

A Crisis of Representation in the Human Sciences [1986]

GEORGE E. MARCUS & MICHAEL M.J. FISCHER

Along with Selection 33, this selection reflects on the unsettled state of theoretical affairs in ethnography accompanying the infusion of postmodernism in the 1980s. The selection is George E. Marcus and Michael M.J. Fischer's introduction to their controversial book *Anthropology as Cultural Critique: An Experimental Moment in the Human Sciences* (1986). It offers readers highlights of American social and intellectual history linked to changes in anthropological theory in the wake of Clifford Geertz's interpretive anthropology (Selection 25). According to Marcus and Fischer, the 1980s was a time of diffusion of theoretical authority, abandonment of grand theorizing, and proliferation of experimental writing in ethnography: the crux of their "crisis of representation." Treating ethnography as a form of representational literature, they recommend that ethnographers move forward by writing in the ironic mode. Now widely (if not universally) accepted, Marcus and Fischer's assertion that ethnographic writing embodies literary plotting and rhetorics of romance, tragedy, and comedy, among others, was then considered deeply challenging.

Key Words: blurred genres, crisis of representation, emplotment, grand theory, ironic mode, Jeweler's-eye view of the world, the Marxist label, paradigms, Parsonian sociology, Romance/Romance/Tragedy/Comedy

The present is a time of reassessment of dominant ideas across the human sciences (a designation broader than and inclusive of the conventional social sciences), extending to law, art, architecture, philosophy, literature, and even the natural sciences. This reassessment is more salient in some disciplines than in others, but its presence is pervasive. It is not just the ideas themselves that are coming under attack but the paradigmatic style in which they have been presented. Particularly in the social sciences, the goal of organizing disciplines by abstract, generalizing frameworks that encompass and guide all efforts at empirical research is being fundamentally challenged.

Clifford Geertz's paper, "Blurred Genres" (1980), attempted to characterize the current trend by noting the fluid borrowing of ideas and methods from one discipline to another. Geertz did not, however, attempt to analyze the dilemmas of the various disciplines. While the problem of the loss of encompassing theories remains the same from discipline to discipline, the formulation of and responses to this predicament are varied. For example, in literary criticism, there has been the waning of the "new

criticism," a paradigm which asserted that the meaning of texts was fully explorable in terms of their internal construction. Now, literary critics have incorporated, among other moves, social theories of literary production and reception (see Lentricchia 1980 and the excellent discussion in the late Elizabeth Bruss's *Beautiful Theories*, 1982). In law, there have arisen demystifying critiques by the Critical Legal Studies movement of the long authoritative model of legal reasoning (see, for example, Livingston 1982). In art, architecture, as well as literature, techniques that once had shock value or reoriented perception, such as surrealism, today have lost their original force, thus stimulating a debate about the nature of postmodernist aesthetics (see Jameson 1984). In social theory, the trend is reflected in challenges to establishment positivism (see Giddens 1976, 1979). In neoclassical economics, it is expressed in a crisis of forecasting and economic policy (see Thurrow 1983) as well as in a critique of the ideal of growth in economic theory (see Hirsch 1976, and Piore and Sabel 1984). In philosophy, it takes the form of a recognition of the devastating implications of issues of contextuality and

indeterminancies in human life for the construction of abstract systems, based on clearly derived and universal principles of justice, morality, and discourse (see Ungar 1976, 1984; Rorty 1979). In the current lively debate about the possibility of artificial intelligence, a key issue is precisely that of an adequate language of description (see Dennett 1984: 1454). Finally, in the natural sciences (physics, especially) and mathematics, the trend is indicated by a preference among some theorists for concentrating less on elegant theoretical visions of order, and more on the micropatterns of disorder—for example, the attention that “chaos” theory has recently gotten in physics, chemistry, biology, and mathematics (for a popular account of this development, see Gleick 1984).

