-62. For rebuttals see Bernadelli, "A Reply to Mr. Samuelson's Note," *Economica* (February 1939): 88-89; and "Comment on Mr. Lancaster's Refutation," *Economica* (August 1954): 240-42.

[24] See Charles Kennedy, "Concerning Utility," *Economica* (February 1954): 13. Kennedy's article, incidentally, is an attempt to rehabilitate a type of cardinalism by making distinctions between "quantity" and "magnitude," and uasing the Bertrand

*Professor Robbins's Problem*

Professor Lionel Robbins, in the course of a recent defense of ordinalism, raised a problem which he left unanswered. Accepted doctrine, he declared, states that if *difference* between utility rankings can be judged by the individual, as well as the rankings themselves, then the utility scale can in some way be *measured*. Yet, Robbins says, he *can* judge differences. For example, among three paintings, he can say that he prefers a Rembrandt to a Holbein far less than he prefers a Holbein to a Munnings. How, then, can ordinalism be saved?[25] Is he not conceding measurability? Yet Robbins's dilemma had already been answered twenty years earlier in a famous article by Oskar Lange.[26] Lange pointed out that in terms of what we would call demonstrated preference, only pure rankings are revealed by acts of choice. "Differences" in rank are not so revealed, and are therefore mere psychologizing, which, however interesting, are irrelevant to economics. To this, we need only add that differences of rank *can* be revealed through real choice, whenever the goods can be obtained by money. We need only realize that *money* units (which are characteristically highly divisible) can be lumped in the same value-scale as commodities. For example, suppose someone is willing to pay $10,000 for a Rembrandt, $8,000 for a Holbein and only $20 for a Munnings. Then, his value-scale will have the following descending order: Rembrandt, $10,000; Holbein, $9,000, $8,000, $7,000, $6,000 . . . , Munnings, $20. We may observe these ranks and no question of the measurability of utilities need arise.

That money and units of various goods can be ranked on one value scale is the consequence of Mises's money-regression theorem, which makes possible the application of marginal utility analysis to money.[27] It is

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Russell concept of "relational addition." Surely, this sort of approach falls with one slash of Occam's Razor—the great scientific principle that entities not be multiplied unnecessarily. For a criticism, cf. D.H. Robertson, "Utility and All What?" pp. 668-69.

[25] Robbins, "Robertson on Utility and Scope," p. 104.

[26] Oskar Lange, "The Determinateness of the Utility Function," *Review of Economic Studies* (June 1934): 224ff. Unfortunately, Lange balked at the implications of his own analysis and adopted an assumption of cardinality, solely because of his anxious desire to reach certain cherished "welfare" conclusions.

[27] See Mises, *Theory of Money and Credit*, pp. 97-123. Mises replied to critics in *Human Action*, pp. 405ff. The only further criticism has been that of Gilbert, who asserts that the theorem does not explain how a paper money can be introduced after the monetary system has broken down. Presumably he refers to such cases as the German *Rentenmark*. The answer, of course, is that such paper was not introduced *de novo*; gold and foreign

characteristic of Professor Samuelson's approach that he scoffs at the whole problem of circularity which money-regression had solved. He falls back on Léon Walras, who developed the idea of "general equilibrium in which all magnitudes are simultaneously determined by efficacious interdependent relations," which he contrasts to the "fears of literary writers" about circular reasoning.[28] This is one example of the pernicious influence of the mathematical method in economics. The idea of mutual determination is appropriate in physics, which tries to explain the unmotivated motions of physical matter. But in praxeology, the *cause* is known: individual purpose. In economics, therefore, the proper method is to proceed from the causing action to its consequent effects.

*The Fallacy of Indifference*

The Hicksian Revolutionaries replaced the cardinal utility concept with the concept of indifference classes, and for the last twenty years, the economic journals have been rife with a maze of two- and three-dimensional indifference curves, tangencies, "budget lines," and so on. The consequence of an adoption of the demonstrated preference approach is that the entire indifference-class concept, along with the complicated superstructure erected upon it, must fall to the ground.

Indifference can never be demonstrated by action. Quite the contrary. Every action necessarily signifies a *choice*, and every choice signifies a definite preference. Action specifically implies the *contrary* of indifference. The indifference concept is a particularly unfortunate example of the psychologizing error. Indifference classes are assumed to exist somewhere underlying and apart from action. This assumption is particularly exhibited in those discussions that try to "map" indifference curves empirically by the use of elaborate questionnaires.

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exchange existed previously existing moneys. Cf. J.C. Gilbert, "The Demand for Money: the Development of an Economic Concept," *Journal of Political Economy* (April 1953): 149.

[28] Samuelson, *Foundations of Economic Analysis*, pp. 117-18. For similar attacks on earlier Austrian economists, cf. Frank H. Knight, "Introduction" in Carl Menger, *Principles of Economics* (Glencoe, Ill.: The Free Press, 1950), p. 23; George J. Stigler, *Production and Distribution Theories* (New York: Macmillan, 1946), p. 181. Stigler criticizes Böhm-Bawerk for spurning "mutual determination" for "the older concept of cause and effect" and explains this by saying that Böhm-Bawerk was untrained in mathematics. For Menger's attack on the mutual determination concept, cf. Terence W. Hutchison, *A Review of Economic Doctrines, 1870-1929* (Oxford: Clarendon Press, 1953), p. 147.

If a person is really indifferent between two alternatives, then he cannot and will not choose between them.[29] Indifference is therefore never relevant for action and cannot be demonstrated in action. If a man, for example, is indifferent between the use of 5.1 ounces and 5.2 ounces of butter because of the minuteness of the unit, then there will be no occasion for him to act on these alternatives. He will use butter in larger-sized units, where varying amounts are *not* indifferent to him.

The concept of "indifference" may be important for psychology, but not for economics. In psychology, we are interested in finding out intensities of value, possible indifference, and so on. In economics, however, we are only interested in values revealed through choices. It is immaterial to economics whether a man chooses alternative A to alternative B because he strongly prefers A or because he tossed a coin. The *fact of ranking* is what matters for economics, not the reasons for the individual's arriving at that rank.

In recent years, the indifference concept has been subjected to severe criticism. Professor Armstrong pointed out that under Hicks's curious formulation of "indifference," it is possible for an individual to be "indifferent" between two alternatives and yet choose one over the other.[30] Little has some good criticisms of the indifference concept, but his analysis is vitiated by his eagerness to use faulty theorems in order to arrive at welfare conclusions, and by his radically behaviorist methodology.[31] A very interesting attack on the indifference concept from the point of view of psychology has been levelled by Professor Macfie.[32]

The indifference theorists have two basic defenses of the role of indifference in real action. One is to cite the famous fable of Buriden's Ass. This is the "perfectly rational" ass who demonstrates indifference by

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[29] The "indifference theorists" also err in assuming infinitely small steps, essential for their geometric representation but erroneous for an analysis of human action.

[30] Wallace E. Armstrong, "The Determinateness of Utility Function," *Economic Journal* (1939): 453-67. Armstrong's point that indifference is not a transitive relation (as Hicks assumed), only applies to different-sized units of *one* commodity. Also cf. Armstrong, "A Note on the Theory of Consumers' Behavior."

[31] Little, "Reformulation" and "Theory." It is another defect of Samuelson's revealed preference approach that he attempts to "reveal" indifference-curves as well.

[32] Alec L. Macfie, "Choice in Psychology and as Economic Assumption," *Economic Journal* (June 1953): 352-67.

standing, hungry, equidistant from two equally attractive bales of hay.[33] Since the two bales are equally attractive in every way, the ass can choose neither one and starves therefore. This example is supposed to indicate how indifference can be revealed in action. It is, of course, difficult to conceive of an ass, or a person, who could be *less* rational. Actually, he is not confronted with *two* choices but with *three*, the third being to starve where he is. Even on the indifference theorists' own grounds, this third choice will be ranked lower than the other two on the individual's value-scale. He will *not* choose starvation.

