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On Political Theory and Political Action*

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The overwhelming fact of our time is change—rapid large-scale change in politics, societies, technologies, and cultures. Many of these changes are continuing; some are accelerating. From the 1890's onward, most of the political institutions of the world have been shaken or transformed by a chain of wars and revolutions. By 1970, the majority of the world's adults were older than the political systems under which they were living. And there will be more change—both change in the relations among the world's many nations and societies, and change within each of them. We must navigate through the rapids of change or perish in them. We must face change, understand change, and sometimes initiate change in our thoughts; and we must meet change, respond to change, and sometimes initiate change in our actions.

To cope with change—indeed, to recognize it—some things must remain. What must continue for some time or as far as we can see ahead? What should be kept, what can be kept, what will recur? To decide how to act, we must seek answers to these questions; our hopes and our lives may depend on them.

None of this can be done well without some awareness of what we are thinking and doing, and of the larger contexts within which we are acting. It cannot be done, therefore, without political theory and without the courage and the knowledge which the understanding or creation of political theory requires.

In this task, mankind is threatened equally by the risk of two failures: the failure of cour-

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age and the failure of imagination. We can be destroyed either by the paralysis of fear or by the failure to think of anything new—to think of anything better than the few poor routines of action that we already know.

The history of mankind is a story of vast successes which have led to even vaster dangers. In our time, now, we must dare to act and know to act. Our lives and our children's lives may depend on our capacity to dare and on our capacity to know.

Fear could stop us not only from action but also from knowledge and discovery. If it does, our remaining actions will be blind. Blind zeal—the automatic acting out of pre-rehearsed routines—may be tolerable, even necessary, for short periods of time, provided that the old routines are not too inappropriate to the new tasks. But the longer such blind zeal is persisted in, the more rigid, narrowing, and eventually destructive and self-destructive it is likely to become.

These dangers exist in all kinds of countries, industrialized or developing, non-Communist or Communist. The struggle for needed new knowledge, for openness and resourcefulness, for new possibilities, discoveries and innovations, cuts across the great organized ideological divisions of our time. What role can political theory play in meeting these dangers and in the conduct of this struggle?

I. What Is Theory?

The ancient Greek word for "theory"—*teoría*—denotes passionate contemplation. It referred to the experience of spectators at a classic tragedy, which would leave them heightened in awareness and shaken and purified in their emotions.¹

The concept of *theory*, then, has an objective

¹ Bertrand Russell, *History of Western Philosophy* (New York: Simon & Schuster, 1945), p. 33.

and subjective meaning. In its objective meaning, "theory" implies *perception* of a relatively distant *object* or situation. It means *to see and perceive something outside the observing self*, even though the object of the observation may be within one's own larger personality.

But in its subjective aspect, "theory" means to perceive this object as *relevant* to one's own emotions, needs or desires—even if it were relevant only to one's desire to know or to resolve some inconsistency or dissonance in one's knowledge.

These two sides of theory imply perception of a double *context*, (regardless of whether this context be explicit or implicit, real or imaginary, ready-made or newly constructed).

1. What does this thing, situation or condition mean in a larger context or image of the outside world?

2. What does it mean *to me*, i.e., in the inner context of my personality with its memories, needs and desires?

The study or creation of theories requires first of all an ability to discriminate and recognize: This is the so-called "figure-ground perception"—the capacity to discern a dim figure against an otherwise chaotic background.^{1a}

But the creation of theories also requires *care*—care to feel concern or curiosity for the initial question or image of the problem, and to maintain some of this feeling throughout the changes of the perceived problem in the course of the investigation.

Finally, creating theories requires a capacity for *interpretation*, that is, for putting perceptions into contexts. These include both outer and inner contexts, if such contexts are available, or creating such contexts, if they are not.²

These contexts must be capable of being *shared*. They must be stateable, retraceable, and reproducible, by operations which can be performed by any one with requisite training. That is to say, they must be formally rational.

The external contexts, at least, also must be capable of being verified, directly or indirectly

^{1a} I am indebted to Dr. John P. Spiegel for having drawn my attention to the similarity between figure-ground perception and the perception of new configurations in art or science.

² Such contexts are social, as well as psychological and physical. On the problems of interpretation, see Jürgen Habermas, *Strukturwandel der Öffentlichkeit*, 2nd ed., (Neuwied a/Rh-Berlin: Luchterhand, 1965); *Erkenntnis und Interesse* (Frankfurt: Suhrkamp, 1968); "Toward a Theory of Communicative Competence," in H. P. Ditzel (ed.), *Recent Sociology No. 2: Patterns of Communicative Behavior*, (London: Collier-Macmillan Ltd., 1970); and *Towards a Rational Society* (Boston: Beacon Press, 1970), esp. Chap. 5. See now also John R. Platt, *Perception and Change: Projections for Survival* (Ann Arbor, Mich.: University of Michigan Press, 1971), pp. 25-73.

—that is, either corroborated or disconfirmed—through such impersonally repeatable operations. In this sense, theories must be capable of being made scientific, even though they may have been stated originally in poetic or literary form.³

What are the effects of theory? First of all, a good theory offers orientation. It furnishes a model in which future observations and consequences of actions in the outside world can be predicted. This includes both a model of the problem area and of its wider context or environment.

A good theory also furnishes a presentational image of more than one dimension from which several one-dimensional, sequential pathways can be read off. These pathways are to be mutually consistent, so as to reduce or avoid cognitive dissonance. Hence different pathways among parts of the same image should not be incompatible; and in the case of a rigorous theory, the answers should be identical for all such pathways.⁴

It follows that a theory is not a simple proposition but an ensemble or configuration of interrelated propositions. This fact has direct implications for the way in which theories can change. Ordinarily such an ensemble will tend to be more stable than many—or any—of the single propositions which are its members. Most often, progress in knowledge changes our knowledge of single facts or propositions, leaving the larger ensembles and configurations of thought substantially unchanged. When these larger configurations—the major patterns of our thought about some problem area—themselves are changed, we speak of a revolution in our theory, thought, or knowledge. Routine progress in political theory, in short, changes some members of a class of propositions; a revolution in theory changes the class itself; or it may even change a configuration of several such classes.⁵

There is a profound connection between the problem of wisdom and the problem of revolution. Wisdom does not seek answers; it asks what classes of answers are worth seeking. Wisdom asks not what we know but what is worth knowing. It does not deal with propositions but with entire classes, configurations and ensembles.

³ For the relationship of poetry and rational theory in early Greek philosophy, see Werner Jaeger, *Paideia* (New York: Oxford University Press, 1945), vol. I, pp. 152-153.

⁴ For the concept of "presentational" vs. "discursive" communication, see Susan K. Langer, *Philosophy in a New Key*, (Cambridge, Mass.: Harvard University Press, 1951), pp. 79-102.

⁵ See Thomas S. Kuhn, *The Structure of Scientific Revolutions*, (Chicago: The University of Chicago Press, 1962).

bles of propositions; and it deals particularly with the criteria for selection and preference among such classes or ensembles.⁶ Revolutions occur when the old ways have failed in which some kinds of knowledge were preferred over others. They consist not in the reordering of any one structure of politics, society or culture, but in the hierarchical and nearly simultaneous reordering of several interdependent structures at several levels of organization.⁷

The significance of this process of hierarchical restructuring for political theory will be considered later in somewhat more detail. For now let us only note that such periods of comprehensive reordering of ideas, values and practices occur when an old pattern of wisdom has failed to cope with new but inescapable problems, when it has failed to adapt and respond to them, and a new wisdom is needed. Seen in this way, wisdom and revolution are both aspects of the problem of social learning and of the self-transformation, gradual or sudden, of social and political systems, and of the political theories which help us to think about them.

II. What Kinds of Knowledge Does Theory Produce?

A theory produces knowledge of several kinds. For the sake of convenience, these may be organized under nine headings. The first five of these aspects of theory are primarily cognitive, while the last four are more nearly action-oriented. The nine aspects are:

1. A scheme for the orderly and efficient *storage and retrieval* of memories. In this respect, a theory functions as a coding scheme, and its efficiency can be evaluated in terms of the efficiency of coding.⁸

*To assert an "end of ideology" in a general sense would be to assert an end of the search for wisdom. It would mean an end to the changing goals by individuals and societies, to the choice among conflicting goals, or to the changing of priorities among them. Only if we restrict the term "ideology" to those belief systems which restrict or exclude any control by reality, would it be rational to consider to what extent the class of such forms of reality-distorting or reality-excluding ideologies might decline in frequency and social influence, and under what conditions. For a different point of view, see Daniel Bell *The End of Ideology* (rev. ed.; New York: Free Press, 1966); and for a relevant discussion, see Joseph LaPalombara, "Decline of Ideology: A Dissent and an Interpretation," this *Review*, 60 (March 1966), 5-16. Cf. also Karl Mannheim, *Ideology and Utopia* (New York: Harcourt, Brace, 1947); Chaim Isaac Waxman (ed.), *The End-of-Ideology Debate*, (New York: Simon and Schuster, 1969).

