



DANIEL BELL

*With a
New Foreword by
Irving Louis Horowitz*

THE WINDING PASSAGE
Sociological Essays and Journeys

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DANIEL BELL

With a New Foreword by Irving Louis Horowitz

 **Routledge**
Taylor & Francis Group
LONDON AND NEW YORK

Originally published in 1980 by ABT Associates Inc.

Published 1991 by Transaction Publishers

Published 2019 by Routledge

2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

52 Vanderbilt Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

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Library of Congress Catalog Number: 90-26677

Library of Congress Cataloging-in-Publication Data

Bell, Daniel

The winding passage: sociological essays and journeys / Daniel Bell;
with a new foreword by Irving Louis Horowitz

Reprint. Originally published: Cambridge, Mass.: Abt Books, c1980.

Includes bibliographical references and index.

ISBN 0-88738-899-X

1. Sociology. 2. Social History--1960--1970. 3. Social history--1970--
4. Social change. I. Title.

[HM24.B386 1991]

301-dc20

90-26677

CIP

ISBN 13: 978-0-88738-899-6 (pbk)

ISBN 13: 978-1-138-53950-1 (hbk)

For Nathan and Lochi Glazer



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*la vie è lunga e 'l cammino è malvagio,
e già il sole a mezza terza riede.*

The way is long and the road is hard,
and already the sun is at mid-tierce.

Canto xxxiv, 96-97



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Foreword to the Transaction Edition

Montaigne long ago established the criteria for style and substance in the essay form: it must be well written, precise, with a focused theme and moral purpose directed to the question: *Que sais-je?* These essays by Daniel Bell, written between 1960 and 1980, live up to the highest standards of the essay. Bell brings to his task not only the twenty years of sociology herein covered but a previous twenty years of journalism that obviously contribute to the pungent, targeted nature of his enterprise. His deeply reflective preface itself is well worth the price of the book. I initially thought of excerpting some choice passages, only to decide that there are too many eloquent and piquant passages to choose only a few. Anyhow, Bell is entitled to state for himself how these seventeen essays came to be written and included in this volume.

This collection represents not simply the work of a highly civilized *freischwebende Intelligenz* in the best sense of that much-abused phrase but the sifted excellence of a sociologist in mid-passage. We should all read these papers not only to be in the presence of a vital intellectual force but also to evaluate what that force stands for in specifically professional terms. I am not certain whether Bell claims too much or too little for his sociology, for its significance is less the relationships between goods and information than between the good and the knowable. This formulation may sound a trifle soft methodologically, but it has the merit of drawing attention to Bell's special skill at infusing social life with deeply philosophical meaning.

We enter Bell's world only when we make a commitment to close encounters of a philosophic kind. I do not have in mind ideological postures or metaphysical abstractions, but the constancy of asking the Aristotelian question: What are the causes and consequences of bringing about change in the realms of being? And how are those realms carved up in our age along social, economic, and cultural dimensions? What keeps these large issues in manageable proportion is Bell's unswerving journalistic dedication to the concrete. The play of abstract ideas in concrete operational settings is what sets this man's work apart from that of his fellow sociologists.

The Winding Passage is divided into five parts and seventeen chapters; each of them represents areas of research in which Bell has become well known. In fact, not a few of the essays are distilled versions or microcosms of those larger works. Many themes in "Prophets of Utopia" were taken up in *The End of*

Ideology. "Techne and Themis" extends positions mapped out in *The Coming of Post-Industrial Society*. And the final section, "Culture and Beliefs," echoes many of the sentiments expressed in *The Cultural Contradictions of Capitalism*. This is not to suggest that these essays are somehow less valuable or valid for having antecedents or descendants; quite the contrary, a knowledge of Bell's larger works will make reading these essays a double treat: first, they illumine his sociological sense of the world; and second, they amplify the larger works by Bell on similar subjects.

I have no quarrel at all with the first section on technology. Indeed, these two essays contain some of the best thinking by a sociologist on the relationships of technology to society since Ernest Burgess in the 1930s and Fred Cottrell in the 1950s. But I am somewhat less certain that he has resolved the problem of the relationships of the new technology to the social system any more than his sociological forebears. Even if we accept the Greek distinction between a material culture in progress and a moral culture in eternal recurrent cycle, we still cannot seem to open the windows on the monads. That is to say, although modernity bursts the walls of technology in the early essays, it turns out that in the later essays modernity itself seems to be bankrupt. For Bell, the new code word of the age is not so much "progress" as "limits." But then, we might well ask, what is the connection between the technological and the sacral? There are many teasing indicators of new combinations and permutations, but slender connective tissue to the dialectic. The monads remain sealed atomic parts, shrouded in the mystery of Being transformed into culture.

It may be too burdensome to expect a series of linkages in a retrospective volume. It is better to read each essay as a separate analytic framework with a moral charge behind it. Read in such a way, each essay is breathtaking in the range of information and quality of imagination. The essay, "The End of American Exceptionalism," is an especially stunning example of Bell's quintessential liberalism, and probably his lingering socialism. Starting with the problem of why socialism has not come to American shores, a myriad of prophecies notwithstanding, he emphasizes the qualities of the legal and constitutional system in the New World, rather than emphasizing economic well-being, as have earlier explanations by Leon Samson and Seymour Martin Lipset. If Bell is correct that American exceptionalism has passed away, world capitalism has clearly not dissolved. If anything, the weakening of American capitalism and the wider distribution of world resources and wealth, has been abetted by the addition of new players on the world scene, often at the expense of the American dominion. That the Eurodollar replaces the American dollar, or that natural resources replace consumer goods as major commodities of value may reduce American exceptionalism, may increase moral anguish, but neither necessarily impinges on the character of socioeconomic arrangements on a worldwide basis. A peculiar variety of American myopia prevents Bell from

developing an appropriate international frame of reference in which to assess the present-day United States.

It is in the nature of such a volume that each reader engage the author in private dialogue. It is perhaps best to permit each reader to argue with *The Winding Passage* in his or her own way, without excessive intrusion by a reviewer. (In any event, essays by Bell on the character of postindustrial society and on the New Class were published in the pages of *Transaction/SOCIETY*; these seminal statements in particular should be left to the assessment of other readers.) It is, however, important to draw out Bell's essential sociology, with which he operates, for while Bell is frank enough to state that there is no unifying or singular architechtonic to his work, the variety of themes addressed do add up to a genuine, if not entirely original sociological framework. One of his major points, with which I am in full concurrence, is that we should worry less about the originality of a theory and more about the originality of a mind using the theory to interpret and penetrate the social world.

There is in Bell's *Winding Passage* a strong attack against holism, against viewing the world as a series of parts adding up to a teleologically determined whole. He argues instead that society is best understood as composed of diverse realms, each obedient to and situated within an axis, which in turn becomes the regulatory or normative principle that legitimates action in that field. Bell situates these realms in the economy, within the principle of functional efficiency; in the polity, with its principle of equality before the law; and in the principle of culture, or the enhancement and fulfillment of self. It is a special aspect of Bell's thought that he tends to be committed to personal fulfillment rather than social order. This identification with Marx rather than Durkheim on so fundamental an issue also separates him from the conservative mood with which he has so often, and in my view, wrongly been identified by his critics. Bell's emphasis on the cultural has another element, a thorough disenchantment with much that passes for mainline sociology, a moving away from problems of the middle range into analysis that connects such issues as crime and deviance to large patterns. It is interesting to note that these essays become longer and more complex as they move from concrete subjects, such as national character or national guilt, to the larger issues of the present period.

The final essays on the exhaustion of modernism might well stand as Bell's statement about the exhaustion of sociology. Bell's present pursuits are characterized by a groping for a new vocabulary. This search for new key words and trends, for new ways to gain a sense of the sacral, indicates his dissatisfaction with an earlier trinitarian model of economy, society, and culture. Although Bell does point the way toward an understanding of the problems in each realm, he has yet to explain how a new integration or, for that matter, a present disintegration of social scientific paradigms provides help in the pursuit of a new vocabulary. The probing and the lurching are brilliantly etched, but if

they lead to a new theology rather than a new sociology, then I am not sure that I share the sense of purpose and challenge captured in this intellectual odyssey.