If both bundles of hay are equally attractive, then the ass or man, who must choose one or the other, will allow pure chance, such as the flip of a coin, to decide on either one. But then indifference is still not revealed by this choice, for the flip of a coin has enabled him to establish a preference![34]

The other attempt to demonstrate indifference classes rests on the consistency-constancy fallacy, which we have analyzed above. Thus, Kennedy and Walsh claim that a man can reveal indifference if, when asked to repeat his choices between A and B *over time*, he chooses each alternative 50 percent of the time.[35]

If the concept of the individual indifference curve is completely fallacious, it is quite obvious that Baumol's concept of the "community indifference curve," which he purports to build up from individual curves, deserves the shortest possible shrift.[36]

*The Neo-Cardinalists: the von Neumann-Morgenstern Approach*

In recent years, the world of economics has been taken by storm by a neo-cardinalist, quasi-measurement theory of utility. This approach, which has the psychological advantage of being garbed in a mathematical form more advanced than economics had yet known, was founded by von Neumann and

[33] Thus, cf. Joseph A. Schumpeter, *History of Economic Analysis* (New York: Oxford University Press, 1954), pp. 94 n. 1064.
[34] Also see Croce's warning about using animal illustrations in analyses of human action. Croce, "Economic Principle I," p. 175.
[35] Kennedy, "The Common Sense of Indifference Curves" and "On Descriptions of Consumer's Behavior."
[36] William J. Baumol, *Welfare Economics and the Theory of the State* (1952; Cambridge, Mass.: Harvard University Press, 1965), pp. 47ff.

Morgenstern in their celebrated work.[37] Their theory had the further advantage of being grounded on the most recent and fashionable (though incorrect) developments in the philosophy of measurement and the philosophy of probability. The Neumann-Morgenstern thesis was adopted by the leading mathematical economists and has gone almost unchallenged to this day. The chief consolation of the ordinalists has been the assurance by the neo-cardinalists that their doctrine applies only to utility under conditions of uncertainty, and therefore does not shake the ordinalist doctrine too drastically.[38] But this consolation is really quite limited, considering that some uncertainty enters into every action.

The Neumann-Morgenstern theory is briefly as follows: an individual can compare not only certain events, but also combinations of events with definite numerical probabilities for each event. Then, according to the authors, if an individual prefers alternative A to B, and B to C, he is able to decide whether he prefers B or a 50:50 probability combination of C and A. If he prefers B, then his preference of B over C is deduced as being greater than his preference of A over B. In a similar fashion, various combinations of probabilities are selected. A quasi-measurable numerical utility is assigned to his utility scale in accordance with the indifference of utilities of B as compared with various probability combinations of A or C. The result is a numerical scale given when arbitrary numbers are assigned to the utilities of two of the events.

The errors of this theory are numerous and grave:

> (1) None of the axioms can be validated on demonstrated preference grounds, since admittedly all of the axioms can be violated by the individual actors.

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[37] John von Neumann and Oskar Morgenstern, *Theory of Games and Economic Behavior*, 2nd ed. (Princeton, N.J.: Princeton University Press, 1947), pp. 8, 15-32, 617-32.

[38] Thus see the excellent expository article by Armen A. Alchian, "The Meaning of Utility Measurement," *American Economic Review* (May 1953): 384-397. The leading adherents of the Neumann-Morgenstern approach are Marschak, Friedman, Savage, and Samuelson.

Claims of the theory, even at its best, to measure utility in any way have been nicely exploded by Ellsberg, who also demolishes Marschak's attempt to make the theory normative. Ellsberg's critique suffers considerably, however, from being based on the "operational meaning" concept. D. Ellsberg, "Classic and Current Notions of Measurable Utility," *Economic Journal* (September 1954): 528-56.

> (2) The theory leans heavily on a constancy assumption so that utilities can be revealed by action over time.
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> (3) The theory relies heavily on the invalid concept of *indifference* of utilities in establishing the numerical scale.
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> (4) The theory rests fundamentally on the fallacious application of a theory of numerical probability to an area where it cannot apply. Richard von Mises has shown conclusively that numerical probability can be assigned only to situations where there is a class of entities, such that nothing is known about the members except they are members of this class, and where successive trials reveal an asymptotic tendency toward a stable proportion, or frequency of occurrence, of a certain event in that class. There can be no numerical probability applied to specific individual events.[39]

Yet, in human action, precisely the opposite is true. Here, there are no classes of homogeneous members. Each event is a unique event and is different from other unique events. These unique events are not repeatable. Therefore, there is no sense in applying numerical probability theory to such events.[40] It is no coincidence that, invariably, the application of the neo-cardinalists has always been to lotteries and gambling. It is precisely and *only* in lotteries that probability theory can be applied. The theorists beg the

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[39] 39 Richard von Mises, *Probability, Statistics, and Truth* (New York: Macmillan, 1957). Also Ludwig von Mises, *Human Action*, pp. 106-17. The currently fashionable probability theories of Rudolf Carnap and Hans Reichenbach have failed to shake the validity of Richard von Mises's approach. Mises refutes them in the third German Edition of his work, unfortunately unavailable in English. See Richard von Mises, *Wahrscheinlichkeit, Statistik, und Wahrheit*, 3rd ed. (Vienna: J. Springer, 1951). The only plausible critique of Richard von Mises has been that of W. Kneale, who pointed out that the numerical assignment of probability depends on an *infinite* sequence, whereas in no human action can there be an infinite sequence. This, however, *weakens* the application of numerical probability even to cases such as lotteries, rather than enabling it to expand into other areas. See also Little, "A Reformulation of the Theory of Consumers' Behavior."

[40] Compare Frank Knight's basic distinction between the narrow cases of actuarial "risk" and the more widespread nonactuarial "uncertainty." Frank H. Knight, *Risk, Uncertainty, and Profit* (2nd ed.; London, 1940). G.L.S. Schackle has also leveled excellent criticism at the probability approach to economics, especially that of Marschak. His own "surprise" theory, however, is open to similar objections; cf. C.F. Carter, "Expectations in Economics," *Economic Journal* (March 1950): 92–105; G.L.S. Schackle, *Expectations in Economics* (Cambridge: Cambridge Univesity Press, 1949), pp. 109–23.

entire question of its applicability to general human action by confining their discussion to lottery cases. For the purchaser of a lottery ticket knows only that the individual lottery ticket is a member of a certain-sized class of tickets. The entrepreneur, in making his decisions, is on the contrary confronted with unique cases about which he has some knowledge and which have only limited parallelism to other cases.

