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Introduction

THROUGHOUT the world, governments dominate the economic scene. Their spending determines whether full employment prevails; their taxes influence countless decisions; their policies control international trade; and their domestic regulations extend into almost every economic act.

Yet the role of government in the world of economic theory is not at all commensurate with this dominance. True, in each separate field of economics, recent thought has fruitfully concentrated upon the impact of government on private decision-making, or the share of government in economic aggregates. But little progress has been made toward a generalized yet realistic behavior rule for a rational government similar to the rules traditionally used for rational consumers and producers. As a result, government has not been successfully integrated with private decision-makers in a general equilibrium theory.

This thesis is an attempt to provide such a behavior rule for democratic government and to trace its implications. In pursuing these ends, we do not pretend to solve all the problems which have been frustrating analysis in this field. However, we hope to start toward a solution of some and to formulate a reasonable evasion of others which are intrinsically insoluble.

I. THE MEANING OF RATIONALITY IN THE MODEL

A. THE CONCEPT OF RATIONALITY IN ECONOMIC THEORY

Economic theorists have nearly always looked at decisions as though they were made by rational minds. Some such simplification is necessary for the prediction of behavior, because decisions made at random, or without any relation to each other, do not fall into any pattern. Yet only if human actions form some pattern can they ever be forecast or the relations between them subject to analysis. Therefore economists must assume an ordering of behavior takes place.

There is no *a priori* reason to suppose that this ordering is rational, i.e., reasonably directed toward the achievement of conscious goals. Nevertheless, economic theory has been erected upon the supposition that conscious rationality prevails, in spite of acid assertions to the contrary by men like Thorstein Veblen and John Maurice Clark. Since our model is *ex definitione* one concerning rational behavior, we also make this assumption.[1]

As a result, the traditional methods of prediction and analysis are applicable in our model. If a theorist knows the ends of some decision-maker, he can predict what actions will be taken to achieve them as follows: (1) he calculates the most reasonable way for the decision-maker to reach his goals, and (2) he assumes this way will actually be chosen because the decision-maker is rational.

Economic analysis thus consists of two major steps: discovery of the ends a decision-maker is pursuing, and analysis of which means of attaining them are most reasonable, i.e., require the least input of scarce resources. In carrying out the first step, theorists have generally tried to reduce the ends of each economic agent to a single goal, so that one most efficient way to attain it can be found. If

[1] See footnote 3, p. 5. Our definition of *rationality* includes the assumption that men pursue their own interests directly without disguising them, except in one specific instance discussed in Chapter 3. For an analysis of when rational men conceal their preferences, see Kenneth J. Arrow, *Social Choice and Individual Values* (New York: John Wiley & Sons, Inc., 1951), p. 7. Like Arrow, we exclude the "pleasures of the game" aspects of choice-making from our study except for a few specific comments.

multiple goals are allowed, means appropriate to one may block attainment of another; hence no unique course can be charted for a rational decision-maker to follow. To avoid this impasse, theorists posit that firms maximize profits and consumers maximize utility. Any other goals which either possess are considered deviations that qualify the rational course toward the main goal.

In such analysis, the term *rational* is never applied to an agent's ends, but only to his means.[2] This follows from the definition of *rational* as efficient, i.e., maximizing output for a given input, or minimizing input for a given output. Thus, whenever economists refer to a "rational man" they are not designating a man whose thought processes consist exclusively of logical propositions, or a man without prejudices, or a man whose emotions are inoperative. In normal usage all of these could be considered rational men. But the economic definition refers solely to a man who moves toward his goals in a way which, to the best of his knowledge, uses the least possible input of scarce resources per unit of valued output.

To clarify this definition, let us consider an example of behavior which is rational only in the economic sense. Assume that a monk has consciously selected as his goal the achievement of a state of mystical contemplation of God.[3] In order to attain his goal, he must purge his mind of all logical thoughts and conscious goal-seeking. Economically speaking, this purging is quite rational, even though it would be considered irrational, or at least nonrational, by any of the noneconomic definitions of rationality.

