

The Realm of Meaning: The Inadequacy of Human-Nature Theory and the View of Mass Consumption

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An understanding of human transformation of nature involves understanding not only what we are doing to affect nature, but also why we do it. Describing "what" - in the sense of the volumes of carbon dioxide released into the atmosphere, the amount of soil depleted, or the ozone removed - can be accomplished up to a point without considering social and individual motivations. These motivations, however, must be included in the "why" of human behavior, and knowing the "why" is essential if we expect to change "what" we do. Describing what happens assumes some theoretical view, and verifying theories requires describing the facts. Yet distinguishing between what and why will be useful in this discussion if we do not lose sight of the fact that they are ultimately interrelated. Why we behave the way we do means understanding ourselves as agents and the kind of life we wish to lead, and this understanding may well raise questions about ourselves that are difficult for conventional scientific methods to handle. Much of the "why" in human-nature relations can be understood only through the social side of the equation - that is, through understanding the nature of individuals and societies that create the "what".

Insights into human behavior can come from any method, but in our age, a socially sanctioned and "scientific" understanding of ourselves is preferred and often expected to emerge from theories that are based in concepts from the social sciences. These are often referred to as social theories; here, however, they are called social-science theories. The term social theories is used as a more inclusive category that incorporates "scientific" attempts at understanding human behavior, whether or not they be from the perspective of social science. The term is not used in the more restrictive sense that it has acquired from neo-Marxist approaches. Thus sociobiology, environmental determinism, psychoanalysis, neoclassical economics, and Marxism are all social theories.

The general import of my remarks is skeptical. Although existing social theories contain many useful and provocative insights into our behavior, they do not, and may never, provide us with a general understanding of ourselves as agents transforming ourselves and nature. The reasons for

skepticism are far too complex to review comprehensively in this chapter. What I do here is provide a particular framework that maps several of the more important issues.

The framework, or intellectual map, is intended to portray the theoretical interconnections among three well-known problems. The first is the fragmented and partial nature of social theories, and especially social-science theories. The second is the difficulty in developing a science of human nature that has as its subject conscious, reflective, and intelligent human agents. The third is the incongruity between what social theory tells us about the relationships between people and nature, and what our everyday experiences suggest, especially as they are molded by mass consumption. This last issue needs to be raised if we, as reflexive agents, expect our theories to match our experiences. The three are interrelated.

The first section of the chapter considers the problems of reflexivity in the context of causality and free will. The second section is a wide-ranging survey of social theories, focusing on what they have to say about why we transform nature. Their truth or validity is not evaluated. Rather, these theories are used as critiques of one another to show that there is very little common ground to which an objective truth can be anchored, because the theories tend to consider three very different realms as the sources of power over humans - the realms of nature, meaning, and social relations - and because all underestimate the importance of reflexivity or free agency. The third section concentrates on one important component of modern, western, everyday life - that of being a consumer of mass-produced goods and services. Virtually everyone in the West is a consumer in a consumer society. Indeed, our economies are geared to increase people's desires for goods. Mass consumption powers the economy, but it does more. Since mass consumption transforms nature and since the economy of mass consumption dominates the world, these transformations have a global reach. Therefore, each of us, as a consumer in everyday life, becomes intimately involved in this transformation process. In addition, mass consumption provides us with an everyday experience of combining nature, meaning, social relations, and reflexivity (or agency) - a synthesis that is presently beyond the powers of social theory.

The section then examines this everyday experience, focusing in particular on how it molds our attitudes and values toward nature.

Reflexivity

Social theories consist of a multitude of suggestions based on different conceptions of what people are and how they can and should be studied. One of the major cleavages arises from the tensions between scientific method and the nature of the human subject. Much social theory attempts, with the aid of the philosophy of science, to emulate what it conceives to be the structure of natural science. Its overall ideal is to phrase its observations in the form of interrelated (and often deductively linked) generalizations that are subjected to verification and testing. This often implies that empirical associations reveal some sort of deeper causal structure and even a necessity. This chain of inference is not ironclad. Empirical regularities and generalizations do not have to imply causality, and causality does not have to lead to necessity (Bunge 1963; Keat and Urry 1975; Nagel 1986). But they can be linked, and the desire of many social scientists to unearth laws and theories that will explain and predict human behavior seems to suggest that they have the forging of such a chain in mind. Even the embedding of correlation and regression within a hierarchy of structural equations and LISREL models suggests that most social scientists view statistical associations as part of the search for causal connections.²

This search further suggests a particular conception of human behavior - one of unfree and unreflexive agents compelled to act by forces beyond their control. Certainly causality can exist side by side with degrees of indeterminism and theoretical incompleteness, but these characteristics are not equivalent to a sense of humans as free and reflexive agents (even when the realm of their agency is restricted). Learning, motivation, and purpose can be included in social-science models, and these models, moreover, can apply uniquely to humans, and thus truly separate us from the rest of creation. Nevertheless, these models are based on rules that generate regular and predictable behavior and, in the long run, either replace free agency with cause or reduce free agency to an appearance or sensation that can be explained away by a more comprehensive analysis of forces controlling us (Nagel 1986: 110-26).

Thus the use of scientific method itself may incline researchers to assume a model of human behavior that relies very little on individual free will and much on structural constraints. It is important to note that constraints need not take the form of causal laws. In fact, constraints most often appear to us in the form of rules and regulations over which we seem to have little or no control.

Still, most of us believe that our sense of agency is not an illusion. Even though our actions are constrained by rules or laws, we are still able to create projects. We set our own goals and attempt to attain them. In so doing, we are reflexive. We provide our own explanations for human actions and learn, evaluate, and react to the theories or explanations of others. Thus, unlike the situation in the natural sciences of subjects

studying objects, the social sciences have the problem of subjects studying subjects. This freedom and reflexivity mean that theory can transform its own object (Giddens 1984: 348). From its very beginnings, social science has held this view, as well as a causal or structural one, and has developed attendant methodologies, including *Verstehen* and empathetic understanding, that are quite different from those of the natural sciences (Weber 1947).

Reflexivity complicates the already thorny issue of verification. Evidence is extremely important in a society committed to science, and people, who in their everyday lives theorize about their own behavior as well as the behavior of others, must have their explanations somehow conform to their own experiences. But many of the concepts and posited structures of social theory seem remote from our day-to-day experiences of people and nature. When individuals can provide their own reasons for their own behavior, they may be skeptical of social theories that postulate hidden forces and undisclosed meanings. Because of social science's subject/subject relationship, it matters that social theories are remote from everyday experiences, and this must be taken into account when evaluating social theory. This remoteness is explored here when considering the ways that mass consumption provides a day-to-day structure connecting society to nature.

Reflexivity is a fundamental problem of social science, and social theorists from Marx to Weber to Giddens have struggled to find how it can be contained. Reflexivity is also central "to the entire question of why we transform nature in the way we do. An emphasis on the importance of causes or structures tends to make the human realm less autonomous, whereas the opposite is true when we emphasize free agency. When we believe that the most significant part of our behavior is reducible to natural or physical forces, structure is obviously emphasized. This emphasis can still admit that humans, like volcanoes and earthquakes, have an enormous capacity to transform nature, but it insists that the explanation of why we do what we do falls within the province of the natural sciences and that we ultimately have little control over our behavior. Even if we believe that humans are essentially different from other agencies and that the sources of our actions come from particularly human conditions, our actions still could be 'structured' and caused if they can be disclosed by natural-science like methods of hypothesis formation and testing. If, however, the reflexive and creative capacities of human nature are emphasized, then little about our behavior toward nature is beyond our capacity to change (if we have the will to do so), but also little about our behavior would then be predictable.