> (5) The neo-cardinalists admit that their theory is not even applicable to gambling if the individual has either a like or a dislike for gambling itself. Since the fact that a man gambles demonstrates that he likes to gamble, it is clear that the Neumann-Morgenstern utility doctrine fails even in this tailor-made case.[41]
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> (6) A curious new conception of measurement. The new philosophy of measurement discards concepts of "cardinal" and "ordinal" in favor of such labored constructions as "measurable up to a multiplicative constant" (cardinal); "measurable up to a monotomic transform" (ordinal); "measurable up to a linear transform" (the new quasi-measurement, of which the Neumann-Morgenstern proposed utility index is an example). This terminology, apart from its undue complexity (under the influence of mathematics), implies that everything, including ordinality, is somehow "measurable." The man who proposes a new definition for an important word must prove his case; the new definition of measurement has hardly done so. Measurement, on any sensible definition, implies the possibility of a unique assignment of numbers which can be meaningfully subjected to all the operations of arithmetic. To accomplish this, it is necessary to define a fixed unit. In order to define such a unit, the property to be measured must be extensive in space, so that the unit can be objectively agreed upon by all. Therefore, subjective states, being *intensive* rather than objectively extensive, cannot be measured and subjected to arithmetical operations. And utility refers to intensive states. Measurement becomes even more implausible when we realize that utility is a praxeologic, rather than a directly psychologic, concept.
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> A favorite rebuttal is that subjective states *have* been measured; thus,

[41] It is curious how economists have been tempted to discuss gambling by first assuming that the participant doesn't like to gamble. It is on this assumption that Alfred Marshall based his famous "proof" that gambling (because of each individual's diminishing utility of money) is "irrational."

the old, unscientific subjective feeling of heat has given way to the objective science of thermometry.[42] But this rebuttal is erroneous; thermometry does *not* measure the intensive subjective feelings themselves. It assumes an approximate correlation between the intensive property and an objective extensive event—such as the physical expansion of gas or mercury. And thermometry can certainly lay no claim to precise measurement of subjective states: we all know that some people, for various reasons, feel warmer or colder at different times even if the external temperature remains the same.[4343] Certainly no correlation whatever can be found for demonstrated preference scales in relation to physical lengths. For preferences have no *direct* physical basis, as do feelings of heat.

No arithmetical operations whatever can be performed on ordinal numbers; therefore, to use the term "measurable" in any way for ordinal numbers is hopelessly to confuse the meaning of the term. Perhaps the best remedy for possible confusion is to avoid using *any* numbers for ordinal rank; the rank concept can just as well be expressed in letters (A, B, C . . .), using a convention that A, for example, expresses higher rank.

As to the new type of quasi-measurability, no one has yet proved it capable of existence. The burden of proof rests on the proponents. If an object is extensive, then it is at least theoretically capable of being measured, for an objective fixed unit can, in principle, be defined. If it is intensive, then no such fixed unit can apply, and any assignment of number would have to be ordinal. There is no room for an intermediate case. The favorite example of quasi-measurability that is always offered is, again, temperature. In thermometry, centigrade and Fahrenheit scales are supposed to be convertible into each other *not* at a multiplicative constant (cardinality) but by multiplying and then adding a constant (a "linear transform"). More careful analysis, however, reveals that both scales are simply derivations from one scale based on an absolute zero point. All we need to demonstrate the cardinality of temperature is to transform both centigrade and Fahrenheit scales into scales where "absolute zero" *is* zero, and then each will be convertible into the other by a multiplicative constant. Furthermore, the actual measurement in temperature is a measurement of length (say, of the mercury column) so that temperature is really a derived measure based on the cardinally measurable magnitude of length.[44]

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[42] Thus, cf. von Neumann and Morgenstern, *Theory of Games and Economic Behavior*, pp. 16–17.

[43] Cf. Morris R. Cohen, *A Preface to Logic* (New York: Henry Holt, 1944), p. 151.

[44] On measurement, see Norman Campbell, *What is Science?* (New York: Dover, 1952),

Jacob Marschak, one of the leading members of the Neumann-Morgenstern school, has conceded that the temperature case is inappropriate for the establishment of quasi-measurability, because it is derived from the fundamental, cardinal, measurement of distance. Yet, astonishingly, he offers *altitude* in its place. But if "temperature readings are nothing but distance," what else is altitude, which is solely and purely distance and length?[45]

## Welfare Economics: A Critique

### *Economics and Ethics*

It is now generally accepted among economists, at least *pro forma*, that economics *per se* cannot establish ethical judgments. It is not sufficiently recognized that to accept this need not imply acceptance of the Max Weber position that ethics can never be scientifically or rationally established. Whether we accept the Max Weber position, or we adhere to the older view of Plato and Aristotle that a rational ethics is possible, it should be clear that *economics* by itself cannot establish an ethical position. If an ethical science is possible, it must be built up out of data supplied by truths established by all of the other sciences.

Medicine can establish the fact that a certain drug can cure a certain disease, while leaving to other disciplines the problem whether the disease *should* be cured. Similarly, economics can establish that Policy A leads to the advancement of life, prosperity, and peace, while Policy B leads to death, poverty, and war. Both medicine and economics can establish these consequences scientifically, and without introducing ethical judgments into the analysis. It might be protested that doctors would not inquire into

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pp. 109-34; and Campbell *An Account of the Principles of Measurement and Calculation* (London: Longmans, Green, 1928). Although the above view of measurement is not currently fashionable, it is backed by the weighty authority of Mr. Campbell. A description of the controversy between Campbell and S. Stevens on the issue of measurement of intensive magnitudes was included in the unpublished draft of Carl G. Hempel's *Concept Formation*, but was unfortunately omitted from Hempel's published *Fundamentals of Concept Formation in Empirical Science* (Chicago: University of Chicago, 1952). Campbell's critique can be found in A. Ferguson, et al. *Interim Report* (British Association for the Advancement of Science Final Report, 1940), pp. 331-49.

[45] Jacob Marschak, "Rational Behavior, Uncertain Prospects, and Measureability," *Econometrica* (April 1950): 131.

possible cures for a disease if they did not want a cure, or economists would not investigate causes of prosperity if they did not want the result. There are two answers to this point: (1) that this is undoubtedly true in almost all cases, but not *necessarily* so—some doctors or economists may care only about the discovery of truth, and (2) this only establishes the psychologic motivation of the scientists; it does not establish that the discipline itself arrives at values. On the contrary, it bolsters the thesis that ethics is arrived at apart from the specific sciences of medicine or economics.

Thus, whether we hold the view that ethics is a matter of non-rational emotions or taste, or whether we believe in a rational ethic, we must agree that economic science *per se* cannot establish ethical statements. As political policy judgment is a branch of ethics, the same conclusion applies to politics. If prosperity vs. poverty, for example, are political alternatives, economic science cannot decide between them; it simply presents the truth about the consequences of each alternative political decision. As citizens, we take these truths into account when we make our politico-ethical decisions.

*The Problem of the New Welfare Economics: The Unanimity Rule*

The problem of "welfare economics" has always been to find some way to circumvent this restriction on economics, and to make ethical, and particularly *political*, statements directly. Since economics discusses individuals' aiming to maximize their utility or happiness or welfare, the problem may be translated into the following terms: When can economics say that "society is better off" as a result of a certain change? Or alternatively, when can we say that "social utility" has been increased or "maximized"?

Neoclassical economists, led by Professor Pigou, found a simple answer. Economics can establish that a man's marginal utility of money diminishes as his money-income increases. Therefore, they concluded, the marginal utility of a dollar is less to a rich man than to a poor man. *Other things being equal*, social utility is maximized by a progressive income tax which takes from the rich and gives to the poor. This was the favorite demonstration of the "old welfare economics," grounded on Benthamite utilitarian ethics, and brought to fruition by Edgeworth and Pigou.

Economists continued blithely along this path until they were brought up short by Professor Robbins. Robbins showed that this demonstration rested on interpersonal comparisons of utility, and since utility is not a

cardinal magnitude, such comparisons involve ethical judgments.[46] What Robbins actually accomplished was to reintroduce Pareto's Unanimity Rule into economics and establish it as the iron gate where welfare economics must test its credentials.[47] This Rule runs as follows: We can only say that "social welfare" (or better, "social utility") has *increased* due to a change, if no individual is worse off because of the change (and at least one is better off). If one individual is worse off, the fact that interpersonal utilities cannot be added or subtracted prevents economics from saying anything about social utility. Any statement about social utility would, in the absence of unanimity, imply an ethical interpersonal comparison between the gainers and the losers from a change. If X number of individuals gain, and Y number lose, from a change, any weighing to sum up in a "social" conclusion would necessarily imply an ethical judgment on the relative importance of the two groups.[48]

The Pareto-Robbins Unanimity Rule conquered economics and liquidated the old Pigovian welfare economics almost completely. Since then, an enormous literature known as the "new welfare economics" has flourished, devoting itself to a series of attempts to square the circle: to assert certain political judgments as scientific economics, while still retaining the unanimity rule.