Present conditions of knowledge are defined not so much by what they are as by what they come after. In general discussion within the humanities and social sciences, the present indeed is often characterized as “postparadigm”—postmodernism, poststructuralism, post-Marxism, for example. It is striking that in Jean-François Lyotard’s acute exploration of *The Postmodern Condition: A Report on Knowledge* (1984 [1979]), he too should cite the contemporary “incredulity towards metanarratives” which previously legitimated the rules of science. He speaks of a “crisis of narratives” with a turn to multiple “language games” that give rise to “institutions in patches.” “Postmodern knowledge,” he says, “is not simply a tool of the authorities; it refines our sensitivity to differences and reinforces our ability to tolerate the incommensurable” (p. xxv). The key feature of this moment, then, is the loosening of the hold over fragmented scholarly communities of either specific totalizing visions or a general paradigmatic style of organizing research. The authority of “grand theory” styles seems suspended for the moment in favor of a close consideration of such issues as contextuality, the meaning of social life to those who enact it, and the explanation of exceptions and indeterminants rather than regularities in phenomena observed—all issues that make problematic what were taken for granted as facts or certainties on which the validity of paradigms had rested.

The part of these conditions in which we are most interested is what we call a crisis of representation. This is the intellectual stimulus for the contemporary

vitality of experimental writing in anthropology. The crisis arises from uncertainty about adequate means of describing social reality. In the United States, it is an expression of the failure of post-World War II paradigms, or the unifying ideas of a remarkable number of fields, to account for conditions within American society, if not within Western societies globally, which seem to be in a state of profound transition.

This trend may have much to do with the unfavorable shift in the relative position of American power and influence in the world, and with the widespread perception of the dissolution of the ruling postwar model of the liberal welfare state at home. Both the taste for totalizing frameworks and the predominance in many academic disciplines of general models of stability in the social and natural order seemed to have coincided with the previously more confident and secure national mood. The current exhaustion of this style of theorizing merely points up the politicized context in which post-World War II intellectual trends have been shaped all along.

The questioning of *specific* postwar paradigms, such as the social theory of Talcott Parsons, gained its force during the 1960s when there was a widespread politicization of academic thought in the United States. Yet, those times were sufficiently dominated by hopes for (or reactions to) images of massive, revolutionary transformations of society that grand, abstract theoretical visions themselves remained in vogue. While retaining its politicized dimension as a legacy of the 1960s, social thought in the years since has grown more suspicious of the ability of encompassing paradigms to ask the right questions, let alone provide answers, about the variety of local responses to the operation of global systems, which are not understood as certainly as they were once thought to be under the regime of “grand theory” styles. Consequently, the most interesting theoretical debates in a number of fields have shifted to the level of method, to problems of epistemology, interpretation, and discursive forms of representation themselves, employed by social thinkers. Elevated to a central concern of theoretical reflection, problems of description become problems of representation. These are issues that have been most trenchantly explored by philosophical and literary theories of interpretation—thus their prominence

not merely for sociology, but for anthropology, psychology, political science, and models of economic development as well. Based on his synthesis of the major systems of nineteenth-century social theory (including Weber and Durkheim, but excluding Marx), Parsons provided a comprehensive, abstract vision of the social system, and its relationship to the separate systems of culture and personality. His theoretical project promised to coordinate and unify conceptually the empirical work of all the social sciences. It was an intellectual effort of such vast scope and ambition that it occupied minds and disciplines for some time.

During the 1960s, Parsonian sociology rapidly lost its hold, to disappear quite as dramatically from open terms of reference by the time Parsons died as had, for example, Spencian sociology before it. The apolitical and ahistoric character of Parsonian theory could not be sustained through the upheavals of the 1960s. In purely analytic terms, reducing the richness of social life, especially conflict, to the notions of function and system equilibrium on which the Parsonian vision depended, proved unsatisfactory. Parsonian social theory has not vanished; too many generations of students, now prominent scholars, were trained in terms of it for that to happen. But the theoretical edifice of Parsons has been thoroughly delegitimated, though many ideas within it remain intellectual resources at present, along with a multitude of other influences.

Furthermore, it is not that contemporary attempts to revive Parsonian sociology do not sometimes occur (as in the work of Niklas Luhmann 1984 and Jeffrey Alexander 1982-83) or that different, but equally ambitious efforts at grand theory do not arise (for example, sociobiology, "the new synthesis"—see Wilson 1975). It is simply that they each become just one more voice to be heard at the moment, with little likelihood of achieving hegemonic status. Indeed, if Talcott Parsons were writing today, his synthetic scheme would merely take its place among several other grand, and not so grand, programs and suggestions for research, each capturing its own fragment among scholars within and across disciplines.

So, too, in the contemporary period a similar diffusion of legitimacy and authority attends Marxism.

now as a source of inspiration for theoretical and self-critical reflection in so many disciplines.