If the duality of causality and free agency (or structure and agency, as it is often termed) is not bridgeable in theory, modern mass consumption - a process changing the biosphere on a global scale - at least provides the illusion of a link between the two. Consumption in this culture both constrains and enables the consumer, and does so by drawing together elements from the realms of society, nature, and meaning (Fig. 40.1). These three realms, in fact, constitute the major territories on our intellectual map of social theory. These three realms are difficult to connect theoretically and, impor-

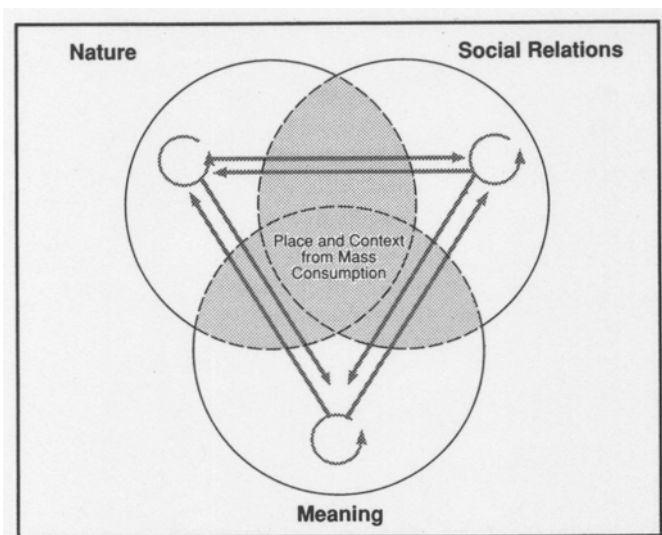


Figure 40.1 The intellectual surface.

tantly, each provides claims for sovereignty over the others. This map will serve as a guide in our discussion of social theory.

Social Theory

I would have us consider nature, social relations, and meaning as interpenetrating conceptual realms identifying important components of modern thought. The three circumscribe separate loci of power in an intellectual terrain roughly embracing the academic domains of the natural sciences, the social sciences, and the humanities. Each realm contains the raw materials to develop theories that claim to explain human nature and also to reduce or subsume the others, but their primary efforts have been confined to issues within their respective domains. The realm of meaning and especially the realm of social relations have generated what I have termed social-science theory. It is in these realms that many of the chapters in this volume place the locus of environmental change, either implicitly or explicitly. And it is within these two realms that the structure/agency debate occurs (indicated by the stippling in Figure 40.1).

The map (Fig. 40.1) illustrates the relationships among these realms, even though by using it, the risk is run of having the divisions appear more rigid and exclusive than they actually are. The arrows portray lines of analysis emanating from theories of a particular realm. Most of the theories examine issues within their own domains and are represented by small, semicircular arrows. Indeed, many chapters in this volume are concerned primarily with the interconnections among natural-science forces and thus focus exclusively upon the realm of nature. The theories explored here are those that have something to say about the other realms. These theories, of course, can be quite complex, passing through two realms, with numerous feedback loops. To simplify, they are represented by straight arrows.

Each realm emphasizes a particular kind of power that controls human beings. The *realm of meaning* draws upon the mind and its power to construct reality. It includes theories

that emphasize the power of ideas, values, and psychological relationships in shaping nature and social organizations. The mind, as the locus of power, molds reality and creates change. This position embraces theories that draw attention to the fact that humans are symbol makers and users. Although reality may exist independently of the mind, it is only through symbolic systems (including ordinary language, art, and science) that the world takes shape. At first glance, it may appear that the realm of meaning implies a commitment to agency over structure: to unbridled creative mental power. However, this is not the case. Some theories of mind do see mental energy in this way, but many propose complex patterns of thought that constrain the form that thought takes.

The *realm of nature* emphasizes the power of those forces that the natural sciences recognize. Here we find theories of environmental determinism that emphasize the power over humans of climate and other aspects of nature, or the theory of sociobiology, which emphasizes genetics as a force in human actions. These forces from the realm of nature are supposed to explain the broad range of human actions, including the realms of society and meaning.

The *realm of social relations* situates the forces controlling human actions in social, economic, and political structures. Here we find theories about the power of bureaucracy, as in Weber; or market economy, as in classical economics; or economic class, as in Marx. Social relations such as these are argued to affect other social actions, and also to mold the realm of meaning and to propel our transformations of nature.

The conceptual development, separation, and difficulty of recombining these three realms is a particularly modern and intellectual phenomenon. The basic cleavages, however, may have their roots in consciousness itself. For instance, the separation between realms of meaning and nature elaborates the basic distinction between being aware both of the world and of oneself as an observer of that world (Nagel 1986). Different societies handle this tension differently. In the modern West, it has become elaborated (since the seventeenth century) into the objective realm of nature and its universal properties, and the subjective realm of meaning, value, and the mind. The social realm, in turn, became separated from both the mind and nature (in the eighteenth and nineteenth centuries, with the rise of social science) in that it is corporeal because it includes the physical properties of people, their symbols, and their artifacts, and yet it is produced by humans and thus distinct from the rest of nature.³

Several theories attempt to incorporate all three realms, but even these draw their primary rationale and model of human behavior from one realm, tending to make the others derivative. Theories from different realms make fragmented and competing claims. This is why the arrows do not emanate from the center of the diagram or even traverse it, for the center represents a balanced synthesis drawn from elements (though not necessarily theories) of all three realms equally. At the level of theory, fragmentation, not synthesis, prevails.

The center, however, is approached in everyday practice.

Here our lives are lived within the realms of nature, meaning, and social relations. Moreover, the interconnections of the three in everyday life are important to our discussion of theory because of the subject/subject character of social science. It is important for both theory and practice to know whether our theories synthesize the three to coincide with the way they appear in everyday practices.

Several mechanisms operate to draw parts of the three together at the level of everyday life. One is the ordinary, personal experience of being in place. This sense of place captures elements of all three realms, but it is a personal synthesis that is achieved simply by being in place. Its elements differ for each of us, which makes this sense of place difficult to communicate in our highly complex, hierarchical, and specialized world. Another and more public mechanism is our material constructions and symbols of place as played out in mass consumption. It builds on the first by allowing the consumer to use mass-produced goods to create places as contexts. Because mass consumption draws on elements of all three realms, it affects our everyday experiences of the three; and these experiences, in turn, are used by consumers, as reflexive agents, in their evaluation of the theoretical perspectives.

A later section of the chapter considers the role of consumption in drawing the three realms together in creating context, including environmental context, but it will emphasize the link between consumption and meaning. Before considering the role of consumption, however, we first must explore the theoretical attempts to draw the three realms together. We begin with theories from the realm of meaning.

Meaning

Innumerable examples exist of the assumption that the mind provides the primary power for affecting human nature and our transformation of the world. Some of these are simple, others complex. Some give more emphasis to structure, others to agency. Here only three are explored. The first is the well-known position expressed by Lynn White (1967) in his article "The Historical Roots of Our Ecologic Crisis." It is the simplest of the three and represents the way many intellectual historians would portray the mind as a dynamic independent element transforming the world. The second and third examples are progressively more complex. The second, from Levi-Strauss, explores how the mind constructs a view of nature and social relations, albeit a static one. The third example is from Sigmund Freud, and examines how the mind uses forces from the biological portion of the natural realm continuously to develop complex systems of social relations. Freud's theories are enormously complex. Although his work is primarily about the mind, it serves also as a transition to our discussion of nature.