⁷ John R. Platt, "Hierarchical Restructuring" *Bulletin of the Atomic Scientists*, Nov. 1970, pp. 2-4, 46-48; also in *General Systems*, v. 15 (1970), pp. 49-54.

⁸ Cf. K. W. Deutsch, "On Theories, Taxonomies, and Models as Communication Codes for Organiz-

2. An aid to *insight*, that is, to the perception, labeling of and recognition of previously unrecognized and/or poorly defined patterns of things, events, relations or symbols in the outside world. (This aspect is similar to the well-known experiments in "figure-ground" discrimination mentioned above, in which a dimly outlined pattern is hard to perceive against a disordered background, but is recognized more easily by persons to whom a similar pattern has been shown.)

3. Organization and *strategic simplification* of knowledge. Arabic numerals, positional notation and the number zero are familiar examples from mathematics. Each of these symbols or practices reduces the amount of detail that must be remembered.⁹ Political concepts, such as "power," "legitimacy," "natural rights," quite apart from their empirical corroboration or disconfirmation, may also serve in such a simplifying function in our processing of information about politics.

4. *Heuristics*.¹⁰ Theories serve as search devices for new observations, experiments and discoveries. The heuristic effectiveness of a theory is the greater the more fruitful it proves to be, that is, the more likely it is to lead to new knowledge and new discoveries, including possibly the creation of new theories that will eventually supersede it.

Any metatheory of science—that is, any theory about scientific theories—must include a theory about the search for new knowledge. In this respect, therefore, it must overlap with the general theory of search. Work on a probabilistic theory of search has been carried on since World War II, and its applications today include the finding of submarines in the ocean, the finding of references in a library, and possibly the finding of new knowledge at the edge of the unknown.¹¹

ing Information," *Behavioral Science*, (Jan. 1966), 1-17.

⁹ This point is discussed in K. W. Deutsch, *The Nerves of Government* (rev. ed.; New York: Free Press, 1966), pp. 251-252. See also the discussion of "etherealisation" in Arnold Toynbee, *A Study of History*, (3rd ed., New York: Oxford University Press, 1945), Vol. III, pp. 174-192.

¹⁰ As a branch of knowledge, heuristics is the study of finding, or invention, and of the methods and conditions which favor it. The word recalls the reported shout of Archimedes "Heureka!—I have found it!" when he ran naked from his bathtub into the streets of Syracuse, overjoyed by his discovery that the volume of any body, no matter how irregular in shape, can be measured by the amount of fluid it displaces on immersion. See George Polya, *How to Solve It*, second ed. (Garden City, N.Y.: Doubleday Anchor Books, 1957), pp. 112-114, 129-134.

¹¹ See e.g. Philip M. Morse, "On Browsing: The Use

5. *Self-critical cognition.* This aspect of theory stresses the assumptions and biases implicit in operations of verification or corroboration, as well as with other sources of error in any of them. It deals with our need to *know*, in contrast to what we guess at as a mere opinion. To be sure, no theory can be established as ultimately true; any theory can be disconfirmed by reproducible evidence and replaced by a successor theory which fits the evidence better; and this successor theory in turn may be replaced in an open-ended sequence of successions. But at each stage in this process, verification can establish the truth-content of the theory under examination. Every scientific theory contains existential statements of the form "there is . . ." and "if . . . then," referring to empirically verifiable objects or events. Such statements, if verified, make up its *truth content*; and though the larger theory may prove untenable and be superseded by another, any such successor theory will have to comprise all or most of the verified existential statements included in its predecessor.¹² These lasting elements in the cumulative growth of knowledge are as important as the changing theories in which they are temporarily incorporated. Any self-critical theory, therefore, is not only a first-order theory about reality but also a critical second-order theory about other theories and about itself and its own limitations. The critical search for our own biases and errors, and the no less important critical search for verified items or knowledge, are both essential contributions which theories should make to our thinking.

Self-critical cognition should warn us not only against simple errors of fact but against the subtler errors of bias, of hidden assump-

tions and omissions, or answers already made likely by the formulations of our questions, or else tacitly excluded at the outset from our search. A wide variety of possible sources of such biases have been pointed out by different writers: logical or epistemological precommitment; the weight of onesidedly selected evidence; plain economic interest of class or group; emotional ties of social association, status or prestige; concerns for promotion and career, or for popularity within one's reference group; the ceaseless bombardment by mass media or by state-made propaganda; or the deeper bonds of tradition, culture, personality and childhood memories.

Biases of all these kinds exist; but even where they do, they are probabilistic and not wholly determined. Men can look to some extent critically at these pressures on their judgment. They can to some extent compensate for them by drawing upon additional information and critical reflection. As far as possible, they can make explicit the elements, assumptions, implications and limits of their thoughts. They can try to specify not only the quantitative aspects of their findings but the threshold values that may decide about the side effects and qualitative aspects of the processes studied. As they can cross-examine external evidence, so they can cross-examine their own biases which are unlikely to be quite consistent, and they can help themselves in this way to see more of the world more nearly as it is. It is not the least among the tasks of theory to increase this chance of critical self-liberation for the specific task of enhancing the power of human beings to know reality and to deal with it.

If it is important to unmask biases and errors, and to revise or discard theories that suffer from them, it is also important to try to do so with some serious respect for the persons with whom we disagree and for the ideas and theories which we reject.

Thinking is invisible work. Thoughts are invisible tools. Theories and knowledge are invisible capital equipment, contributing to the production of decisions. They are equipment to produce guidance for action, including action in search of further knowledge and for a wider range of possible future actions. Corroborated theories and verified knowledge are invisible capital equipment that has been tested and that can be relied on to a higher degree and over a domain of validity that can be more readily identified, at least at its core, and eventually also at its limits.

It follows from this view that discarding a previously accepted theory and creating a new one in its place always involves a cost in time,

of Search Theory in the Search for Information," (Cambridge: Technical Report No. 50, Operations Research Center, Massachusetts Institute of Technology, February 1970), mimeographed.

¹² According to the "ether" theory of physics, waves in the invisible "ether" permitted the sending of wireless signals across the Atlantic. The "ether" theory was replaced by relativistic physics after the "ether" had turned out to be non-existent, but the existential statement "there is wireless telegraphy" had to be taken over by the more recent theory. The proposition "there can be wireless telegraphy" was not only capable of being "falsified," as Sir Karl Popper likes to use the verb. It was verified by the building and operating of broadcasting stations and receiving sets, and every serious future theory of physics henceforth had to be compatible with this verified fact. For the concept of truth-content as a test of acceptable successor theories, see K. W. Deutsch "On Methodological Problems of Quantitative Research," in Mattei Dogan and Stein Rokkan (eds.), *Quantitative Ecological Analysis in the Social Sciences* (Cambridge, Mass.: M.I.T. Press, 1969), pp. 19-39.

effort and resources. Similar to the case of tangible capital items, this cost of replacement must be measured against the expectable gains in the quantity and quality of future output—here the quantity and quality of future knowledge and decisions to be produced with the aid of the successor theory.

In deciding whether to replace one theory with another, our choice most often will be between a better and a less good one. The obsolescent or otherwise inferior theory, too, is likely to have a significant truth content and some capacity for contributing usefully to the making of decisions. The choice between two theories ordinarily is not between all or nothing but between more or less.

Asking for the truth content of rival theories should help us to guard against arrogance. It is usually an error to think that those of our colleagues who hold an "incorrect" theory cannot possibly obtain any valid results; nor would it be at all realistic to think that our own possession of a better theory—easily mislabeled "*the correct theory*"—will guarantee that all of our own results will be valid, useful or adequate in dealing with our problems. We may believe that theories or scholars with whom we disagree are swayed by biases of culture, ideology or class, but from this view we cannot cogently infer that their findings are entirely devoid of truth. All we can realistically hope is that a better theory will give us a better chance to do a better job. In the search for new discoveries and more effective actions, a better theory will give us most often a greater probability, not a monopoly.

Much as it is rare for a piece of tangible capital equipment to destroy its users or its environment, or to inflict intolerable damage upon them, so it is rare for theories. Yet we know of such pernicious cases from the history of industry, such as some early nineteenth century processes of manufacturing sulphur matches, which poisoned and killed or crippled many of the workers; and we know from our own century how the political theories of fascism and race domination became engines of destruction and self-destruction for many of the governments, groups and individuals who adopted them.

