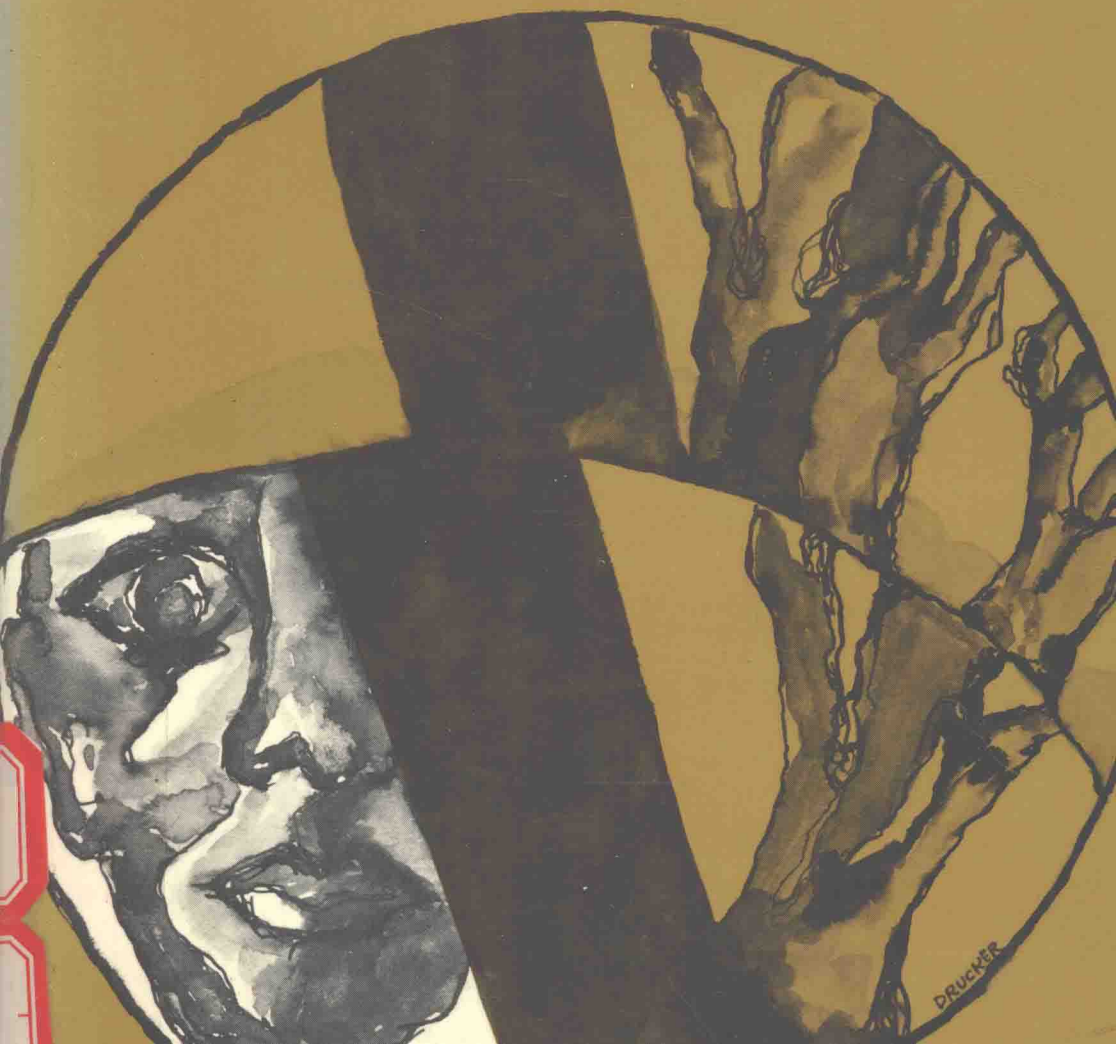


samuel z. klausner

on man in his environment





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ON MAN IN HIS ENVIRONMENT

Social Scientific Foundations for Research and Policy

Samuel Z. Klausner

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Preface



Man coaxes support from the natural environment, impedes damage from its ravages, and aggressively shapes it with the instruments of engineering. Recently economists have begun to compute costs attached to various engineering options. These economists have been social science frontiersmen in the study of the natural environment. Wrestling to solve such cost problems has led some economists to examine the noneconomic aspects of social life. The sociologists' questions dovetail with those of the economist. The economist asks how the free use of the atmosphere as a dump for automobile exhaust can be balanced against the costs of respiratory ailments and cleaning bills. The sociologist wonders whether the sense of power and privacy enjoyed in the private automobile erases sensitivity to atmospheric stench, ambiguous illness, and soiled clothes.