The intellectual historian must have a sense of déjà vu in contemplating these recent developments, for they recapitulate issues debated in other periods, most proximately during the 1920s and 1930s. There is often a circular motion to intellectual history, a return with fresh perspectives to questions explored earlier, forgotten or temporarily resolved, and then reposed in attempts to manage intractable contemporary dilemmas. Yet, this history is better conceived as spiral rather than circular. Rather than mere repetition, there is cumulative growth in knowledge, though the creative rediscovery of older and persistent questions in response to keenly experienced moments of disaffection with the state of a discipline's practice tied to perceptions of unprecedented changes in the world.

Ours is once again a period rich in experimentation and conceptual risk-taking. Older dominant frameworks are not so much denied—there being nothing so grand to replace them—as suspended. The ideas they embody remain intellectual resources to be used in novel and eclectic ways. The closest such previous period was the 1920s and 1930s when evolutionary paradigms, *laissez-faire* liberalism, and revolutionary socialism and marxism all came under energetic critiques. Instead of grand theories and encyclopedic works, writers devoted themselves to the essay, to documenting diverse social experiences at close quarters, and to fragmentary illuminations. The atmosphere was one of uncertainty about the nature of major trends of change and the ability of existing social theories to grasp it holistically. The essay, experience, documentation, intensive focus on fragments and detail—these were the terms and vocabulary of the generation of Walter Benjamin, Robert Musil, Ludwig Wittgenstein, the surrealists, and the American documentary realists of the 1920s and 1930s.

Fascism and World War II brought to fruition the worst fears of the prewar speculations about the effects of the social transformations in industrial capitalism, communications/propaganda, and commodity production. In the aftermath, America emerged as the dominant economic force, and it created a new creed of can-do modernization. In the social sciences, Parsonian sociology became a hegemonic framework,

PART III \ THE LATER TWENTIETH CENTURY

Marxism is a nineteenth-century paradigm which presented itself as a natural science of society that not only had an intellectual identity but also a political one. It was a grand theory to be enacted and measured against history. In the period of Parsonian hegemony in the United States, Marxism maintained itself as an alternative, suppressed and awaiting its release. Today, there are still those who desire to preserve the framework, dogma, and canonic terminology of Marxism—formalists like Maurice Godelier and Louis Althusser. But there are also more interpretive Marxists, accepting the framework loosely as a realm of shared discourse, but probing within it to find out in cultural and experiential terms what concepts such as mode of production, commodity fetishism, or relations and forces of production might mean under diverse and changing world conditions. The label Marxist itself has become increasingly ambiguous; the use of Marxist ideas in social thought has become diffuse and pervasive; and there no longer seem to be any clear paradigmatic boundaries to Marxism. There is indeed a new empirical, and essentially ethnographic/documentary mood in Marxist writing (see Anderson 1984). It is just this sort of diffusion of ideas across boundaries that is to be expected in a period such as this when paradigmatic styles of social thought are suspended. Old labels are thus a poor guide to the current fluidity and crosscurrents in intellectual trends. While Marxism as a system of thought remains strong as an image, in practice, it is difficult to identify Marxists anymore, or to locate a contemporary central tradition for it.

Parsonian social theory and Marxism (as well as French structuralism, more recently) have all served prominently during the postwar period as paradigms or disciplined frameworks for research in the human sciences. All remain today as sources of concepts, methodological questions, and procedures, but none authoritatively guides research programs on a large scale. They have become merely alternatives among many others that are used or discarded at will by researchers operating much more independently. The current period, like the 1920s and 1930s before it, is thus one of acute awareness of the limits of our conceptual systems as systems.

So far we have viewed the present crisis of representation as one distinctive, alternate swing of a

pendulum between periods in which paradigms, or totalizing theories, are relatively secure, and periods in which paradigms lose their legitimacy and authority—when theoretical concerns shift to problems of the interpretation of the details of a reality that eludes the ability of dominant paradigms to describe it, let alone explain it. It is worth playing back this broadly conceived vision of intellectual history, which sets the context of the present experimentation with anthropological writing in terms that specifically capture the literary and rhetorical qualities of such shifts. To do so, we consult the pioneering study by Hayden White, *Metahistory* (1973), which traces the major changes in nineteenth-century European history and social theory, registered at the level of techniques for writing about society. In briefly considering White's framework, we see twentieth-century anthropology, as well as any other discipline which has depended on discursive, essentially literary accounts of its subjects, as comparable to the efforts of nineteenth-century historiography to establish a science of society through presenting realistic and accurate portraits of conditions and events.