If these five aspects of theory are primarily cognitive, the remaining four aspects bring us closer to the realm of action. In order to act well, we must know what we want; know what we know; know what to do and how to do it; and know what is worth wanting, worth knowing, and worth acting for. Our last four aspects of theory follow from these four requirements.

6. Recognition and continuing awareness of

values and goals.¹³ For both individuals and groups, this includes an awareness of their own preferences and desires, their "utility scales," as economic theorists call them, their "preferred outcomes," their goals toward which they actually are tending to move, as well as their goal images which may represent these real goals only more or less inaccurately. Awareness of values also includes awareness of entire value orientations, which emphasize entire classes of valued outcomes, such as "honor," "power," "wealth," and others, rather than any one particular outcome within any such class. Finally awareness of values also comprises an awareness of coherent value configurations, as these are transmitted by existing philosophies, religions, or normative political theories, or as they may come to be proposed by new ones.

Just this, of course, political theorists have almost always done. In the great tradition of political science and political thought, from Solon and Plato to such diverse minds as Locke, Rousseau, Madison, Pareto, Lenin, and Gandhi, the normative element has played a vital role. Each of these thinkers tried to understand reality, to appraise "what is," but he took his viewpoint and his motivation from his sense of what ought to be. Even Machiavelli, who claimed to describe what men and governments were actually doing, and not what they ought to do, was in fact at least a crypto-moralist: he wanted Italian princes to learn the techniques of power so that one of them in time might make Italy a united, strong and independent country, free from the rule of foreigners. Clearly, it is impossible for us to share all the values of all the political thinkers of the past; they are too different for that. But we must remember that they had them and were moved by them, and that no political theory can be understood without understanding both its overt and its hidden normative aspects.

¹³ Cf. Anatol Rapoport "Some System Approaches to Political Theory" in David Easton (ed.), *Varieties of Political Theory* (Englewood Cliffs, N.J.: Prentice-Hall, Inc. 1966), pp. 129–141. Political theory requires an awareness not only of values but also, and particularly, of human needs. A value for a political actor is whatever he happens to desire; a need for him is any condition or input which he cannot forgo, or lack, without suffering significant observable damage. Needs and values overlap but imperfectly. Men may value what they do not need, and need what they do not value. Seventeenth century sailors who had never heard of vitamin C still fell ill from scurvy without it. Whether physical or psychic, needs are objective and verifiable, at least in principle, relative to each actor. For an important plea for orienting political theory more closely to human needs, see Christian Bay, "The Cheerful Science of Dismal Politics," in Theodore Roszak, ed., *The Dissenting Academy* (New York: Pantheon Books-Random House, 1968), pp. 208–230.

7. *Empirical knowledge.* Here indeed the study of politics turns into political science, that is, into knowledge that can be tested, verified, and shared among different investigators, regardless of their personalities and preferences. Man is a part of nature, and hence much about his behavior can be known, much as facts about other parts of nature can be known.¹⁴ Insofar as such knowledge is available about political behavior, it can tell us about the possible attainment of political goals: which goals are attainable, under what conditions, within what time, and at what price.

Beyond this, such "objective" knowledge—objective in the sense that it is verifiable and shareable—can tell us about the compatibility or incompatibility of goals under particular conditions, for man in politics usually does not live by one goal alone; and it can tell us about the expectable consistency of the results of actions. It can tell us, therefore, about the viability of goal configurations, and hence of entire systems of politics and governments. Accordingly, such factual knowledge can tell us about the probable feedback effects from means upon ends, and from political actions upon their actors. This last is a knowledge that political zealots have too often slighted when it applied to themselves and to their own organizations and regimes.

Insofar as it is obtainable, this kind of scientific knowledge is "objective" in the sense of being verifiable and shareable—but it is not "free from values" in Max Weber's sense of the terms. Values enter into the selection of our topics of inquiry, of our strategies of research, of our interpretation and evaluation of the implications of our findings, and into our choice of actions by which we respond to them. It follows that holding of particular values can increase or decrease the probability of our discovering some particular items or kinds of knowledge, and of accepting as real their implications. Similarly, our membership in social or cultural groups which encourage the holding of such values can change these probabilities of our discovering, and acting on, such kinds of knowledge. Here, too, however, we are dealing with probability, not with determinism. Often, when we speak of the power of "ideology"—usually in referring to the views of other people—we overestimate the biasing power of social

situations, and underestimate the self-correcting capabilities of the ensemble of operational methods of verification which are available to us.

8. *Pragmatic skills.* Already an ancient Greek philosopher, Heraclitus, distinguished between "knowing what" and "knowing how."¹⁵ Skill, "know-how," or what we call "practical politics," all these are techniques for mastering reality, or at least for coping with it. They are techniques that can be discovered, learned, described, transmitted. Their test is whether they work. If they do, they may work just as well without being understood, or even better, at least for a time. Often they are taught less well by description than by experience, training and example; and success in their performance may depend less on the equality of step-by-step reasoning and more on the inequality of aptitude.

There is a seemingly ineradicable element of skill and talent in all political activity, and no serious political theory can afford to deny it. Yet what may not be rationally understood by participants may still be understood, at least in part, by observers; and political theory must try to contribute also to our better understanding of the role and the limits of skill, style, timing, and charisma in the political process, and in the success or failure of our own actions.

9. *Wisdom.* As suggested earlier, wisdom is second-order knowledge. It is knowledge about knowledge, a skill about skills, an evaluation of values. It tells us what knowledge to seek, what skills to learn, what values to strive for. In this sense, explicit or implicit wisdom precedes our first theories, for it tells us what to theorize about. But it also follows our theories, by telling us something about the actions which we should take on them.

Generally, wisdom deals with our selection of goals and of priorities among them. It thus deals with changes in our goal configurations—our ways of feeling, thought and life. In the last analysis, it deals with the selection of larger encompassing contexts for our feelings, thoughts and actions. Out of the ensemble of possible alternative contexts of memories and values, which particular context are we to select or construct for the design and interpretation of any particular scientific operation? What context are we to select or construct for the posing of any ethical, intellectual or artistic question, and for our search for an answer to it? What context are we to choose for any political action—for conceiving it, planning it, carrying it through, and evaluating its results?

¹⁴ Cf. Immanuel Kant, "Idee zu einer allgemeinen Geschichte in weltbürgerlicher Absicht," *Berlinische Monatsschrift*, 1784, pp. 385–411, reprinted in Kant, *Was Ist Aufklärung? Aufsatz zur Geschichte und Philosophie* (Göttingen: Vandenhoeck Ruprecht, 1967) pp. 40–54.

¹⁵ Heraclitus called the latter type of knowledge "fronesis": Werner Jaeger, *Paideia I*, pp. 180, 184.

Context is the basis of all meaning; without context, all such activities would appear meaningless. Surely, we are never wholly free in choosing the contexts in which we think and act. But being human, we are never wholly determined from outside, nor wholly ruled by our own past. We always have some room for choice; and our fate depends on how we use it. But most of our decisions about thought or actions will depend upon the larger context we have chosen, wittingly or unwittingly, from which to draw their meaning for us.

If our choice of context can be perilous in its consequences, it is no less imperilled at its source. For we cannot verify the wisdom by which we choose our context and basis for all meaning. Any operation of verification would presuppose another context which itself cannot be verified as a whole but only corroborated in part within its own framework. At best it can be shown to contain probably more truth than, or at least as much truth as, any other context of which we can here and now conceive. This is the peril of all times of great change in politics, society or culture. We can verify the fact—when it has become a fact—that our old wisdom and our old context have broken down, that they fail to cope with the new problems; but we cannot completely verify our new contexts. We must seek new wisdom at our own risk.

There is one set of tentative considerations that can help us at least somewhat in this risky task. Whatever wisdom we have or adopt at a particular time will not merely guide our selection of theories, but it must also be open to at least partial correction by these theories and by the evidence from reality which our verification procedures may produce. Any wisdom not open to reality correction in this sense would degenerate into mere ideology. In this sense, wisdom is the steering section of science; and it is itself a link in a dynamic cycle which includes the selective creation of theories and the selective search for verification in reality, leading to a modification or transformation of wisdom at the next stage. Such feedback cycles may form an ever-narrowing sequence toward decline, stagnation and sterility, or they may lead to a widening sequence of deeper insights, more fruitful theories, greater amounts of verified knowledge, and growing cognitive and evaluative capabilities. In which of these two directions a proposed version of wisdom will take us cannot be decided in advance with any certainty. Only later may we be able to say more definitely of the results of our risky choices that we have come to know them by their fruits.