*Professor Robbins's Escape Route*

Robbins's own formulation of the Unanimity Rule far undervalues the scope of its restrictive power over the assertions of economists. Robbins stated that only *one* ethical assertion would be necessary for economists to make interpersonal comparisons: namely, that every man has an "equal capacity for satisfaction" in similar circumstances. To be sure, Robbins grants that this ethical assumption cannot be established by economics; but he implies

[46] Lionel Robbins, "Interpersonal Comparisons of Utility," *Economic Journal* (December 1938): 635-41; and Robbins, *An Essay on the Nature and Significance of Economic Science*, 2nd ed. (London: Macmillan, 1935), pp. 138-41.

[47] Vilfredo Pareto, *Manuel d'Économie Politique*, 2nd ed. (Paris: Marcel Giard, 1927), p. 617.

[48] Kemp tries to alter the Unanimity Rule to read that social utility is only increased if *everyone* is better off, non being worse off or indifferent. But, as we have seen, indifference cannot be demonstrated in action, and therefore this alteration is invalid. Murray C. Kemp, "Welfare Economics: A Stocktaking," *Economic Record* (November 1954): 245.

that since all good democrats are bound to make this egalitarian assumption, we can all pretty well act *as if* interpersonal comparisons of utility can be made and go on to make ethical judgments.

In the first place, it is difficult, upon analysis, to make sense of the phrase "equal capacity for satisfaction." Robbins, as we have seen, admits that we cannot scientifically compare utilities or satisfactions between individuals. But since there is no unit of satisfaction by which we can make comparisons, there is no meaning to any assumption that different men's satisfactions will be "equal" to any circumstances. "Equal" in what way, and in what units? We are not at liberty to make any ethical assumption we please, because even an ethical assumption must be framed meaningfully, and its terms must be definable in a meaningful manner. Since there is no meaning to the term "equality" without some sort of definable unit, and since there is no unit of satisfaction or utility, it follows that there can be no ethical assumption of "equal capacity for satisfaction," and that this cannot provide a shortcut to permit the economists to make conclusions about public policy.

The Robbins position, moreover, embodies a highly oversimplified view of ethics and its relation to politico-economic affairs. The problem of interpersonal comparisons of utility *is only one* of the very many ethical problems which must at least be discussed before any policy conclusions can rationally be framed. Suppose, for example, that two social changes take place, each of which causes 99 percent of the people to gain in utility and one percent to lose. Surely no assumption about the interpersonal comparison of utility can suffice to establish an ethical judgment, divorced from the *content* of the change itself. If, for example, one change was the enslavement of the one percent by the 99 percent, and the other was the removal of a governmental subsidy to the one percent, there is apt to be a great deal of difference in our ethical pronouncements on the two cases, even if the assumed "social utility" in the two cases is approximately the same.

*The Compensation Principle*

A particularly notable attempt to make policy conclusions within the framework of the Unanimity Rule was the Kaldor-Hicks "compensation principle," which stated that "social utility" may scientifically be said to increase, if the winners *may* be able to compensate the losers and still remain

winners.[49] There are many fatal errors in this approach. In the first place, since the compensation principle is supposed to help economists form policy judgments, it is evident that we must be able to compare, at least in principle, *actual* social states. We are therefore always concerned with *actual*, and not *potential*, winners and losers from any change. Whether or not the winners *may* compensate the losers is therefore irrelevant; the important question is whether the compensation *does*, in fact take place. Only if the compensation is actually carried out so that not a single person remains a loser, can we still assert a gain in social utility. But *can* this compensation ever be carried out? In order to do so, everybody's utility scale would have to be investigated by the compensators. But from the very nature of utility scales this is an impossibility. Who knows what has happened to anyone's utility scale? The compensation principle is necessarily divorced from demonstrated preference, and once this occurs, it is impossible to find out what has happened to anyone's utility. The reason for the divorce is that the act of compensation is, necessarily, a unilateral gift *to* a person rather than an act *of* that person, and therefore it is impossible to estimate how much his utility has increased as compared to its decrease in some other situation. Only if a person is actually confronted with a *choice* between two alternatives can we say that he prefers one to the other.

Certainly, the compensators could not rely on questionnaires in a situation where everyone need only *say* that he has lost utility in order to receive compensation. And suppose someone proclaims that his sensibilities are so hurt by a certain change that no monetary reward could ever compensate him? The existence of one such person would annul any compensation attempt. But these problems necessarily occur when we leave the realm of demonstrated preference.

*The Social Welfare Function*

Under the impact of criticisms far less thoroughgoing than the above, the

[49] On the compensation principle, see Nicholas Kaldor, "Welfare Propositions in Economics," *Economic Journal* (September 1939): 549; John R. Hicks, "The Foundations of Welfare Economics," *Economic Journal* (December 1939): 706. For a criticism, see William J. Baumol, "Community Indifference," *Review of Economic Studies* (1946-1947): 44-48; Baumol, *Welfare Economics and the Theory of the State*, pp. 12 ff; Kemp, "Welfare Economics: A Stocktaking," pp. 246-50. For a summary of the discussion, see D.H. Robertson, *Utility and All That* (London: Allen and Unwin, 1952): pp. 29-35. The weakness in Robbin's accession to the Unanimity Rule is demonstrated by his endorsement of the compensating principle. Robbins, "Robertson on Utility and Scope."

compensation principle has been abandoned by most economists. There have been recent attempts to substitute another device—the "Social Welfare Function." But after a flurry of activity, this concept, originated by Professors Bergson and Samuelson, quickly struck rocky waters, and virtually sank under the impact of various criticisms. It came to be regarded as an empty and therefore meaningless concept. Even its founders have given up the struggle and concede that economists must import ethical judgments from outside economics in order to make policy conclusions.[50] Professor Rothenberg has made a desperate attempt to salvage the social welfare function by radically changing its nature, that is, by identifying it with an existing "social decision-making process." To uphold this shift, Rothenberg must make the false assumption that "society" exists apart from individuals and makes "its" own valuation. Furthermore, as Bergson has pointed out, this procedure abolishes welfare economics, since the function of the economist would be to observe empirically the social decision-making process at work and to pronounce its decisions as gains in "social utility."

*The Economist as Adviser*

Failing the establishment of policy conclusions through the compensation principle or the social welfare function, there is another very popular route to enable the economist to participate in policy formation while still remaining an ethically neutral scientist. This view holds that someone else may set the ends, while the economist is justified in telling that person (and in being hired by that person) the correct means for attaining these desired ends. Since the economist takes *someone else's* hierarchy of ends as given and only points out the means to attain them, he is alleged to remain ethically neutral and strictly scientific. This viewpoint, however, is a misleading and fallacious one. Let us take an example suggested by a passage in Professor Philbrook's seminal article; a monetary economist advising the Federal Reserve System.[51] Can this economist simply take the ends set by the heads

[50] See Abram Bergson, "On the Concept of Social Welfare," *Quarterly Journal of Economics* (May 1954): 249; Paul A. Samuelson, "Welfare Economics; Comment," in *A Survey of Contemporary Economics, Vol. II*, B.F. Haley, ed. (Homewood, Ill.: R.D. Irwin, 1952), 2, p. 37. Also Jerome Rothenberg, "Conditions for a Social Welfare Function," *Journal of Political Economy* (October 1953): 397; Sidney Schoeffler, "Note on Modern Welfare Economics," *American Economic Review* (December 1952): 881; I.M.D. Little, "Social Choice and Individual Values," *Journal of Political Economy* (October 1952): 422-32.

