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Politics, Science and Public Policy: An Essay on the Use and Abuse of Behavioral Theory *

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In 1957 Professor Leo Strauss criticized the idea of a positivist social science on the grounds that it is impossible to study social phenomena without inserting value judgments.¹ Strauss' comment was merely a prelude to the great debate which would occur within the political science profession between traditional thinkers and the more modern behaviorists, a conflict which would reach its height in 1969 when Sheldon Wolin found occasions to draw a distinction between the "vocation of the theorist" and the "vocation of the methodist."² The boundaries between the two camps have now become more opaque in a "post-behavioral" era when an attempt is being made to integrate normative and empirical concerns. Yet the question still remains, "To what extent can politics be made into a scientific endeavor?"

This paper supports Strauss' notion that it is both impossible and undesirable to exclude values from the study of social phenomena. A consideration of major trends within the behavioral movement will cast some light on the important role which values continue to play in the field of systematic political inquiry. This role, we will see, has gained increased recognition among practitioners of the behavioral approach.

Contrary to Strauss' position, we do not believe that the behaviorists' failure to create value free discipline necessarily excludes their work from the realm of science. In order to determine the extent to which politics can or should be made into a scientific enterprise, it is necessary to deal with this long debated issue on two levels. The first level concerns politics as a field of inquiry. Here the question is epistemological. The second concerns politics as a field of governmental action. Here the problem is one of application, i.e. the utilization of scientific knowledge within the policy making process.

In considering the first question we would argue that much of the criticism leveled against behavioralism for its alleged inability to con-

* I am gratefully indebted to Professor Dankwart A. Rustow of the City University of New York for his many helpful comments on an earlier draft of this paper. Responsibility for the position presented herein is entirely mine.

¹ Strauss, "What is Political Philosophy," *Journal of Politics*, XIX, 3 (August, 1957), pp. 347-348.

² Wolin, "Political Theory as a Vocation," *American Political Science Review*, 63 (December, 1969), p. 1062.

form to scientific standards is based on inaccurate assumptions about the nature of science. By critically examining some of the premises and promises of scientific investigation, we will attempt to demonstrate that the theoretical and methodological deficiencies which critics often attribute to social research are common elements within the natural and social sciences alike. Therefore, such deficiencies as real as they might be, would not necessarily exclude behavioralism from the realm of science.

The limits to which politics can be made into a scientific venture are more readily defined when we consider the problem of applying knowledge in government. These limitations are both empirical and normative in nature. On the one hand, there is no mechanism within the political system which guarantees that information resulting from scientific research will be utilized or heeded by those responsible for the formation of public policy. To the contrary, such data is frequently ignored when it calls for governmental action which is not in accordance with the preferences of powerful interests. On the other hand, any attempt to insure that the system will be totally responsive to the dictates of scientific knowledge raises the potential danger of a technocratic government. Any serious consideration of the prospects for a science of politics cannot afford a failure to recognize the serious normative issues underlying this dilemma. This paper does not propose any claim toward a solution. However, it will attempt to explain how the institutions of our government can operate to allow science to exert a rationalizing effect on the political process without undermining the democratic values of the system. Based on Max Weber's notion of an ideal bureaucracy we will argue that it is the administrative branch of government which affords us the best opportunity to utilize the techniques and the knowledge of the various sciences in the formulation and implementation of public policy.

I. SCIENCE, VALUES AND THE STUDY OF HUMAN BEHAVIOR

The behavioral movement within the social sciences originated with the work of John B. Watson, a psychologist. His work was essentially a reaction to the "introspective or subjective" psychology of Wundt, Freud and James, whose subject matter, consciousness, he believed "can be analyzed only by looking in on what takes place inside of us."³ By concentrating on the study of human behavior through experimental methods, behaviorist psychologists sought to create "a natural science that takes the whole field of human adjustments as its own."⁴ As Watson explained it:

³ Watson, *Behaviorism* (New York: W. W. Norton & Company, 1930), p. 5.

⁴ *Ibid.*, p. 11.

The interest of the behaviorist in man's doings is more than the interest of the spectator—he wants to control man's reaction as physical scientists want to control or manipulate other natural phenomena. It is the business of behavioristic psychology to be able to predict and control human activity.⁵

One of Watson's most loyal disciples and until this day the most significant popularizer of his ideas is B. F. Skinner. Skinner expressed a concern with the uneven development of science which has "extended our control of inanimate nature without preparing for the serious social problems which follow."⁶ He espoused the methods and goals of his predecessor, but then took the case a step further by attempting to come to grips with the political and moral implications of the behaviorist venture. Recognizing government as that agency most suited to control human behavior, Skinner anticipated critical reaction from democratic idealists who would raise questions concerning the threat of a scientific despotism.⁷ Reminding his critics that "it has always been the unfortunate task of science to dispossess cherished beliefs", Skinner advocated a system of government for the people rather than a government by the people.⁸ He expressed a firm belief in the power of science to tell social designers what type of action is necessary to produce a given result or more generally, what type of government will necessarily promote the well being of those who are governed.⁹ As a modern day Galileo, Skinner saw science as a means to overcome the individual and social biases of his environment, but he did not hesitate to emphasize that his science might also "provide mankind with a set of moral values."¹⁰ The idea of creating a new culture based on scientifically determined values is probably the most ambitious claim of behaviorist psychology.