Now for a slightly negative note: I should like to attend to the two essays that I found least satisfactory. Let me observe that fifteen brilliant essays out of seventeen is so unusual a batting average that negative comment on these two essays only emphasizes my respect for the overall achievement.

Bell's attack on Mills in "Vulgar Sociology" is painfully on target. But unlike almost every other essay, it is pugnacious and ungenerous; it seems more pique with another variety of essayist and moralist than a key statement of his paradigm. In an age of bubbling optimism and touching faith in the American century, Mills articulated a new pluralistic basis for left thought; a pragmatic vision, part of the debates on the left from which the excitement of the 1960s seemed to flow. (How strange it is that the excitement generated by intellectual debate is now taking place on the right.) Despite Mills's failure to appreciate the heterogeneity of government, military, and business, and despite a line of analysis often flawed by amateurish emulators, this does not deprive Mills himself of moral sophistication in the midst of prevailing sociological orthodoxies. In the former he was unique, in the latter, alas, in a large company. Bell would have been better advised to sustain the pitch of grace and elegance captured in these essays, rather than remind his readers of an earlier age, when bellicosity and anger toward opponents was more commonplace.

"Reflections on Jewish Identity" is the second essay that I had difficulty reconciling with the volume as a whole. Bell reflects the sorts of problems characteristic of many Jews who came from socialist and radical backgrounds; namely an inability to appreciate that Judaism is not simply a religious supplement to an already rich ideological diet, but itself a total perspective and framework for action. By emphasizing the moral travails of the author rather than actual conflicts within Judaism, an embarrassing autobiographical excess ends up creating problems rather than explaining them. We are rhetorically asked if we must accept a Jewish God, a jealous God: "Do I have to accept the sins of my fathers, and my children those of mine? This is not an academic question, for it confronts us everywhere." This is indeed an academic question, nor is it a particularly Jewish question. Jews are not expected to accept the sins of fathers or bequeath their sins to children. Accepted is the culture of the fathers, and bequeathed is the commitment to that culture. There is more of Sombart's Calvin than Scholem's Moses in Bell's sense of the Jewish. The "community [of Jews] woven by the thinning stands of memory" reflects more on Bell's weakening sense of community and his own reliance upon memory than the actual condition of Judaism. Bell missed a golden opportunity to move to a higher ground of synthesis by failing to explore in his own Judaism an analytic structure rather than a memory trace.

Bell is so widely regarded as a political figure in sociology, if not as a political sociologist, that it is surprising how little of the book treats political

themes, either on a national or international scale. His abilities with technological literature are unsurpassed, and his sense of the economic context of culture, and cultural texture of stratification is again flawless. But whether he is discussing utopian or ideological themes, the level of discourse is often twice, sometimes thrice, removed. Even when Bell examines prospects for mobilization of politics in the United States, it is within a context of the dissolution of "insulated space" as represented by "the contemporary revolutions of communication and transportation." Unlike Seymour Martin Lipset or Reinhard Bendix, on whom political science has had a profound impact, Bell has a deep commitment to the sociological paradigm in a purer and older fashion. Even his heroes (Veblen and Fourier) tend to reveal this. Bell is simply not taken with Machiavelli or Hobbes. It is how politics is impacted from economic and cultural realms, rather than the workings of the political process, that captures his attention. In this respect he is perhaps a "purer" variety of sociologist than his detractors have appreciated. Even in discussing the "decline of authority," where political analysis would seem inevitable, categories remain distinctly Weberian: the status system of society, organizational life, institutional life, professional life, and cultural life. The political "life" as such is simply not much of a factor in this collection.

The strongest difference I have with Bell's essays is with his mood rather than content. The dark picture of a series of unresolved dialectical tugs may properly suit our epoch, and certainly may explain the decline of the secular and the triumphal return of the sacral. Just as assuredly, within sociology few have better captured this sort of imagery. Only the essays of Edward A. Shils, Lewis Coser, and Robert Nisbet come close. And perhaps this is the proper posture and stance. My own preference is not to overidentify the pessimistic with the profound but to be more concerned with the potential character of the next synthesis than the structure of the present contradictions. In an ideal world of social theory, both tasks can and will be performed simultaneously; if a choice of strategies must be made, the search for new combinations, new ways of overcoming old dilemmas, the smashing of dialectical icons seems more appropriate to the tasks of our discipline. However, in the likely event that this optative mood may be little more than intellectual whistling in the dark, one can nonetheless scarcely be better equipped to appreciate the cultural contradictions of the structures and ideologies that we live with than by reading and digesting these masterful essays.

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Preface

These are the essays of a prodigal son. They are essays written in my middle years, midway in the journey of our life, in that dark wood, seeking a return to the straight way of my ancestors. I know that the world I live in is vastly different from theirs, yet the duplex nature of man remains largely the same, now as then.

The first twenty years of my working life, from 1940 to 1960, were spent primarily in journalism, though for three years, from 1945 to 1948, I taught social science in the College of the University of Chicago, working with an extraordinary group of young thinkers—David Riesman, Edward Shils, Milton Singer, Barrington Moore, Morris Janowitz, Philip Rieff—in a common course, and from 1952 to 1956 I was an adjunct lecturer in sociology at Columbia University. The wartime years were spent as managing editor of *The New Leader*, a period of frenetic intellectual activity, one of whose privileges was meeting and getting to know a remarkable group of European émigrés who had fled to America after the fall of France, such old Mensheviks as Raphael Abramovitch and Boris Nicolaevsky, and such young anti-Fascists as Nicola Chiaramonte and Lewis Coser (or Louis Clair,

as he then signed himself). From 1948 to 1958, I was a writer on *Fortune*, except for the year 1956–57, when I worked in Paris as the director of seminars for the Congress for Cultural Freedom, years made vibrant, and sad, by the Polish and abortive Hungarian revolutions. My contacts with those Communists who had lived through the brutal Stalinist years, had retained their idealism, and had turned against the Russian tanks to seek what a decade later would be called “socialism with a human face,” gave me a vivid sense of what the “cold war” was about at first hand. On *Fortune*, I wrote primarily about labor, though over the years I began to write on a wider variety of social topics as well.

My writings in those years were primarily political and topical, dealing mainly with economics, changes in the occupational and class structure, and the expanding role of big business and government. I started a book, entitled *The Monopoly State*, which, strangely, anticipated some of the theories of corporate capitalism proposed by New Left writers a quarter of a century later, but I abandoned it after several hundred pages, when I realized that I was simply retreading some old Marxist categories, those of “finance capitalism” of Hilferding or the theory of “organized capitalism” of Bukharin, and applying them in a procrustean way to a more complex reality. (When I see these recurrent efforts by new New Leftists eager to discover the “secret” of capitalism, repeated without reference to or memory of past effort, I understand the pith of Charles Frankel’s remark that it is not Marxism that creates each new generation of radicalism, but that each new generation seeks to create its own Marx.) I wrote many columns for *Commentary*, in its Study of Man department, conducted by Nathan Glazer, reviewing sociological studies in various areas, and I completed a monograph on *Marxian Socialism in the United States*, which was published in 1952 in the compendium *Socialism and American Life* and later reissued independently in 1967, with a new introduction, as a paperback by the Princeton University Press. A long essay on *Work and Its Discontents* was published as an elegant small book. And, together with my friends Richard Hofstadter and Seymour M. Lipset, I wrote (and later published in two collections of essays) studies of McCarthyism and the radical right, essays which grew out of a seminar we had conducted at Columbia University. I was, as the saying goes, politically *engagé*, and my numerous writings of the time reflect those diverse and bustling concerns.*

For the past twenty years, I have been an academic: ten years at Columbia and ten years at Harvard. Inevitably, my temperament has drawn me to

*A bibliography of my writings to 1960 has been compiled by Douglas G. Webb of the University of Toronto, who has been engaged in a study that he calls *From Socialism to Sociology: The Intellectual Careers of Philip Selznick, Seymour Martin Lipset, Nathan Glazer and Daniel Bell, 1932–1960*. Mr. Webb’s compilation shows that from 1940 to 1950, I wrote 210 pieces. From 1950 to 1960, I wrote 116 articles. If one adds the “unsigned” columns in *Fortune* on labor, in this period, “this adds approximately 100 pieces to the bibliography,” or a total of 426 articles and reviews in those twenty years. I must express my deep appreciation to Mr. Webb for his stupendous task, and my bewilderment, as well, in rereading some of those portentously assured writings of my callow years.

other, activist concerns. For eight years, from 1965 to 1973, I was the coeditor with Irving Kristol of *The Public Interest*, a magazine we founded to deal seriously, but not technically, with issues of domestic public policy. I served on the President's Commission on Technology, Automation and Economic Progress from 1964 to 1966, and helped draft the commission's report, *Technology and the American Economy*. From 1966 to 1968, I was cochairman, first with William Gorham and then with Alice Rivlin, of the government panel on social indicators, and supervised the study, *Toward a Social Report*, that was directed by Mancur Olson. In 1965, I became the chairman of the Commission on the Year 2000 (an enterprise of the American Academy of Arts and Sciences), a group that pioneered, for better or for worse, the spate of futurist studies that have flooded the American scene like the red tide in this past decade. More recently, I have been, from 1976 to 1979, the U.S. representative on the intergovernmental advisory committee of the OECD project, *Interfutures*, which has been looking at the common problems of the advanced industrial societies within a ten-year period. I am now a member of the President's Commission for an Agenda for the 1980's.