[2] We are assuming throughout this study that ends can be separated from means in the mind of the decision-maker. Although it can be argued that goals will be modified by the processes used to attain them, some separation of ends from means must be allowed or all behavior becomes disorganized and pointless. Consequently, we assume that every decision-maker evaluates the alternatives facing him by their relation to his ends, even if these ends are temporary or are themselves means toward some ultimate end. For a discussion of this problem, see William J. Baumol, *Welfare Economics and the Theory of the State* (London: Longmans, Green and Co., 1952), p. 121 n.

[3] Consciously selected goals need not be (1) continuously held in awareness while they are being pursued or (2) purely a matter of free choice. The first point is proved by the example given. The second can be shown by the fact that men consciously seek to obtain food, though their underlying desire to eat is intrinsic to their natures. Thus conscious selection may at times be limited to specifically carrying out basically unconscious drives.

Economic rationality can also be formally defined in another manner. A rational man is one who behaves as follows: (1) he can always make a decision when confronted with a range of alternatives; (2) he ranks all the alternatives facing him in order of his preference in such a way that each is either preferred to, indifferent to, or inferior to each other; (3) his preference ranking is transitive; (4) he always chooses from among the possible alternatives that which ranks highest in his preference ordering; and (5) he always makes the same decision each time he is confronted with the same alternatives.[4] All rational decision-makers in our model—including political parties, interest groups, and governments—exhibit the same qualities.

Rationality thus defined refers to processes of action, not to their ends or even to their success at reaching desired ends. It is notorious that rational planning sometimes produces results greatly inferior to those obtained by sheer luck. In the long run, we naturally expect a rational man to outperform an irrational man, *ceteris paribus*, because random factors cancel and efficiency triumphs over inefficiency. Nevertheless, since behavior in our model cannot be tested by its results, we apply the terms *rational* or *irrational* only to processes of action, i.e., to means. Of course, some intermediate ends are themselves means to ultimate goals. The rationality of the former we can judge, but evaluation of the latter is beyond our scope.

B. THE NARROW CONCEPT OF RATIONALITY IN THE PRESENT STUDY

However, even though we cannot decide whether a decision-maker's ends are rational, we must know what they are before we can decide what behavior is rational for him. Furthermore, in designating these ends, we must avoid the tautological conclusion that every man's behavior is always rational because (1) it is aimed at some end and (2) its returns must have outweighed its costs in his eyes or he would not have undertaken it.

To escape this pitfall, we focus our attention only upon the economic and political goals of each individual or group in the model.

[4] These conditions are drawn from the analysis in Chapters 1 and 2 of Arrow, *op. cit.*

Admittedly, separation of these goals from the many others which men pursue is quite arbitrary. For example, a corporation executive may work for a higher income because he enjoys working as well as to gain more purchasing power; hence, viewing the latter as his only real motive is erroneous as well as arbitrary. Nevertheless, this is a study of economic and political rationality, not of psychology. Therefore, even though psychological considerations have a legitimate and significant place in both economics and political science, we by-pass them entirely except for a brief mention in Chapter 2.

Our approach to elections illustrates how this narrow definition of rationality works. The political function of elections in a democracy, we assume, is to select a government. Therefore rational behavior in connection with elections is behavior oriented toward this end and no other. Let us assume a certain man prefers party A for political reasons, but his wife has a tantrum whenever he fails to vote for party B. It is perfectly rational *personally* for this man to vote for party B if preventing his wife's tantrums is more important to him than having A win instead of B. Nevertheless, in our model such behavior is considered irrational because it employs a political device for a nonpolitical purpose.