Several scholars are responsible for initiating the twentieth century effort to create a new science of politics, including, among others, Arthur Bentley, James Bryce, Graham Wallace and Stuart Rice. However, the individual most frequently credited with the distinction of fathering the behavioral movement in politics is Professor Charles Merriam of the University of Chicago. It was in 1921 when Merriam's article appeared in the *American Political Science Review* outlining four key ingredients

⁵ *Ibid.*

⁶ Skinner, *Science and Human Behavior* (New York: Macmillan, 1953), p. 4.

⁷ A recent defense of Skinner's writing appears in his book *About Behaviorism* (New York: Alfred A. Knopf, 1974). A comprehensive listing of commentaries on his work is found in Peter Stillman, "The Limits of Behaviorism," *American Political Science Review* LXIX (March, 1975).

⁸ Skinner, *Science and Human Behavior*, p. 449.

⁹ *Ibid.*, p. 443.

¹⁰ *Ibid.*, p. 445.

which he believed were necessary for the development of a more rigorous discipline. They included:

1. More adequate equipment for the collection and analysis of political material;
2. More adequate organization of the political prudence of the profession;
3. Broader use of the instruments of social observation from statistics, and the analytical techniques of psychology;
4. Coordination of technical political research with the work of other closely allied fields.¹¹

Merriam looked forward to a "new politics" which would synthesize the work of the older and newer disciplines. He had praise for psychologists' study of behavior, sociologists' use of surveys and the case study method, and the rigorous techniques employed by natural scientists. However, Merriam was also well aware of the obstacles which political scientists would face because of the elusive nature of their subject matter, such as the difficulty in analyzing phenomena in order to establish causal relationships, the problem of separating the personality of the observer from the social situation of which he is a part, and the absence of the controlled experiment.¹²

In his own research, Merriam isolated the idea of "power" hoping to use it as a central organizing concept in politics in much the same way as the physicist uses the concepts of space or motion.¹³ The idea was hardly an original contribution to Western thought, yet Merriam's emphasis on "power" certainly foreshadowed the important role the concept would play in the research of later behavioralists. Merriam's greatest contribution to the discipline was that he articulated a set of goals which political scientists took seriously enough so that the notion of a behavioral movement could be transformed into a reality. Unfortunately he did little himself to create the methodology and approach which was then called for.¹⁴

The consequences which resulted from Merriam's effort to revolutionize the study of politics became most apparent in the work of his most successful and controversial student, Harold D. Lasswell. Lass-

¹¹ Merriam, *American Political Science Review*, 15 (May, 1921), pp. 184-185.

¹² Merriam, *New Aspects of Politics* (Chicago: University of Chicago Press, 1925), pp. 135-138.

¹³ Cf Merriam, *Political Power* (New York: Collier, 1964).

¹⁴ A critical survey of Merriam's career is found in Bernard Crick's *The American Science of Politics* (Berkeley: University of California Press, 1959), pp. 133-155. Further commentaries appear in Barry Karl, *Charles E. Merriam and the Study of Politics* (Chicago: University of Chicago Press, 1974).

well's career is of particular interest because it is representative of the slow and uneven course of the behavioral movement; it is indicative of the conceptions and the misconceptions held by those thinkers who emulated the scientific tradition as a model for the new politics.

David Easton has identified two distinct phases in Lasswell's historic career, an "elitist amoral phase" and a "decisional moral phase."¹⁵ In the first stage, which Easton dates from 1934 to 1940, Lasswell's purpose was to create a purely objective science of politics and rid political inquiry of all values. Like his teacher at Chicago, Lasswell concentrated on the study of power and the manipulative techniques utilized by those who wield it.¹⁶ He defined political science as . . . "the study of influence and the influential" and concluded "the influential are those who get whatever there is to get."¹⁷ However, Lasswell's elitist approach to the study of power, which had strong ideological ties with the writings of Pareto, was in the fact value laden. As Easton explained it, the notion that political power is always concentrated in the hands of an elite implies that democracy or majority rule can never be achieved.¹⁸ Therefore although early behavioralists differed from behaviorist psychologists by attempting to exclude values from scientific investigation, their descriptive analysis of the distribution of power in modern society was no less objectionable to liberal democratic theorists.¹⁹