Yet my interests have been more scholarly, reflective, and academic. One idiosyncratic clue is the length of the essays I write. Writers, like runners, develop "natural" lengths. The man who runs the 100-yard dash will rarely be a good half-miler; wind capacity and the sense of pace are necessarily different. In my first two decades as a writer, I found that my natural length was a 3,000- to 5,000-word essay, something I could do in a week. In the later decades, it has been the 30,000- to 40,000-word essay, a length that could be completed during the summer.* It may be that advancing age makes one wordier, but I prefer to assume that such length is a function of thought.

Secondly, my subjects have tended to be more theoretical, philosophical, and methodological. I have, in these past years, written many essays on policy and polemical subjects: on forecasting, the university, ideology, the race issue, and the like. Yet my major interest has been the recasting of sociological theory. Though I do not write in the formal or abstract fashion of a Talcott Parsons or a Jürgen Habermas (there is a distinction between abstract formulation and generalization) and remain closer to the historical

*When I left *Fortune* in 1958 Mr. Luce was puzzled at my decision and asked for the reasons, with the thought that he might be able to match a rival offer. There are, I told Mr. Luce, four good reasons for going back to academe—June, July, August, and September. Mr. Luce thought that more money might compensate for time, but I decided otherwise. I have never regretted that decision, and when I look back at the fortunate opportunities I have had to change careers several times, and the education this has given me, I regret the *loss* of such opportunity today for young people. When I listen to some of my colleagues today who have been in the lockstep of student, graduate student, young instructor, and then tenured professor without the crosshatch of experience that might leaven their large generalizations about "the State," "capitalism," "revolution," I regret not only the loss to themselves but even more, to their students, for whom such abstractions take on the "reified consciousness" of reality, with no sense of what the world is about.

and empirical terrain, my ultimate intentions are still theoretical. The two sociological books I have written in this past decade, *The Coming of Post-Industrial Society* and *The Cultural Contradictions of Capitalism*, are based on the methodological repudiation of a "holistic" view of society, be it Marxist or Functionalist. A Marxist or a Functionalist views society as some kind of historical period or closed system, integrated through the mode of production or a dominant value system, and believes that all other, superstructural or peripheral, realms are determined by or predominantly influenced by this principle of "totality" or "integration."

Against these holistic views, I have argued that society is better understood as being composed of diverse realms, each obedient to a different "axial" principle which becomes the regulative or normative standard, the legitimating principle, of action in each realm. In a modern *economy*, the axial principle is "functional rationality," or efficiency—the idea that in the techno-economic realm the criterion for using a process or a product is whether it can be made cheaper, better, more efficiently, that one can measure costs, and provide a clear principle of substitution (either in the production functions of capital and labor, or in the substitutions of different metals or minerals or energy sources). In the Western *polity*, the axial principle is equality—equality before the law, equality of opportunity, equality of rights—and this principle serves to legitimate the demand for "entitlements" which has been a feature of Western polities for the past fifty years. And in the *culture*, the axial principle is the enhancement or the fulfillment of the "self." The gratification or the "realization" of the potential of the individual self is the legitimate norm that shapes the life-styles of social groups, or the search for novelty and experimentation in the expressive areas of the culture.

But the methodological crux is not only the differences of realms, but the idea that each realm has a different rhythm of change. In the techno-economic realm change is linear because there is a clear principle of substitution: that of lesser cost, greater extractive power per unit of energy, more productivity. In the polity, one tends to see alternative possibilities (but not in any determinate sequence) of centralization and decentralization, elite and mass, oligarchic control or extensive participation. In the culture, there is either the continuity of tradition, in stable societies, or, as in contemporary society (and as in Hellenistic and Roman times), a principle of syncretism, or indiscriminate mingling or borrowing of diverse cultural styles. At different historical periods, there may be a larger degree of integration of realms (as in twelfth-century Europe, or at the apogee of bourgeois society in the last third of the nineteenth century); at other times, such as the present, there may be large discordances and contradictions.

There are some crucial methodological consequences to these arguments. For one thing, it is difficult to "periodize" history in accordance with some necessary "intrinsic" unity, or to say that there are determinate sequential stages of historical development. For another, it becomes too formal and abstract (that is, lacking in historical content) to conceptualize society in terms of some "general theory," in which a single principle of order

defines the "functional requisites" of a society. This is not to say that large-scale conceptual schemes are useless or wrong. Depending upon the question, one may find it useful to posit "modes of production" as the conceptual prism for understanding a particular time, and to think of society in terms of the Asiatic mode of production, of slavery, feudalism, and capitalism. Given other questions, one might use "modes of domination" as the conceptual prism, and think of societies in terms of patriarchal, patrimonial, and legal-rational systems of domination, as Max Weber did. But over historical time, *there is no necessary historical congruence* of the two schemes. The use of one or another (or different conceptual themes, using "civilizations" as the regulative unit; or cultural styles, such as Gothic, Baroque, Mannerist, and Modern) depends upon the theoretical questions one is asking. The substance of this argument, to use Kantian language, is that there is no given "constitutive" order to the structure of societies; what one knows is a function of the conceptual scheme that one self-consciously applies to the reality one is exploring.

This methodological argument underlay a set of substantive conjectures about the nature of social change and the character of modern society. In my book on postindustrialism (strictly speaking, I should not have called it postindustrial *society*, since I was only dealing with a dimension of society), I was seeking to identify a new principle, the codification of theoretical knowledge, which was reshaping the relation of science to technology, and of innovation to economic change. It was not a forecast of things to come, which would have to be an empirical set of observations. But, as a new principle, it could have large-scale consequences for modern society, *if* that principle should spread. As I also specifically pointed out, technology does not determine changes in other realms of a society but poses questions of management, especially for the political order.

In *The Cultural Contradictions of Capitalism*, working from the same methodological assumptions, I sought to show how bourgeois capitalism, as the sociological form of the modern economy, and avant-garde modernism, as the victorious feature of culture, had common roots in their repudiation of the past, in their dynamism, in the search for novelty and sanction of change. Yet, inevitably, the different axial principles of these realms (the techno-economic realm segmenting a person into "roles," the culture emphasizing the achievement of the whole person) brought the bourgeois economic system into sharp conflict with the modernist culture (just as the bureaucratic structure of the economic enterprise begins to clash with the equality and participatory ethos of the polity). Thus one discerned contradiction in the fundamental structures of modern society.

Within the realms, other contradictions have developed. The bourgeois ethic was one of prudence, delayed gratification, and emphasis on work. Yet from the 1920s modern corporate capitalism, being geared to mass production and mass consumption, has promoted a hedonism that has undercut the very Protestant ethic which was the initial motivation or legitimation for individuals in bourgeois society. Indeed, the corporation itself is a contradiction, for in the realm of work and production it requires individ-

uals to live by one norm, yet in the realm of consumption and play, it fosters another. The further, deeper contradiction is the collapse of a traditional bourgeois culture in the arts, and the victory of modernism and the avant-garde to the point where a new "cultural mass" has today taken over the trappings of modernism when, as an aesthetic movement, modernism has in fact become exhausted.