Lynn White's position is that the responsibility for our ecological crises can be laid at the doorstep of Christianity. Christianity has taught that humanity has dominion over nature. This belief has come to be so much a part of our values that we act without concern for nature, which we treat simply as a resource to be dominated and transformed. "Christianity ... not only established a dualism of man and

nature but also insisted that it is God's will that man exploit nature for his proper ends" (White 1967: 107). White claims that the "victory of Christianity over paganism was the greatest psychic revolution in the history of our culture" (White 1967: 106). This victory instilled in us not only the sense of domination over nature, but also the sense of progress that sees the cumulative weight of our actions as improvements. It is true that the idea by itself did not transform nature. Rather, it set in motion a complex web of practices, including the development of science and technology, through which this mental commitment operates. Still, the motor for this transformation is squarely within the realm of ideas. White's commitment to the mind as the primary source of change also is revealed by the fact that he believes the primary means by which we can mend our ways is to change our values. "We shall continue to have a worsening ecologic crisis until we reject the Christian axiom that nature has no reason for existence save to serve man" (White 1967). He proposes as an alternative the view of St. Francis of Assisi, who "tried to substitute the idea of the equality of all creatures, including men, for the idea of man's limitless rule of creation" (White 1967: 114).

Even though we must act through social organizations and institutions, as in the case of religion, "men do what they think" (Schaeffer 1975: 13). We are free to choose, although the range of choice varies. Instead of attacking the unrestrained role of agency implied by White, some critics have questioned his interpretation of Christianity. Schaeffer (1975), for example, proposes an alternative Christian ethic that he believes would allow humanity to exist in harmony with nature. Others, though, have challenged White's assumption about the power of ideas, simply by asking if any evidence really exists that our attitudes affect the way we behave toward nature. An excellent example of such a challenge is Tuan's (1968) comparison of Chinese Taoist attitudes toward nature and China's effects on the land, on the one hand, and western Christian attitudes and uses of the land, on the other. Tuan argues, along with White, that the predominant western view is that humanity should dominate nature, whereas the predominant view in China - the Taoist view - is one of harmony with nature. Yet, in comparing the environmental changes wrought by both civilizations until the rise of the Industrial Revolution, Tuan is hard-pressed to find a difference: the transformations wrought in the two traditions were comparable. The lesson, then, is that attitudes may have little effect on environment at this scale of analysis.

Even if we accept the argument that Christian values have influenced our transformation of nature, other complicating factors abound in interpreting the specific form of these particular values. For example, Protestantism, and especially the Puritan ethic, has tended to encourage individualism and acquisitiveness, which, as many have pointed out, are necessary values in the modern consumer world. Consumers must believe not only that they should transform nature to meet their needs, but also that their needs are potentially unlimited and are worth satisfying at all costs. But is unbridled acquisitiveness primarily a product of particular forms of Christianity, or is it a product of other forces? Such a

question points out that another means of attacking positions like White's is to argue that Christian values in particular, or our realm of meaning in general, are not autonomous seats of power, but rather dependent on one of the other realms. Thus, particular forms of Christian values, individualism, and unbridled acquisitiveness could reinforce one another and yet be outgrowths of particular social relations such as capitalism; and it is really these social relations that are the primary factors transforming nature.

Levi-Strauss's theory of "structuralism" is a more complex set of ideas about how the mind creates a world of nature and of social relations (Leach 1976; Levi-Strauss 1963). Levi-Strauss argues that the mind works by forming categories of extreme oppositions and mediation. These categories are most clearly revealed in the mythical structures of preliterate societies. A myth's content in a sense is secondary to its structure, which reveals the inner workings of the mind. For the most part, these mental processes are unconscious. According to Kirk (1970: 44), Levi-Strauss does not claim to show how men think in their myths, but "how myths think themselves in men, and without their awareness." The structural oppositions reflect irreconcilable mental categories such as life/death, man/god, good/evil, male/female, up/down, front/back, and so on. These and others provide a scaffolding for our ideas about nature and society. Levi-Strauss's examples are often extremely complex and assume a considerable background in the ethnography and environment of a people. Therefore, I will take a short cut and consider the application of his method to a western view about people and nature, with the understanding that the method seems to be exemplified best in simpler, preliterate societies. A prime example comes once again from Christian thought. To a Levi-Straussian, the characteristics of Christ - his being the son of God, his having been immaculately conceived, and his death and resurrection - are a product of our attempts to reconcile contradictory categories. God is immortal. God is unchanging. God is perfect. Man is mortal. Man changes. And Man is imperfect. How can these extremes be reduced? By developing a set of mediations that can also reduce the tensions between other and related categories. A primary mediating concept is Christ the man/god. He is both man and a god, and he can die and yet be immortal. The structure can develop further through other intermediaries such as priests, bishops, archbishops, and the Pope. Another set of intermediate positions could be developed to close the geographical gap between heaven and earth. Various earthly places can bring us closer to heaven and, after death, heaven itself is reached through various steps or levels.

Another example, closer to home, is an interpretation of one of our contemporary conceptions of wilderness (Tuan 1971; Graber 1976). Wilderness can be thought of as part of a modern western opposition. Wilderness recently is often valued positively. It is natural, pure, and unchanging. Earlier, it had been thought of as hostile and something to conquer. It is also a place with little or no human activity. The relative absence of man is what makes wilderness pure. Its opposites are the areas of greatest human habitation and control, places such as cities. They are almost completely human-made

environments, and yet they are, relatively speaking, often seen as unnatural, impure, and impermanent. Still, these oppositions contain elements of the other. Wilderness requires human intervention. It must be protected, and it is there for humans to visit. Cities are not completely immune from nature. Natural elements can still wreak havoc. In order to reduce the oppositions, we create intermediate categories and places, such as suburbia, city parks, and zoos.

Our analysis can continue almost indefinitely, but this may be sufficient to illustrate the position that the power of the mind creates oppositions and mediations that order the natural and social worlds. Both White and Levi-Strauss conceive of the realm of meaning as the locus of power. But unlike White, who emphasizes the role of the agent, Levi-Strauss presents a mental structure that (he argues) cannot be escaped. Yet another difference is that for all of its complexity, Levi-Strauss's model is primarily static, whereas White's is dynamic. (Others have attempted to make structuralism dynamic [e.g., Sahlins 1981; 1985]). Finally, we should note that Levi-Strauss's oppositions themselves may not be so much a product of the mind, as mental reflections of deeper antitheses in social relations.

Freud, the founder of modern psychoanalysis and other branches of psychology, focused his attention on the nature of psychological forces. He sees the principal sources of psychic energy as stemming from our biological drives and instincts. Freud's efforts lie in understanding the way in which the mind draws upon and transforms these forces and how they lead to social relations. In his most succinct discussion of these relationships, Freud (1952) argues that civilization creates frustrations by placing obstacles in the path of the immediate gratification of our desires and drives. This might appear to mean that social relations dominate psychological and even biological ones, yet civilization itself is a product of displaced psychological forces, so that the effects of civilization are something like feedback loops within a psychological system.

