Social Structure and Disaster: A Prolegomenon

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Gary Kreps and his colleagues are engaged in research that expands our ability to describe and explain the collective reactions of people who experience tornadoes, earthquakes, floods, and other disasters. But there is more. Through their studies of disasters, these researchers describe and explain central components of social reality: social process, social structure, and social organization. Moreover they introduce and illustrate a dialectical method for conducting research. The papers collected here present the results of the work of the Kreps group and the formal reactions of distinguished scholars from the fields of disaster research and general theory.

In the following comments we attempt an overview of Kreps's research program and the collected essays from a symposium on social structure and disaster by pointing to contributions in three major areas: advances in the sociology of disasters, new and more analytically complete formulations of basic sociological concepts, and an articulated dialectical method. We try in this prolegomenon to highlight major contributions of this volume and underscore the potentially intractable conceptual and methodological issues that remain.

The Sociological Study of Disasters

Disaster researchers bring a variety of perspectives to the field. Defining the objects of study and the "core concept" (disaster) has proved to be difficult. There are basic questions about the relevant properties of disasters, and researchers often disagree about the identification and classification of particular historical events. E. L. Quarantelli, identified as the "Arch Druid of Cataclysm" by the *Boston Globe*, observed at the symposium that the field continues to operate without a clear definition of its basic subject matter: "There is something wrong about a field of study which attempts to delineate the characteristics of something, tries to depict the conditions leading to that something, and gropes to show the conse-

quences of that something, without having a relatively clear conception of what the something." He also pointed to Kreps's work as an example of efforts in the right direction.

Kreps and his colleagues offer a "modest revision" of the definition introduced by pioneer disaster researcher Charles Fritz. The definition is elaborated through the identification of four "core properties": events, impacts, social units, and responses. Kreps builds from there to suggest that problems of definition and description can be approached through taxonomy. The Kreps group then identifies and illustrates potentially relevant property spaces for classifying disasters: physical, temporal, and social dimensions. The chapters of part 1 provide detailed discussions and applications of the analytic constructs and the development of taxonomic description.

Those who are interested in issues and methods of taxonomy will want to pay close attention to papers in part 3 as well. Thomas Drabek confronts taxonomy head-on with discussions of approaches for resolving four issues: (1) sharpening the criteria used to distinguish events; (2) specifying thresholds; (3) connecting disaster events to ongoing social processes; and (4) capturing the subjective understandings of participants who occupy key structural positions (i.e., those who are in a position to define an event as disaster or nondisaster). Commentaries by Allen Barton, Ronald Perry, and Louis Zurcher make clear the difficulties and limits of the taxonomic approach:

> Taxonomies may be "too cold" to capture the experiences of "warm-blooded" humans;
> they may have little practical use for field researchers because of their abstractness and the subtlety of their distinctions;
> they may be "discipline-bound" and, therefore, insensitive to some matters; and,
> they tend to miss the dynamic and emergent character of disaster events and collective responses.

Researchers have collected an incredible body of data on disaster events, much of which is stored in the archives of the Disaster Research Center (DRC; formerly at Ohio State University and now at the University of Delaware). Dennis Wenger describes the range and types of data, the opportunities for comparative research, and the state of theory and research on disasters in the part 1 Appendix. Kreps and his colleagues demonstrate the value of the collected data in their far-ranging and analytically incisive studies, which comprise part 1.

Contents

Disaster Research and Basic Sociology

Do disaster researchers have the luxury of considering abstract issues concerning the nature of reality or the nature and process of knowing? Do they have a choice? Jeffrey Alexander argues that Kreps and his colleagues raise questions of ontology, epistemology, and ideology because they must. Sociology lacks a common paradigm and, thus, assumptions must be specified in order to communicate and minimize the probability of misunderstanding. Charles Warriner disagrees: "... it seems to me that in all scientific and intellectual endeavors there have often been important and useful substantive contributions despite wrong-headed and even patently invalid positions on ontological, methodological, and epistemological issues. Quite wrong epistemologies have sometimes been associated with quite right outcomes; conversely, quite sound metatheory is no guarantee of useful knowledge creation" (p. 296). These and related matters are the subject of spirited, yet reasoned, discussion in chapter 10. Note also in chapter 8 Ralph Turner's assessment: "... I am asking whether the escalation of intrinsically interesting and practical middle-level problems to the level of superabstraction in the form of ideal types is a constructive enterprise. My tentative answer is no" (p. 212).