Thus we do not take into consideration the whole personality of each individual when we discuss what behavior is rational for him. We do not allow for the rich diversity of ends served by each of his acts, the complexity of his motives, the way in which every part of his life is intimately related to his emotional needs. Rather we borrow from traditional economic theory the idea of the rational consumer. Corresponding to the infamous *homo economicus* which Veblen and others have excoriated, our *homo politicus* is the "average man" in the electorate, the "rational citizen" of our model democracy.

Because we allow this political man to be uncertain about the future, he will not appear to be as much of a calculating-machine-brained character as was the utilitarians' economic man. Nevertheless, he remains an abstraction from the real fullness of the human personality. We assume that he approaches every situation with one eye on the gains to be had, the other eye on costs, a delicate ability to balance them, and a strong desire to follow wherever rationality leads him.

Undoubtedly, the fact that our model world is inhabited by such artificial men limits the comparability of behavior in it to behavior in the real world. In the latter, some men *do* cast votes to please their wives—and vice versa—rather than to express their political preferences. And such behavior is often highly rational in terms of the domestic situations in which it occurs. Empirical studies are almost unanimous in their conclusion that adjustment in primary groups is far more crucial to nearly every individual than more remote considerations of economic or political welfare.[5]

Nevertheless, we must assume men orient their behavior chiefly toward the latter in our world; otherwise all analysis of either economics or politics turns into a mere adjunct of primary-group sociology. However, nearly all primary groups are strongly influenced by general economic and political conditions; hence we may provisionally regard the peculiarities of each such group as counterbalanced by opposite peculiarities of other primary groups. Therefore when we define rationality in terms of general conditions alone, we are not distorting reality as greatly as it might at first appear.

The exact nature of the economic and political ends from which we derive our descriptions of rational behavior will be revealed in the specific structure of our model. But before we consider that structure, we must clarify one more aspect of what we mean by rationality: how can we distinguish between the mistakes of rational men and the normal behavior of irrational ones? If rationality really means efficiency, are inefficient men always irrational, or can rational men also act inefficiently?

C. IRRATIONALITY AND THE BASIC FUNCTION OF POLITICAL RATIONALITY

To distinguish clearly between rational errors and irrational behavior is not an easy task. Our first inclination is to declare that a mistaken rational man at least intends to strike an accurate balance

[5] For a summary of such studies, see Elihu Katz and Paul F. Lazarsfeld, *Personal Influence* (Glencoe, Illinois: The Free Press, 1955), part one.

between costs and returns; whereas an irrational man deliberately fails to do so. But numerous cases of unconscious neurosis belie this criterion. Even hopeless psychotics often behave with perfect rationality, given their warped perception of reality. Therefore, intention is an inadequate distinction.

For our limited purposes in this model, correctability is a much better means of telling errors from irrational behavior. A rational man who is systematically making some mistake will cease to do so if (1) he discovers what the mistake is and (2) the cost of eliminating it is smaller than the benefits therefrom. Under the same conditions, an irrational man will fail to rectify his errors because he has some nonlogical propensity to repeat them. His actions are not primarily motivated by a desire to attain his overt ends efficiently; hence he fails to do so even when he can.

There are two objections to this method of distinguishing error from irrationality. The first is that it often requires hypothetical testing, since erroneous rational men do not always discover their mistakes. If a man continues to make mistakes, how can we tell whether he is irrational or merely lacks information? In such cases, are we not driven back to judging his intentions, which we have just shown to be useless indicators?

This objection strikes at a basic difficulty in the social sciences by attacking the inability of these sciences to prove all their assertions experimentally. Undoubtedly it weakens our argument. However, if we yield to it completely, we must refrain from making any statements whatever about many vital issues in all the social sciences. To avoid such paralysis we hypothesize whenever it is absolutely necessary, recognizing the limitations of doing so.