In its simplest form, the model is built on the dynamic interrelationships among the id, the ego, and the super-ego. The id includes our internal drives and our need to satisfy them. Among the most general drives are the pleasure principle and aggressive instincts. The ego includes our learned instrumentalities for satisfying these urges; it furthers the aims of the id (Hall and Lindzey 1978). The super-ego refers to our socially derived norms or social facets of our personality: our conscience. The super-ego is instilled by social organization such as the family and school, and represses, displaces, and postpones many of our drives. This causes frustration. But these social institutions in turn are based on displaced and sublimated psychic energy, particularly the energy from the guilt over conflicts between fathers and sons. In other words, civilization is a result of psychic forces, and may itself exhibit a psyche and a cultural superego. On the one hand, its institutions are essential in providing individuals with a nurturing environment. On the other, they draw their force by inhibiting our drives - hence our ambivalent attitudes and even hostility toward civilization.

It is clear from Freud's dynamic theory that biological nature ultimately is at the base of our psychological drives but

that psychological forces transform this part of nature and lead to the development of civilization. Moreover, civilization dominates the rest of nature - the biosphere - to provide us with a nurturing environment. Indeed, the highest forms of civilization are measured by their power to control nature (Lowenthal's reference to Freud, chap. 8). These are the primary structures, and they drive the system despite the wishes of individual agents.

Nature

Freud's theory draws on biological forces but emphasizes the role of the mind. Other, more direct claims have been made about the power of the natural world in determining human behavior, and they will be discussed here under the realm of nature. They include theories that reduce meaning and social relations to the forces recognized by the natural sciences. This reduction not only places the natural forces in a position to determine the conditions of the other realms, but it also presents a view of the influence of the human on the nonhuman realm as simply a subsystem affecting a larger system. First, those theories that have nature driving human action are considered, followed by those dealing with the effect of human activities, conceived in natural terms, on nature. Finally, human ecology is examined as a bridge between natural and social-science theories.

Entire fields such as neurophysiology and sociobiology are dedicated to the reduction of human behavior to biological, chemical, and physical processes. Reduction is a complex concept in philosophy, but to scientific practitioners it usually means the capacity to use the concepts and theories of a more basic discipline to understand processes in another field (Bergmann 1954: 170-71; Brodbeck 1968). In this case, it means the use of the natural sciences to understand human actions. Claims that our mental and social processes are affected by chemical states, biological instincts, or drives are examples of reduction.

Precise, but narrow, links have been established between certain chemical and electrical states of the brain, and certain mental dispositions and activities. On a broader, but less precise, level assertions have been made that social organizations, social hierarchies, territorial behavior, and the like can be structured by our biological instincts and drives that evolved within the "pristine environments" of our ancestors. So too are such attitudes and values as love of family and self-sacrifice. Some have gone so far as to claim to predict which type of relative one would most likely sacrifice oneself for, by considering which ones would perpetuate more of one's own genetic pool (Wilson 1975: 118-26). Extending this logic, I would be more likely to sacrifice my life for my brother than for a first cousin, but more likely to sacrifice my life for nine first cousins or three uncles than for a brother.

Biology, of course, is one part of the natural sciences. Other parts focus on the power of climate and the entire biosphere as driving mechanisms affecting human behavior. Perhaps the most comprehensive environmental theory - and one that still has residual effects - was the classical doctrine of elements and humours. Through the correspondences of the

elements of air, water, earth, and fire with the humours of phlegm, bile, black bile, and blood, the theory was able to link natural forces that originated in the stars and planets at one end with mental and social behavior at the other (Glacken 1967: 10-12, 80-82). The position of the planets and stars affected the distribution of elements, which in turn affected the internal balance of the body through the distribution of humours, and they determined mental and social states, as well as a person's physical well being. The more recent theories of environmental determinism are far less sweeping. Ellsworth Huntington viewed the local environment as a determining factor, and supported his claims with specific relations such as associations between temperature and barometric pressure and the expansion of the Mongols, and between temperature extremes and higher forms of civilization (Grossman 1977: 127).

All together, these theories emphasize nature's constraints on human behavior. They can make room for randomness and incompleteness, but there is no room for the individual as a reflexive agent. The concept of reflexivity is beyond the natural sciences; it belongs solely to the realms of meaning and social relations. Thus the natural realm views our transformations as inevitable because we act according to our nature. If this means fouling our nests or depleting our resources, then that is the way it is. And even then, we may survive. After all, we have so far. We are increasing in number. We continue to settle in practically every nook and cranny of the globe, and we are even thinking of colonizing outer space. It is the implications of inevitability, more than anything else, that make many social scientists recoil from social hypotheses that are drawn from the realm of nature.

This part of our discussion has drawn attention to theories in which the forces of nature, through some kind of causal chain, affect the realms of meaning and social relations. But the same chain can be used in the opposite direction to analyze the human impact on nature by considering humans as subsystems within the larger natural realm. This means examining the physical, chemical, and biological outputs of human behavior without entering the social or mental realms to look for the sources of such output, much as one would examine the outputs of volcanoes. Such an approach is essential in order to find out what humans in fact are doing to the natural world (and several of the papers in this volume are examples of such analysis). But without explaining this output by embedding it within a broader social theory (from any of the realms), learning is restricted to "what" we are doing to nature, and not "why."

One exception might be the use of biological explanations, as in a loose interpretation of competition among the species. This analysis could argue that it is natural that humans, like any other species, try to survive. If in so doing, humans have altered and even simplified the natural environment, that is just the way it has to be. Even so, we may continue to succeed. Success could be assured not only because it is in our nature, but because the rest of nature is designed to accommodate us. This idea of a forgiving nature does not have to lead us to a biblical interpretation of design (Glacken 1967: 42-44, 403-404). Rather, it can lead us off the beaten track

of conventional science to the byways of functional and teleological systems. Lovelock (1979), for one, in his Gaia hypothesis, has argued that much of ecology fits into place scientifically if the biosphere is thought of as designed to support life.

In its broadest sense, human ecology provides the conceptual foundation for the most comprehensive description of the complex links between people and nature. Ecology and ecosystems stress connectivity and mutual causality among the natural and human components. In Ellen's (1982: 76) words,

in the ecosystem view, all social activities impinge directly or indirectly on ecological processes and are themselves affected by these same processes The approach thus emphasizes the two-way character of causality and avoids the deterministic-possibilistic fallacy, although the relative influence in reciprocally causal relationships is never equal and may be very unequal.

We shall turn to the issue of relative influence shortly, but first note that the primary, though by no means only, device that ecologists employ to connect human and natural systems is, to put it positively, to focus on characteristics that both systems possess, or to put it slightly negatively, to reduce human actions to physical ones. One of the most important and elemental means is the flow of energy. A web of energy and material relations allows the ecosystems approach to draw together the natural and human processes (Coomes 1987). This focus on common components in an interconnected system provides an important means of specifying how nature and society are in fact interrelated: how, for example, the slightest changes in irrigation processes (along with the human energy required to initiate and sustain them) change the caloric yield of crops, and how changes in precipitation can also affect yields. The analysis can be extended to the inorganic. It can help us trace the effects of agricultural practices on erosion, and this erosion on stream morphology and flooding. We can use it to trace the effects of effluents throughout the material and biotic systems, if we know the energy and material flows. Indeed, many chapters in this volume do precisely these things.