I have always believed that theory should be exemplified in substance, and both *The Coming of Post-Industrial Society* and *The Cultural Contradictions of Capitalism* emphasized historical and contemporary events as conclusions that could be demonstrated by using those conceptual prisms. In recent years I have come to believe that the epistemological assumptions of the social sciences are now more problematic. The ebbing away of positivism and functionalism has left sociology with the choice of being historicist, and limiting the range of its generalizations; or formalist, seeking invariant structures independent of the history of culture; or interpretive, seeking meanings and eschewing causal explanation. (Even Marxism finds itself in this cleft, with a historicist-Hegelian wing on one side, and a structuralist-formalist wing, for example, Althusserian, on the other.) In a number of unpublished papers, beginning with one on the philosophy of science for an international seminar in Berlin, in September 1975, and most recently in a paper on "The Quest for Certainty," for the Einstein Centennial symposium in Jerusalem in March 1979, I have been trying to establish a new set of relevant distinctions regarding the appropriate modes of inquiry for problems within the natural and social sciences.

What, then, of the essays in this book, essays "midway in the journey of our life"? They are largely reflective, or explorations in the history of ideas. There is no unifying theme or single thesis. Why, then, collect them within a single set of covers? The simplest reason is to make them more easily available to those who are interested in these ideas. Many of them have been published in journals not easily available (for example, "The Return of the Sacred," in the *British Journal of Sociology*) or in books that are out of print (for example, "Veblen and the Technocrats," the introduction to *The Engineers and the Price System*.) Another is practical. It is said that Diderot's *Encyclopedia* was the first *bourgeois* encyclopedia because it was organized on the utilitarian principle of placing essays in alphabetical order rather than on the more intellectual principle of grouping them under common themes, as in the *trivium* and *quadrivium*, or as Mortimer J. Adler has sought to do in the *Propaedia* volume of *Britannica* 3. By bringing these essays together under the name of the author, a utilitarian purpose is served.

But beyond that, I would hope, there are other gains. These are explorations of ideas and a presentation of argument, a reasoned exposition of an intellectual position. I hope that the essays will provide pleasure—an old-fashioned word, I must admit—to the reader, and also some instruction.

There are, however, a number of distinct themes which run through some of these essays, and it might be helpful to make these explicit. The first, in the analysis of social change, is the distinction between the social

and the cultural, between the kind of changes that occur in institutions and those in the realm of ideas. Most of sociological theory, as I have indicated, looks at social change in holistic terms, as a succession of systems or periods or dominant modes, in some determinate sequence. Thus, apart from Marxism, the most influential theory of social change, that postulated by Émile Durkheim and elaborated by Talcott Parsons, sees such change as a process of "structural differentiation," in which original nuclear or molecular units differentiate and specialize (just as economic activities divide into wholesale and resale functions when distributions grow) and thus require a greater degree of coordination and bureaucratic controls. In the realm of culture, this idea has been used by Robert Bellah in his influential discussion of religious evolution, in *Beyond Belief*.

As I have indicated, I believe that changes in culture arise in a very different way, and follow a very different trajectory, than do changes in social structure. This is a theme that appears in the first essay, on "Technology, Nature, and Society," and it reappears in the last, "The Return of the Sacred." In the latter essay, I point out that one of the mistakes sociologists have made in dealing with religion—which all Enlightenment thinkers predicted would disappear by the twentieth century—is the use of the word "secularization" to describe the process of social change. By failing to distinguish between changes in institutions (such as the church) and changes in ideas (such as doctrine), they have failed to understand why one has seen the recurrence at various times of religious beliefs, moods, revivals, even though the world seems to be progressively disenchanted, to use Max Weber's term. Secularization, I argue, is too gross a term, for it sees social change as a one-way street, and fails to make the necessary distinction of levels. Thus, I propose to divide the term, to keep the word "secularization" in dealing with institutional matters (which was its original meaning, for the shrinking of ecclesiastical authority in a temporal realm) and to use "profanation" to deal with changes in ideas. Since I believe that social change operates on a double level, I propose the pairs *sacred and secular* and *holy and profane* to describe the different patterns of change.

A different kind of theme appears in such diverse essays as the one on ethnicity and the one on "The New Class: A Muddled Concept." This is the question of what are the most appropriate social units to describe contemporary social structure. Most sociologists, in one way or another, use the idea of *class* as the central term to describe social structure. Marxism, in fact, can almost be summed up in the phrase that all social structure is class structure. I have no quarrel with the term class.* I think it is the most

*This is in no way to assume that the term "class" is unambiguous. In principle there are three different "locations" of the term class, and within each of them one can distinguish three further subdivisions.

One way of thinking about class is to derive it from the *structure of production* in any society. And here, there are three distinct differences: *occupations* (e.g., from managers and professionals to unskilled and manual, which is the usual census distribution); *property relations* (e.g., with capitalist and proletariat comprising the main classification in modern Western society); and *authority relations*, a distinction first used by Ralf Dahrendorf in his *Class and*

powerful means we have for understanding Western society in the two centuries from 1750 to 1950. But I do quarrel with the effort to expand this as a master term in looking at *all* social structures. And I would argue that it is increasingly limited as a way of comprehending not only the complexities of Western societies but also the communal and tribal societies of the non-Western worlds.

The European world before industrial capitalism was organized primarily as a series of "vertical orders," what Max Weber has called *Stände*, and what Marx, before he generalized his notion of class in *The Communist Manifesto*, acknowledged as "estate society." In this social structure, there was a landed order, a military order, an ecclesiastical order, a legal order (*parlements*), and a bourgeois mercantile/artisan order, largely within the free cities or *burgesses*. Each of these orders was hierarchical and graded. Before the eighteenth century, individuals lived within an intricate system of codified rights and duties that were sanctioned by tradition, custom, or law. The rankings of lords, vassals, and serfs were inherited, and independent of money. The distinctions of master, journeymen, and apprentices were fixed in the guilds, and even the guilds themselves, as in Florence, were rigidly ranked as to rights and precedence.

Industrial capitalism blew this structure apart, or, more specifically, the bourgeois economic order expanded to almost envelop the entire social structure, so that the internal divisions within that order, the crude ties created by exchange, between capitalist and worker, became the major divisions within society. The idea of "class" arose because these divisions were so loose, and contractual, as against the intricate system of rank and rights that had preceded it.

But from that perspective, the idea of "class" arises out of what in eighteenth- and nineteenth-century political terminology was called "civil society"—an aggregation of individuals outside the State. And the idea of

Class Conflict in an Industrial Society (1965). This mode is primarily Marxist, but which of these, especially the second or third, is the most faithful to the master, I will have to leave to the textual disputants.

A second way, following Max Weber, is to think of economic class in terms of *market relations*. As elaborated by Norbert Wiley, there are three kinds of markets. One is credit markets, in which the basic class relationships are those of debtors and creditors, usually in agrarian societies, as well as in classical times. (Aristotle's discussion of class in the *Politics* is focused on the agrarian struggles of the landed debtors and their creditors, and the original meaning of the Latin word *proletariat* was "without land or property.") The second is labor markets, in which individuals sell their labor power to others. And the third is commodity markets of goods and services: of producers and consumers, of landlords and tenants, of professionals and clients. For Weber, the different kinds of market relations, at different historical times, defined different *kinds* of economic classes.

And the third major distinction would be the idea of *social class*. This might involve *rank*, as a formal set of distinctions, which one can see in the *chiny* (or ladder) system instituted by Ivan Grodny in Russia, or the informal distinction between gentlemen and commoners in nineteenth-century England. Or a different dimension would be *prestige*, based on social evaluations of "old families," or the ranking of occupations in modern society. And a third would be *life-style*, in the sense that Veblen used the term, wherein emulation becomes the basis of higher or lower rank in the social hierarchy.

class makes strong sense to the extent that "civil society" predominates as a social form. But in contemporary times, we have seen the re-emergence of the State as the dominant social unit of political society, and the State, given the compulsion to formulate an interest over and above any single set of interests, to think of the "national interest," or the "system as a whole," is not necessarily a tool of any specific class. In fact, to the extent that a society is a political democracy, the State is in the double bind of being an *arena*, where the competitive play of interests takes place (as against the economic divisions within the market or private enterprise), and also a *directive force*, having to forge policies for the society as a whole.