No individual has done more than Lasswell to integrate the techniques of modern psychology with the research of political scientists. His psychological profile of political characters which was written in 1930 remains a classic innovation within the behavioral movement.²⁰ However it is significant to point out that behaviorist Lasswell utilized the very methodology to which Watsonian behaviorism was a reaction, psychoanalysis. His study includes several flattering references to the contributions which Freud has made in "subjective psychology."²¹ This "subjective" approach, along with the normative connotations implied in Lasswell's emphasis on "pathology", represents an early point at which

¹⁵ Easton, "Harold Lasswell, Policy Scientist For a Democratic Society," *Journal of Politics*, 12 (1950), p. 459.

¹⁶ Lasswell first concentrated on the topic in his doctoral dissertation, *Propaganda Technique in the World War* (New York: Alfred Knoph, 1927). His classic work on power is, of course, *Politics, Who Gets What, When, How?* (New York: McGraw-Hill, 1936).

¹⁷ Lasswell, *Politics, Who Gets What, When, How*, *op. cit.*, p. 13.

¹⁸ Easton, *op. cit.*, p. 462.

¹⁹ Though Easton relates Lasswell's approach primarily to Pareto, this orientation was also evident in the work of other Europeans such as Geatano Mosca and Robert Michels. For a critical analysis of this tradition see David Spitz, *Patterns of Anti-Democratic Thought* (New York: Free Press, 1949).

²⁰ Lasswell, *Psychopathology and Politics* (Chicago: University of Chicago Press, 1930).

²¹ *Ibid.*, p. 12.

he overtly, although unintentionally, introduced his own values into his work.

That part of Lasswell's career which Easton labeled the "decisional moral phase" amounted to an absolute turnabout in Lasswell's attitude on the place of values in social inquiry. Now concerned with the development of a "science of democracy", Lasswell announced the value goals of his own research in terms of justice, human dignity, majority rule, shared powers, and freedom.²² This approach was accompanied by a new orientation in the study of power. Power was defined as "participation in the making of important decisions."²³ In order to reconcile his empirical research with his newly announced value goals, Lasswell drew a meaningful distinction between political leaders (or decision makers) and a political elite. As he explained it:

The distinction between leaders and the elite enables us to avoid the confusion that often arises when someone points out that government is always government by the few, whether carried out in the name of the few, or the one, or the many The proposition is true when it is understood to mean that "government is always government by a few leaders". It is false when construed to mean that "government is always government by a highly restricted elite", and that democracy is by definition impossible.²⁴

Following the instructions of Professor Merriam, Lasswell made a noble attempt to integrate the work of natural and social scientists in order to rationalize the political process. The new "science of democracy" was identified as a "policy science" designed to clarify the goals of a democratic society and set down a methodology through which these goals could be realized. This commitment to democratic values was not understood as an obstacle to objective investigation. Lasswell explains:

The policy approach does not mean that the scientist abandons objectivity in gathering or interpreting data The policy emphasis calls for a choice of problems which will contribute to the goal values of the scientist, and the use of scrupulous objectivity

²² See, for instance, Lasswell, *Power and Personality* (New York: W. W. Norton and Company, 1948), p. 107; *The Analysis of Political Behavior* (New York: Oxford University Press, 1948), pp. 2-8; with Abraham Kaplan, *Power and Society* (New Haven: Yale University Press, 1950), p. VIII.

²³ Lasswell, *The Analysis of Political Behavior*, op. cit., p. 68.

²⁴ *Power and Personality*, op. cit., p. XII.

and maximum technical ingenuity in executing the projects undertaken.²⁵

After having spent a large part of his early career studying the language symbols and manipulative techniques of political elites, Lasswell became convinced that it was now possible to determine the type of political action necessary in order to achieve a particular set of goals. Although his goals were democratic, the methodology which Lasswell was ready to employ in order to apply such scientific knowledge manifests a striking resemblance to the behavioral controls advocated by behaviorist psychologists. This is most evident in the introduction to his *Power and Society* which reads:

The result of inquiry is a warranted statement of the way in which an actor in a situation can increase the probability of an occurrence of a specified state of affairs. "To produce Y (or to make Y most likely to occur), do X!"²⁶

It is unfortunate that Lasswell did not come to grips with the fact that his own methodology could be anathema to the democratic values he so strongly espoused.

The policy science approach is certainly more practicable than Lasswell's "amoral politics", which amounted to an unsuccessful attempt to completely divorce values from social inquiry. The distinction between propositions of fact and propositions of value at least temporarily defines one area of politics which remains outside the realm of science, the determination of political ends. However the application of behavioralism as an instrument to such ends does not preclude the possibility, suggested by Merriam, that the personal biases of social scientist at work in their own environment might affect the quality of empirical observation. While empirical social research cannot be used as a means for determining human values, human values will continue to play a role in determining both the direction and the product of empirical social research. As long as values influence the purpose and the character of behavioral inquiry, skeptics can be expected to raise questions concerning the scientific merit of such investigation. These questions cannot be dealt with adequately however, without first devoting some attention to clarifying the meaning and the nature of science.