III. Theory as an Integrative Process

We have surveyed nine aspects of political theory. But we can also look upon them from another viewpoint. We can recognize them as so many stages in a single production cycle of political knowledge and political action. If any one of these stages is neglected, the entire cycle will suffer and may stop—or someone somewhere will have to make an effort to repair the damage. Memories, insights, organized symbols, self-criticism, heuristic search, consciously held values, verifiable knowledge, practised skills, risk-laden wisdom—all these are essential to political theory and vital to action. Political thought and action have cycled through these stages in the past and will continue to do so in the future. Owing to the diversity of gifts and the division of labor, some of us will concentrate our efforts on some particular stage, but all stages in the process are necessary; none can be omitted if it is to go on. In this common task of keeping political theory alive—of helping men to understand and control their fate as much as possible—all of us, political scientists and political humanists, have need of each other.

Seen from this viewpoint, political theory as a whole is an integrative and partly integrated process. We must become more conscious of its unity and make it stronger, without confusing the unity of theory as an intellectual effort with the presence or absence of unity in the political systems which we analyse.

Already now, to be sure, particular political theories may serve as instruments of integration in the political systems in which they hold sway. Under suitable conditions, a political theory may reduce cognitive dissonance, or it may shift it from the center of political attention to its margins. Such a theory may also reduce cognitive or evaluative conflicts within the personality of individuals, or conflicts between individual and group, or among groups within the state. In this manner, political theory may promote personal singlemindedness and peace of mind, group solidarity, and/or national morale.

If it does these things, then individuals, group leaders, and national governments may prize it highly, even if the particular theory should have degenerated into an ideology, that is, if it should have become substantially inaccessible to reality control. If political theory began as an instrument to apprehend reality, now, turned into an ideology, it becomes an instrument to exclude it from the awareness of its adherents. For a time, both elites and mass believers may enjoy such an intellectual and emotional shelter from unpleasant facts, but even-

tually the bill for collective self-deception must be paid.¹⁶

But a theory also can have the opposite effects. It may reveal imbalances or contradictions, disproportionate rates of change. It may highlight elements or aspects of reality that are in conflict with others, and previously were ignored. It may show us an important new context. It may increase our cognitive dissonances or the clash among our values. In practice, it may upset past habits of trust, agreement, cooperation or obedience. It may not bring peace but a sword. Yet it may be an important theory. It may contain important elements of truth and we may ignore it at our peril.

All this seems true for theory in any field of knowledge. But what of the special problems of a theory of politics?

IV. The Central Task of Politics

Politics is the steering sector of society. It deals with the organized effort of society to change the probability of outcomes. In this sense, politics is always the study of *power*, but it is particularly the study of the power of any society *over its own fate*.¹⁷

Similarly, perhaps, theories of modernization should focus more realistically on the probability of major disproportions and imbalances inherent in the process.¹⁸

Only secondarily does politics deal with the steering performance and the power of *subsystems* on the society—that is, of individuals and groups, including interest groups, nationalities and classes—relative to their own particular fate and relative to one another. The study of “who gets what, when, how” is indeed a large and crucial fact of the study of politics, but it is

¹⁶ See the references in note 6, above. For a proposed concept of “extreme” ideology as one closed to reality correction, see K. W. Deutsch, *Politics and Government: How People Decide Their Fate* (Boston: Houghton Mifflin, 1970), pp. 9–10.

¹⁷ For a sociological approach compatible with this view, see Amitai Etzioni, *The Active Society: A Theory of Societal and Political Processes* (New York: Macmillan, 1968).

¹⁸ Cf. Albert O. Hirschman, *The Strategy of Economic Development* (New Haven: Yale University Press, 1958); and A. O. Hirschman and Charles E. Lindblom, “Economic Development, Research and Development, Policy Making: Some Converging Views,” *Behavioral Science*, 7:2, April 1962, pp. 211–222; cf. also Etzioni, *op cit*, p. 110. See also Helio Jaguaribe, *Economic and Political Development: A Theoretical Approach and a Brazilian Case Study*, (Cambridge, Mass.: Harvard University Press, 1968); Barrington Moore, Jr., *Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World* (Boston: Beacon Press, 1966); and, for a different approach, Samuel P. Huntington, *Political Order in Changing Societies* (New Haven, Conn.: Yale University Press, 1968).

not in itself the part that points toward the future. For this future, political science deals inescapably with the collective self-control of human beings—their joint power over their own fate.¹⁹

Just as information is measured relative to what is already known to the receiving system, so power is measured relative to what is already likely to happen otherwise.²⁰

Similarly, steering performance can only be appraised—let alone measured—against the probable course of events in its absence, that is, against the alternative of the political system’s mere drifting with its larger social and ecological environment. The performance of politics consists essentially in the difference it makes to the “non-political” sectors of society. How could we judge the steering performance of a helmsman, or a ship, without knowing something about the storms, currents, waves and sandbanks among which they have to seek their course? And how could we judge the performance of any statesman or government in our time without knowing something of the vast changes in population, economic life, cultural and social practices through which all contemporary societies are passing?

To answer such questions, we need a broad array of facts. Many of these data must come from other social sciences, such as economics, demography, sociology, psychology, and psychiatry. Regardless of their disciplinary origin, such data are becoming crucial for political analysis. Basic data about the major developmental trends of the entire society—social, economic, cultural and ecological, and the probability distribution of further developments made likely by their interplay—thus themselves have become an indispensable part of political research and theory. Today studies of such data are not a marginal extension of political analysis; they are becoming inseparable from its core and essence.²¹

¹⁹ See Harold D. Lasswell, *Politics: Who Gets What, When, How* (Cleveland: Meridian Books, 1958); and David Easton, *The Political System: An Inquiry Into the State of Political Science*, (New York: Alfred A. Knopf, 1953).

²⁰ See Robert A. Dahl “The Concept of Power”, *Behavioral Science*, 2 (July 1957), 201–215; cf. also Dahl’s *Modern Political Analysis*, (2nd ed.; Englewood Cliffs, N.J.: Prentice Hall, 1970).

²¹ For examples of such data, see Bruce M. Russett, Haywood R. Alker, Jr., Karl W. Deutsch and Harold D. Lasswell, *World Handbook of Political and Social Indicators* (New Haven: Yale University Press, 1964); Charles L. Taylor (ed.), *Aggregate Data Analysis: Political and Social Indicators in Cross-National Research* (Paris and The Hague: Mouton, 1968); Michael Hudson and Charles Taylor, *Second World Handbook of Political and Social Indicators* (New

What differences do we find among societies and nations, among regions and classes, groups and individuals—and how much or little is politics contributing to their perpetuation or their change? What are some of the missed opportunities, or the outright failures, in the current steering performance of political systems—West, East, North and South? How much *could* the political steering systems contribute to human betterment, within each context of temporarily given conditions, if large numbers of people would change their behavior? How likely or unlikely would such changes be and what can be done to change these probabilities?

So conceived, our political and social inventories and indicators, our data programs and attitude surveys need not be the mere piling up of sterile information, nor need they be monuments of worship of whatever facts and practices exist. They can help us discover the dynamics of social and political reality, so that we can develop from them a dynamics of possible political and social change toward human self-determination.

V. The Growth of Theory: Can It Be Recognized?

How can we know whether we are making any progress toward this goal? How do we know whether political theory really grows over the years and decades, or whether it just changes much as the fashions in women's dresses change? Will it be amusing to wear radical pessimism this season, and skeptical conservatism next year, and perhaps once again modified consensus the year after that?

There is only one way to know whether our knowledge in fact has grown. No matter how different our theories may look on the surface, by how much has their truth content increased? How many new existential statements do they imply, in addition to the old ones included in their predecessors? How many new facts, relations and possibilities have we discovered, how many earlier conjectures confirmed or even modified, or else refuted? What new predictions can we make and test, what new political, so-

cial or legal actions, what new laws or institutions, now seem possible and perhaps worth trying?

In a broader sense, we can test the growth of political theory in regard to each of the nine aspects or stages of the production cycle of theory, which we surveyed earlier. Has there been growth in relevant facts and data to be stored and ordered for recall? Has there been a gain in new insights, in greater awareness of the need to act, in greater sensitivity to the real, practical needs of men and women? Have we found more powerful or efficient ways for organizing our knowledge? Have we sharpened and deepened our critical reflection, and applied it more effectively also to our own thoughts and practices? Has our thinking become more fruitful, more conducive to the making of new discoveries and to their testing and development? Are we developing a clearer awareness of values, value orientations and value configurations—both in the political processes and systems we observe and in our own thoughts and actions? How much actual, dependable, tested knowledge have we gained—knowledge that could be called scientific and shared among scientists? What skills have we discovered, understood, learned and made available for application to research or political practice? And finally, what wisdom, if any, have we gained?

No single theorist, nor any single group of scholars, is likely to make contributions in all these ways. This is why we need each other's help, if political theory is to develop strongly enough and fast enough to match the needs of our time. But even collectively, as a profession, what real progress, if any, have we made in the last few years?