With the emergence of State-directed societies, the idea of class becomes less and less relevant. I have sought (in my book on postindustrial society, and in the essay on "The New Class") to revive the term *situs* (from the Latin, meaning location), to emphasize the competitive "vertical orders." In the Communist world, these *situses* are the governmental bureaucracy, the military, the factory managers, the collective farm heads, the cultural watchdogs, as units competing for power and privilege. In the Western world, particularly as postindustrial areas expand, while the professional and technical classes may divide into what I have called *estates*—scientific, applied engineering, administrative, and cultural—it is not likely that these estates would share a sufficient set of interests to cohere as a class; but that the major structural units of society would be the *institutional situses* in which these professionals would be distributed: corporations, the military, governmental agencies, social-educational complexes, and the like.

In a different respect, the emphasis on class has until recently overshadowed the understanding of what is today loosely called ethnicity—national, cultural, linguistic, religious, communal, tribal, or primordial attachments. In the nineteenth century, as I point out in the essay on "National Character Revisited," a large number of influential thinkers regarded race (meaning simply peoples, or those of "common blood" or "common descent") as the primary source of attachments and divisions in society. Moses Hess, who converted Friedrich Engels to communism and who was one of the original triad in the birth of Marxism (given both the dialectic and the trinity it stands to reason that *ur-Marxism* had a triad), broke with Marx on that issue and, in his prescient *Rome and Jerusalem* (1862), one of the first "Zionist" tracts, argued that the race struggle is first and the class struggle secondary—a point that is particularly apposite to the Middle East today. But given the intensity of the labor struggles in the latter part of the nineteenth century, the growth of the mass socialist parties in Western Europe, and the victory of Bolshevism in Russia, the idea of class became predominant—particularly with its view of the ultimate, if not inevitable, victory of the proletariat.

Today that emphasis on class has diminished. One factor has been the shrinkage in Western societies of the industrial working class, the traditional proletariat, though a number of neo-Marxist theorists argue that the white-collar classes, lacking autonomy in their jobs, will be proletarianized.

A second has been the argument, first proposed by Ralf Dahrendorf, that the labor question has become "encapsulated," and can no longer be generalized to become the polarizing division in modern society.

The other aspect has been the resurgence of ethnicity. One can look at it in two ways. First, almost all societies in the world today, with the exception of Japan, Sweden, and one or two smaller countries, are "plural societies," in that there are huge admixtures of crosscutting "ethnic" groups which are competitive with each other on ethnic rather than class lines.* One can see this in Canada, Belgium, northern Ireland, as well as most African societies. Second, the centrality of the *political* arena, rather than the *market*, as the allocator of reward and privilege forces each group in the society to organize on political lines in order to hold or gain relative advantage. In effect, ethnicity has become politically "salient"—this is the argument I make in the essay in this volume—though I am fearful of some of the consequences of this new, highly emotional divisiveness.

The further, more striking fact is that ethnicity, and history, and traditional power rivalries have a larger explanatory range than Marxism and class in understanding the bewildering conflicts between the Soviet Union and China, between China and Vietnam, and between Vietnam and Cambodia. The paradox is that Marxism, as a conceptual set of ideas, is of least use in explaining the internal structures and the national conflicts of the Communist states themselves.

A persistent concern of most sociologists (is it our culture of narcissism?) has been the role of the intellectuals. Curiously, in the hundred years of writing on the subject there has been little agreement on terms. For Edward Shils (as earlier for Julien Benda), the function of the intellectual (if he is to be concerned with intellect, and therefore with scholarship) is to be the moral guardian of the society, maintaining the continuity of tradition and of disinterested truth, and to be above political battle. For S. M. Lipset, the intellectual, because he is creative, necessarily innovates and is a force for change in the society. A diffuse left-wing tradition, drawing upon the Russian origins of the term *intelligentsia*, sees the intellectual as critic, or rebel against society. (The confusion is compounded in the Soviet Union today since the term *intelligentsia* is used as a census category to denote all non-manual, or "mental," work.) A counter-left-wing tradition, going back to Bakunin and the anarcho-syndicalist Waclaw Machajski, sees the intellectuals as a group using the working class primarily as a tool in order to put itself into power as a new class. This idea was revived by Milovan Djilas, in his book *The New Class* (1957), to designate the altered character of the Soviet regime.

*The very fact that Japan is a homogeneous society (though it has a pariah class of its own, the *burakamin*) makes it easier for that society to reach consensus and practice group solidarity—the factors that sociologists such as Ezra Vogel point to as accounting for much of Japan's economic success. But that very homogeneity, which is often overlooked in the preachments of management consultants to American enterprise to copy Japanese methods, makes it difficult to apply the Japanese style in our diverse society.

In a piquant twist, Irving Kristol has in recent years used the term "The New Class" to designate that sector of the educated classes—primarily in the universities, the media, and the government agencies—which is hostile to the business ethos and which favors the expansion of government because it is the means of exercising its own power in society. And almost twenty years ago C. Wright Mills, in a famous "Letter to the New Left," wrote off the workers and peasantry as a force for social change in the advanced industrial societies, and assigned this role to the students and the intellectuals—a theme that has been revived most recently in the *theses* of Alvin Gouldner, for whom Marxism is the "false consciousness" of the intelligentsia!

All of these debates have taken place on what may be called the "ideological" level. On the occupational-structural level, we have seen the expansion of the professional and technical classes in the society; in the United States today, these groups now comprise almost 25 percent of the labor force; they are concentrated in engineering, teaching, and the health fields—though the managerial and administrative classes have expanded hugely as well. Thirty-five years ago, following the lead of Berle and Means, who had argued that ownership of property had become less meaningful than managerial control, James Burnham wrote *The Managerial Revolution*, arguing that this sweeping change would be true of *all* Western societies. For Burnham, World War II—the conflict between Nazi Germany, Soviet Russia, and the United States—was not a war of democracy against fascism, but the *first war* between the managerial societies, as World War I had been the last war between the capitalist countries. In the time since Burnham wrote, we have seen the expansion of what J. K. Galbraith has called the "techno-structure" of business and society, the expansion of what Ralf Dahrendorf (following Karl Renner) has called the "service class" of the society (meaning not *services*, but the bureaucrats, managers, administrators, the "service class" of public and private organizations), and the enlargement of the sectors that I have called postindustrial.

How does one make sense of, or order, these complex developments? The essays in this book undertake such an effort. The essay on "Veblen and the Technocrats" traces some of the first ideas of the role of the *technicians* as men who would wield power in a syndicalist or corporate society. The essay on "The 'Intelligentsia' in American Society" tries to deal with the conflicting ideological and moral roles assigned to the intellectuals—and includes, as well, an extended discussion of the "New York Jewish Intellectuals." The short essay on C. Wright Mills, entitled "Vulgar Sociology," takes issue with the simplisms of Mills's equation-and-convergence theory. And the long essay on "The New Class: A Muddled Concept" seeks to make a set of distinctions about the different kinds of intellectuals in the society and to examine the problem on the structural and cultural levels.

The final group of essays I have entitled "Culture and Beliefs." They are more personal than any of the other essays. They deal, in one way, with the tension of the *parochial* and the *universal* which confronts any sentient indi-

vidual in a society, but especially the Jewish intellectual who, by his very history, is deracinated. In the larger context, they deal with the problem of the antinomian self and "the Law," (or, in Hebrew, that of *Halakha*, which is translated as "the commandments" but also as "the Way").

The antinomian individual, in modern times, appears with the Protestant Reformation. Antinomianism is the assertion of the conscience of the individual against institutions (the Church) or the Law. It is the basis of individualism. It is also the basis of the "self" that becomes unrestrained and seeks the lineaments of its own desires as the touchstone of sensibility and even of moral judgments.

The burdens of the Law are always evident. They are constricting. The Law is used by institutional authority to protect its own privileges. And the Law can be arbitrary, unreachable, or unfathomable—as Kafka's parables make painfully clear.