²⁵ Daniel Lerner and Harold Lasswell, *The Policy Sciences* (Stanford: Stanford University Press, 1951), p. 14.

²⁶ Lasswell and Kaplan, *op. cit.*, p. XII.

II. SCIENCE: ITS PREMISES AND PROMISES

Albert Einstein defined science as an "attempt to make chaotic diversity into a system of thought."²⁷ How successful science can be in responding to this summons is dependent on the ability of its practitioners to abide by the rigorous standards inherent in the scientific tradition. In more precise terms than Einstein, Herbert Feigl defines the aims of science as description, explanation and prediction.²⁸ He then proceeds to set down a core of standards which he believes should regulate any quest for scientific knowledge. They are as follows:

1. *Intersubjective Testability:*

This standard of "objectivity" involves "freedom from personal or cultural bias" and "the requirement that the knowledge claims of science be capable of test."²⁹ In accordance with the latter point Karl Popper has emphasized that "falsifiability is the mark of science."³⁰

2. *Reliability or a Significant Degree of Confirmation:*

This criterion differing from the first only by matter of degree, "enables us to distinguish . . . "mere opinion" from scientific knowledge (well substantiated belief)."³¹

3. *Definiteness of Precision:*

This standard requires that "the concepts used in the formulation of scientific knowledge claims be as definitely delimited as possible", hence the application of quantitative techniques.³² In accordance with this criterion, Ernest Nagel, among others, notes the need for an exact language or technical vocabulary.³³

4. *Coherence or Systematic Structure:*

This calls for "a well connected account of the facts" as opposed to a "mere collection of miscellaneous items of information."³⁴

²⁷ Einstein "Considerations Concerning the Fundamentals of Theoretical Physics," *Science*, 91 (May 24, 1940), p. 487.

²⁸ Feigl, "The Scientific Outlook: Naturalism and Humanism," in Herbert Feigl and May Brodbeck, *Readings in the Philosophy of Science* (New York: Appleton-Crofts, 1953), p. 10.

²⁹ *Ibid.*, p. 11.

³⁰ Popper, *The Logic of Scientific Discovery* (New York: Harper and Row, 1965), pp. 40-42.

³¹ Feigl, *op. cit.*, p. 12.

³² *Ibid.*

³³ Nagel, *The Structure of Science* (New York: Harcourt, Brace & World, Inc., 1961), pp. 8-9.

³⁴ Feigl, *op. cit.*, p. 12.

5. *Comprehensiveness or Scope of Knowledge:*

This characterizes scientific knowledge as "different in degree from common sense knowledge." Science is believed to acquire "a reach far beyond the limits of our unaided senses . . . not to be confused with the sham completeness metaphysics procure for their world pictures by verbal magic."³⁵

Feigl concludes by stating that the aims of applied science are "practical control, production, guidance, therapy and reform."³⁶ These aims have a marked similarity to the purposes adopted by behaviorists Watson and Skinner, not to mention Lasswell. However Feigl's analysis of standards leaves one with a rather flattering impression of the scientific venture and it is bewildering to the student of society who would hope to observe the tradition as it is here understood.

Rigorous standards are in order if science is to maintain its position as a respected form of inquiry. However a realistic appraisal of its performance is necessary if we are to determine whether behavioralism rightfully deserves a place within its bounds. A closer consideration of the intellectual process carried out by natural scientists will show that Feigl's standards are more representative of an ideal than a reality. Therefore the demands of science are not so prohibitive to the student of social phenomena as one might be led to expect.

The commitment to ensure objectivity in scientific investigation, although necessary and desirable from a methodological point of view, is inevitably frustrated by the human element which is part and parcel of the whole investigatory process. As Michael Polanyi has explained, all human inquiry is initially motivated by "intellectual passion."³⁷ Thomas Kuhn has perceptively pointed out that intellectual partisanship is a common feature of any scientific endeavor which is carried out for the purpose of replacing established theories (or paradigms) with new systems of analysis.³⁸ Galileo, for example, who endured great hardship for disassociating himself from the religious and cultural biases of his time in order to revolutionize the study of astronomy, performed his work with an emotional commitment which bordered on obsession.³⁹

Kuhn goes on to explain that scientific partisans will frequently refuse to accept empirical data which contradicts theories to which they

³⁵ *Ibid.*, p. 13.

³⁶ *Ibid.*

³⁷ Polanyi, *The Study of Man* (London: Routledge, 1959), p. 13.