But once again, what causes these flows? It is at this point that subsumption of people and nature within a single web becomes unravelled by the various theoretical tugs from the three realms, but primarily from the realm of nature. An ecological concept that is particularly sensitive to these pulls is adaptation.⁴ A narrowly biological sense of adaptation will once again place the primary emphasis squarely within the realm of nature. Two other interpretations that are more distant from the biological are functional adaptation, which is usually a part of "ecosystemicist" (Bennett 1976: 166), and strategic adaptation, which is part of adaptive dynamics. The former, of course, involves an understanding of the purpose of the system and thus invokes teleology and its attendant criticisms, and places human actions in the context of homeostatic adaptations. The latter views adaptation as the

process of individual choice and alteration to attain individual goals. The individual is both purposeful and innovative. As a biological person, he has definable needs ... [he] is tethered by available

material conditions of the environment (nature and culture) and by available cultural institutions, rules, values, etc. He is not reducible to either, however, but plays the key selective role that underlies the dynamics of ... a revised adaptationism (Earle 1984: 407).

Conceiving of adaptation as a series of strategic choices is helpful because it focuses the analysis on the decisions and actions of individuals, not populations or cultures; avoids teleological explanation; and opens the analysis to interesting methods such as game theory. Yet in the shift from adaptation to strategy, we lose purpose and direction and run the risk of seeing any action as "strategic" and thus "adaptive" (Ellen 1982). To go beyond is to seek causes.

Non-natural-science causes or reasons for human actions are found in the realms of both meaning and social relations. We have discussed theories from the former, and it is now time to examine theories from the latter.

Social Relations

The realm of social relations provides a host of social-science theories offering explanations of why humans act the way they do. Only a few focus directly on the human transformation of nature, although it is possible to draw from most of the others implications that pertain to the question of the human impact on nature. Those social-science theories that explore such quantitative aspects of human actions as movement in space and time, and energy expended, can be linked directly to the human-ecological models and can even drive them - but not necessarily in the direction of equilibrium or adaptation. One such link can be forged along the lines of ecology. Ellen (1982: 122), for example, considers human society, along with other biological systems, in terms of energy production, utilization, and exchange, and these processes provide "the material basis of human existence." Energy is the starting point for "a materialist explanation of human social relations and the history of these relations." Where a materialist link leads us will be discussed later. First I consider another chain that can also transmit flows of energy. This one, however, is forged by a more conventional social-science perspective' on human behavior, of humans as seekers of pleasure, and forms the basis of what we shall term conventional social theory.

Schnaiberg (1980: 17-19), who discusses human and other biological systems in terms of energy, notices that one important area wherein human systems diverge from other biological systems is in the

creation and disposition of surplus energy [If] the ecosystem changes over time from [a] simpler, faster-growing one to a more complex, slower-growing entity, almost the reverse is true of human economies whereas the ecosystem reaches a steady-state by permitting the growth of just enough species and populations to offset the surplus, societies tend to use the surplus to accumulate still more economic surplus in future periods Thus societies operate to multiply their surpluses, particularly industrial capitalist societies. In contrast, ecosystems tend to mature by stabilizing numbers of consumers and levels of consumption.

The social question then is, "What drives society?" And the conventional social-science theory answer is the deceptively simple one: our individual pursuit of pleasure.

Conventional social-science theory is built upon a political-economic tradition that emphasized the importance and sovereignty of individuals - from the exaltation of the individual in Renaissance thought, to the development of individual liberties in Enlightenment political theories and constitutions, to the development of neoclassical economics. Contemporary social science has crystallized these forces into a series of propositions built upon the assumption that people are motivated to seek pleasure and avoid pain, and society is, or ought to be, structured to facilitate such a pursuit. Pleasure and pain can, of course, take innumerable forms. Freud uses the concept of pleasure in his psychological theories, and other branches of psychology (as in stimulus-response theory) discuss it in a slightly different way. Utilitarians use a conception of it in their theories about the greatest good for the greatest number, and economics, as well as economically oriented approaches in political science, sociology, and geography, discuss it in terms of utility functions. The latter concept can be made quantitative and public when money becomes the measure of utility or pleasure.

The pursuit of pleasure alone may not be a particularly human trait, but it becomes more so when combined with human learning and rationality (which in conventional social science usually means the capacity constantly to compare often novel alternatives and evaluate their outcomes in terms of their respective utilities), and when these utilities are quantified in terms of a scale like money. Then we have the basic components of a social motor that can drive society to "multiply its surpluses," consume more energy, and transform nature. The object of human behavior is then to maximize income or wealth, or to minimize costs, and so on.

The pursuit of pleasure does not necessarily lead to a need for more and more. Some certainly are satisfied with what they have, and others want even less. But the motor tends to (and some interpretations say ought to) push us in the direction of more because of the way in which the parts are interconnected (Leiss 1976). It is at this level of design that we find different and numerous subtheories within the major thesis of pleasure - each providing different means of discussing the role of the agent within the powerful structure.

Neoclassical economic theory, for example, presents the agents as free to pursue pleasure and avoid pain, and this can even mean free to be irrational, by not maximizing pleasure. However, such freedom is constrained by several structures that make "more" even more compelling than "less." For example, economies of scale, which in neoclassical economics result from specialization and division of labor, mean that more can be produced more cheaply. This sets in motion the need for firms competing in the market to take advantage of economies of scale in order to survive. Once they do, the consumer is presented with even more to consume. The economy itself encourages an ideology of "more is better." More means success, more means a higher standard of living, and more is progress. This ideology is, of course, encouraged by advertising, which may do more to promote the expectation that more is better, and thus grease the wheels of consumption, than to increase the sales of one item over another. In addition, people may simply want more, even without these extra pushes.

Once set in motion, these factors reinforce one another and become embedded within institutions, each trying to maximize its own sphere of interests. Which ones are significant, how, and why are, of course, the critical issues that distinguish the particular theories within the classical social-science paradigm. Thus, in some cases, the various realms of government - state and local - and their several branches must be distinguished from types of business interests; and these, from labor unions; and these, from classes of civil servants; and these, from nonunionized; and these, from home owners and apartment dwellers, males and females, age cohorts, regional areas, and so on.

Some theories see organizations of all kinds behaving in generally the same way (as in bureaucracies being driven by their interest in perpetuating themselves [Michels 1958]), and others require distinctions among the different goals of organizations and the individuals within them.- These institutional contexts can appear so important that the entire idea of free agents pursuing their own self-interest loses ground to the notion of agents following a script for a role in an institution. What is more, the competing interests and institutions can have the net effect of thwarting the tendencies to produce and consume more. This would have environmental consequences, for it would mean that social production may not "necessarily require increased environmental withdrawals and additions" (Schnaiberg 1980: 423). Overall, then, even within the conventional paradigm, there is little consensus about the identity of society's significant components, their relative weights, and their causal efficacy. These contradictions and vagaries are magnified when simplified models of the human system are linked to simplified models of the natural system to create instruments of analysis, such as global-simulation models.

Conventional theories forge chains not only to nature, but also to the realm of meaning. Conventional social science can be used to explain or reduce this realm to social relations. This is, of course, one of the projects of stimulus-response theories in several branches of psychology. Other links between social relations and meaning have been explored by social scientists examining the connection between social and economic status, and between political and religious values and beliefs. More inclusive attempts at reducing meaning to social relations come from theories that are only partially based in the conventional paradigm, for instance in ethnosociology, the sociology of knowledge (Mannheim 1936), and the social construction of reality (Berger and Luckmann 1966). These approaches share the assumption that ideas and meaning, including our attitudes and beliefs about nature, are molded by various forms of social relations. Hence the mind once again constructs nature and reality, but this time the mind itself is molded by society.