Any historical (or anthropological) work exhibits emplotment, argument, and ideological implication, according to White. These three elements may be at odds with one another as well as being in an unstable relation to the facts they attempt to encompass and order. From these instabilities come shifting modes of writing which also show connections with broader social currents. The struggle to reconcile conflicts among these elements in the writing of texts, especially of important, influential works, poses problems of method for other practicing historians that define a theoretical discourse about the interpretation of reality. White's scheme is of interest to us here precisely because it translates the problem of historical (and anthropological) explanation, most often conceived as a clash of theoretical paradigms, into the writer's problem of representation.

Nineteenth-century historical writing, according to White, began and ended in an ironic mode. Irony is unsettling: it is a self-conscious mode that senses the failure of all sophisticated conceptualizations; stylistically, it employs rhetorical devices that signal real or feigned disbelief on the part of the author

comprehensive and plausible, yet apparently mutually exclusive conceptions of the same events. At the end of the nineteenth century, writers such as Nietzsche and Croce took the ironic consciousness of the age as their problem and attempted to find ways of overcoming its unsettling, self-conscious inability to have faith in itself. Croce attempted the romantic move again, trying to purge history of irony by assimilating it to art, but he succeeded only in driving deeper the awareness of the ironic conditions of knowledge.

Twentieth-century human sciences have not so much repeated the cycle White describes for the nineteenth century; rather they have exhibited a persistent oscillation between more realist modes of description and irony. For example, the later work of the anthropologist Clifford Geertz, who was among those prominent in developing the idea of the cultural system out of the Parsonian framework discussed earlier, turns away from Parsons and represents a romantic move. Like Croce, he utilizes an image or symbol to uncover, define, and impose a recognizable pattern in cultural thought, be it the cockfight to explore the patterning of Balinese thought, or the theater state to discuss an aspect of politics underused in Western thought. At the same time, however, his mode of selecting such symbols and images draws attention to questions of perspective and questions of assumptions of "scientific" objectivity. Similarly, the persistent contemporary interest in Marxist perspectives continues the tragic move in the writing of Marx himself, while also exhibiting increasing concern about issues of epistemology. Thus, throughout the twentieth century, irony has remained consistently strong and has become particularly salient during the two periods—the 1920s and 1930s and the 1970s and 1980s—that have exhibited a pervasive suspension of faith in the idea of grand covering theories and reigning paradigms of research in a number of fields.

The task, particularly now, is not to escape the deeply suspicious and critical nature of the ironic mode of writing, but to embrace and utilize it in combination with other strategies for producing realist descriptions of society. The desirability of reconciling the persistence of irony with other modes of representation derives in turn from a recognition that because all perspectives and interpretations are subject

toward the truth of his own statements; it often centers on the recognition of the problematic nature of language, the potential foolishness of all linguistic characterizations of reality; and so it reveals—or walls—in satirical techniques. Yet, the irony at the end of the Enlightenment was quite different from that at the end of the nineteenth century. In between, historians and social theorists attempted at least three major alternatives to break out of the conditions of irony and thus to find a proper (read paradigmatic) representation of historical process.

In White's literary terms, these alternatives are best conceived as strategies of employment in constructing works of history and social theory—Romance, Tragedy, and Comedy. Romance is the empathetic self-identification by the writer with quests that transcend specific periods of world history; in ethnology, an example would be Sir James Frazer who envisioned *The Golden Bough* as a quest of reason battling through centuries of superstition. Tragedy is a heightening of the sense of conflicting social forces, in which the individual or the event is merely an unhappy locus, one, however, in which there can be a gain in consciousness and understanding through experiencing the power of social conflicts. It is more world-wise than Romance; an example would be Marx's vision of class conflict, derived from his earlier explorations of the alienation of human labor. Comedy is the reverse side of Tragedy: it cultivates the sense that there can be temporary triumphs and reconciliations, often figured in the euphoria of festivals and rituals that bring competitors together and temporarily still conflict. An example would be the vision of social solidarity in Durkheim's *Elementary*