³⁸ Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962), p. 8.

³⁹ For a well documented and enjoyable account of Galileo's heroic efforts see Arthur Koestler, *The Sleepwalkers* (New York: Universal Library, 1963). pp. 352-463.

are personally committed; they simply proceed to search for new evidence in order to provide themselves with the satisfaction of support.⁴⁰ Behavioral scientist Lasswell is merely a case in point. When his empirical conclusions about the elitist structure of power were found contradictory to his democratic ideals, Lasswell developed a new method of analysis (the decision-making approach) which produced evidence that was more consistent with his own values. Hence the ends of scientific research, both natural and social, are to some extent determined by the personal biases and values of those who carry it out. The important question to consider at this point is: To what extent is the quality of this research influenced by non-empirical factors?

Despite proverbial claims to the contrary, a large part of natural science is based on metaphysical propositions. The most significant of these propositions is a belief in a natural order which gives birth to the concepts of causality and inductive reasoning.⁴¹ When once asked by Reichenbach how he came upon the theory of relativity, Einstein responded that he found it because he was thoroughly convinced of the harmony of the universe.⁴² Some prominent historians of science have traced the idea of a natural order to religious origins, asserting that it was based on the belief that a rational God created a perfect universe which functions in a clocklike fashion.⁴³

The integrity of a scientific knowledge is frequently measured by the methodology which is used to verify it. Since the foundation upon which natural science frequently bases its claims of precision is mathematics, at least part of the myth concerning the authority of scientific information is related to misunderstandings about the nature of mathematics. Even a schoolboy knows that Euclidian geometry, the foundation for modern physics, is largely based upon unproven axioms. Statistics, that branch of mathematics which is frequently used for the testing and verification of scientific hypotheses, operates within the realm of probability rather than of certainty, and the probability upon which the scientist makes his predictions is often based on arbitrary weight-

⁴⁰ Kuhn, *op. cit.*, p. 8.

⁴¹ Cf Arthur Pap, *Elements of Analytic Philosophy* (New York: Macmillan, 1949), Chapter 16; E. A. Burtt, *The Metaphysical Foundations of Modern Physical Science* (New York: Harcourt, 1925).

⁴² Hans Reichenbach, "The Philosophical Significance of the Theory of Relativity," in *ibid.*, p. 131.

⁴³ Cf. Herbert Butterfield, *The Origins of Modern Science* (New York: Macmillan, 1965), p. 131; Alfred Whitehead, *Science and the Modern World* (New York: Macmillan, 1925), p. 13.

⁴⁴ Cf Morris Cohen and Ernest Nagel, *An Introduction to Logic and Scientific Method* (New York: Harcourt Brace and Company, Inc., 1937), Chapters 12 and 15; Hans Reichenbach, "Probability Methods in Social Science," in Lerner and Lasswell, *op. cit.*, Chapter VII.

ing.⁴⁴ Such tests are made in terms of concepts which are operationally defined rather than directly testable. As Hubert Blalock has explained:

Mathematics makes use of deductive reasoning in which one goes from a set of definitions, assumptions, and rules of operation to a set of conclusions by means of purely logical reasoning. Mathematics *per se* tells us nothing new about reality since all the conclusions are built into the original definitions, assumptions and rules and are not determined empirically.⁴⁵

Science is merely a human invention contrived to liberate mankind from its own ignorance. As an instrument for human progress, it remains susceptible to the individual and cultural biases of those who put it to use. Notwithstanding demands for objectivity, reliability and precision, no scientific technique has been developed to provide a shield of protection against error. The most revolutionary discoveries of modern science often serve to document the commission of prior mistakes. The product of scientific efforts will continue to serve as an invitation to refinement and revision. As Einstein has admitted:

(In science) sense experiences are the given subject matter. But the theory that shall interpret them is man-made. It is the result of an extremely laborious process of adaptation: Hypothetical, never completely final, always subject to question or doubt.⁴⁶

It is not being argued here that the work of natural scientists is unreliable or that science itself should not be considered a rigorous form of inquiry. What Feigl has called "intersubjective testability", the validation of knowledge claims with observable evidence, continues to distinguish science from other forms of investigation, most notably metaphysics. The point to be made here is that we must recognize the real limits of science so that behavioralists who seek to be accepted into the scientific community are not unjustly excluded for a failure to live up to otherwise unattainable standards.

An examination of the criteria set down by Professor Feigl to distinguish science from other forms of inquiry has shown thus far that these criteria represent ideals that neither natural nor behavioral scientists have been able to fully operationalize. Feigl's final criterion for distinguishing scientific investigation involves the scope or comprehensiveness of its knowledge. Those who would argue for the

⁴⁴ Blalock, *Social Statistics* (New York: McGraw-Hill, 1960), p. 21.