Whether cloud seeding will moisten farmers' fields while reducing snowfall on a ski slope is a technical question asked prior to an economic analysis. The policy oriented sociologist might ask whether the community of skiing recreationists could be or become as powerful an interest group as the farmers who encourage cloud seeding.

How much increase in the cost of water purification is incurred by a downstream community when its upstream neighbors use the river as a sewer? The sociologist might wonder whether the socioethnic and economic interests of the elites of the upstream and downstream communities can be meshed in the development of a

Preface

regional water plan. How can the costs of a tsunami warning system be weighed against the number of potential victims who might be saved? Would an environmental warning system operated by local government, the police, the fire department, and the mayor's office enjoy greater public legitimation and attention—and thus have greater effectiveness—than one developed around a specialized federally monitored civil defense function?

This book discusses the relation of man and nature—the theme underlying the above questions—and could begin, with equal legitimacy, with the study of either of the two partners to that relation. The approach is that of the discipline of sociology rather than of physical environmental analysis. Rather than beginning with the characteristics of the physical environment—with the concentrations of particulate matter or sulfur dioxide in the air or the rates of thermal change in certain lakes—I begin with the characteristics of human society, taking a sociological look at the environment instead of an environmentalist look at sociology. This perspective enhances the probability of contributing to sociological theory itself and thereby to the attraction of a body of serious sociologists to the field.

Chapter One explains the current neglect of man-environment studies. Chapter Two weighs the advantages of theoretical models implicit in current man-environment research of demographers, human ecologists, and location theorists. Chapters Three and Four present a voluntaristic model for thinking social scientifically about human action oriented to the physical environment. Chapter Five uses this frame of reference to analyze social influences on the systematically developed concepts of the environment in the natural sciences and technology. The final two chapters illustrate reconceptualizations useful for research in three areas publicly defined as posing environmental problems: air pollution, noise pollution, and outdoor recreation. The Epilogue shifts abruptly from theory and research to some comments on policy for environmental research, education, and management.

The sociologist is asked to contribute to the solution of problems of water pollution, of weather hazard, or of the provision of

Preface

recreational facilities. As stated, these are social rather than sociological problems. Further, water, weather, and camp stoves are common-sense physical concepts, not sociological concepts. The major contributions to understanding, and ultimately control, of the natural environment are likely to come from sociologists who reformulate environmental problems in theoretical terms. The principal thrust of this book is toward such a theoretical reformulation.

Action, however, need not wait for new theoretical formulations. The sociologist can make immediate contributions to the resolution of some program and planning problems—even while those problems are conceptualized in common-sense or physical terms. The questions posed in the opening paragraphs are of this character. Applications of well known sociological knowledge may go far toward answering such questions. Studies of communication of natural hazard warning or sociographic descriptions of participation in various types of recreation would in their raw state be useful to planners. Studies of consumer tastes and preferences, using traditional attitude and value scaling procedures, would help economists interpret the slopes and positions of demand curves. Such studies of communication, buying behavior, or attitudes are appropriate sociological service functions. Service functions are both socially and sociologically useful. The theoretical development and application of knowledge proceed hand in hand. If a sense of social crisis presses us toward premature application of knowledge, some of us must hold this sense of emergency at bay to explore alternative ways of looking at the problem of man and nature. Empirical research, engendered and interpreted by theoretical formulations, can produce new sociological knowledge and guide planners in improving the habitability of the earth.

I was encouraged to think sociologically about the natural environment during four enjoyable spring and summer months as a sociological-psychological consultant to Resources for the Future, Inc. (RFF). Initially, I examined some social and psychological dimensions of the demand for outdoor recreation. A more general consideration of the natural environment developed when my economist colleagues began asking for a sociologist's thoughts on

Preface

urban and marine environments and on the quality of our air and water.

The men who are RFF personally and professionally absorbed me as if I were a regular member of the staff. Blair Bower, Michael Brewer, Robert Davis, Charles Howe, and Allen Kneese will recognize the influence of their comments in the following pages. Continuous help with economic problems by my monitor, John Krutilla, kept the discussion on the intersect of economics and sociology from being more crude than it is. Neither he nor RFF should be called to account for what I have elected to say here. My good assistants, Sandra Bouxsein and Christine Rupard, helped me review work of earlier scholars in the field. My amanuenses, Vera Ullrich at RFF and Candace P. Cole, Gail W. Donner, and Judith Thomas at the Center for Research on the Acts of Man at the University of Pennsylvania labored over the manuscript.