The second objection is similar to a point we have already discussed. It states that behavior which is irrational according to our definition is highly rational in the psychic economy of the individual's personality. Neurotic behavior is often a necessary means of relieving tensions which spring from conflicts buried deep within the unconscious.[6] But we are studying rational political behavior,

[6] See Karen Horney, *The Neurotic Personality of Our Time* (New York: W. W. Norton & Company, Inc., 1937), *passim*.

not psychology or the psychology of political behavior. Therefore if a man exhibits political behavior which does not help him attain his political goals efficiently, we feel justified in labeling him politically irrational, no matter how necessary to his psychic adjustments this behavior may be.

The reason we are trying to distinguish so carefully between rational errors and irrational acts is that we wish simultaneously (1) to point out how the cost of information can lead rational men to make systematic errors in politics and (2) to avoid any discussion of political irrationality. Our desire to by-pass political irrationality springs from (1) the complexity of the subject, (2) its incompatibility with our model of purely rational behavior, and (3) the fact that it is an empirical phenomenon which cannot be dealt with by deductive logic alone but also requires actual investigation beyond the scope of this study.

There is only one point at which irrationality needs to be discussed in connection with our model. If a significant section of any body politic becomes irrational in its behavior, a difficult problem is posed for the man who does not. How should he act? What is the best course for a rational man in an irrational world?

The answer depends upon whether the irrationality he faces involves predictable patterns of behavior. If so, rational action is still possible for him. And because almost no society can survive for long if no one in it is efficiently pursuing his goals, there is usually some kind of predictability in the political system. Citizens who behave irrationally do so partly because someone who stands to gain thereby urges them on. For example, a party which perennially makes false promises can gain votes if it convinces voters to believe its lies. It is rational for this party to encourage voters to behave irrationally. Tensions of this type often exist, but as long as someone's rationality prevails, behavior can still be predicted.

Thus, to cope with seemingly irrational behavior, the rational man must try to discern the underlying pattern of rationality; he must discover whose ends this behavior is actually serving and what those ends are. Then he can decide, in view of his own ends, how he should react to this behavior. Only when no pattern can be discovered and all acts are unpredictable—i.e., when chaos prevails—is there no rational course for a man who knows his own goals.

Therefore rational behavior requires a predictable social order. Just as the rational producer must be able to make reasonably accurate forecasts of his demand and costs if he is to invest intelligently, so the rational man in politics must be able roughly to predict the behavior of other citizens and of the government. Some ambiguity is inevitable, but whenever uncertainty increases greatly, rationality becomes difficult.

Because government provides the framework of order upon which the rest of society is built, political rationality has a function much more fundamental than the mere elimination of waste in governing. Rational behavior is impossible without the ordered stability which government furnishes. But government will continue to furnish such stability only so long as the political system functions efficiently, i.e., so long as it is rational. Thus political rationality is the *sine qua non* of all forms of rational behavior.

Of course, political rationality need not operate democratically, as it does in our model. As long as uncertainty is diminished and stable order introduced and maintained, rational action is possible, even if tyranny prevails. Furthermore, political rationality need not be perfect, since most political systems operate tolerably well without being purged of every inefficiency. Nevertheless, a high degree of political rationality is necessary in every large-sized society if it is to solve its problems successfully.

II. THE STRUCTURE OF THE MODEL

Our model is based on the assumption that every government seeks to maximize political support. We further assume that the government exists in a democratic society where periodic elections are held, that its primary goal is reëlection, and that election is the goal of those parties now out of power. At each election, the party which receives the most votes (though not necessarily a majority) controls the entire government until the next election, with no intermediate votes either by the people as a whole or by a parliament.

The governing party thus has unlimited freedom of action, within the bounds of the constitution.