⁴⁶ Einstein, *op. cit.*, p. 13.

superiority of natural science over social science might base their case on the idea that although the naturalists have not yet been totally successful in realizing the ideals of science, they have been more successful than behavioralists. To state it another way, one might argue that natural scientists have done a more complete job in explaining the world about us than have behavioralists. Morris Cohen has related this factor to the nature of the phenomena with which social scientists are concerned. According to his description, social questions are inherently more complicated than those of physics or biology because they are less repeatable in character, are less directly observable, have greater variety and less uniformity, and are more difficult to isolate.⁴⁷

The success of any investigation, no matter what the form, is ultimately dependent upon the adequacy of its methods to deal with the matters at hand. The problems anticipated by Cohen are similar to those referred to in the writing of Charles Merriam. Nevertheless, despite the apparent validity of these claims they should not be mistakenly applied to conclude that behavioralism has been non scientific, nor that it has been less scientific or less successful than natural science.

We do not propose to disprove the conclusions listed here nor would we even hope to dispute them. However we would refuse to accept them on the grounds that they defy verification. In order to compare the level of success which naturalists and behavioralists have achieved in explaining the mysteries of the universe one would need to measure the accumulated knowledge in each field, which of course is impossible. If, as Cohen tells us, the social order is more complex than the physical environment, then the argument might be made that social scientists have done a rather commendable job in relation to their naturalist colleagues. Nevertheless at the present stage of his intellectual development, man is not even certain how long the knowledge claims in either field will withstand the evidence of new discoveries. Therefore such a comparison is at best an act of speculation.

In the last analysis we can merely compare behavioralism and natural science in terms of the common ideals which neither has managed to convert into completely operable standards. Until a method is designed to measure how each has approximated these ideals, there is no reason to assume the intellectual superiority of one over the other. There is no reason to exclude behavioralism from the realm of science.

⁴⁷ Cohen, *Reason and Nature* (New York: Harcourt, Brace, & Company, 1931), pp. 250-251.M

III. POLITICS, SCIENCE AND PUBLIC POLICY IN A DEMOCRATIC STATE

We have already noted that there are two distinct aspects of the policy science approach within the behavioral movement: a research phase concerned with the acquisition of information and an applicational phase concerned with the output of public policy. In order for scientific knowledge to be most significant in a political sense, it must be employed by government officials who are capable of making authoritative decisions. Experience has shown us that such is not always the case. For example, despite the fact that by 1954 fourteen major studies were completed which linked cigarette smoking to serious diseases, it was not until 1965 when legislation appeared which required such information to appear on cigarette packages. At present there is no reason to expect that this poisonous commodity will be banned from the open market in the near future. Recent efforts to pass national gun control legislation have failed when crime statistics reflect a rise in the number of personal assaults committed with illegally held hand guns. While social statistics had long since demonstrated the need for national health insurance to provide Americans with the most vital professional service, it was not until 1965, after a generation of debate, that medicare legislation was adopted.

Examples of such apparent irrationality within government are legion. The explanation can be found by examining the very principles upon which the political system is designed. Madison referred to this phenomenon as "factionalism". According to his definition, a faction is . . .

a number of citizens . . . who are united and actuated by some common impulse of passion, or of interest, adverse to the rights of other citizens, or to the permanent aggregate interests of the community.⁴⁸

Until this day our government has remained susceptible to the influence of powerful interests, such as the tobacco industry, the National Rifle Association and the American Medical Association, who would ignore scientific prudence in order to advance limited ends which are not necessarily consistent with the general welfare.

In search of a remedy for the problem of factionalism, Madison identified liberty as its first cause. However, in accordance with the other framers of the Constitution, Madison realized that the elimination

⁴⁸ Federalist Paper, Number 10, (New York: Mentor Books, 1961), p. 78.

of liberty would destroy the political life of the democracy. He found the second cause of factions to exist in the diversity of opinions, passions and interests among men and concluded that any effort to eliminate such human diversity would be impracticable.

Modern science has made man more capable of dealing with the second cause of factions, but in so doing it has created a force which is no less threatening to the vitality of democracy than would be the elimination of political freedom. We have seen that science is not only an effort to explain the world about us but also a means to control it. As the interest of science turns from the physical to the social environment, then the object of manipulation and control must necessarily be human. This is not to suggest that political behavioralists have espoused the idea of a "technology of behavior" which has been advocated by Skinnerian psychologists.⁴⁹ However, the fact remains that technicians have now devised methods of mass communication which make it possible to affect if not control human "opinions, passions and interests." Commenting on the future of America in a "technetronic age", Brzezinski has warned, "Human conduct will become less spontaneous and less mysterious—more predetermined and subject to deliberate programming."⁵⁰ In a more radical statement on American life in a post-industrial era Betram Gross has warned against the emergence of a new form of "friendly fascism."⁵¹ It is no longer sufficient for behavioralists to ask, "Can politics be scientific?" The key question before behavioralists today is, "In what ways can we maximize the utility of science in government without endangering the health of democracy?"