[51] Clarence Philbrook, " 'Realism' in Policy Espousal," *American Economic Review* (December 1953): 846-59. The entire article is of fundamental importance in the study of economics and its relation to public policy.

of this System and advise on the most efficient means to attain them? *Not unless the economist affirms these ends as being positively good*, that is, not unless he makes an ethical judgment. For suppose that the economist is convinced that the entire Federal Reserve System is pernicious. In that case, his best course may well be to advise that policy which would make the System highly *inefficient* in the pursuit of its ends. The economist employed by the System cannot, therefore, give any advice whatever without abandoning ethical neutrality. If he advises the System on the best way to achieve its ends, it must be logically inferred that he supports these ends. His advice involves no less an ethical judgment on his part if he chooses to "tacitly accept the decisions of the community as expressed through the political machinery."[52]

*The End of Welfare Economics?*

After twenty years of florid growth, welfare economics is once more confined to an even tighter Unanimity Rule. Its attempts to say anything about political affairs within the confines of this rule have been in vain.

The death of the New Welfare Economics has begun to be reluctantly recognized by all of its supporters, and each has taken turns in pronouncing its demise.[53] If the strictures advanced in this paper are conceded, the burial rites will be accelerated, and the corpse decently interred. Many New Welfare Economists understandably continue to grope for some way of salvaging something out of the wreckage. Thus, Reder suggests that economics make specific, piecemeal policy recommendations anyway. But surely this is only a despairing refusal to take the fundamental problems into account. Rothenberg tries to inaugurate a constancy assumption based on psychologizing about underlying basic personalities.[54] Aside from the fact that "basic" changes can take place at any time, economics deals with *marginal* changes, and a change is no less a change for being marginal. In

[52] E.J. Mishan, "The Principle of Compensation Reconsidered," *Journal of Political Economy* (August 1952): 312. See especially the excellent note of I.M.D. Little, "The Scientist and the State," *Review of Economic Studies* (1949-50): 75-76.

[53] Thus, see the rather mournful discussion in the American Economic Association's second volume of the *Survey of Contemporary Economics*; Kenneth E. Boulding, "Welfare Economics," pp.1-34; Melvin W. Reder, "Comment," pp. 34-36; and Samuelson, *The Empirical Implications of Utility Analysis*. Also see the articles by Schoeffler, Bergson, and Kemp cited Above.

[54] Jerome Rothenberg, "Welfare Comparisons and changes in Tastes," *American Economic Review* (December 1953): 888-90.

fact, whether changes are marginal or basic is a problem for psychology, not praxeology. Bergson tries the mystical route of denying demonstrated preference, and claiming it to be possible that people's values "really differed" from what they chose in action. He does this by adopting the "consistency"-constancy fallacy.

Does the Unanimity Rule then spell the end of *all* possible welfare economics, as well as the "old" and the "new" versions? Superficially, it would seem so. For if all changes must injure nobody, that is, if no people must feel worse off as a result of a change, what changes could pass muster as socially useful within the Unanimity Rule? As Reder laments: "Consideration of the welfare implications of envy, for example, make it impossible even to say that welfare will be increased by everyone having more of every commodity."[55]

## Welfare Economics: A Reconstruction

*Demonstrated Preference and the Free Market*

It is the contention of this paper that the wake for all welfare economics is premature, and that welfare economics can be reconstructed with the aid of the concept of demonstrated preference. This reconstruction, however, will have no resemblance to either of the "old" or "new" edifices that preceded it. In fact, if Reder's thesis is correct, our proposed resurrection of the patient may be considered by many as more unfortunate than his demise.[56]

Demonstrated preference, as we remember, eliminates hypothetical imaginings about individual value scales. Welfare economics has until now always considered values as hypothetical valuations of hypothetical "social states." But demonstrated preference only treats values as revealed through chosen action.

Let us now consider exchanges on the free market. Such an exchange is voluntarily undertaken by both parties. Therefore, the very fact that an exchange takes place demonstrates that both parties benefit (or more strictly, *expect* to benefit) from the exchange. The fact that both parties chose the exchange demonstrates that they both benefit. The free market is the name

[55] Reder, "Comment," p. 35.

[56] To a considerable extent, welfare (and related) theorizing of the 1930s and 1940s was an attempt to show the variety and importance of the circumstances under which *laissez-faire* was inappropriate." Ibid.

for the array of all the voluntary exchanges that take place in the world. Since every exchange demonstrates a unanimity of benefit for both parties concerned, we must conclude that *the free market benefits all its participants.* In other words, welfare economics can make the statement that the free market increases social utility, while still keeping to the framework of the Unanimity Rule.[57]

But what about Reder's bogey: the envious man who hates the benefits of others? To the extent that he himself has participated in the market, to that extent he reveals that he likes and benefits from the market. And we are not interested in his opinions about the exchanges made by *others*, since his preferences are not demonstrated through action and are therefore irrelevant. How do we *know* that this hypothetical envious one loses in utility because of the exchanges of others? Consulting his verbal opinions does not suffice, for his proclaimed envy might be a joke or a literary game or a deliberate lie.

We are led inexorably, then, to the conclusion that the processes of the free market always lead to a gain in social utility. And we can say this with absolute validity as economists, without engaging in ethical judgments.

*The Free Market and the "Problem of Distribution"*

Economics, in general, and welfare economics, in particular, have been plagued with the "problem of distribution." It has been maintained, for example, that assertions of increased social utility on the free market are all very well, but only within the confines of assuming a given distribution of income.[58] Since changes in the distribution of income seemingly injure one person and benefit another, no statements, it is alleged, can be made about social utility with respect to changes in distribution. And income distribution is always changing.

On the free market, however, there *is* no such thing as a separate "distribution." A man's monetary assets have been acquired precisely because his or his ancestors' services have been purchased by others on the

[57] Havelmo criticizes the thesis that the free market maximizes social utility on the grounds that this "assumes" that the individuals "somehow get together" to make an optimal decision. But the free market is precisely the method by which the "get together" takes place! See Trygve Haavelmo, "The Notion of Involuntary Economic Decision," *Econometrica* (January 1950): 8.

[58] It would be more correct to say given distribution of money *assets*.

free market. There is no distributional process apart from the production and exchange processes of the market; hence the very concept of "distribution" becomes meaningless on the free market. Since "distribution" is simply the result of the free exchange process, and since this process benefits all participants in the market and increases social utility, it follows directly that the "distributional" results of the free market also increase social utility.

The strictures of the critics do apply, however, to cases of State action. When the State takes from Peter and gives to Paul it is effecting a separate *distribution* process. Here, there does exist a process *separate* from production and exchange, and hence the concept becomes meaningful. Moreover, such State action obviously *and demonstrably* benefits one group and injures another, thus violating the Unanimity Rule.

*The Role of the State*

Until quite recently, welfare economics has never analyzed the role of the State. Indeed, economics in general has never devoted much attention to this fundamental problem. Specific problems, such as public finance, or price controls, have been investigated, but the State itself has been a shadowy figure in the economic literature. Usually, it has vaguely been considered as representing "society" or "the public" in some way. "Society," however, is not a real entity; it is only a convenient short-hand term for an array of all existing individuals.[59] The largely unexplored area of the State and State actions, however, can be analyzed with the powerful tools of Demonstrated Preference and the Unanimity Rule.