Let us look again at the nine aspects of theory which we listed earlier. Five of these, we recall, related primarily to cognition and only indirectly to action. The remaining four related more directly to the political actions that men take, or the steps that could be taken if we will them. What has been gained in recent years in relation to each of these aspects, and what promising developments are under way?

VI. The Evidence of Recent Years

As regards the first aspect of political theory, its basis of experiences, memories and data with which it has to deal, we find very rapid growth. The universe of politics has grown, to over 140 nation-states, and within each of these states, the public and political sectors of life have grown. In 1959, the expenditures of the public sector—national, state or provincial, and municipal governments, plus social security and public enterprises—accounted for a median

Haven: Yale University Press, pub. sched. 1971); J. David Singer, *The Wages of War* (New York: Wiley, pub. sched. 1971); J. D. Singer (ed.), *Quantitative International Politics: Insight and Evidence* (New York: Free Press-Macmillan, 1968); and *Beyond Conjecture: Data-Based Research in Political Science* (with Susan Jones), (Chicago: Peacock Publishing Co., pub. sched. 1971); Raymond Bauer (ed.), *Social Indicators* (Cambridge: M.I.T. Press, 1966). For a careful and comprehensive discussion, see Richard L. Merritt, *Systematic Approaches to Comparative Politics* (Chicago: Rand McNally, 1970).

share of about 34 percent in the 28 countries for which data were available.²² There is some reason to think that in many countries, this public sector has grown still further during the 1960s.

Not only the quantity but also the diversity of political experience has grown. By 1970, there were 14 Communist countries in the world, ruled by party regimes committed to at least four distinct varieties of communist ideology—the Soviet Russian, Chinese, Yugoslav and Cuban types, with a fifth type, the Czechoslovak, being forcibly subordinated to the Russian version in 1968, and with Rumanian, Albanian, Polish and North Vietnamese varieties still preserving some degree of distinctiveness. The variety of private enterprise systems also grew, or at the very least persisted, ranging from oligarchies and laissez-faire economies in parts of Latin America to the welfare states and mixed economies of Scandinavia and other parts of Western Europe. Under these conditions, social and economic systems are no longer simple givens, to be treated as a “non-political” background of politics. The social order itself has become a variable for political research, much as it has become an object of political contention in the practice of many countries. We now can compare the working of political institutions and the political behavior of people under different social systems, as well as against the contrasting backgrounds of rich and poor countries, and of Western and non-Western culture.²³ Together, these contrasts and possible comparisons offer us a range of possible political experience far beyond anything that Aristotle, Machiavelli, Montesquieu, Rousseau or Pareto could have included in their theories.

Simultaneous with this expansion of our universe of political experiences, there has been a vast expansion of the political memories and data available to political scientists; and this growth of data is continuing. Such data include mass opinion surveys; elite biographies and interviews; voting statistics at national and local

levels; legislative rollcall votes; aggregative statistics of political, social and economic indicators; data from content analysis; data about wars and other historical events; data from other social sciences; and mathematical and statistical routines, ratios, and other secondary data.²⁴ In 1966–67, the present author estimated that for the field of political science alone, the stock of such relevant data may have totalled in 1965 about 16 million punched card equivalents, with annual additions coming in at the rate of more than 2.5 million card equivalents per year. By 1975, it was then estimated, the stock of political science data would have grown to more than 30 million card equivalents, and the annual additions to more than 5 million card equivalents.²⁵ Today, in 1970, it appears that these estimates were, if anything, too low.

We may consider this vast enlargement of the information base of political science as “a nightmare,” and we may reject the systematic analysis of large amounts of such data simply as irrelevant for the understanding of politics, as some distinguished senior political scientists of a tradition-oriented historical and literary cast of mind have suggested.²⁶ But what would have become of medicine if physicians had refused to consider the statistics of epidemics and the evidence of millions of case histories? What would have become of chemistry if chemists had become afraid of the large number of compounds, what of biology if biologists had feared the large number of data about different molecules and cells, what of astronomy if astronomers had become frightened of the multitude of stars?

There is no reason for political scientists to become fearful of the large amounts of evidence of how people act in politics. Modern methods of information storage and retrieval, and of electronic computation, make it possible to deal with large amounts of data—if we know what we want to do with them, and therefore, if we have an adequate political the-

²¹ See the literature cited in note 20.

²² See Bruce M. Russett, Hayward R. Alker, Jr., Karl W. Deutsch and Harold D. Lasswell, *World Handbook of Political and Social Indicators*, p. 63.

²³ See Frederick J. Fleron, Jr., (ed.), *Communist Studies and the Social Sciences: Essays on Methodology and Empirical Theory* (Chicago: Rand McNally, 1970); Richard L. Merritt and Stein Rokkan (eds.), *Comparing Nations: The Use of Quantitative Data in Cross-National Research* (New Haven: Yale University Press, 1966); and Mattei Dogan and Stein Rokkan (eds.), *Quantitative Ecological Analysis in the Social Sciences* (Cambridge: M.I.T. Press, 1969), for discussions of intra-national as well as international comparisons.

²⁴ Karl W. Deutsch, “The Impact of Complex Data Bases on the Social Sciences,” in Ralph L. Bisco (ed.), *Data Bases, Computers, and the Social Sciences* (New York: Wiley, 1970), pp. 19–41, esp. p. 30. See also, Heinz Eulau and James G. March, eds., *Political Science*, (Englewood Cliffs: Prentice-Hall, 1969), p. 58.

²⁵ Cf. Frederick L. Schuman, *International Politics: Anarchy and Order in the World Society* (7th ed.; New York: McGraw-Hill, 1969), p. viii, n.l.; Hans Morgenthau, *The Annals of the American Academy of Political and Social Science*, (July 1965); For an opposite approach, see James N. Rosenau, ed., *International Politics and Foreign Policy*, revised ed. (New York: Free Press-Macmillan, 1969), and the collections edited by J. David Singer (note 20, above).

ory to help us formulate our questions and to interpret the answers we obtain.

Computers cannot be used as substitutes for thought, nor can data replace values. But computers can help us to carry out the analyses which our thoughts and theories suggest. Data can help us decide whether the world of facts at some particular time and place has been moving in line with our values or against them, and they can help us estimate the scale of the effort needed to change the trend of events in accordance with our desires. In this manner, the availability of large masses of relevant data, and of computer methods for their processing, offers a broader and deeper foundation for political theory, at the same time that it confronts theory with larger and more complex tasks.

The changes in the quantitative data base of political theory have been matched only in part by changes in awareness and insight. Here, too, however, the changes have been marked. The 1960s have been the second decade of what some psychologists might call "sensitivity training" for the American people. The 1930s were the first such decade. Then it was the poor whites, the unemployed and those white migrants in whose lives John Steinbeck saw a ripening harvest of the grapes of wrath.²⁷

Today it is the black Americans and the Chicanos, who now stand out as lie detectors in our society, together with other poor people, with many of the young, and with many of the men and women in that growing sector of our society which includes our universities, our scientific and research organizations, our intellectuals, our mass media, and generally our knowledge-processing industries and occupations.

It is most often from these varied backgrounds that people have spoken out in protest against what they felt was wrong with some or many of the institutions and processes of our society. And we have learned from them, as well as from the seemingly unemotional work of social scientists and fact-minded researchers. Thanks to this difficult but very real communication between the protestors and the scholars, the poets and the behavioral scientists—a communication which continues within the mind of almost every one of us—we know now a little more about some real problems that for too long used to be overlooked or slighted.

²⁷ An example for the potential fruitfulness of this interplay for the widening of the perceptions of social scientists is the appearance of two valuable new chapters, on inequality and on problems of the environment, in the 8th edition of the classic textbook by Paul A. Samuelson, *Economics* (New York: McGraw-Hill, 1970).

By now, we know a little more about the problems of exclusion and discrimination, about cultural deprivation, about the growth or stifling of human pride and motivation for effort and achievement. We know a little more about the quality of our schools and our environment, about alienation, withdrawals, protests, and the difficulties of bringing about even a limited amount of real change. We know enough to know that all these problems constitute increasingly crucial aspects of the performance of governments and of the integration of political communities.