The most important of these bounds is that the government—i.e., the governing party—cannot hamper the operations of other political parties in society.[7] It cannot restrict their freedom of speech, or their ability to campaign vigorously, or the freedom of any citizen to speak out against any party. Nor can it alter the timing of elections, which recur at fixed intervals.[8]

Economically, however, there are no limits to its power. It can nationalize everything, or hand everything over to private parties, or strike any balance between these extremes. It can impose any taxes and carry out any spending it desires. The only restraint upon it is that of maintaining political freedom; therefore it must not vitiate its opponents by economic policies aimed specifically at injuring them. Also it must economically uphold the voting rights of its citizens.[9]

Some political theorists may object that this government seems to have little connection with the state it is supposed to run. Sociol-

[7] Throughout this thesis we use the term *government* in the European sense; i.e., it always refers to the *governing party* unless otherwise noted.

[8] Although elections recur at fixed intervals in our model, they could just as easily recur at any time *within* fixed time limits, with the exact date set by the incumbent party, as in the British political system. Thus our stricture is stronger than necessary; we make it so only to eliminate the timing of elections from the area of party strategy. Alteration of this axiom to resemble the British system would affect none of our conclusions.

[9] It can be argued that government must not destroy private property rights if it is to guarantee political freedom for its citizens, since they must remain independent of its control. However, *private property* in this sense does not mean an ownership claim over the means of production, but a legally protected share of their output. If a citizen knows his income depends upon fulfillment of certain well-defined tasks connected with his job, and that the law protects him from income losses resulting from any actions unconnected with that job, he is free to follow his own political inclinations, regardless of whether he works for the state or a private firm. He owns his job, and as long as he carries out its duties, he cannot be deprived of it without due process of law. Examples of this are seniority rights in unions and status grades in the civil service. We would agree that the government must not abolish *both* this kind of private property and private ownership of the means of production if political freedom is to exist; therefore government's economic power has some limits. Furthermore, since all private property depends upon a legal system independent of politics, one of the elements of our model's constitution must be such a system.

ogists might further object that reëlection *per se* is of no value to anyone; therefore some deeper motives must lie behind it. We will deal with both of these criticisms in Chapter 2. Meanwhile, let us assume that every government's goal is to be reëlected, whether the government be that of a nation, a province, or a municipality.[10]

Having given government a purpose, we can discover the most efficient means it can employ to achieve that purpose. In other words, we can construct a model showing how a rational government behaves in the kind of democratic state we outlined above. However, we first need to know more about the world in which our model government is to function.

This world differs from the usual general-equilibrium world because it contains uncertainty. True, in order to study the basic logic of decision-making in our political economy, we will assume perfect knowledge in Chapters 3 and 4. However, these chapters are only preliminary to the later analysis of behavior when uncertainty prevails.

Our reason for stressing uncertainty is that, in our opinion, it is a basic force affecting all human activity, particularly economic activity. Coping with uncertainty is a major function of nearly every significant institution in society; therefore it shapes the nature of each. A prime example is money, which Lord Keynes and others have shown to be a response to uncertainty, a link between the present and a not-definitely-known future.[11] It would be absurd to study money only in a certain world and hope to discover its essence —in fact, the attempt to do so led to inherent contradictions.

Similarly, though we can find out something about how rational governments operate by analyzing them in a "certain" world, we learn much more by facing uncertainty and the problems it creates. Many of these problems are related to the cost of obtaining informa-

[10] Our main concern is with the national government throughout this thesis. However, much of the reasoning also applies to the other types.

[11] See John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (New York: Harcourt, Brace and Company, 1936), ch. 17. For a lucid explanation of this chapter, see Abba P. Lerner, "The Essential Properties of Interest and Money," *Quarterly Journal of Economics*, LXVI (1952), 172–193.

tion. Therefore we devote several chapters to examining how this cost affects rational political behavior.

We hope that our study will be of interest to students of democracy as well as to economists. Few of our conclusions are new; in fact, some have been specifically stated by Walter Lippmann in his brilliant trilogy on the relation between public opinion and democratic government.[12] However, our attempt to trace what rational men will do, both as citizens and in government, is novel as far as we know. It tends to prove logically contentions that Lippmann and others have reached by observing politics empirically.