Convinced that it would be unreasonable to attempt eliminating the causes of factionalism in American politics, Madison chose to deal with its effects. In so doing he expressed a faith that the institutional arrangement of government could be used to counterbalance the forces of self interest.⁵² In search for a method of dealing with the growth of science in a way which is advantageous to the republic, we would also look towards the institutional framework of government. Of particular interest to us in this case is the modern phenomenon we know as bureaucracy.

⁴⁹ See B. F. Skinner, *Beyond Freedom and Dignity* (New York: Alfred A. Knopf, Inc., pp. 1-23).

⁵⁰ Brzezinski, "America in a Technetronic Age," *Encounter* (January, 1968) p. 17.

⁵¹ Gross, "Friendly Fascism: A Model For America," *Social Policy* (November/December 1970).

⁵² While Madison's system of checks and balances draws heavily from Montesquieu, it is noteworthy that his idea was quite consistent with the mechanical view of the universe which dominated the scientific-social thought of the Enlightenment.

Max Weber perceived bureaucracy as an instrument which serves to rationalize the means of production and administration. In looking towards government bureaucracy as an agent for a more scientific politics, we do not pretend that these institutions remain remote from the influence of powerful interests. Nor is it assumed that these institutions operate according to the strict laws of science or reason. To begin with, Weber himself emphasized the distinction between substantive rationality concerned with the definition of values or ends and formal rationality which deals with a technology of means. It is only the latter form which he ascribed to bureaucratic institutions. Secondly, the Weberian model of bureaucracy to which we subscribe is an ideal type. The rational and scientific superiority of these organizations must be understood in relation to the other kinds of institutions which Weber described in his typology of political structures.

There are two basic characteristics of bureaucratic institutions which facilitate their performing according to rational and scientific standards. The first of these, is their technical superiority. As Weber explains,

Bureaucratic administration means the exercise of control on the basis of knowledge. This is the feature of it which makes it specifically rational . . . Bureaucracy is superior in knowledge, including both technical knowledge and knowledge of concrete facts within its own sphere of interest.⁵³

No organ of government has written its possession the professional expertise, technical equipment or scientific data which are commonly housed within the bureaucracy. The attributes have been enhanced by the growth of professionalism within the various public services. Career civil servants now have the opportunity to attend college and university programs in urban planning, police science, environmental protection, health service and various other fields of public administration where they are taught skills which serve to increase their individual competence and improve the performance level of the agencies in which they are employed.⁵⁴ The recent financial plight which had encumbered many American cities has served as an added incentive for public officials to seek out better trained executive and middle management personnel capable of bringing new ideas and improved administrative

⁵³ Weber, *The Theory of Social and Economic Organization*, ed. by Talcott Parsons (New York: Oxford University Press, 1947), p. 339.

⁵⁴ See Harold Lasswell, *A pre-View of Policy Sciences* (New York: American Elsevier Publishing Company, 1971), pp. 4-13, 132-159.

methods into the government service. We have witnessed the development of new technological discoveries such as methodone for the treatment of drug addicts and polymerized water for more effective fire fighting. Advances in the study of criminal behavior now permit police officials with computerized hazard rating systems to predict the time, place and circumstances in which criminal activity is most likely to occur.⁵⁵ Such technological and behavioral devices provide us with evidence that there is indeed a scientific revolution occurring within our government bureaucracies which enables these institutions to deal with chronic social problems in a more rational effective way.

The second characteristic of bureaucratic organization with which we are concerned is its hierarchic structure. In some way this feature is a function of the first, for authority within the bureaucracy is delegated to some extent on the basis of technical qualification or expertise. It is the hierarchic structure of these institutions which facilitates their capacity to mobilize and coordinate the human, material and technical resources at their command. Barnard and Simon have written extensively on the means available to bureaucratic leaders for motivating cooperation among employees.⁵⁶ More recently public officials have instituted the practice of productivity bargaining in negotiating contracts with powerful unions where employee benefits are exchanged for a higher quality and quantity of public service.⁵⁷ However, while bureaucratic organization facilitates the scientific functions of manipulation and control, it does not necessarily present the threat of technocratic depotism.

A multiplicity of restraints, both internal and external tend to limit the power of bureaucratic leaders. Bertram Gross has analysed the situation quite succinctly by describing bureaucratic organizations as "polyarchal structures" of "shared responsibility". He explains:

Superior hierarchic authority is never absolute. At the lower levels it is always confined to a certain area of operation and limited by superior authority. At the peak of the organization it is always limited to the purposes of the organization as well as being subjected to various external restraints.⁵⁸

⁵⁵ See Edward V. Hamilton, "Productivity: The New York City Approach," *Public Administration Review* XXXII (Nov-Dec., 1972).