The State is distinguished from all other institutions in society in two ways: (1) it and it alone can interfere by the use of violence with actual or potential market exchanges of other people; and (2) it and it alone obtains its revenues by a compulsory levy, backed by violence. No other individual or group can legally act in these ways.[60] Now what happens when the State, or a criminal, uses violence to interfere with exchanges on the market? Suppose that the government prohibits A and B from making an exchange they are willing to make. It is clear that the utilities of both A and B have been lowered, for they are prevented by threat of violence from making an

[59] On this fallacy of methodological collectivism, and the broader fallacy of conceptual realism, see the excellent discussion in Hayek, *Counter Revolution of Science*, pp. 53ff.

[60] *Criminals* also act in these ways, but they cannot do so legally. For the purpose of praxeologic rather than legal analysis, the same conclusions apply to both groups.

exchange that they otherwise would have made. On the other hand, there has been a gain in utility (or at least an anticipated gain) for the government officials imposing this restriction, otherwise they would not have done so. As economists, we can therefore say nothing about social utility in this case, since some individuals have demonstrably gained and some demonstrably lost in utility from the governmental action.

The same conclusion follows in those cases where the government forces C and D to make an exchange which they otherwise would not have made. Once again, the utilities of the government officials gain. And *at least one* of the two participants (C or D) lose in utility, because at least one would not have wanted to make the exchange in the absence of governmental coercion. Again, economics can say nothing about social utility in this case.[61]

We conclude therefore that *no government interference with exchanges can ever increase social utility*. But we can say more than that. It is the essence of government that it alone obtains its revenue by the compulsory levy of taxation. All of its subsequent acts and expenditures, whatever their nature, rest on this taxing power. We have just seen that whenever government forces anyone to make an exchange which he would not have made, this person loses in utility as a result of the coercion. But taxation is just such a coerced exchange. If everyone would have paid just as much to the government under a system of voluntary payment, then there would be no need for the compulsion of taxes. Given the fact that coercion is used for taxes, therefore, and since all government actions rest on its taxing power, we deduce that: *no act of government whatever can increase social utility*.

Economics, therefore, without engaging in any ethical judgment whatever, and following the scientific principles of the Unanimity Rule and Demonstrated Preference, concludes: (1) that the free market always increases social utility; and (2) that no act of government can ever increase social utility. These two propositions are the pillars of the reconstructed welfare economics.

Exchanges between persons can take place either voluntarily or under

[61] We cannot discuss here the praxeological analysis of general economics which shows that, in the long run, for many acts of coercive interference, the coercer himself loses in utility.

the coercion of violence. There is no third way. If, therefore, free market exchanges always increase social utility, while no coerced exchange or interference can increase social utility, we may conclude that the maintenance of *a free and voluntary market "maximizes" social utility* (provided we do not interpret "maximize" in a cardinal sense).

Generally, even the most rigorously *Wertfrei* economists have been willing to allow themselves one ethical judgment: they feel free to recommend any change or process that increases social utility under the Unanimity Rule. Any economist who pursues this method would have to (a) uphold the free market as always beneficial, and (b) refrain from advocating any governmental action. In other words, he would have to become an advocate of *"ultra" laissez-faire.*

*Laissez-faire Reconsidered*

It has been quite common to scoff at the French "optimist" *laissez-faire* school of the nineteenth century. Usually, their "welfare economic" analysis has been dismissed as naive prejudice. Actually, however, their writings reveal that their *laissez-faire* conclusions were *post-judices*—were judgments *based* on their analysis, rather than preconceptions of their analysis.[62] It was the discovery of the general social benefit from free exchange that led to the rhapsodies over the free exchange process in the works of such men as Frédéric Bastiat, Edmond About, Gustave de Molinari, and the American, Arthur Latham Perry. Their analyses of State action were far more rudimentary (except in the case of Molinari), but their analyses generally needed only the ethical presumption in favor of social utility to lead them to a pure *laissez-faire* position.[63] Their treatment of exchange may be seen in this passage from the completely neglected

[62] Lionel Robbin's *The Theory of Economic Policy in English Classical Political Economy* (London: MacMillan, 1952) is devoted to the thesis that the English classical economists were really "scientific" because they did not uphold laissez-faire, while the French optimists were dogmatic and "metaphysical" because they did. To uphold this, Robbins abandons his praxeological approach of twenty years before, and adopts positivism: "The final test whether a statement is metaphysical (sic) or scientific is . . . whether it argues dogmatically *a priori* or by way of appeal to experience." Naturally, Robbins cites examples from the physical sciences to bolster this fallacious dichotomy. Ibid., pp. 23-24.

[63] Bastiat's writings are well known, but his "welfare" analysis was generally inferior to that of About or Molinari. For a brilliant analysis of State action, see Gustave de Molinari, *The Society of Tomorrow* (New York: G.P. Putnam and Sons, 1904), pp. 65-96.

Edmond About:

> Now what is admirable in exchange is that it benefits the two contracting parties. . . . Each of the two, by giving what he has for that which he has not, makes a good bargain. . . . This occurs at every free and straightforward exchange. . . . In fact, whether you sell, whether you buy, you perform an act of preference. No one constrains you to give over any of your things for the things of another.[64]

The analysis of free exchange underlying the *laissez-faire* position has suffered general neglect in economics. When it is considered, it is usually dismissed as "simple." Thus, Hutchison calls the idea of exchange as mutual benefit "simple"; Samuelson calls it "unsophisticated." Simple is perhaps it, but simplicity *per se* is hardly a liability in science. The important consideration is whether the doctrine is correct; if it is correct, then Occam's Razor tells us that the simpler it is, the better.[65]

The rejection of the simple seems to have its root in the positivist methodology. In physics (the model of positivism), the task of science is to go beyond common-sense observation, building a complex structure of explanation of the common-sense facts. Praxeology, however, begins with the common-sense truths as its *axioms*. The laws of physics need complicated empirical testing; the axioms of praxeology are known as obvious to all upon reflection. As a result, positivists are uncomfortable in the presence of universal truth. Instead of rejoicing in the ability to ground knowledge on universally accepted truth, the positivist rejects it as simple, vague, or "naive."[66]

Samuelson's only attempt to refute the *laissez-fare* position was to refer briefly to the allegedly classic refutation by Wicksell.[67] Wicksell,

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[64] Edmond About, *Handbook of Social Economy* (London: Straham, 1872), p. 104. Also, ibid., pp. 101-12; and Arthur Latham Perry, *Political Economy*, 21st ed. (New York: Charles Scribners' Sons, 1892), p. 180.

[65] Terence W. Hutchison, *A Review of Economic Doctrines, 1870-1929*, p. 282; Samuelson, *Foundations of Economic Analysis*, p. 204.

[66] For an example of this attitude, see the critique of Hayek's *Counter Revolution of Science* by May Brodbeck, in "On the Philosophy of the Social Sciences," *Philosophy of Science* (April 1954). Brodbeck complains that the praxeologic axioms are not "surprising"; if she pursued the analysis, however, she might find the *conclusions* surprising enough.

[67] Knut Wicksell, *Lectures on Political Economy* (London: Routledge and Kegan Paul, 1934), 1, pp. 72ff.

however, also dismissed the approach of the French "harmony economists" without argument, and went on to criticize at length the far weaker formulation of Léon Walras. Walras tried to prove "maximum utility" from free trade in the sense of an interpersonally cardinal utility and thus left himself wide open to refutation.