Thus our model could be described as a study of political rationality from an economic point of view. By comparing the picture of rational behavior which emerges from this study with what is known about actual political behavior, the reader should be able to draw some interesting conclusions about the operation of democratic politics.

III. THE RELATION OF OUR MODEL TO PREVIOUS ECONOMIC MODELS OF GOVERNMENT

Most economic treatments of government concern its policies in particular fields, such as monetary control, maintenance of employment, price stabilization, regulation of monopolies, and international trade. The few analyses of government activities as a whole are mostly normative; i.e., they deduce the type of actions which a government *should* undertake from some basic ethical principle about its proper function.

Our analysis is likewise deductive, since it posits a basic rule and draws conclusions therefrom. However, it is also positive, because we try to describe what *will* happen under certain conditions, not what *should* happen. Nevertheless, we shall briefly show how it is related to several normative ideas advanced by other economists, and how it attempts to solve certain problems they have raised.

[12] Walter Lippmann, *Public Opinion* (New York: The Macmillan Company, 1922), *The Phantom Public* (New York: Harcourt, Brace and Company, 1925), and *Essays in the Public Philosophy* (Boston: Little, Brown and Company, 1955).

A. THE PROBLEM OF FALSE PERSONIFICATION VS. OVER-INDIVIDUALISM

In an article on "The Pure Theory of Government Finance," James Buchanan suggested two mutually exclusive ways to view decision-making by the state.[13] The first is to consider the state a separate person with its own ends not necessarily related to the ends of individuals. It acts to maximize its own welfare or utility by manipulating government spending and taxation so that the marginal gain from further spending is equal to the marginal loss from further taxing. These gains and losses are social—felt by the personality of the state. They are not the gains and losses of individuals in some aggregated form.

Though this "organismic" approach is intellectually neat, it has no substantive content, as Buchanan points out. No one knows what the welfare function of the state-as-a-person looks like, nor can anyone ever find out. Therefore it is useless as a guide to practical decisions.

Buchanan's second approach considers only individuals as having end structures. The state has no welfare function of its own; it is merely a means by which individuals can satisfy some of their wants collectively. For example, the state has a monopoly of certain services, but instead of trying to maximize profits, it seeks only to cover costs in the long run. Individuals buy services from it and pay it only for those services they receive. Thus a basic *quid pro quo* benefit principle underlies the functioning of the state and establishes limits on what it does.[14]

At first glance, this voluntaristic view of the state does not square with its use of coercion in collecting taxes. If taxes are merely *quid pro quo* payments for services rendered, why must citizens be forced

[13] James Buchanan, "The Pure Theory of Government Finance: A Suggested Approach," *Journal of Political Economy*, LVII (December, 1949), 496–505.

[14] These two approaches have been elaborated in greater detail by Edward C. Banfield, who distinguishes between two types of "unitary" view of the state and three types of "individualistic" view. His analysis does bring Buchanan's ideas closer to reality, but it does not alter the basic dichotomy which we are discussing. See "Note on the Conceptual Scheme," in Martin Meyerson and Edward C. Banfield, *Politics, Planning, and the Public Interest* (Glencoe, Ill.: The Free Press, 1955), pp. 322–329.

to pay them? Paul Samuelson has answered this question by arguing that in this model world the state undertakes only those activities providing indivisible benefits.[15] Since every man enjoys the benefits of every government act, no matter who pays for it, each man is motivated to evade paying himself. However, he will be willing to pay his share of the cost—since he does receive benefits for it—if all others also bear their shares. All citizens agree to be coerced, since each individual's gain more than offsets his part of the cost, and benefits are provided which otherwise could not be had. The voluntaristic nature of the state is thus not contradicted by its use of coercion.[16]

Julius Margolis has strongly attacked this conception of the state as entirely unrealistic.[17] He points out that almost no activities undertaken by the state produce purely indivisible benefits. Even national defense, the classic example of indivisible benefits, aids some people more than others, and the marginal expenditure on it may actually harm some citizens. Most other government actions produce clearly divisible benefits; e.g., the more citizens B through Z use government-built roads, the more crowded these roads become, and the less utility citizen A gets from using them. The fact that government carries out such activities instead of private firms cannot be explained by Samuelson's criterion. His model, says Margolis, limits the state to so few actions that it cannot reasonably be accepted even as a normative theory of government activity. We agree.