But antinomianism, too, has become problematic—if not more so than the burdens of the Law. Antinomianism is quick to defend heresy at any cost, on the presumption that heresy must be right and orthodoxy wrong. (In doing so, it makes the error of confusing orthodoxy, which means "right reason," with conformity. When heresy becomes *a la mode*, orthodoxy, paradoxically, is the stronger standpoint for criticism of society.) Antinomianism sanctions all forms of challenge and experiment, so that in the end, nothing is sacred. Antinomianism (as I seek to point out in the essay "Beyond Modernism, Beyond Self") exhausts itself in the search for novelty, and finally comes to fear the boredom and isolation of a life given over to the unrestrained self. Is it not a paradox that the term critics have used to describe the loss of community in modern society, *anomie* or a *nomos*—without law, or without restraint—has the same source as *antinomian*?

"The Winding Passage," as the reader may know, comes at the end of a long journey; it is the movement out of the netherworld to the fires of redemption. To get there, one has had to descend through nine circles, each of which exhibits the dark side of the nature of man. In this descent, there is a puzzle which each reader must solve for himself. For Dante, who is the *vade mecum* in this voyage, the first five circles—Limbo, Lust, Gluttony, Avarice, and Prodigality—form the upper Hell, the first of three main divisions, which is called Incontinence or Concupiscence. The two lower parts of Hell are the seventh level, Violence, and the eighth level, Fraud, leading to the ninth, or the winding passage itself.

The sixth circle is Heresy, but Heresy, a plateau in the stages of descent, stands apart from the three main divisions of Incontinence, Violence, and Fraud. And while Dante and Virgil, as they leave each circle, move to the left, only after the sixth circle do they go *a la man destra si fu volto*, turning to the right. "It is particularly striking," Professor Charles Singleton writes in his detailed explication of the text, "because the two wayfarers have always turned to the left," and, with one other minor exception, "will continue to do so."

Why, then, does Heresy stand outside the three main divisions of Hell, and why, after that level alone, do the two pilgrims turn to the right? Heresy, one concludes, is not a weakness of the flesh or of impulse, but a sin of intellectual pride, and thus stands apart from the traditional Christian categories of sin. That is why it stands outside the three main divisions of Hell itself. In confronting the sins of the flesh, the pilgrims turn consistently to the left; but in recoiling from the sin of intellect, they turn to the right.

But why, then, do the pilgrims turn to the right? It is a mystery to most commentators, yet Professor John Freccero has attempted an explanation:

[To] this apparent exception to Dante's rule. . . . Heresy, unlike all other sins in hell, attacks the True, and not the Good; which is to say, in the words of St. Thomas, that its *subiectum* is not *voluntas* but rather *intellectus*. Here is the only instance in Dante's moral system where an error of the speculative intellect is punished in hell, a fact which no pagan, neither Cicero, nor Aristotle, nor Virgil would have been able to understand. It is for this reason that the pilgrim must perform his retrograde movement to the right, in order to deal with an aberration of the intellect in the realm of the perverted will.*

If a parable is a prologue, I offer another in conclusion. It is a Zen story. Two monks have been circling in the desert for a long time. Finally they sit down. Neither says a word. Sometime later, one speaks: "My brother is lost." The other is silent. After a long meditation, he says: "No. I am not lost. I am here. The Way is lost."

It may be a story that a modern man can accept. For one who is proceeding through the winding passage, if The Way is lost, all is lost.

One does not walk alone. It is one of the author's pleasures to acknowledge his friends. I want to thank Clark Abt for suggesting this collection. His strong intellectual curiosity, which has driven him to build the largest social-research firm in the United States, is merged with a passion for the reflective, so that while he may not share my ideas, he has urged me to bring together these reflections and speculations in order to show that sociology has its humanistic as well as social-policy concerns.

My wife Pearl has been my "common reader," her exacting taste holding in check my "perverted will," forcing me to emphasize clarity and purpose and to limit, though not always successfully, the digressions of my restless vanity. My son David has begun to share the burdens which a father always hopes a son will assume; in this case, to undertake some of the chores of preparing a manuscript for publication. Whether he agrees with my views is a question that neither he, nor I, has an answer to, for he is now beginning his own intellectual journey. But I am grateful to him for the filial love which, as a son, he expresses.

*See Charles S. Singleton, *The Divine Comedy, Inferno: 2, Commentary*, Bollingen Series, LXXX (Princeton, N.J.: Princeton Univ. Press, 1970), pp. 43-44 for the divisions of hell; and p. 143 for the quotation from John Freccero.

I dedicate this book to my friends Nathan and Lochi Glazer. I have known Nat, as a friend, for almost thirty-five years, going back to the days when we first met in my office at *The New Leader*, and then at *Commentary*, where he worked as an editor for a decade. We have been collaborators in formal and informal ways. We have usually found ourselves signing the same petition and making the same protest. When I stepped down as co-editor of *The Public Interest*, Nat took my place on the balance wheel of the magazine. For the past ten years we have been colleagues at Harvard and neighbors in Cambridge. Nat and Lochi are part of my extended family and I hope they have as much pleasure in accepting this dedication as I have in giving it.

Cambridge, Massachusetts

April 1980

I



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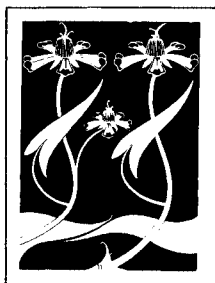
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1

TECHNOLOGY, NATURE, AND SOCIETY

The Vicissitudes of Three World Views and the Confusion of Realms*



The terms of the will of James Smithson bequeathed the whole of his property to the United States of America, "to found at Washington, under the name of the Smithsonian Institution, an Establishment for the increase and diffusion of knowledge among men." Though the bequest, in one sense, was clear, the effort to implement it led for several decades to many confusions and debates. What is knowledge, and how does one increase it or diffuse it? Some individuals wanted to create a national university, others a museum, still others a library, and others still a national laboratory, an agricultural experiment station, or, with John Quincy Adams, a national observatory. Today we have all these except a national university—though some local patriots might consider my home on the Charles such an institution. And certainly, under Mr. Dillon Ripley, the Smithsonian has become "an Establishment."

*This essay was originally written as a lecture to be given, in December 1972, at the Smithsonian Institution in Washington. On such occasions, one usually seeks to make a gracious genuflection to the place, and omit such parochial introductions on publication. However, since the nineteenth-century debates about the purposes of the Smithsonian are still relevant to the question of "what knowledge is worth having," I have retained that introduction in this publication.

But if in later years buildings were built and institutions established, the more vexing question of what knowledge should be increased and promoted, which bedeviled the regents of the Institution, still remains. In the mid-nineteenth century the "promotion of abstract science," as Joseph Henry, the first head of the Institution, put it, dominated the activities of the Smithsonian. But Mr. Henry soon found himself under attack from all sides. There were those like Alexander Dallas Bache, who said that ". . . a promiscuous assembly of those who call themselves men of science would only end in disgrace." Under the new conditions of scientific specialization, he declared, the universal savant was obsolete; the differentiation of scientists from amateurs demanded the material support only of professional research scientists. On the other hand, Horace Greeley, in the *New York Tribune*, accused Mr. Henry of converting the Smithsonian into "a lying-in hospital for a little knot of scientific valetudinarians." The question of what kind of science, theoretical or applied, continues to be refought.

A different, equally familiar issue was the one between men of science and men of letters. Ethics and philosophy, said Rufus Choate of Massachusetts, were as vital as soil chemistry and a knowledge of noxious weeds, and in the debate in the House of Representatives Choate's protégé Charles W. Upham, representing the men of letters, declared: ". . . vindicate art, taste, learning, genius, mind, history, ethnology, morals—against sciologists, chemists & catchers of extinct skunks."¹

In the unhappy further differentiation of the world since then, I present myself neither as a man of science nor as a man of letters. Sciologists (the bearers of superficial learning) have become crossed with logomachs (those who contend wearily about words) to create sociologists, that hybrid with a Latin foreword and a Greek root, symbolizing the third culture which has diffused so prodigiously throughout the modern world.

Yet as an intellectual hybrid my provenance may not be amiss. For my theme is the redesign of the intellectual cosmos, the hybrid paths it has taken, and the necessary and hybrid forms it may take. With Mr. Upham's charge in mind, I am prepared to vindicate all his categories, except extinct skunks.