A good deal of recent work in political science has made contributions to this unending task of pattern recognition. In its form it may be historical or descriptive, or essayistic, literary and philosophical. Regardless of form it offers us in its substance the recognition of patterns, new or old, which in the past we have failed to recognize adequately, and which now demand our attention. Thus Thomas Schelling has drawn our attention to the common interests and the cooperative and coordinating aspects implicit in all situations of threat. Philip Green has identified the "deadly logic" implicit in so much of the seemingly rational rhetoric of deterrence policy.²⁸ Herbert Marcuse—with whom I generally and emphatically disagree—has reminded us that even tolerance can be repressive if it is joined to a persistent denial of real attention and to a lack of adequate response.²⁹ Seymour Martin Lipset has traced the elements of authoritarianism in the attitudes and behavior of working people; Michael Harrington has shown how the poor are forced to pay more, while Robert Lane has highlighted the fear of equality found in the minds of many voters who themselves are in many ways disadvantaged in our society.³⁰

These scholars I have referred to represent a wide variety of political viewpoints and scholarly methods. Yet we can learn one thing from considering their work. Careful, deep-probing

²⁸ Thomas C. Schelling, *The Strategy of Conflict* (Cambridge, Mass.: Harvard University Press, 1960); *Arms and Influence* (New Haven: Yale University Press, 1966); Philip Green, *Deadly Logic: The Theory of Nuclear Deterrence* (Columbus, Ohio: Ohio State University Press, 1966).

²⁹ Herbert Marcuse, *One Dimensional Man* (Boston: Beacon Press, 1964); Robert Paul Wolff, Herbert Marcuse and Barrington Moore, Jr., *A Critique of Pure Tolerance* (Boston: Beacon Press, 1965).

³⁰ Seymour Martin Lipset, *Political Man* (Garden City: Doubleday, 1960) and *Revolution and Counter-revolution: Change and Persistence in Social Structures* (New York: Basic Books, 1968); Michael Harrington, *The Other America: Poverty in the United States* (Baltimore: Penguin Books, 1963); Robert E. Lane,

description and critical reflection are not old-fashioned methods in political science, out-of-date and soon to be discarded for the new beauties of computer tape. They are indispensable methods, permanently necessary to restore our contact with the real world in which we live, with its real human beings with their needs, their hopes, and their emotions. It is these methods of recognition, reflection, and description that must tell us about the quality of political events, before we can even begin to study their quantitative aspects.

To be sure, we shall need to know which descriptions are more realistic, which reflections contain a larger element of truth. It is then that we cannot remain content with the haunting quality of poetic or artistic vision, or with the impact of mere rhetoric or plausibility. We shall have to use every suitable method of verification available to us, so as to test the descriptions or assertions before us for their consistency within themselves and with external evidence. We shall then use, if need be, every relevant method of science at our command, including the newer skills of survey research, opinion measurement, social indicators, quantitative data, and mathematical and statistical analysis. But we cannot test or measure anything that we have not recognized first.

A third major function of theory is the *organization* of knowledge for quick and efficient storage and retrieval, and for ready extrapolation and unambiguous prediction beyond the original basis of data and experiences. Here concepts and conceptual schemes are playing their well-known roles. They permit us to collect and compare new categories of qualitative data, such as the concepts of "associative" and "dissociative" behavior in politics, of "achievement motivation," of "free-floating aggression," of the "authoritarian personality," of "other-directedness" or of "cognitive dissonance." Often they also permit us to try to compile and compare new measurements and quantitative data, such as the "military participation ratio," the "government ratio" (i.e., the proportion of the public sector to the GNP), the "rate of social mobilization," the "foreign trade ratio," the changing proportions of elite groups, elite recruitment and elite turnover, and many more. Experience may compel us to refine these concepts, or to modify or abandon some of them. In their turn, indeed, new qualitative con-

cepts often lead to new quantitative measurements.

Some of these new categories and ratios may lead us to new insights and new dependable knowledge. Others may yield more ambiguous results. The concepts of any clear-cut opposition between "middle class" and "working class" in the United States, of "middle America" as the alleged opposite of most groups desiring political and social change; of "totalitarianism" and its alleged opposite the "free world" in an allegedly unending "cold war"; the notions of the "balance of power," the "vacuum of power," and the "domino effect" all these have turned out to be largely chaotic and unverifiable in theory, and sometimes deadly and disastrous in practice.

We need concepts and theories that are less misleading, and above all, that are not sterile. The heuristic search for new discoveries and greater fruitfulness of our political theories is becoming a more urgent aspect of our work. We may define a "breakthrough" in any of the social sciences as a contribution which has a large impact on a field, and which furthermore either discovers an important fact or relationship previously unknown and/or enables us to do something important in the way of a research operation which we could not carry out before in a repeatable and verifiable manner. Such breakthroughs can be identified; in the period 1900-1965 a recent count for all social sciences (except history) shows 62, or almost one per year. This count excludes several borderline cases which may yet turn out to have been breakthroughs, in the light of the later effects that still may flow from them. Among these breakthroughs, political science has its full share.³¹

We must ask, therefore, of each political theory: "To what discoveries is it likely to lead? What new facts or questions does it point to? What new scientific operations—repeatable and verifiable regardless of person—could be developed with its aid?"

Heuristics is the search for new knowledge. As a search, it can operate even by intuition, suggestion or surmise. But eventually we must find out whether the surmised knowledge is indeed knowledge, whether what we suspected is true, whether we are dealing with poetry or science, whether we are in the presence of a faith healer or a physician.

Political Ideology: Why the American Common Man believes what he does (New York: Free Press, 1962). For a recent study of some aspects of the politics of poverty in a single State, see Samuel H. Beer and Richard E. Barringer, eds., *The State and the Poor* (Cambridge: Winthrop Publishers, 1970).

³¹ Karl W. Deutsch, John R. Platt and Dieter Senghaas, *Major Advances in Social Science Since 1900: An Analysis of Conditions and Effects of Creativity* (Ann Arbor, Mich.: Mental Health Research Institute, The University of Michigan, 1970), Communication 273, lithoprinted; and for an abridged version, *Science*, (February 5, 1971), pp. 450-459.

On a 17th Century fresco in an old palace in Bavaria I read the words: "*Fides certiora ratione*"—"Faith is more certain than reason." It was a slogan characteristic of the Counter-Reformation and the police state of that bygone age. It would be a tragedy if the same anti-rational and anti-scientific slogan should reappear as a motto of a misguided pseudo-radicalism in our own time.

The subjective, personal certainties of any faith—political, economic or ideological—are a great temptation, regardless of their cognitive content. But mankind's need for truth is greater; our commitment to truth remains paramount, overriding all others. Only subject to this control by the truth-seeking and truth-testing methods of science can political theory make its heuristic contribution.

How can we make it more likely that our new ideas contain truth, and that our verified discoveries contain novelty? These questions bring us to the fifth task of political theory, a task which too often in the past has been neglected, particularly in such large and powerful countries as the United States and the Soviet Union. This too often neglected task is the task of *critical reflection*. It is the serious effort to reexamine and think through, at every time and place, the glib assumptions of the prevailing political ideology and culture—assumptions which we may unknowingly share and take for granted, so that we may remain as ignorant of them as the herring are of the salt content of the sea in which they are swimming. Are our industrial societies really as affluent, our political and social developments as progressive, our poverty areas as steadily improving, our efforts at economic aid to foreign nations as generous and as successful, our armaments as conducive to national and world security, as we are invited to believe?

The more seriously we take this task of critical reflection, the more difficult and demanding it becomes. For it must include a critical awareness of the hidden weaknesses and biases in our research methods, in our data, our logic, our statistics and our mathematical models whenever we use them. Here we need not a peasant-like sense of brooding suspicion against the fast-talking stranger from the big city of scientific research; rather, we need critical competence at the highest technical level—such as in Anatol Rapoport's criticism of the misuse of probability estimates by some writers on strategic deterrence.³²

But criticism of cognitive assumptions is not

enough. In addition, we also need a critical awareness of values, including our own values, and of the extent to which these values change the perceptions and the reasoning of those persons who hold them.

All of us are prejudiced in some ways and in some directions. What counts is not only what our prejudices are but, more important, how strong they are, how greatly they distort our perceptions of reality, and how effectively they cut us off from any chance of self-correction through new information about reality and about the real consequences of our actions. Striving to open our minds and hearts, we know that most of us cannot succeed entirely, but we can use political theory to move in the direction of greater openness, more effective self-criticism and greater capacity for learning, mutual understanding and common survival.

A good deal of the theoretical, philosophical and analytic work of such writers as Robert Lynd, David Riesman, Theodor W. Adorno, Jürgen Habermas, Erik Erikson, Alexander Mitscherlich and many younger scholars in many countries is helping us to move in this direction.³³ None of these writers, it seems safe to say, has solved the problem, but their work demonstrates that the critical examination of values and of cognitive assumptions now are once again an expanding frontier of political theory. Here, too, political theory is not merely a legacy of the eminent dead but an active concern of the living.