Forms of Religious Life

For nineteenth-century historiography, White describes a movement from Romance to Tragedy to Comedy, ending finally in a deep ironic mode. The irony at the end of the nineteenth century was different from that at the end of the Enlightenment. Nineteenth-century historiography was uniformly less abstract, and more empirical than that of the Enlightenment. During the nineteenth century there had been a sustained series of efforts to find a "realist" mode of description. All ended in irony, however, because there were a number of equally

paradigms, or ere, and periods cy and author- to problems of ability that eludes to describe it, let back this broadly y, which sets the on with anthro- cally capture the h shifts. To do so, Hayden White, major changes in y and social the- ques for writing White's frame- ropology, as well depended on dis- of its subjects, as nth-century his- f society through orats of condi- (al) work exhibits gical implication, ements may be at ing in an unstable to encompass and shifting modes of ons with broader reconcile conflicts ing of texts, espe- ks, poses problems rians that define a rpretation of real- us here precisely of historical (and st often conceived s, into the writer's writing, according s mode that senses conceptualizations; devices that signal part of the author

to critical review, they must finally be left as multiple and open-ended alternatives. The only way to an accurate view and confident knowledge of the world is through a sophisticated epistemology that takes full account of intractable contradiction, paradox, irony, and uncertainty in the explanation of human activities. This seems to be the spirit of the developing responses across disciplines to what we described as a contemporary crisis of representation.

Periods of heightened irony in the means of representing social reality seem to go with heightened perceptions throughout society of living through historic moments of profound change. The content of social theory becomes politicized and historicized; the limiting conditions of theory become clearer. Those fields most closely tied in their concerns to describing and explaining social phenomena undergoing complex changes exhibit strong internal challenges to reigning paradigms, and to the idea of paradigms itself. Thus, during the 1970s and early 1980s, we find such generalist works on social theory as Anthony Giddens's *New Rules of Sociological Method* (1976) and *Central Problems of Social Theory: Action Structure, and Contradiction in Social Analysis* (1979), Alvin Gouldner's *The Coming Crisis in Western Sociology* (1970), R.J. Bernstein's *The Restructuring of Social and Political Theory* (1976), and Pierre Bourdieu's *Outline of a Theory of Practice* (1977). Simultaneously, the problems posed in such works of theoretical discourse are more directly and cogently being addressed in the research process itself, which for fields such as cultural anthropology and history, is significantly a matter of representing in a narrative form social and cultural realities. Empirical research monographs, through self-conscious attention to their writing strategies, equally become works of heightened theoretical significance and ambition. Intellectually, then, the problem of the moment is less one of explaining changes within broad encompassing frameworks of theory from a concern to preserve the purpose and legitimacy of such theorizing, than of exploring innovative ways of describing at a microscopic level the process of change itself.

A jeweler's-eye view of the world is thus urgently needed, and this is precisely where the strength and attractiveness of cultural anthropology reside at the

moment. As we will see in the next chapter, anthropology's distinctive method of research, ethnography, has long been focused precisely on problems of the recording, interpretation, and description of closely observed social and cultural processes. While long associated by its public with the study of so-called primitive, isolated societies, anthropology in fact has been applying its "jeweler's-eye" method for some time to complex nation-state societies, including, increasingly, our own. Moreover, the contemporary innovations in anthropological writing, occasioned by the same crisis of representation affecting other disciplines, are moving it toward an unprecedentedly acute political and historical sensibility that is transforming the way cultural diversity is portrayed. With its concerns firmly established across the traditional divide of the social sciences and humanities, anthropology (among other disciplines such as literary criticism) is thus serving as a conduit for the diffusion of ideas and methods from one to the other. The current changes in past conventions for writing about other cultures are the locus of operation for this strategic contemporary function of anthropology.

Within anthropology itself, the current absence of paradigmatic authority is registered by the fact that there are presently many anthropologies: efforts to revitalize old research programs such as ethno-semantics, British functionalism, French structuralism, cultural ecology, and psychological anthropology; efforts to synthesize Marxist approaches with structuralism, semiotics, and other forms of symbolic analysis; efforts to establish more encompassing frameworks of explanation such as sociobiology to achieve the aim of a more fully "scientific" anthropology; efforts to merge the influential study of language in anthropology with the concerns of social theory. All of these have merits and problems in different measure; yet, all are inspired by and inspire the practice of ethnography as a common denominator in a very fragmented period.