I

THE CONFUSION OF REALMS

If we ask what uniquely marks off the contemporary world from the past, it is the power to transform nature. We define our time by technology. And until recently we have taken material power as the singular measure of the advance of civilization.

1. My discussion of the Smithsonian legacy and its vicissitudes is taken from A. Hunter Dupree, *Science in the Federal Government* (Cambridge, Mass.: Harvard University Press, 1957), chapter IV, and Howard S. Miller, "Science and Private Agencies," in *Science and Society in the United States*, Van Tassel and Hall, eds. (Homewood, Ill.: Dorsey Press, 1960), pp. 195-201.

The philosophical justification of this view was laid down a hundred or more years ago by Marx. Man has needs which can only be satisfied by transforming nature, but in transforming nature he transforms himself: as man's powers expand he gains a new consciousness and new needs—technological, psychological, and spiritual—which serve, further, to stimulate man's activity and the search for new powers. Man, thus, is defined not by nature but by history. And history is the record of the successive plateaus of man's powers.²

But if it is, as Marx states in *Capital*, that in changing his external environment man changes his own nature, then human nature in ancient Greece must have been significantly different from human nature under modern capitalism, where needs, wants, and powers are so largely different. And if this is so, how is it possible, as Sidney Hook asks, to understand past historical experience in the same way we understand our own, since understanding presupposes an invariant pattern? This is a problem which confronts not only historical materialism but all philosophies of history.³

Marx only once, to my knowledge, in a fragment written in 1857, sought to wrestle with this conundrum; and his answer is extraordinarily revealing:

It is a well-known fact that Greek mythology was not only the arsenal of Greek art but also the very ground from which it had sprung. Is the view of nature and social relations which shaped Greek imagination and Greek [art] possible in the age of automatic machinery, and railways and locomotives, and electric telegraphs? Where does Vulcan come in as against Roberts & Co.; Jupiter as against the lightning rod; and Hermes as against the *Crédit Mobilier*? All mythology masters and dominates and shapes the forces of nature in and through imagination; hence it disappears as soon as man gains mastery over the forces of nature. . . . Is Achilles possible side by side with powder and lead? Or is the *Iliad* at all compatible with printing press and steam press? Do not singing and reciting and the muses necessarily go out of existence with the appearance of the printer's bar, and do they not, therefore, disappear with the prerequisites of epic poetry?

But the difficulty is not in grasping the idea that Greek art and epos are bound up with certain forms of social development. It rather lies in understanding why they still constitute with us a source of aesthetic enjoyment and in certain respects prevail as the standard and model beyond attainment.

The reason, Marx declares, is that such art is the *childhood* of the human race and carries with it all the charm, artlessness, and precocity of childhood, whose truths we sometimes seek to recapture and reproduce "on

2. "Human history may be viewed as a process in which new needs are created as a result of material changes instituted to fulfill the old. According to Marx . . . the changes in the character and quality of human needs, including the means of gratifying them, is the keystone not merely to historical change but to the changes of human nature." Sidney Hook, *From Hegel to Marx* (Ann Arbor: Univ. of Michigan Press, 1962), p. 277.

3. Sidney Hook, "Materialism," *Encyclopedia of the Social Sciences*, Vol. X (New York: Macmillan, 1933), p. 219.

a higher plane." Why should "the social childhood of mankind, where it had obtained its most beautiful development, not exert an eternal charm as an age that will never return?"⁴ That is why we appreciate the Greek spirit.

The answer is a lovely conceit. Yet one must know the sources of the argument to understand the consequences. For Marx, this view derived, in the first instance, from the conception of man as *homo faber*, the tool-making animal; the progressive expansion of man's ability to make tools is, therefore, an index of man's powers. A second source of this view was Hegel, who divided history into epochs or ages, each a structurally interrelated whole and each defined by a unique spirit qualitatively different from each other. From Hegel, this view passed over into cultural history, with its periodization of the Greek, Roman, and Christian worlds, and Renaissance, Baroque, Rococo, and Modern styles. Sociologically, Hegel's idea is the basis of the Marxist view of history as successive slave, feudal, bourgeois, and socialist societies. Behind it all is a determinist idea of progress in human affairs, or a *marche générale* of human history, in which rationality in the Hegelian view, or the powers of production in the Marxist conception, are the immanent, driving forces of history that are obedient to a teleology in which anthropology, or a man-centered world, replaces theology, or a God-created world.

Today we know that, of the two views, that of *homo faber* is inadequate and that of the march of society and history is wrong. Man is not only *homo faber* but *homo pictor*, the symbol-producing creature, whose depictions of the world are not outmoded in linear history but persist and coexist in all their variety and multiplicity through the past and present, outside of "progressive" time. As for the nineteenth-century view of society, just as the mechanistic world view of nature has been shattered by quantum physics, so the determinist theory of history has been contradicted by the twentieth-century clash of different time-bound societies.⁵

So we are back to our initial question: what marks off the present from the past, and how do we understand each other; how, for example, do we read the ancient Greeks, and how would they read us? The answer lies, perhaps, in a distinctive interplay of culture and technology. By culture, I mean less than the anthropological view, which includes all "nonmaterial" factors within the framework of a society, and more than the genteel view,

4. "Introduction to the Critique of Political Economy." The essay, much of it in the form of notes, was intended as an introduction to the main work of Marx. As a posthumous essay, it was first published by Karl Kautsky, Marx's literary executor, in *Neue Zeit*, the theoretical organ of the German Social Democratic Party, and published in English as an appendix to Marx's *A Contribution to the Critique of Political Economy* (Chicago: Charles H. Kerr, 1904). The quotations in the text are from pp. 310-312.

5. Socialism has not come as the successor of capitalism. Communist China is technologically more backward than capitalist U.S.A. If it is socially more "progressive," on what dimensions do we make relevant comparisons: freedom, sexual styles, standard of living, communal care, personal dignity, social cohesion, attachment and loyalty to the country or party or leadership figure? Surely there is no way to "rank" these factors.

which defines culture by some reference to refinement (for example, the fine arts). By culture, I mean the efforts of symbol makers to define, in a self-conscious way, the *meanings* of existence, and to find some justifications, moral and aesthetic, for those meanings. In this sense, culture guards the continuity of human experience. By technology—in a definition I will expand later—I mean the effort to transform nature for utilitarian purposes. In this sense, technology is always disruptive of traditional social forms and creates a crisis for culture. The ground on which the battle is fought is nature. In this paper, I want to deal largely with the vicissitudes of nature as it is reshaped by technology, and the vicissitudes of technology in its relation to society. To that extent, I have to forgo an extensive discussion of culture, though I shall return to that theme at the end.

II

WHAT IS NATURE?

What is nature? Any attempt at specific definition brings one up short against the protean quality of the term. Nature is used to denote the physical environment or the laws of matter, the "nature" of man (for example, his "essence") and the "natural order" of descent (in the family, in botany, and in society). We talk of "natural selection" as the fortuitous variations in individuals or species which assure survival, and "natural law" as the rules of right reason beyond institutional law.⁶ In a satirical passage in *Rasselas*, Samuel Johnson has his young Prince of Abissinia meet a sage who, when asked to disclose the secret of happiness, tells him "to live according to his nature." *Rasselas* asks the philosopher how one sets about living according to nature and is told a string of generalities that expose the wise man's emptiness.⁷

6. As *Webster's Second* points out: "The conception of *nature* (Gr. *physis*, L. *natura*) has been confused by the mingling of three chief meanings adopted with the word into English, viz.: (1) Creative or vital force. (2) Created being in its essential character; kind; sort. (3) Creation as a whole, esp. the physical universe. The main ambiguity is between *nature* as active or creative and *nature* as passive or created. In the original animistic view, the active vitalistic conception prevailed; but Plato sharply distinguished the passive material from the active formal element, and Aristotle continued the distinction in the conception of a moving cause, or God, as separate from the moved physical universe, or Nature. This antithesis is all but obliterated in pantheistic and naturalistic views. It appears in the pantheism of Spinoza, but the distinction of *natura naturans* and *natura naturata* serves only to discriminate two elements or aspects of the one organic being or substance. The two elements, in the forms of matter and energy, are retained in the modern physical or mechanical view, wherein nature appears as a material universe acting according to rules, but to all intents independent of God or purposive cause." (Springfield, Mass.: G. & C. Merriam, 1955), p. 1631.