Marxism too draws on the concept of self-interest and the pursuit of pleasure, but with a different emphasis and purpose. Marx tended not to isolate and abstract individuals conceptually and theorize about their interests apart from their particular social contexts and constraints. Perhaps the most basic context, and the one that makes Marxism a materialist philosophy (and thus a potential bridge constructed through flows of energy between nature and society) is that

humans and nature are dialectically connected through labor. As with all other living organisms, humans too must consume and thus transform nature. This is accomplished through our labor, which is natural, and yet which has particularly social qualities. One quality is labor's superiority over nature. To paraphrase Schmidt (1971: 30), at bottom there existed only human beings and their labor on the one side, nature and its material on the other. Human beings construct the world on the model of their contemporary struggle with nature. Historically, the struggle favors humans.

Labor then, according to Marx, forges the links between humans and nature. The power of labor is elaborated through the mode of production, which includes the forces and relations of production. The forces refer to resources and technology, and the relations refer to the social organization of work and the ownership of the means of production and of surplus. Historically, we find different modes of production, including primitive, feudal, and capitalist. (The number and characteristics are unsettled issues within Marxist theory [Hindess and Hirst 1975]). Each not only affects material production and our use of nature as well as the distribution of wealth, but also provides the basic organizing principle (or "base" in the vulgar materialist term) for other social organizations (such as education, childrearing, and leisure) and also for the realm of meaning (or superstructure). Vulgar materialists would say that the realm of meaning, or the superstructure, is an epiphenomenon reducible to the mode of production.

One can argue that because Marxism is a form of materialism, its proper location on our map is within the realm of nature. I believe, however, that the material link is not the primary one, because human behavior is seen by most Marxists as a struggle to overcome and transform nature (although we can quibble about whether this itself is natural), and is driven by forces squarely within the realm of the social - forces that in capitalism are especially those of class relations. Capitalism is thus far unique in the scope and scale by which it has transformed nature. Within the biosphere there is now virtually no "nature" that is not in some way affected by the activity of labor (Smith 1984). But Marx does not tell us much about what to expect after the demise of capitalism. According to Marx, we never escape from the necessity of labor, and thus the transformation of nature (Marx 1967: 820, as quoted in Smith 1984: 64).

As noted, Marxist theories exist that interpret materialism far more literally, so that nature does indeed become the determining force (e.g., Wittfogel 1957). Such theories are very difficult to distinguish from those of environmental determinism. By the same token, some Marxists emphasize the "relative" autonomy of the realm of meaning and see that realm as in turn affecting the realm of social relations (Thompson 1978; Williams 1978). Meaning or culture then is not a superstructure, but rather an integral component in the "production" of society.

Marxism, like the conventional paradigm, is not monolithic. A narrow Marxism based on the mode of production and class conflict as the necessary and sufficient social forces may appear logically coherent but also highly unrealistic. A broader interpretation that attributes power to other forms of

social relations and to other realms faces the problem of logical incoherence. In addition, Marxist theory contains the problem of the autonomy of the agent vis-a-vis any structure. Marx (1963: 15) wrote that "men make their own history." Yet the power of specific structures - especially class relations - is emphasized by Marxism to such a degree that it casts the power of the agent into doubt. It is important to note that technology, bureaucracy, and population pressure are parts of social relations, and have been mentioned frequently in chapters of this volume as tripping functions causing environmental transformations. Moreover, ever since Malthus, important social theories have viewed population and technology as major transforming forces. Both conventional social science and Marxism recognize that demography is important, that institutions tend to have a life of their own, and that technology can lead to numerous and alienating consequences. But these theories do not see population and technology as root causes of the transformation of nature. Rather, they see them as particulars of social relations that are driven by deeper social structures.

Social Theory: Summary

At this point we come full circle. We have examined arguments that claim meaning can shape nature and social relations; that nature can shape meaning and social relations; and that social relations can do the same for meaning and nature. Within this circularity lie the undercutting issues of reflexivity. Where then do we turn? Each position purports to tell us something about the causes for human alteration of the environment. But each can be undermined by another. Even if we assume that we are facing severe ecological crisis, as in Schnaiberg's (1980: 423-24) dialectic, we still are left directionless about its causes. Are they psychological? Are they matters of individual values? Are they based on social relations? Are they simple natural? In terms of our map, this circularity means that none of the theories provides a balanced picture of the center.

The partial and competing theories also raise fundamental doubts about the possibility of objective knowledge. A profound relativity pervades the realms of meaning and social relations, and even extends to the natural sciences through the thesis that reality is mentally and socially constructed. Contemporary philosophy and history of science have been unable to demonstrate how it is possible for science to be "objective," given the fact that models and theories are human creations; but these problems have not (perhaps fortunately) affected the everyday conduct of the natural sciences. Even though philosophers cannot show us how particular theories are truer than others, science still seems to work. Its own structure confidently supports or rejects statements about reality that are far removed from everyday experience.

The issue is quite different, though, for the realms of meaning and social relations. Here no single theory has the scope and consistency of the paradigms of the physical sciences. This alone can make the problem of relativity more acute. But the problem penetrates to the core of the entire social-science enterprise when it is allowed that the subjects of the theories themselves, as agents, are also their own theorists in everyday life, and thus social science has subjects

not make objectivity evaporate altogether, but it does make it more difficult to grasp. One possibility of reconstructing it is to build on our shared experiences in everyday life, for these are the ones that most people draw on to construct their own theories about people and nature.

One such experience is the sense of place. Being in place is central to everyday life, and also at the center of our diagram, for it draws equally on elements of meaning, nature, and social relations. When the experience is conveyed to others in dynamic societies such as ours, however, it too fragments along the lines of the theories discussed (Sack 1980). One way in which we can construct our personal worlds, or contexts, and do so through a public language, is through the everyday activity of mass consumption. Mass consumption draws on all three realms, but the synthesis it achieves is only partial, and what is more, it does not speak to the theories addressed. Nevertheless, even this incomplete synthesis is important. It stays, albeit temporarily, the contradictions that the theoretical realm cannot resolve, and it makes us party to transforming nature while presenting us its own view of this transformation.

I have said that consumption allows us to draw upon and affect all the realms equally. The full mechanism of consumption cannot be described here (see Sack 1988). Rather, this synthesis is sketched primarily from the meaning consumption creates. The meaning of mass-produced commodities is readily accessible to everyone because advertisements are the primary means by which such information is conveyed.

Consumption and Meaning

The creation of ever more products and goods to consume is the fuel for our economy; and in consuming them, each of us in daily life becomes an active agent transforming nature. What we have to say about consumption pertains for the moment especially to the more developed western economies. Still, the nature of consumption has broader implications because the desire for mass-produced goods is spreading. With the assistance of advertising, these goods have penetrated virtually all economies, and many of the developing countries aspire to a standard of living like that of the West. This standard is difficult to separate from a consumer society. Focusing on mass consumption can help disclose how most of us in everyday life affect nature and one important and widespread way we conceive of this effect.

Many claim that people in advanced capitalist societies live in a consumer's world - a world in which the things we are and do count less as common bonds than the things we consume. We live by consuming mass-produced products, whether we wish to or not. Consumption forms a mass culture, and each act of consumption or purchase draws together the realms of meaning, nature, and social relations, and in turn transforms them (Sack 1988). Consumption draws the three together because each mass-produced product contains elements of all three.

A product - whether it be a Coke or an automobile embodies social and economic relations. It is produced and

consumed within specific historical contexts. The social history of an automobile, for example, can include the efforts of thousands who extract the raw materials from various parts of the world, assemble them (often in different countries under different working conditions), and then ship them to dealers and finally to the public. A product is also part of nature. Its history and present location take place in physical space, which is a property of nature. The product is drawn from material objects and becomes an important part of the modern "consumer" landscape. Also, a product embodies meaning, especially through the aid of advertising. Advertising tells us that an automobile is more than a means of transportation; it is a life style.