⁵⁶ Chester Barnard, *The Functions of The Executive* (Cambridge: Harvard University Press, 1938). Chapter XI; Herbert Simon, *Administrative Behavior* (New York: Macmillan, 1945), Chapters VI-VII.

⁵⁷ See Chester A. Newland, "Personnel Concerns in Government Productivity Improvement" *Public Administration Review*, Vo. XXXII (November-December, 1972), 807-815.

⁵⁸ Gross, *The Managing of Organizations* Vol. I (New York: Free Press, 1964), p. 371.

Since authority within these structures is delegated on the basis of technical skill, the jurisdiction of bureaucratic officials is usually limited to a specialized sphere of competence. Specialization tends to decentralize power. For example while a systems analyst in the Defense department may enjoy considerable discretion within his specific functional area, he would not ordinarily exercise any influence over matters in another area such as health or education.

Herbert Simon has emphasized that although bureaucratic leaders enjoy a good deal of power within their respective jurisdictions, their behavior is conditioned by the fact that they have internalized the goals of the organizations to which they belong.⁵⁹ This observation is quite significant for it leads us to a consideration of power in a way which serves to illustrate a key deficiency in the approach commonly utilized by political scientists in their study of this all important concept.

Lasswell's assumption that "the influential are those who get whatever there is to get" implies that power is a commodity which merely serves the interests of those who wield it. Although the decision making approach Lasswell later adopted amounted to a rejection of his earlier elitist conclusions, the pluralist theory which evolved from his new approach continued analyzing power merely as a self serving commodity. The major innovation of the pluralists is that they identified the influential (or decision makers) as a multiplicity of self serving elites.⁶⁰ Bureaucratic power, as it is perceived by Simon, functions to realize the goals of the bureaucracy. Since the objectives of these governmental institutions are essentially public, then the benefits resulting from their successful performance must also be public, whether these objectives involve preventive health, waste disposal or the erection of public housing. The impact of this phenomenon is further exaggerated by the growth of professionalism to which we have already referred. Individuals who identify their careers with a particular public service will seek to increase the efficiency of their organizations in carrying out their particular governmental functions.⁶¹

Of course, it would be naive to assert that bureaucratic leaders are not motivated by the same selfish impulses which pervade all of politics. These officials have also been known to seek to maximize the resources at their command almost as a matter of principle, even when the very pur-

⁵⁹ Simon, *op. cit.*, p. 11.

⁶⁰ A more extensive critique of the pluralist approach is found in Joseph P. Viteritti, *Police, Politics and Pluralism in New York City* (Beverly Hills and London: Sage Professional Paper in Administrative and Policy Studies, 03-004, 1973), pp. 8-12, 46-49.

⁶¹ For an empirical case study which supports this point see Viteritti, *op. cit.*, 19-22, 61-65.

pose of their existence is the subject of vigorous political debate. Such an attitude, notwithstanding the element of interest, can not be separated from the fact that bureaucrats, whatever their function, often tends to perceive their career missions and the public welfare as one and the same.

Whether or not our government wants a more effective defense system in a time of peace, as opposed to better health care or more adequate housing, at a higher cost to the taxpayer is to some extent a question of values. As we have already emphasized, and Weber would agree, such questions are not susceptible to scientific solution. The policy science approach is merely an attempt to rationalize the instruments of government in terms of predetermined goals or values. Bureaucratic institutions contain the technical means to advance the progress of behavioral and natural science along with the organizational structure to utilize the resulting knowledge in the performance of their governmental functions.

In the last analysis however, the determination of which governmental functions will be given priority over others are not resolved within the bureaucracy. These questions are ultimately decided in the legislative branch of government which is popularly elected and highly responsive to the demands of powerful organized interests. Herein lies a basic strength and a basic weakness of the current institutional arrangement. The control of bureaucratic resources by other branches of government tends to offset the danger of a bureaucratic or technocratic despotism. However the determination of public priorities by elected officials leaves such important questions open to the influence of powerful self-motivated interests.

Despite Skinner's hopes to the contrary, science has not yet devised a method to eliminate the selfish character within human nature. Science provides us with a means to rationalize the instruments through which society goes about achieving its goals, but it can not determine toward what values these goals should be directed. Science can inform the government and the public of the imminent consequences of alternative policies, yet there is no mechanism within government which can insure that the dictates of science will be heeded by those responsible for making decisions. As Madison has long since taught us, such is the price of freedom in a democratic state. Given the tentative nature of scientific wisdom perhaps it is not a bad exchange.