Furthermore, it should be stressed that the theorem of maximum social utility applies not to any type of "perfect" or "pure" competition, or even to "competition" as against "monopoly." It applies simply to any voluntary exchange. It might be objected that a voluntary cartel's action in raising prices makes many consumers worse off, and therefore that assertion of the benefits of voluntary exchange would have to exclude cartels. It is not possible, however, for an observer scientifically to compare the social utilities of results on the free market from one period of time to the next. As we have seen above, we cannot determine a man's value-scales over a period of time. How much more impossible for all individuals! Since we cannot discover people's utilities over time, we must conclude that whatever the institutional conditions of exchange, however large or small the number of participants on the market, the free market at any time will maximize social utility. For all the exchanges are exchanges effected voluntarily by all parties. Then, suppose some producers voluntarily form a cartel in an industry. This cartel makes its exchanges in Period 2. Social utility is again maximized, for again no one's exchanges are being altered by coercion. If, in Period 2, the government should intervene to prohibit the cartel, it could not increase social utility since the prohibition demonstrably injures the producers.[68]

*The State as a Voluntary Institution: A Critique*

In the development of economic thought, far more attention has been paid to analysis of free exchange than to State action. Generally, as we have indicated, the State has simply been assumed to be a voluntary institution. The most common assumption is that the State is voluntary because all

[68] It is also possible to argue, on *general* economic, rather than welfare-economic, grounds, that a voluntary cartel action, *if profitable*, will benefit consumers. In that case, consumers as well as producers would be injured by governmental outlawry of the cartel. As we have indicated above, *welfare* economics demonstrates that no governmental action can increase social utility. *General* economics demonstrates that, in many instances of government actions, even those who immediately benefit lose in the long run.

government must rest on majority consent. If we adhere to the Unanimity Rule, however, it is obvious that a majority is not unanimity, and that therefore economics cannot consider the State as voluntary on this ground. The same comment applies to the majority voting procedures of democracy. The man who votes for the losing candidate, and even more the man who abstains from voting, can hardly be said voluntarily to approve of the action of the government.[69]

In the last few years, a few economists have begun to realize that the nature of the State needs careful analysis. In particular, they have realized that welfare economics must prove the State to be in some sense voluntary before it can advocate any State action whatever. The most ambitious attempt to designate the State as a "voluntary" institution is the work of Professor Baumol.[70] Baumol's "external economy" thesis may be put succinctly as follows: certain wants are by their nature "collective" rather than "individual." In these cases, every individual will rank the following alternatives on his value scale: In (A) he would most prefer that *everyone but himself* be coerced to pay for the satisfaction of the group want (for example, military protection, public parks, dams, and so on). But since this is not practicable, he must choose between alternatives B and C. In (B) *no one* is forced to pay for the service, in which case the service will probably not be provided since each man will tend to shirk his share; in (C) *everyone*, including the particular individual himself, is forced to pay for the service. Baumol concludes that people will pick C; hence the State's activities in providing these services are "really voluntary." Everyone cheerfully chooses that he be coerced.

This subtle argument can be considered on many levels. In the first place, it is absurd to hold that "voluntary coercion" can be a demonstrated preference. If the decision were truly voluntary, no tax coercion would be necessary—people would voluntarily and publicly agree to pay their share of contributions to the common project. Since they are all supposed to prefer getting the project to not paying for it and not getting it, they are then really *willing* to pay the tax-price to obtain the project. Therefore, the tax coercion

[69] Schumpeter is properly scornful when he says: "The theory which construes taxes on the analogy of club dues or of purchase of services of, say, a doctor only proves how far removed this part of the social sciences is from scientific habits of mind." Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper and Brothers, 1942), p. 198. For a realistic analysis see Molinari, *The Society of Tomorrow*, pp. 87-95.
[70] See William J. Baumol, "Economic Theory and the Political Scientist," *World Politics* (January 1954): 275-77; and Baumol, *Welfare Economics and the Theory of the State*.

apparatus is not necessary, and all people would bravely, if a bit reluctantly, pay what they are "supposed to" without any coercive tax system.

Second, Baumol's thesis undoubtedly is true for the *majority*, since the majority, passively or eagerly, must support a government if it is to survive any length of time. But even if the majority are willing to coerce themselves in order to coerce others (and perhaps tip the balance of coercion *against* the others), this proves nothing for welfare economics, which must rest its conclusions on *unanimity*, not majority, rule. Will Baumol contend that *everyone* has this value ordering? Isn't there *one* person in the society who prefers freedom for all to coercion over all? If one such person exists, Baumol can no longer call the State a voluntary institution. On what grounds, *a priori* or empirical, can anyone contend that no such individual exists?[71]

But Baumol's thesis deserves more detailed consideration. For even though he cannot establish the existence of voluntary coercion, if it is really true that certain services simply cannot be obtained on the free market, then this would reveal a serious weakness in the free-market "mechanism." Do cases exist where only coercion can yield desired services? At first glance, Baumol's "external economy" grounds for an affirmative answer seem plausible. Such services as military protection, dams, highways, and so on, are important. People desire that they be supplied. Yet wouldn't each person tend to slacken his payment, hoping that the others would pay? But to employ this as a rationale for State provision of such services is a question-begging example of circular reasoning. For this peculiar condition holds only and precisely because the State, not the market, provides these services! The fact that the State provides a service means that, unlike the market, its *provision of the service is completely separated from its collection of payment*. Since the service is generally provided free and more or less indiscriminately to the citizens, it naturally follows that every individual—assured of the service—will try to shirk his taxes. For, unlike the market, his individual tax payment brings him nothing directly. And this condition cannot be a justification for State action; for it is only the *consequence* of the existence of the State action itself.

But perhaps the State must satisfy some wants because these wants are "collective" rather than "individual"? This is Baumol's second line of

[71] Galbraith, in effect, does make such an assumption, but obviously without adequate basis. See John K. Galbraith, *Economics and the Art of Controversy* (New Brunswick, N.J.: Rutgers University Press, 1955), pp. 77-78.

attack. In the first place, Molinari has shown that the existence of collective wants does not necessarily imply State action. But, furthermore, the very concept of "collective" wants is a dubious one. For this concept must imply the existence of some existent collective entity who does the wanting! Baumol struggles against conceding this, but he struggles in vain. The necessity for assuming such an entity is made clear in Haavelmo's discussion of "collective action," cited favorably by Baumol. Thus, Haavelmo grants that deciding on collective action "requires a way of thinking and a power to act which are outside the functional sphere of any individual group as such."[72]

Baumol attempts to deny the necessity for assuming a collective entity by stating that some services can be financed only "jointly," and will serve many people jointly. Therefore, he argues that individuals on the market cannot provide these services. This is a curious position indeed. For all large-scale businesses are "jointly" financed with huge aggregations of capital, and they also serve many consumers, often jointly. No one maintains that private enterprise cannot supply steel or automobiles or insurance because they are "jointly" financed. As for joint consumption, in one sense no consumption can be joint, for only individuals exist and can satisfy their wants, and therefore everyone must consume separately. In another sense, almost all consumption is "joint." Baumol, for example, asserts that parks are an example of "collective wants" jointly consumed, since many individuals must consume them. Therefore, the government must supply this service. But going to a theater is even more joint, for all must go at the same time. Must all theaters therefore be nationalized and run by the government? Furthermore, in a broad view, all modern consumption depends on mass production methods for a wide market. There are no grounds by which Baumol can separate certain services and dub them "examples of interdependence" or "external economies." What individuals could buy steel or automobiles or frozen foods, or almost anything else, if enough other individuals did not exist to demand them and make their mass-production methods worthwhile? Baumollian interdependencies are all around us, and there is no rational way to isolate a few services and call them "collective."

A common argument related to, though more plausible than,

[72] Haavelmo, "The Notion of Involuntary Economic Decision." Yves Simon, cited favorably by Rothenberg, is even more explicit, postulating a "public reason" and a "public will" as contrasted to individual reasonings and wills. See Yves Simon, *Philosophy of Democratic Government* (Chicago: University of Chicago, 1951); Rothenberg, "Conditions," pp. 402-3.