7. I am indebted for the illustration to John Wain, from a review of *Sexual Politics* in the London *Spectator*, April 10, 1971. As Mr. Wain writes: "Everyone agrees that happiness comes, and can only come, from living according to nature. And what is that? When woman is assigned a different role from man, is she being thwarted and twisted away from 'nature'? Or is it, on the contrary, the woman who wants to be treated exactly like a man who is turning her back on 'nature' and happiness?"

For my purposes, I restrict the meaning of nature to two usages. The first is what in German—whose fine structure of prefixes allows one to multiply distinctions—is called the *Umwelt*, the organic and inorganic realms of the earth which are changed by man. This is the geography of the world, the environment. The second is what the Greeks called *physis*, or the order of things, which is discerned by man; this natural order is contrasted with *themis*, the moral order, and *nomos*, the legal order. For my purposes, then, nature is a realm outside of man whose designs are reworked by men.⁸ In transforming nature, men seek to bring the timeless into time, to bring nature into history. The history of nature, then, is on two levels: the sequential transformations of the *Umwelt* as men seek to bend nature to their purposes; and the successive interpretations of *physis* as men seek to unravel the order of things.⁹

We begin with the *Umwelt*, and with myth. Man remakes nature for the simple and startling reason that man, of all living creatures, "natural man," is not at home in nature. Nature is not fitted to his needs. This is the insight first enunciated by Hesiod in *Works and Days*, and retold by Protagoras in the Platonic dialogues to spell out a moral about human society. The story, of course, is that of Prometheus and Epimetheus. The two brothers, foresight and hindsight, are charged by the gods with equipping all newly fashioned mortal creatures with "powers suitable to each kind." But, unaccountably—perhaps because of the pride of the younger to excel—Epimetheus asks the older for permission to do the job, and is given the task. He begins with the animals. Some are given strength and others speed, some receive weapons and others camouflage, some are given flight and others means of dwelling underground; those who live by devouring other animals are made less prolific, while their victims are endowed with fertility—"the whole distribution on a principle of compensation, being careful by these devices that no species should be destroyed."

But without forethought, Epimetheus squandered all his available powers on the brute beasts, and none were left for the human race. Prometheus, come to inspect the work, "found the other animals well off for everything, but man naked, unshod, unbedded, and unarmed, and already the appointed day had come when man, too, was to emerge from within the earth into the daylight." Prometheus therefore stole from Athena

8. If nature is outside man, what does one do with the term *human nature*? Despite its ambiguities, it is probably indispensable. Yet, in the effort to keep my distinctions clear, I would use instead the term *human character*.

9. I realize that I am using the phrase "the history of nature" in a very different way from such physicists (or should one call him a natural philosopher) as C. F. von Weizsäcker, who asserts that nature is historic, since by history he means being *within* time, since all of nature itself is changing—and ten billion years ago there was neither sun nor earth nor any of the stars we know—and, following the theorem of the second law of thermodynamics, events in nature are fundamentally irreversible and incapable of repetition. My history of nature, here, is within the time frame and conceptual map of nature's transformation at the hands of man, and the understandings of nature by man. See C. F. von Weizsäcker, *The History of Nature* (Chicago: University of Chicago Press, 1949).

and Hephaestus the gift of skill in the arts, together with fire. "In this way man acquired sufficient resources to keep himself alive. . . ." ¹⁰ Nature, thus, became refitted for man.

As Prometheus says, in the play of Aeschylus:

*I gave to mortals gift.
I hunted out the secret source of fire.
I filled a reed therewith,
fire, the teacher of all arts to men,
the great way through. . . .
I, too, first brought beneath the yoke
great beasts to serve the plow,
to toil in mortals' stead. . . .
Listen, and you shall find more cause for wonder.
Best of all gifts I gave them was the gift of healing.
For if one fell into a malady
there was no drug to cure, no draught, or soothing
ointment. . . .
The ways of divination I marked out for them,
and they are many; how to know
the waking vision from the idle dream;
to read the sounds hard to discern;
the signs met on the road; . . .
So did I lead them on to knowledge
of the dark and riddling art.¹¹*

Natural goods are those we share with the animals, but cultivated or fabricated goods require the reworking of nature: the husbandry of soil and animals, the burning of the forests, the redirection of the rivers, the leveling of mountains. These demand acquired powers. The introduction of *techne* gives man a second nature, or different character, by extending his powers through adaptive skills and redirective thought; it allows him to prefigure or imagine change and then seek to change the reality in accordance with the thought. The fruits of *techne* create a second world, a technical order which is superimposed on the natural order.

In the imagination of the Greeks, these stolen skills were powers of the gods, and with these powers man could begin that rope dance above the abyss which would transform him from "the kinship with the worm," in the phrase of Faust, to the godlike knowledge that partakes of the divine. Prometheus was punished, and, in the romantic imagination of Marx as well as Shelley, Prometheus was the eternal rebel who had dared to act for men. The paradox is that today the romantic imagination, having turned against

10. "Protagoras," in *Plato: The Collected Dialogues*, trans. by W. K. C. Guthrie, Edith Hamilton and Huntington Cairns, eds., Bollingen Series LXXI (New York: Pantheon Books, 1966), pp. 318-319, lines 320d-322.

11. Aeschylus, *Prometheus Bound*, trans. by Edith Hamilton, in *Greek Plays in Modern Translation*, Dudley Fitts, ed. (New York: The Dial Press, 1953), pp. 508-509, 519-520.

techne, remains puzzled as to what to say about its primal hero. Most likely, the new shamans would say that the punishment was justified. But that is another story, for another day.

I jump now almost two thousand years, from Protagoras to the seventeenth century C.E., to a radically new way of looking at nature and of organizing thought, the rule of abstraction and number.¹²

Mythology, the first mode of depicting the world, is based on personification or metaphor. Nature is a creative or vital force ruling the *Umwelt*. In *Prometheus Bound* the characters are called Ocean, Force, and Violence, or in the later personification of the tides of destiny (we cannot escape metaphor in our speech) we find *Moirai*, or Fate, and *Tyche*, or Chance, as the two principles which rule our lives. Through myth, metaphor, and characterization, we can dramatize our plights, and search for meaning in expressive symbolism; that is the virtue of the poetic mode. But with abstraction and number, we can state causal or functional relationships and predict the future states of, or manipulate, the world. Nature as *physis* is an order of things. The heart of the modern discovery is the word *method*. Nature is to be approached through a new method.

In terms of method, the first achievement, that of Galileo, was the simplification of nature. Galileo divided nature into the world of qualities and the world of quantities, the sensory order and the abstract order. All sensory qualities—color, sound, smell, and the like—were classified as secondary and relegated to subjective experience. In the physical world were the primary quantities of size, figure, number, position, motion, and mass, those properties which were capable of extension and mathematical interpretation. The worlds of poetry and physics, the idea of natural philosophy, were thus sundered.

Equally important was the contrast with the classical Aristotelian view which Thomas Aquinas had enlarged upon in medieval thought. Then the object of science was to discover the different purposes of things, their essence, their "whatness," and their qualitative distinction. But little attention was paid to the exactly measured *relations* between events or the *how* of things. In this first break with the past, measurement and relation became the mode. To do so Galileo shifted the focus of attention from specific objects to their abstract properties. One did not measure the fall of an object but mass, velocity, force, as the properties of bodies, and the relations among these properties. The elements of analytical abstraction replaced concrete things as the units of study.

12. In this section I have drawn primarily from E. J. Dijksterhuis, *The Mechanization of the World Picture* (London: Oxford University Press, 1961); Charles C. Gillespie, *The Edge of Objectivity* (Princeton, N.J.: Princeton University Press, 1960); Arthur Koestler, *The Sleepwalkers* (London: Hutchinson, 1959); John Herman Randall, Jr., *The Making of the Modern Mind* (Boston: Houghton Mifflin, 1926), especially for the quotations from Descartes and Spinoza; and Joseph Mazzeo, *Renaissance and Revolution* (New York: Pantheon Books, 1965), especially on Galileo. Unless otherwise noted, the quotations from Descartes and Spinoza are taken from Randall.