[15] Paul A. Samuelson, "The Pure Theory of Public Expenditures," *Review of Economics and Statistics*, XXXVI (November, 1954), 387–389. Samuelson states also that the government will make direct transfer payments (taxes plus expenditures) to satisfy "the ethical observer." However, these transfers do not involve any resource-exhausting government activities; hence they are irrelevant to our discussion of such activities.

[16] A similar approach is used by William J. Baumol, *op. cit.*, and is stated and criticized by Richard A. Musgrave in "The Voluntary Exchange Theory of Public Economy," *Quarterly Journal of Economics*, LIII (1939). These analyses are enough like Samuelson's so that we need not treat them separately.

[17] Julius Margolis, "A Comment on the Pure Theory of Public Expenditures," *Review of Economics and Statistics*, XXXVII (November, 1955), 347–349. Samuelson's reply concedes some of the points made by Margolis and clarifies the nature of "public" and "private" goods. See Paul A. Samuelson, "Diagrammatic Exposition of a Theory of Public Expenditure," *Review of Economics and Statistics*, XXXVII (November, 1955), 355–356.

Our own criticism of the Buchanan-Samuelson approach is that it poses a false dichotomy between two views, one of which is totally false and the other of which expresses only part of the truth. On one hand, the organismic view of government is untrue because it is based upon a mythical entity: a state which is a thing apart from individual men. On the other hand, the individualistic view is incomplete because it does not take coalitions into consideration.

As we shall see in Chapter 2, when a small group of men acting in coalition runs the apparatus of the state, we can reasonably speak of the government as a decision-maker separate from individual citizens at large. Thus we avoid both false personification of a mental construct and an over individualistic view of society. However, we are still faced with the problem of discovering a relationship between the ends of individuals at large and the ends of the coalition which does not restrict government to providing indivisible benefits. Our model attempts to describe such a relationship.

B. THE SOCIAL-WELFARE-FUNCTION PROBLEM

Exactly the same problem has long been the center of controversy in the new welfare economics, where Abram Bergson's "social welfare function" was advanced as a solution to it.[18] Having rejected cardinal utility and psychological interpersonal comparisons, Bergson attempted to substitute for them an abstract rule for the derivation of social ends from individual ends. He called this rule the "social welfare function."

This amorphous entity has been the target of two major criticisms. One is that it does not remove the necessity of weighting each individual's desires in the process of arriving at a collective end structure. Yet any such weighting is in fact an interpersonal comparison of welfare; it serves the same function as the assumption that all men are of equal ethical value in Pigou's earlier analysis. Thus, using a social welfare function does not solve the problem of

[18] Abram Bergson (Burk), "A Reformulation of Certain Aspects of Welfare Economics," *Quarterly Journal of Economics*, LII (February, 1938), 314–344.

how to make interpersonal comparisons, as Bergson himself admitted.[19]

The second criticism has been stated by Kenneth Arrow and will be analyzed in detail in Chapter 4.[20] To put it briefly, Arrow has shown that if most choice situations involve more than two alternatives, and if the preferences of individuals are sufficiently diverse, no unique and transitive general welfare function can be constructed unless some part of society dictates to the rest. This argument demolished what was left of Bergson's social welfare function and dissolved the relationship between individual and social ends which it had tried to establish.