Baumol's thesis is that certain services are so vital to the very existence of the market that they must be supplied collectively outside the market. These services (protection, transportation, and so on) are so basic, it is alleged, that they permeate market affairs and are a prior necessary condition for its existence. But this argument proves far too much. It was the fallacy of the classical economists that they considered goods in terms of large *classes*, rather than in terms of *marginal units*. All actions on the market are marginal, and this is precisely the reason that valuation and imputation of value-productivity to factors can be effected. If we start dealing with whole classes rather than marginal units, we can discover all sorts of activities which are necessary prerequisites of, and vital to, all market activity; land, room, food, clothing, shelter, power, and so on—and even paper! Must all of these be supplied by the State and the State only?

Stripped of its many fallacies, the whole "collective wants" thesis boils down to this: certain people on the market will receive benefits from the action of others without paying for them.[73]This is the long and short of the criticism of the market, and this is the only relevant "external economy" problem.[74] A and B decide to pay for the building of a dam for their uses; C benefits though he did not pay. A and B educate themselves at their expense and C benefits by being able to deal with educated people, and so on. This is the problem of the Free Rider. Yet it is difficult to understand what the hullabaloo is all about. Am I to be specially taxed because I enjoy the sight of my neighbor's garden without paying for it? A's and B's purchase of a good reveals that *they* are willing to pay for it; if it indirectly benefits C as well, no one is the loser. If C feels that he would be deprived of the benefit if only A and B paid, then he is free to contribute too. In any case, all the individuals consult their own preferences in the matter.

In fact, we are *all* free riders on the investment, and the technological development, of our ancestors. Must we wear sackcloth and ashes, or submit ourselves to State dictation, because of this happy fact?

Baumol and others who agree with him are highly inconsistent. On the

[73] See the critique of a similar position of Spencer's by "S.R.," "Spencer As His Own Critic," *Liberty* (June 1904).

[74] The famous "external diseconomy" problems (noise, smoke nuisance, fishing, and so on) are really in an entirely different category, as Mises has shown. These "problems" are due to insufficient defense of private property against invasion. Rather than a defect of the free market, therefore, they are the results of invasions, of property, invasions which are ruled out of the free market by definition. See Mises, *Human Action*, pp. 650-56.

one hand, action cannot be left up to voluntary individual choice because the wicked free rider might shirk and obtain benefits without payment. On the other hand, individuals are often denounced because people will not *do enough* to benefit free riders. Thus, Baumol criticizes investors for not violating their own time-preferences and investing more generously. Surely, the sensible course is neither to penalize the free rider nor to grant him special privilege. This would also be the only solution consistent with the unanimity rule and demonstrated preference.[75]

Insofar as the "collective want" thesis is not the problem of the Free Rider, it is simply an ethical attack on individual valuations, and a desire by the economist (stepping into the role of an ethicist) to substitute his valuations for those of other individuals in deciding the *latter's* actions. This becomes clear in the assertion by Suranyi-Unger: "he (an individual) may be led by a niggardly or thoughtless or frivolous evaluation of utility and disutility and by a corresponding low degree or complete absence of group responsibility."[76]

Tibor Scitovsky, while engaging in an analysis similar to Baumol's, also advances another objection to the free market based on what he calls "pecuniary external economies."[77] Briefly, this conception suffers from the common error confusing the general (and unattainable!) equilibrium of the evenly rotating economy with an ethical "ideal" and therefore belaboring such ever-present phenomena as the existence of profits as departures from such an ideal.

Finally, we must mention the very recent attempts of Professor Buchanan to designate the State as a voluntary institution.[78] Buchanan's

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[75] In a good, though limited, criticism of Baumol, Reder points out that Baumol completely neglects voluntary social organizations formed by individuals, for he assumes the State to be the only social organization. This error may stem partly from Baumol's peculiar definition of "individualistic" as meaning a situation where no one considers the effects of his actions on anyone else. See Melvin W. Reder, "Review of Baumol's *Welfare Economics and the Theory of the State*," *Journal of Political Economy* (December 1953): 539.

[76] Theo Suranyi-Unger, "Individual and Collective Wants," *Journal of Political Economy* (February 1948): 1-22. Suranyi-Unger also employs such meaningless concepts as the "aggregate utility" of the "collectivized want satisfaction."

[77] Tibor Scitovsky, "Two Concepts of External Economies," *Journal of Political Economy* (April 1954): 144-51.

[78] See James M. Buchanan, "Social Choice, Democracy, and Free Markets," *Journal of Political Economy* (April 1954): 114-23; and Buchanan, "Individual Choice in Voting

thesis is based on the curious dialectic that majority rule in a democracy is really unanimity because majorities can and do always shift! The resulting pulling and hauling of the political process, because obviously not irreversible, are therefore supposed to yield a social unanimity. The doctrine that endless political conflict and stalemate really amount to a mysterious social unanimity must be set down as a lapse into a type of Hegelian mysticism.[79]

## Conclusion

In his brilliant survey of contemporary economics, Professor Bronfenbrenner described the present state of economic science in the gloomiest possible terms.[80] "Wilderness" and "hash" were typical epithets, and Bronfenbrenner ended his article in despair by quoting the famous poem *Ozymandias*. Applied to currently fashionable theory, his attitude is justified. The 1930s was a period of eager activity and seemingly pathbreaking advances in economic thought. Yet one by one, reaction and attenuation have set in, and in the mid-1950s the high hopes of twenty years ago are either dying or fighting desperate rearguard action. None of the formerly new approaches any longer inspires fresh theoretical contributions. Bronfenbrenner specifically mentions in this connection the imperfect competition and the Keynesian theories, and justly so. He could also have mentioned utility and welfare theory. For the mid-1930s saw the development of the Hicks-Allen indifference curve analysis and the New Welfare Economics. Both of these theoretical revolutions have been enormously popular in the upper reaches of economic theory; and both are now crumbling.

The contention of this paper is that while the formerly revolutionary and later orthodox theories of utility and welfare deserve an even speedier burial than they have been receiving, they need not be followed by a theoretical vacuum. The tool of Demonstrated Preference, in which

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and the Market," *Journal of Political Economy* (August 1954): 334-43. In many other respects, Buchanan's articles are quite good.

[79] How flimsy this "unanimity" is, even for Buchanan, is illustrated by the following very sensible passage: "a dollar vote is never overruled; the individual is never placed in the position of being a member of dissenting minority"—as he is in the voting process (Buchanan, "Individual Choice in Voting and the Market," p. 339). Buchanan's approach leads him so far as to make a positive virtue out of inconsistency and indecision in political choices.

[80] Bronfenbrenner, "Contemporary Economics Resurveyed."

economics deals only with preference as demonstrated by real action, combined with a strict Unanimity Rule for assertions of social utility, can serve to effect a thoroughgoing reconstruction of utility and welfare economics. Utility theory can finally be established as a theory of ordinal marginal utility. And welfare economics can become a vital *corpus* again, even though its new personality might not attract its previous creators. It must not be thought that we have, in our discussion of welfare economics, been attempting to set any ethical or political program. On the contrary, the proposed welfare economics has been put forward without inserting ethical judgments. Economics by itself and standing alone cannot establish an ethical system, and we must grant this regardless of what philosophy of ethics we hold. The fact that the free market maximizes social utility, or that State action cannot be considered voluntary, or that the *laissez-faire* economists were better welfare analysts than they are given credit for, in itself implies no plea for *laissez-faire* or for any other social system. What welfare economics does is to present these conclusions to the framer of ethical judgments as part of the data for his ethical system. To the person who scorns social utility or admires coercion, our analysis might furnish powerful arguments for a policy of thoroughgoing Statism.