The self-critical tasks of theory can be summed up in a phrase once used by the economist Jacob Marschak: it must help us to *know what we know*, and to keep this knowledge distinct from the no less important task of *knowing what we want*.³⁴ What we then do will derive

³² Robert Lynd, *Knowledge for What?* (New York: Grove Press, 1964); David Riesman, *Abundance for What? And Other Essays* (New York: Doubleday, 1964); Theodor W. Adorno, *Negative Dialektik* (Frankfurt: Suhrkamp Verlag, 1966); Alexander Mitscherlich, *Toward Society Without a Father* (New York: Harcourt, Brace, 1964); *Die Idee des Friedens und die menschliche Aggressivität* (Frankfurt: Suhrkamp Verlag, 1970) and *Versuch, die Welt besser zu bestehen* (Frankfurt: Suhrkamp Verlag, 1970); Theodore J. Lowi, *The End of Liberalism: Ideology, Policy, and the Crisis of Public Authority* (New York: W. W. Norton & Company, Inc., 1969); Michael Parenti, *The Anti-Communist Impulse* (New York: Random House, 1969) William Connolly (ed.), *The Bias of Pluralism* (New York: Atherton Press, 1969). Jürgen Habermas, *Theorie und Praxis* (Neuwied: Luchterhand, 1963), and works listed in note 2, above.

³⁴ Jacob Marschak, "Probability in the Social Sciences," in Paul F. Lazarsfeld, ed., *Mathematical Thinking in the Social Sciences* (Glencoe, Ill.: The Free Press, 1954), pp. 166–215.

³² Anatol Rapoport, *Strategy and Conscience* (New York: Harper & Row, 1964).

from the interplay of our perceptions and our desires, but for effective actions these two essential elements must be kept separate at first if they are to be combined later for effective action.

Here political theory meets with the philosophy of science and the development, criticism and refinement of research methods. The work of such political scientists as Harold Lasswell, Gabriel Almond, Heinz Eulau, Johan Galtung and a host of younger scholars shows the vigor of the efforts to strengthen political theory and research in this respect; and the contributions of several leaders in neighboring disciplines will leave their mark on the political theories of the future.³⁵

It is characteristic of practically all the scholars just referred to that they have combined their contribution to critical analysis and methodology with an equal or stronger concern for the substance of political science. To none of these scholars could one apply the old British epigram which might fit, I fear, some other writers: "You use the snaffle and the curb all right, but where's the bloody horse?"

If critical knowledge is to grow, there must be some knowledge to be criticized. If growth is to continue, new knowledge will have to be discovered, either by the piecemeal accumulation of small items or by the larger advances on even breakthroughs to entire new classes of facts and areas of knowledge.

VII. From Theory to Action

The remaining four aspects of political theory—the last four stages in its production and reproduction cycle—are more closely oriented toward political action. Here, too, much has been learned but our main tasks still are waiting to be done; and they are so waiting at a time when our mounting dangers will not wait.

Our concern for values begins as an empirical enquiry. Who values what, how highly, in preference to what alternatives, under what contingencies? By what conditions and processes are such values and value patterns cre-

³⁵ Harold D. Lasswell, *The Future of Political Science* (New York: Atherton Press, 1963); Heinz Eulau, *Micro-Macro Political Analysis: Accents of Inquiry* (Chicago: Aldine Publishing Company, 1969); Johan Galtung, *Theory and Methods of Social Research* (New York: Columbia University Press, 1967); Robert T. Golembiewski, William A. Welsh and William J. Crotty, *A Methodological Primer for Political Scientists* (Chicago: Rand McNally & Company, 1969); Talcott Parsons, *Politics and Social Structure* (New York: Free Press-Macmillan, 1969); Jean Piaget, *Le structuralisme* (Paris: Presses Universitaires de France, 1968); G. A. Almond, *Political Development: Essays in Heuristic Theory* (Boston: Little, Brown, 1970).

ated and maintained? Is there an ecology of values, and if so, what creates it and keeps it alive? When, how and how fast do some values decline in their hold upon the minds of people? What is the half-life of a prejudice, that is, the time during which it loses one-half of its supporters? How are old value patterns transformed, and how are new value configurations created?

Already Plato in his *Republic* offered a model of a Greek city state with a succession of political and social regimes that would lead from an aristocratic culture exalting the values of honor and courage to a "timocracy" exalting wealth, and to a democracy, preferring rapid gratifications of the changing moods and desires of its people; and he advocated the replacement of all these by a new caste society ruled by philosophers and devoted to the paramount value of philosophic contemplation by a highly trained and gifted few.³⁶

We recognize once again historic value orientations in Shakespeare's spokesmen of an aristocratic age, such as his King Henry V who confesses. "But if it be a sin to covet honor, I am the most offending soul alive,"³⁷ or Shakespeare's Hotspur who longs "to pluck bright honor from the pale-faced moon,"³⁸—an ambition adopted by broader strata in a later age, and eventually fulfilled by three members of the federal bureaucracy of the United States in 1969.

In our own time, striking value contrasts and value changes can be observed from country to country and from decade to decade. Political and social scientists have gathered substantial data on such value changes and have made a beginning in their interpretation.³⁹

To examine the ecology of values and value patterns, as well as their changes and transfor-

³⁶ *The Republic of Plato* translated by Francis MacDonald Cornford (New York: Oxford University Press, 1945), pp. 265 ff.

³⁷ *Henry V*, Act 4:3, 29–30.

³⁸ *King Henry IV*, Part 1, Act 1:3, 201–202.

³⁹ See Robert E. Lane, *Political Thinking and Consciousness: The Private Life of the Political Mind* (Chicago: Markham, 1969). Erik H. Erikson, *Gandhi's Truth*, New York: Norton, 1969). Gabriel A. Almond and Sidney Verba, *The Civic Culture* (Princeton: Princeton University Press, 1963); Margaret Mead, *New Lives for Old: Cultural Transformation-Manus* (New York: Morrow, 1956); Jules Henry, *Culture Against Man* (New York: Random House-Vintage Books, 1965); Florence R. Kluckhohn and Fred R. Stoodtbeck, *Variations in Value Orientations* (Evanston, Ill.: Row, Peterson, 1961); Paul Roazen, *Freud: Political and Social Thought* (New York: Random House-Vintage Books, 1970); Daniel Bell, "The Cultural Contradictions of Capitalism," *The Public Interest*, no. 21, Fall 1970, pp. 16–43.

mation, is to study these matters as it were from the outside, from their past and their environment. But we can also study them, so to speak, from the inside, in their structure and consistency, or lack of it. Which values are compatible with each other? What kinds of pursuit of which values are *legitimate*? That is to say, which means and strategies in pursuing one value may be expected not to inflict intolerable damage upon other values which are also important to the acting individual or group? In terms of internal consistency or environmental adaptation, which value patterns are *viable*?

The answers to these last questions are likely to be plural. More than one value pattern is likely to prove legitimate and viable, but their number is not likely to be large. Game theory has shown for many games the number of winning strategies is larger than one, but that it is usually quite limited, while many more strategies will lead to loss or defeat.⁴⁰ These considerations suggest a world of pluralism, tolerance and possible coexistence, but not of indifference. Several different ways of government and life may all be viable and legitimated, but others, such as Fascism, chattel slavery, nuclear warfare, or continuing United States military intervention in Southeast Asia, may not be.⁴¹

But we need not limit our analysis to value patterns that exist now or that existed in the past. We can treat values themselves as variables, and we can do the same to their priorities within a value pattern. What would happen if in an existing social and political system some major values would change? Making the experiment on paper or in thought, we may find ourselves constructing a political utopia or dystopia, a vision of conceivable new political arrangements, based on these changed values—arrangements which could appear much better or much worse in terms of other values or of their overall configuration.⁴²

⁴⁰ See John Von Neumann and Oskar Morgenstern, *Theory of Games and Economic Behavior* (Princeton: Princeton University Press, 1947); Anatol Rapoport, *Fights, Games and Debates* (Ann Arbor, Mich.: University of Michigan Press, 1960).

⁴¹ For the last-named, see Townsend Hoopes, *The Limits of Intervention* (New York: David McKay, 1969); Telford Taylor, *Nuremberg and Vietnam: An American Tragedy* (Chicago: Quadrangle Books, 1970); and Seymore Hersh, *My Lai IV* (New York: Random House, 1970).

⁴² Frank Manuel, *Utopias and Utopian Thought* (Boston: Houghton Mifflin, 1966). The opposite of utopia is technocracy, the adding of mere technological power to an unchanged value structure. For a critical exploration of these problems see Wolf-Dieter Narr, *Theoriebegriffe und Systemtheorie* (Stuttgart: Kohlhammer Verlag, 1969); Claus Koch and Dieter Senghaas (eds.), *Texte zur Technokratiediscussion* (Frank-

All such imaginative constructs have to be confronted with our knowledge of the world of facts. Here we enter upon the seventh aspect of theory: actual dependable, potentially scientific knowledge, utilizing the point of view of systems analysis.