Several of my colleagues have taken time from busy schedules to comment on an earlier draft of this report. Charles Y. Glock of the University of California, Berkeley, and William Burch of Yale University pointed to some weaknesses in my discussion of recreation. Lincoln Day of Yale noted some of the more serious defects in the chapter on demography and ecology. William E. Henry of the University of Chicago and Renée C. Fox and William L. Kissick of the University of Pennsylvania were perceptive critics of my policy statement. My deepest gratitude is due Albert Gollin of the Bureau of Social Science Research who reviewed the entire manuscript as a conscientious professor would that of a fumbling graduate student.

The editing by Carol Talpers of Jossey-Bass Publishers made many of my awkward sentences articulate. My wife, Madeleine, brought that measure of order into my life and work without which no manuscript could have emerged.

I dedicate the book to Madeleine Zipporah, a fortress for the earth transcended in the sky.

Philadelphia
November 1970

SAMUEL Z. KLAUSNER



On Man in His Environment

*Social Scientific
Foundations for
Research and Policy*



How desolate is the populous city!
Lamentations 1:1

*The abundance of the sea shall
be turned to you,
The wealth of the nations shall
come to you.*
Isaiah 60:5



Contents



	<i>Preface</i>	ix
1	<i>Retreat from Man-Environment Studies</i>	1
2	<i>Populations and Their Resources</i>	17
3	<i>How Physical Facts Become Social Facts</i>	36
4	<i>Elements for an Environmental Theory</i>	53

Contents

5	<i>Rediscovery of the Environment</i>	75
6	<i>Social Implications of Filth and Noise</i>	106
7	<i>Recreation as Social Action</i>	131
8	<i>Social Policy for the Environment</i>	167
	<i>Bibliography</i>	195
	<i>Index</i>	219

CHAPTER II



Retreat from Man- Environment Studies



The sociological field of man-environment relations, cultivated with some élan for nearly a century, today lies fallow. Now and then an anthropologist or a human ecologist who is committed to holism surveys the territory. An earlier environmentalism encourages some psychologists to experiment with the stimulus value and symbolic meaning of light, sound, space, or temperature. For the decade or so after Hiroshima, a small eddy of disaster research projects took the truculence of nature as a proxy for the ferocity of man. Encouraged by the Committee on Disaster Studies of the National Academy of Sciences-National

Research Council and the Federal Civil Defense Administration, sociologists studied individual and communal responses to tornadoes, floods, and earthquakes (Klausner and Kincaid, 1956; Baker and Chapman, 1962).

Two wide-angle surveys of sociology attest to the limited interest in the relations of man and nature. One of these is a collection of thematic papers from the 1957 meeting of the American Sociological Association (Merton, Broom, and Cottrell, 1959) and the other a similar collection from the 1962 meeting of that association (Larzarsfeld, Sewell, and Wilensky, 1967). Neither collection demonstrates any significant interest in transposing physical environmental variables onto sociological coordinates. No references are found under such traditional index classifications as natural environment or natural resources. A single paragraph on man-land relations appears in the latter volume in the chapter on rural sociology, a branch of the field with older roots than most.

Lack of academic interest does not mean a lack of concern with palpable ties between human society and its nonhuman environment. No sociologist questions the fact that societies, as concrete organizations, shape and are shaped by their natural environment. All agree that technology transforms the environment and induces changes in social organization. All agree that each form of social organization imposes its own demands upon the environment. Most sociologists—especially since the Great Depression—have ignored the physical environment, not as unimportant in human action but as irrelevant to a sociological analysis of action. These sociologists have chosen to ignore physical objects because they feel they are not relevant to the abstractions needed to understand society. Our best contemporary student of sociological theorizing (Parsons, 1949, p. 47) states this case:

Certainly the situation of action includes parts of what is called in common-sense terms the physical environment and the biological organism—to mention only two points. With equal certainty these elements of the situation of action are capable of analysis in terms of the physical and biological sciences. . . . But for purposes of the theory of action it is not necessary or

On Man in His Environment

desirable to carry such analyses as far as science in general is capable of doing. A limit is set by the frame of reference with which the student of action is working. That is, he is interested in phenomena with an aspect not reducible to action terms only insofar as they impinge on the schema of action in a relevant way—in the role of conditions or means. So long as their properties, which are important in this context, can be accurately determined, these may be taken as data without further analysis.

Contemporary sociological analysis gives little attention to the physical world either as “conditions or means” or “as data without further analysis.” Often physical conditions have been dissolved in a residual category under the pseudonyms of *ceteris paribus* and community.