Welfare economics was therefore pushed back into the emasculated state it had earlier entered by rejecting two postulates: cardinal utility and interpersonal welfare comparisons. These axioms had been thrown out because the first was unnecessary and both were based upon an empirically false psychological view of man. But without them or others to replace them, few significant policy statements can be made.

Our model attempts to forge a positive relationship between individual and social end structures by means of a political device. Because each adult citizen has one vote, his welfare preferences are weighted in the eyes of the government, which is interested only in his vote, not his welfare. Thus in answer to the first criticism raised against Bergson, we admit openly that we are adopting an ethical principle—equality of franchise. We are making it a part of politics, where we believe social ethics should be dealt with. In short, we are returning to *political economy*.

However, this does not eliminate Arrow's contention that rational social action is sometimes impossible. Our defense against this attack consists essentially of a double evasion. We try to show the following: (1) Arrow's criticism is not always relevant, and (2) even when it is relevant, its impact is often limited to much narrower

[19] See Tibor Scitovsky, "The State of Welfare Economics," *American Economic Review*, XLI (1951), 303–315.
[20] Kenneth J. Arrow, *op. cit., passim.*

areas of choice than one might suppose. These arguments will be presented in Chapter 4.

Although our model is related to the basic welfare-economics problem which Bergson tried to solve, it is not a normative model. We cannot use it to argue that society is better off in state A than in state B or that government should do X but not Y. The only normative element it contains is implicit in the assumption that every adult citizen has one and only one vote. Actually, even though an ethical judgment must be the ultimate justification for this assumption, we incorporate it into our model simply as a factual parameter, not a normative one. Therefore the relationship we construct between individual and government ends is one that we believe will exist under certain conditions, not one that should exist because it fulfills some ideal set of requirements.

C. TECHNICAL PROBLEMS

Many normative approaches to government decision-making feature such devices as referenda on every decision, perfect knowledge by the government of every citizen's preference structure, and precise calculation and payment of compensation. These devices undoubtedly play a legitimate role in theoretical analysis; we occasionally use them ourselves. However, most of our study is concerned with what would actually happen if men in our fairly realistic world behaved rationally. Therefore we cannot rely on procedures which the division of labor renders impractical, as it does all three of those mentioned above.

On the other hand, our analysis suffers from the same generality that plagues the traditional theories of consumer and firm behavior. We cannot fill in the details of our vote function any more than J. R. Hicks filled in the details of the indifference maps or production functions in *Value and Capital*.[21] To do so is the task of politicians, consumers and businessmen respectively. Abstract analysts

[21] J. R. Hicks, *Value and Capital*, Second Edition (Oxford: Clarendon Press, 1950), Chs. I, VI, and VII.

like ourselves can only show how these details fit into the general scheme of things.

IV. SUMMARY

Although governments are of crucial importance in every economy, economic theory has produced no satisfactory behavior rule for them comparable to the rules it uses to predict the actions of consumers and firms. Our thesis attempts to provide such a rule by positing that democratic governments act rationally to maximize political support.

By *rational* action, we mean action which is efficiently designed to achieve the consciously selected political or economic ends of the actor. In our model, government pursues its goal under three conditions: a democratic political structure which allows opposition parties to exist, an atmosphere of varying degrees of uncertainty, and an electorate of rational voters.

Our model bears a definite relation to previous economic models of government, though ours is positive and most others are normative. Buchanan posed a dichotomy between organismic and individualistic conceptions of the state; we try to avoid both extremes. Samuelson and Baumol argued that the state can efficiently undertake only straight income transfers and actions with indivisible benefits; we try to show that it has many other legitimate roles. Bergson tried to establish relations between individual and social ends by means of a purely ethical postulate; we adopt an ethical axiom in political form. Arrow proved that no such relations could be established rationally without dictation; we try to show how his dilemma can be circumvented.

We attempt these tasks by means of a model which is realistic and yet does not fill in the details of the relationships within it. In short, we wish to discover what form of political behavior is rational for the government and citizens of a democracy.