Now we must ask about the target of our interest: what is the situation in its rich interconnectedness? How is it changing and where is it moving to? What is the autonomous probability distribution of its expectable outcomes in the absence of our intervention? How and to what extent could this distribution of outcomes be changed by a change in any of those of its surrounding conditions over which we have some control?

Our resources for answering these questions have been increasing rapidly, compared to what we had before, but much more slowly compared to the magnitude of our task. An important step forward on the part of some political scientists has been the partial reception of the style of thought of economic theory and econometrics, while at the same time some leading economists have moved toward a more explicit consideration of political problems. Albert O. Hirschman's book *Exit, Voice and Loyalty* will prove, I believe, an outstanding contribution also to political theory; and political scientists may find it profitable to pay attention to Robert Triffin's⁴³ plan for a new type of representation through several tiers of small flexible "affinity groups" which individuals may enter and leave at any time in accordance with their changing subjective interests and interpersonal relations. Such subjective representation through freely chosen "affinity groups" may offer a useful supplement, and in some situations, substitute, for the more rigid representation by external categories, such as residence or place of work.⁴⁴

For the further development of appropriate theories, we must combine a rich clinical, historical, cultural and descriptive knowledge of the situation with substantial quantitative data, and wherever possible, with appropriate mathematical models and methods of computer simulation.⁴⁵

furt: Europäische Verlagsanstalt, 1970) and the important Czechoslovak contribution by Radovan Richta *et al.*, *Civilizace na rozcestí* (Prague: Svoboda, 1969).

⁴³ Robert Triffin's proposals are summarized in *Le Monde*, (Paris), July 9, 1968, p. 6.

⁴⁴ Albert O. Hirschman, *Exit, Voice and Loyalty* (Cambridge, Mass.: Harvard University Press, 1970).

⁴⁵ See Seymour Martin Lipset (ed.), *Politics and the Social Sciences* (New York: Oxford University Press,

Such statistical and computer work costs money, but the amounts need not be prohibitive. The cost of copying data and programs from existing tapes is much less than that of assembling them in the first place. Technical improvements can work not only for the *status quo* but at least as much for those who work for its change.

We must ask corresponding questions on the side of the actors, be they individuals, groups or governments. And these actors, actual and potential, may well include ourselves. What, in the light of our values, is to be done? How clear are our own aims? How strong are our motives? Who else might have what motives to help us, deliberately or unwittingly? What coalitions are needed and practically possible, to take the actions required? Who are the groups or agencies who may im-

1970); Robert P. Abelson, *Simulation of Social Behavior* (New Haven: Yale University, 1969) (mimeographed pub. forthcoming); Bruce M. Russett, *What Price Vigilance? The Burdens of National Defense* (New Haven, Conn.: Yale University Press, 1970), and Bruce M. Russett (ed.), *Economic Theories of International Politics* (Chicago: Markham Publishing Company, 1968); Robert Axelrod, *Conflict of Interest: A Theory of Divergent Goals with Applications to Politics* (Chicago: Markham Publishing Company, 1970); Hayward R. Alker, Jr., *Mathematics and Politics* (New York: The Macmillan Company, 1965); William Coplin, *Simulation in the Study of Politics* (Chicago: Markham, 1968); Harold Guetzkow (ed.), *Simulation in Social Science* (Englewood Cliffs, N.J.: Prentice-Hall, 1962); Harold Guetzkow, Chadwick F. Alger, Richard A. Brody, Robert C. North and Richard C. Snyder, *Simulation in International Relations: Developments for Research and Teaching* (Englewood Cliffs, N.J.: Prentice-Hall, 1963); Ted Robert Gurr, *Why Men Rebel* (Princeton: Princeton University Press, 1970); Ithiel de Sola Pool, Robert P. Abelson and Samuel L. Popkin, *Candidates, Issues and Strategies: A Computer Simulation in the 1960 and 1964 Presidential Elections* (Cambridge: M.I.T. Press, 1965); Dusan Sidjanski, ed., *Méthodes quantitatives et intégration européenne* (Geneva: Institut universitaire d'études européennes, 1970).

See also some of the papers read at the 8th World Congress of Political Science, Munich, September 1970, mimeographed: Hayward R. Alker, Jr., "Multivariate Methods in Political Science: A Review, Critique and Some Further Suggestions," Richard W. Chadwick, "Steps Toward a Probabilistic Systems Theory of Political Behavior, with Special Reference to Integration Theory," Raymond F. Hopkins, "Mathematical Modeling of Mobilization/Absorption Processes," Gerald H. Kramer, "Theory of Electoral Systems," Anatol Rapoport, "Threat Games: A Comparison of Performance of Danish and American Subjects," William H. Riker and Peter Ordeshook, "A Theory of the Number of Political Parties: The Case of India," Paul Smoker, "International Relations Simulations: A Summary," and Harrison C. White, "Congestion, Decoupling and Freedom: Some Implications of Queue Models for Control and Spontaneity in Social Systems.

plement a finding of political science and/or a normative prescription of political philosophy, so as to make it a basis of policy and practice?

In these regards, the recent work of American political scientists has been somewhat one-sided. A fair amount of serious work has been done to provide policy advice for governments or their agencies, but much less has been done to provide specific policy information and proposals for non-governmental reform groups, civic organizations, labor unions, and the general public. This contrasts with the work of American political science near the beginning of this century when the generation of the "muckrakers" produced many reform proposals and some significant reform legislation through reform agitation at the municipal and state level. A revival of this activist and reforming use of the professional skills of political scientists might help us to make our value preferences more effective.

These last points—coalition building, implementation agencies and procedures, and specific substantive proposals for reform—all raise the problem of *skill*. Does political theory tell us only what to do, or can it also tell us something about *how* to do it? Machiavelli's *Prince* was both a major work of theory and a "how to . . ." book. In our own time, theories of urban planning are in part also such "how to . . ." theories. Can we develop other "know-how" theories for our own time?

Up to this point, we have treated theories as tools to attain the goals and values which we have. But now we must ask political theory also to tell us whether we ought to have these goals, or whether to change them. Here political theory returns to political philosophy and political wisdom. The call for a reordering of priorities in the national agenda of the United States is at bottom a call for some new wisdom no less than it is a call for some redistribution of public attention, social prestige, economic resources and political power.

In this process of reordering our values and priorities, we have real need of whatever wisdom political theory can contribute. What contexts of memories and values should we select, assemble or construct for the design and interpretation of any scientific operation in our field—out of the ensemble of possible contexts? Which goals should we prefer for ourselves, our country and mankind? What viable goal configurations can we identify, and which of these should we prefer and develop? We have seen that there are, in principle, discoverable and verifiable limits to the range of acceptable choices in these matters, but that within

these limits our choice cannot be scientific but must be humanistic, existential and fraught with risk. How much of a consensus, if any, has been emerging in our profession in regard to these choices?

To ask these questions is to remind ourselves how little we have done in these respects and how much more work here is needed. And yet there are perhaps some common landmarks that many of us can discern. Two large issues, it seems to me, will have a priority claim on our thoughts and actions from now on and for the next three or four decades. These two issues are the abolition of poverty in the highly industrialized countries⁴⁶ and the abolition of large-scale war in the entire world. Much as the abolition of the more than thousand year-old practice of chattel slavery claimed many of the thoughts and sacrifices of people between the 1820s and the 1870s (and as it was accomplished for most of the world during that short period), so the abolition of poverty and war is the paramount task of our time. Now, as then, the accomplishment of a task of such magni-

⁴⁶ The attack on the minority poverty in the highly industrialized countries should go hand-in-hand, of course, with an attack on the mass poverty in the world's less developed regions. The latter task, the abolition of poverty on world scale, will stretch well into the next century, but in the highly developed countries it ought to be completed in this one.

tude will require a large increase of human effort and a significant expansion of human freedom.

Let us ask ourselves, how much recent political theory has contributed to this task? How many new discoveries, insights and philosophic conceptions, relevant to these tasks, have been promised or announced, how many have been demonstrated and delivered, and how much remains to be done?

Measured against our tasks, our knowledge and our skills are in desperately short supply. The world is better supplied with irate citizens and with zealous partisans of competing varieties of ignorance than it is with professional competence in political and social science.

We can and must realize the cognitive power which is potentially ours in the professional study of political science. Rarely, if ever in its history, has mankind needed it as much as now. If we do not develop this cognitive power in political theory and political science, no one else will do it for us.

Yet, at the frontiers of cognition and verification, and sometimes beyond these frontiers in times of crisis, we must take our stand and hold to it. When we must choose our values and our risks as a profession, I think we should choose a commitment to truth and to compassion. I believe that we have chosen this commitment, and that it will be honored.