Paradoxically, academic sociological interest in the environment has declined at a time of growing popular interest. Environmental management programs are instituted without the benefit of sociological counsel; and despite the failure of some programs to articulate with the needs of the communities they are designed to serve, they continue without sociological counsel. A disparity between sociological and popular social interest is not inconsistent with a philosophy of scientific purism. Nevertheless, this disparity is unusual in the history of sociology. Theoretical developments in sociology have tended to follow public definitions of social problems. For example, the theory of social stratification developed when an economic depression strained relations among the classes and at a time when sociological practitioners were socially mobile. Concern with the sociology of deviance and theories of social control has accompanied public concern about crime and revolutionary change.

Why, in this case, has interest waned while the problem waxed? The seeming exception of the man-environment field may be traced, in part, to nineteenth-century disciplinary fallacies and, in part, to changing social characteristics of sociologists. To explain what has diverted sociologists from an interest in the environment and to explore ways of renewing that interest, some past thinking—both sociological and presociological—on man-environment relations is reviewed.

The history of theories of the relation of man and nature

may be traced from index entries under *environment* in the *Encyclopedia of the Social Sciences* (Seligman and Johnson, 1934). The new *International Encyclopedia of the Social Sciences* (Sills, 1968) with its column and a half of index entries under *environment* and *environmentalism* and additional entries under *natural resources* points to more recent developments. Pursuit of the references cited in both of those encyclopedias leads more often to economics and anthropology than to sociology—but field boundaries have not been that clear.

Two perspectives on man and nature have persisted in social thought. From one perspective the relation appears deterministic. Natural events determine or cause human behavioral events. Individual and social behavior are traced directly to physical characteristics of the environment—to its chemical composition, temperature, or the spatial relation between people. From a second perspective human behavior is traced to a negotiation between man and environment. The physical environment constrains behavior but is not its cause. The human actor defines and shapes the environment and is defined and shaped in the encounter. The former perspective dominated social thought in this field until fairly recently. Its history, largely a record of theories that failed, is documented here. Theories of man as a negotiator with nature are precursive to a new environmental sociology. This second line of development is traced in Chapter Three.

The deterministic image of the relation of man and nature has been bound to physicalist conceptions of the wellsprings of human behavior. The ancient Greeks set the paradigm. Four primordial elements—earth, air, fire, and water—constitute the physical world. Man's health depends on the ratios in which these elements combine in his body. Blood, phlegm, black bile, and yellow bile—the humors of temperament—are produced by particular proportions of fire and water, of moistness and dryness, or of heat and cold. The joint action of these elements supports life. Their separation means death. From this physically based psychology, it was only a small step to the belief that man could control his personality. Greek theoreticians argued that man could control the

On Man in His Environment

balance among his humors by inserting himself into an environment containing the appropriate proportions of heat and moisture or other primordial elements. Man's ability to control his behavior is circumscribed only by his freedom to choose his environment.

St. Thomas Aquinas (1938, Book II, Ch. 1, pp. 110f) elaborated this thinking into a theory of social character. His advice to a ruler on selecting a site for a city tells how climate shapes character:

A temperate climate is most conducive to fitness for war by which human society is kept in security. For as Begetius tells us, all people that live near the sun and are dried up by the excessive heat have keener intellects, it is true, but they have less blood, and consequently have no constancy of self-reliance in hand-to-hand fighting, for knowing that they have but little blood, they have a great fear of wounds. On the other hand, northern tribes, far removed from the burning rays of the sun, are more dull-witted, indeed, but, because they have an ample flow of blood, they are ever ready for war. Those who dwell in temperate climes have, on the one hand, an abundance of blood and thus make light of wounds or death and, on the other hand, do not lack prudence, which puts the proper restraint on them in camp and helps them in using strategy in the field.

The empirical invalidity to which this reasoning leads may titillate the contemporary reader. In a more subtle form, however, such hypothetical linkages from climate to physiology to personality and finally to war and politics have been widely accepted over the centuries by our literati. Ibn Khaldûn (1958), writing in fourteenth-century North Africa, appealed to geographic (oceans, rivers) and climatic (air, temperature, and humidity) factors to account for differences in the characters of peoples and in their sentiments of social commitment. Jean Bodin (1945), in sixteenth-century France, examined the psychological impacts of climate. Hot climates produce inner passion and cold climates outer ferocity. Charles Louis Montesquieu (1964), interpolating the more advanced physiology of his age, believed inhabitants of cold climates to be brave and vigorous because cold air "constringes the external fibers of the body," increasing their elasticity and favoring the re-