Purchasing or consuming products activates these relationships and allows us to draw together the realms to create contexts, with ourselves as the center. The blueprint for such contexts is provided by advertising. A Coca-Cola advertisement shows how possession of this drink can make the consumer the center of a happy, attractive group of young adults; and an automobile ad tells us how possession of this particular car can make the consumer the center of attention, and how he can feel at ease anywhere and anytime.

Consumption then purports to give the consumer the power to create his own context, place, or world. Because the meanings of products are addressed through the ubiquitous medium of advertisements, the meaning of their contexts and their content is part of the realm of public discourse. In other words, consumption is also a public language, which people can and do use to communicate (Leiss 1976). They make statements about who they are or wish to be through the products they consume. One may not wish to participate in this discourse, yet our very act of not purchasing products is still communicating - but through silence. As with any language, that of consumption both constrains the consumer, in that it provides the basic codes and syntax, and enables the consumer to create his own mixtures and meanings, and perhaps even change the structure of the language.

We must recognize that people react skeptically to advertising. They might not take any ad literally, and they know that exaggeration and indirection are advertisement's stock in trade. Even through such skepticism is rampant, the virtual ubiquity of advertisement assures that people come to think of products as having the potential to do more than serve utilitarian goals. Advertisements present a picture of this potential. They impart meanings to products.

These meanings affect our attitudes to and uses of nature. A most obvious but enormously important point is that advertising rationalizes the consumption of ever more products. Since most of what western economies do to the natural world is for the purpose of providing consumers with commodities, advertising can be seen as a justification of such transformations. But, as we shall see, advertisements really do not address the details of this transformation. In fact, they disguise them by focusing on new contexts that commodities are supposed to provide. These commodities become fixtures in homes, in offices, and on the road; and often the homes and offices themselves are literally mass-produced. Thus, mass-produced products populate the built environment,

which is the one in which we spend most of our time. Something of their meanings then adheres to the real places that products create.

The meaning of commodities affects our contexts in other ways. The products are often sold in places that are themselves like advertisements, and these places too are often mass-produced. I refer here to the fast-food chains, the department stores, and the shopping malls - all of which are places devoted solely to the world of mass consumption. Even a physical place itself can be turned into a mass-consumed commodity or a place consumed en masse. These include amusement and theme parks and resorts. Hawaii, Miami, and the beaches of Jamaica and Majorca become mass-consumed commodities of sun, surf, and sand. The modern consumer spends much of his leisure time within these "landscapes" (and a good portion of the service sector spends much of its workday there too), and an even greater amount of time viewing the advertisements that promote commodities. The overwhelming message of these places is that the road to the good life is consumption.

The road, of course, can be quite literal, in the sense of a string of physical places that are intimately related to consumption. There is the house, which contains the massproduced products. Within it individuals are linked to the outside world of consumption through the advertisements in television, radio, magazines, and newspapers. The trips to shopping centers, department stores, and malls are along roads containing signs and billboards and buildings with facades presenting a context for their products. Longer trips and vacations are often undertaken in vans or caravans that contain TVs and have as their destination the amusement parks and the resorts.

As mass consumption draws together meaning, nature, and social relations, it transforms nature, and yet disguises this transformation. Mass-produced products require the extraction, assembly, and distribution of vast amounts of raw materials, the establishment of enormous technical and physical infrastructures, the development of an elaborate "built" environment, and the dumping of large amounts of waste. Yet advertising and the consumer landscape present these same products to us as though they require no such effort, have no such impact, and possess no such history - the biosphere has been unchanged. It is as though through some form of magic the products appear out of nowhere and from no time, to be available instantaneously anywhere and anytime. The global economy can exacerbate this view by locating the source of raw materials continents away from the location of consumption. Only money is needed to purchase the product and it is yours.

On occasion, advertising may describe something of the product's social history or its natural ingredients, as when an American beer is described as being made the American way or an automobile is built with German technology. But these are extremely general and often misleading descriptions of the origins of products. Yet these same products that appear to have no real context are presented as though they can create contexts anywhere. They can draw strangers together. They can make nature into culture and make culture seem

natural. They can make you happy "well, and popular. They never make you sorry, poor, or ill, nor do they every harm a particular group or a natural environment. Since each product creates its own instantaneous context, each place then is a discontinuous and isolated world. A consumer who has the money can pass through the environment of Coca Cola to that of a Le Mans automobile, to that of a Danish modern interior or an American ranch-style house. There is no external logic to connect one context to another except the individual acts of consumption. It is as though products empower individuals with something like magical properties to create things out of nowhere and to transform them into one context after another.

We find this same magical and fantastic sense of context in the places dedicated to selling mass-produced products. Restaurant chains, department stores, malls, amusement parks, and resorts offer versions of contexts that are entire, isolated from one another, and often in no place at all. This sense of place that is no place has been a major part of the geographic critiques of modern landscapes, which have been called pastiches, veneers, generic, inauthentic, and placeless (Relph 1976). Although we cannot address this here, we should note that the sense of contexts out of context, of places that are no place, that result from mass consumption, are reinforced by the workings of mass communications (Meyrowitz 1985).

Consumption, then, allows the individual to create contexts that draw together elements from nature, meaning, and social relations. These contexts form part of our everyday experience and become components in how we, as agents, conceive of the integrations of society, nature, and meaning. These integrations are not only mental. They involve real actions that transform nature. But consumption disguises these transformations and offers a magical world instead. In this respect, consumption stands in opposition to virtually all of the theoretical positions we have discussed. Even though they vary enormously, the theories at least share the assumption that actions have consequences (though not always necessary ones) that extend beyond a single point in time and space, and that these consequences are connected to others, forming some type of chain. It is this broader sense of continuity and context, which in the natural sciences became embodied in the principle of action by contact (Bunge 1963; Sack 1980: 9-19), that is violated in the consumer's world. Here mass consumption can produce a sense of context in which action has no origin or consequence. In short, it creates an egocentric, magical, and irresponsible world - a world virtually divorced from the biosphere in which it is situated. It is precisely this "meaning" that helps explain some of the western world's attitudes about nature and transformation.

I have raised the issue of consumption not to condemn it, but rather to have us recognize its importance in forming our own, everyday sense of our power over nature; According to many social-science theories, human beings are their own theorists. They draw upon their own experiences to explain human behavior. This then makes the consumer's world an important part of reality. People use it to evaluate theoretical positions and to justify their own actions.

Summary

An intellectual terrain has been constructed to illustrate the range of issues involved in judging theories of humans and nature. This intellectual terrain is brought into focus when we consider the range of social theories explaining why we behave the way we do. The terrain is a composite view of such theories: a view from nowhere (Nagel 1986). The terrain recedes into the background as our view centers on a single perspective and how it portrays what our behavior toward nature is like. (Once again I am aware of the basic and ultimate interconnectivity between "what" and "why," and consider them distinct only in terms of the issues they emphasize.) This does not mean that analyzing "what" is at all a simple matter. Rather, it means that for such a purpose we can in effect work within one framework. We can, for example, reduce human actions to physical ones, and trace the results within the environment. We could even draw attention to the severity of such impacts and describe how they can be life-threatening. And all the time, the analysis would take place within just one of the modes of inquiry, and in this case the least philosophically controversial one: the natural mode.