The explicit discourse that reflects on the doing and writing of ethnography itself is what we call interpretive anthropology. It grew out of the cultural anthropology of the 1960s, gradually shifting in emphasis from the attempt to construct a general theory of culture to a reflection on ethnographic fieldwork and writing. It has a major spokesman in Clifford Geertz,

- Livingston, Debra. 1982. "Round and round the Bramble Bush: From Legal Realism to Critical Legal Scholarship." *Harvard Law Review* 95: 1670-76.
 - Luhmann, Niklas. 1984. *Soziale Systeme: Grundrisse einer allgemeinen Theorie*. Frankfurt am Main: Suhrkamp.
 - Lyotard, Jean-François. 1984. *The Post-modern Condition: A Report on Knowledge*. Minneapolis: University of Minnesota Press. (Orig. pub. 1979.)
 - Piore, Michael J., and Charles F. Sabel. 1984. *The Second Industrial Divide*. New York: Basic Books.
 - Rorty, Richard. 1979. *Philosophy and the Mirror of Nature*. Princeton, NJ: Princeton University Press.
 - Thurrow, Lester. 1983. *Dangerous Currents: The State of Economics*. New York: Random House.
 - Ungar, Roberto M. 1976. *Law and Modern Social Theory*. New York: Free Press.
 - . 1984. *Passion: An Essay on Personality*. New York: Free Press.
 - White, Hayden V. 1973. *Metahistory: The Historical Imagination in Nineteenth Century Europe*. Baltimore: The Johns Hopkins University Press.
 - Wilson, E.O. 1975. *Sociobiology: The New Synthesis*. Cambridge, MA: Harvard University Press.
- ### Questions
1. According to Marcus and Fischer, why is there a crisis of representation in the human sciences?
 2. What is ironic about the kind of ethnographic representation recommended by Marcus and Fischer?
 3. What do Marcus and Fischer have to say about paradigms in the human sciences?
- ### Further Readings
- Brown, Richard Harvey, ed. 1995. *Postmodern Representations: Truth, Power, and Mimicry in the Human Sciences and Public Culture*. Urbana: University of Illinois Press.
- Fischer, Michael M.J. 1984. "Toward a Third World Poetics: Seeing through Fiction and Film in the Iranian Culture Area." *Knowledge in Society* 5: 171-241.
- . 1986. "Ethnicity and Post-modern Arts of Memory." In *Writing Culture: The Poetics and Politics of Ethnography*, ed. James Clifford and George E. Marcus. Berkeley: University of California Press.

References

whose work has made it the most influential style of anthropology among the wider intellectual public. It is, as well, the trend in the anthropology of the 1960s from which the contemporary experimental ethnographies, our central concern in this essay, took off.

We now turn from the broader intellectual trend affecting anthropology to this inside story. We first discuss the central role that the ethnographic method, and especially the production of ethnographic texts, has occupied in modern cultural anthropology. Then we trace the emergence of interpretive anthropology as a discourse on this central research practice, to its revision in response to the crisis of representation we have discussed in this chapter.

- Alexander, Jeffrey. 1982-83. *Theoretical Logic in Sociology*. 4 vols. Berkeley: University of California Press.
- Anderson, Perry. 1984. *In the Tracks of Historical Materialism*. Chicago: University of Chicago Press.
- Bernstein, Richard J. 1976. *The Restructuring of Social and Political Theory*. Philadelphia: University of Pennsylvania Press.
- Bourdieu, Pierre. 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.
- Bruss, Elizabeth. 1982. *Beautiful Theories: The Spectacle of Discourse in Contemporary Criticism*. Baltimore: The Johns Hopkins University Press.
- Dennett, Dennis. 1984. "Computer Models and the Mind—a View from the East Pole." *Times Literary Supplement*, p. 1454.
- Geertz, Clifford. 1980. "Blurred Genres." *American Scholar* 49: 165-79.
- Giddens, Anthony. 1976. *New Rules of the Sociological Method*. New York: Basic Books.
- . 1979. *Central Problems in Social Theory: Action, Structure and Contradiction in Social Analysis*. Berkeley: University of California Press.
- Gleick, James. 1984. "Solving the Mathematical Riddle of Chaos." *New York Times Magazine*, June 10, pp. 30-32.
- Gouldner, Alvin W. 1970. *The Coming Crisis of Western Sociology*. New York: Basic Books.
- Hirsch, Fred. 1976. *The Social Limits to Growth*. Cambridge, MA: Harvard University Press.
- Jameson, Fredric. 1984. "Postmodernism, or the Cultural Logic of Late Capitalism." *New Left Review* 146: 53-93.