Commitment to only one of the perspectives obviates the others so that the terrain itself evaporates under the gaze of the committed. I do not wish to challenge commitment, but only to bring to light a range of issues that need to be addressed if others are to be persuaded. By suggesting the strengths and weaknesses of various perspectives, the terrain maps out a domain of discourse that a comprehensive social theory might have to address.

The intellectual terrain also stresses the significance of the center: a position that a comprehensive theory would have to occupy. Yet the center is occupied in everyday life, and consumption helps draw elements of the three realms together and shape their meaning. It literally offers a magical sense of context and causality that opposes all of the other theoretical positions. It is a sense that must be reckoned with even in an age of science. To find out how this sense of context comes about and how people can be persuaded to disregard it leads us back again to the divergent and competing social theories.

Notes

1. The interconnections among description and explanation are revealed primarily through research in the history of science (e.g. Kuhn 1962) and in the philosophy of social science (e.g., Keat and Urry 1975). These issues are similar to those involved in perception and conception and in seeing and knowing (Dretske 1969).
2. LISREL, an acronym, is a well-known social-science synthesis of statistical techniques (Cadwallader 1986). Goldberger (1973), a major contributor to these models, has stated that the role of statistical methods in social science is to disclose real causal relations.
3. The contours of the realms do not neatly conform to the underlying bedrock of philosophical ontologies. This disconformity is not bad, considering that the limitations and contradictions of ontological systems made the bedrock itself a weak and unstable foundation. Nevertheless, in some instances the contours to some extent coincide with ontological positions. For example, the primacy of the mind and its concepts conforms to many facets of idealism. The realm of nature assumes that the constitution of reality is what

natural science says it is. This view can be ontologically undergirded by various combinations of naturalism and realism. Of the three, the social realm rests least comfortably on a single well-developed ontological substructure. Rather, it draws upon elements of idealism, naturalism, and materialism.

4. I am much indebted to Oliver Coomes' (1987) paper for definition and references on cultural adaptation.

References

- Bennett, J. 1976. *The Ecological Transition: Cultural Anthropology and Human Adaptation*. New York: Pergamon.
- Berger, P., and T. Luckmann. 1966. *The Social Construction of Reality*. New York: Doubleday.
- Bergmann, G. 1954. *The Metaphysics of Logical Positivism*. Madison, WI: University of Wisconsin Press.
- Brodbeck, M., ed. 1968. *Readings in the Philosophy of the Social Sciences*. New York: Macmillan.
- Bunge, M. 1963. *Causality: The Place of the Causal Principle in Modern Science*. New York: Meridian Books.
- Cadwallader, M. 1986. Structural equation models in human geography. *Progress in Human Geography* 10:24-47.
- Coomes, O. 1987. The concept of cultural adaptation in cultural ecology: A critical appraisal of functional and strategic interpretation. Department of Geography, University of Wisconsin. Madison, WI.
- Dretske, F. 1969. *Seeing and Knowing*. London: Routledge and Kegan Paul.
- Earle, T. 1984. Comment. *Current Anthropology* 25:406-407. Ellen, R. 1982. *Environment, Subsistence and System*. New York: Cambridge University Press.
- Freud, S. 1952. *Civilization and Its Discontents*. Vol. 54. Chicago: Great Books.
- Giddens, A. 1984. *The Constitution of Society: Outline of the Theory of Structuration*. Berkeley, CA: University of California Press.
- Glacken, C. J. 1967. *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century*. Berkeley: University of California Press.
- Goldberger, A. 1973. Structural equation models: an overview. In *Structural Equation Models in the Social Sciences*, ed. A. Goldberger and O. Duncan, 1-18. New York: Seminar Press.
- Graber, H. 1976. *Wilderness as Sacred Space*. Washington, D.C.: Association of American Geographers.
- Grossman, L. 1977. Man-environment relations in anthropology and geography. *Annals of the Association of American Geographers* 67:126-44.
- Hall, C., and G. Lindzey. 1978. *Theories of Personality*, 3rd ed. New York: John Wiley.
- Hindess, B., and P. Hirst. 1975. *Pre-Capitalist Modes of Production*. London: Routledge and Kegan Paul.
- Keat, R., and J. Urry. 1975. *Social Theory as Science*. London: Routledge and Kegan Paul.
- Kirk, G. S. 1970. *Myth: Its Meaning and Functions in Ancient and Other Cultures*. Cambridge: Cambridge University Press.
- Kuhn, T. S. 1962. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Leach, E. 1976. *Culture and Communications: The Logic by Which Symbols Are Connected*. Cambridge: Cambridge University Press.
- Leiss, W. 1976. *The Limits to Satisfaction*. Toronto: University of Toronto Press.
- Levi-Strauss, C. 1963. *Structural Anthropology* (English trans.). New York: Basic Books.
- Lovelock, J. 1979. *Gaia: A New Look at Life on Earth*. New York: Oxford University Press.
- Mannheim, K. 1936. *Ideology and Utopia*. London: Routledge and Kegan Paul.
- Marx, K. 1963. *The Eighteenth Brumaire of Napoleon Bonaparte*. New York: International Publishers.

- '. 1967. *Capital*. Vol. 1. New York: Vintage Books. Meyrowitz, J. 1985. *No Sense of Place: The Impact of Electronic Media on Social Behavior*. New York: Oxford University Press.
- Michels, R. 1958. *Political Parties*. Glencoe, IL: The Free Press. Nagel, T. 1986. *A View from Nowhere*. New York: Oxford University Press.
- Relph, E. 1976. *Place and Placelessness*. London: Pion.
- Sack, R. 1980. *Conceptions of Space in Social Thought: A Geographic Perspective*. Minneapolis, MN: University of Minnesota Press. -.1988. The consumer's world: Place as context. *Annals of the Association of American Geographers* 78:642-64.
- Sahlins, M. 1981. *Historical Metaphors and Mythic Realities*. Ann Arbor, MI: University of Michigan Press.
- . 1985. *Islands of History*. Chicago: University of Chicago Press.
- Schaeffer, F. 1975. *Pollution and the Death of Man: The Christian View of Ecology*. Wheaton, IL: Tyndale House Publishers.
- Schmidt, A. 1971. *The Concepts of Nature in Marx*. London: New Left Books.
- Schnaiberg, A. 1980. *The Environment: From Surplus to Scarcity*. New York: Oxford University Press.
- Smith, N. 1984. *Uneven Development: Nature, Capital, and the Production of Space*. Oxford: Basil Blackwell.
- Thompson, E. P. 1978. *The Poverty of Theory and Other Essays*. London: Merlin Press.
- Tuan, Yi-Fu. 1968. Discrepancies between environmental attitude and behavior: Examples from Europe and China. *The Canadian Geographer* 12:176-91.
- . 1971. *Man and Nature*. Washington, D.C.: Association of American Geographers.
- . 1977. *Space and Place: The Perspective of Experience*. Minneapolis, MN: University of Minnesota Press.
- Weber, M. 1947. *The Theory of Social and Economic Organization*. Glencoe, IL: The Free Press.
- White, L. 1967. The historical roots of our ecologic crisis. *Science* 155:1203-1207. Reprinted in F. Schaefer. 1975. *Pollution and the Death of Man: The Christian View of Ecology*. Wheaton, IL: Tyndale House Publishers.
- Williams, R. 1978. Problems of materialism. *New Left Review* 109:3-17.
- Wilson, E. 1975. *Sociobiology*. Cambridge, MA: Harvard University Press.
- Wittfogel, K. 1957. *Oriental Despotism*. New Haven, Cf: Yale University Press.