It is not clear whether Kreps and his colleagues are more concerned with articulating a structuralist conception and approach that will inform disaster research or, rather, with using disaster research to ground an emerging structural sociology. Kreps says that his general theory of organized responses to disaster is the product of more than a decade of work on disaster relevant data, most of which are part of the DRC collection. He proposes a code that identifies the crucial structural elements of organization: activities (A), human and material resources (R), tasks (T), and domains (D). But which came first, conception or data? And what issues are more important, those of presupposition or those that concern factual reconstruction and measurement?

Alexander commends Kreps for not getting caught in the empiricist "trap." He asserts that Kreps understands that there are no empirical solutions to fundamental paradigm disagreements within the discipline. At the same time, he pays little attention to the careful, precise, and rigorous data production and measurement efforts that characterize the studies of the Kreps group. Alexander's review stands in sharp contrast to Walter Wallace's complaints (see chapter 8) which reflect a version of the empiricist understanding of science: there is too much gap between empirical data and theoretical modeling; the work is burdened with jargon; each conceptual revision should have been followed by an iteration of data analysis.

It may be that neither Alexander nor Wallace take seriously enough Kreps's inclusive dialectical approach—ontology, epistemology, and

methodology. From one side, the work seems too empiricist; from the other, too speculative. Those in the middle (or, at least in one of the possible "middle" positions in sociology) urge Kreps and his research associates to get on with solving "mid-range" theoretical puzzles and avoid the limitations of issues that are mostly speculative and philosophical anyway (cf. Warriner, Faia, and Turner in this volume). But Kreps is quite convinced of the paradoxical character of social reality and the need for dialectical understanding, as is revealed in major conceptual discussions in parts 1 and 2 and in the substantive chapters of part 1. That means, most specifically, that there is an unrelievable tension between conception and observation and which comes first is not very relevant. Understanding requires an awareness of the tension and a willingness to counterpose the two in a continuous process of analysis.

What, then, is the character of structure as the object of study? Bruce Mayhew (chapter 8) appreciates Kreps's effort toward structural explanation, but finds it lacking outside disaster research because it pays more attention to "culture" (the organization of information) than to the social realities of association. Kreps's "structural code" (taxonomy of association) ". . . is three parts cultural (*D-T-R*) and one part social (*A*)" (p. 197). Kreps responds by noting that Mayhew defines social structure as "interdependencies in social relations," which is the central focus of much of the work. He points to research (part 1) that examines the dimensions of time, space, and number of individuals and units as examples of attention to interdependencies.

Ralph Turner raises questions about the definition of organization and the adequacy of the structural code for identifying and describing organization. Can observers use the code reliably to produce agreements on whether or not elements (*D*, *T*, *R*, *A*) are present? Can they differentiate consistently among the elements? Turner has doubts. He points also to problems in the conception of role offered by Bosworth and Kreps and rejects the idea of a dialectical relationship between role-playing and role-making. In their response, Kreps and Bosworth acknowledge Turner's concerns but suggest that their conception of organization provides at least a starting point for asking questions about things that have been taken as given in most earlier research. Moreover they elaborate their conception of the dialectical relationship between individual and unit in an effort to specify the tension that they see in the dichotomy of role-playing and role-making.

Kreps and his colleagues describe a tension also between subjective and objective dimensions of social reality. Ino Rossi (part 2) applauds the effort to capture both dimensions dialectically, but he concludes that the work remains limited by a residue of the empiricist mode of thinking. Kreps and his colleagues fail to achieve a ". . . true synthesis between the subjective

and objective approach" (p. 282). Rossi's standard may be unrealistically high. "Synthesis" in scholarly inquiry may be only an ideal, whereas a recognition and appreciation of tension is the practical strategy.

Charles Warriner is more concerned with the proposed dialectical relationship between action and order. If dialectic means opposition, no such relationship exists between these elements of reality, according to Warriner. Instead, if action is the basic process of society, then recurrence (order) is a variable. The only dialectical counterpart to action is nonrecurrence, which is the absence of social reality. It follows that role ("typically recurring joint action involving some particular set of actors," p. 303) is the central concept for understanding disasters, organization, and other social realities. Warriner insists that the concept, and by implication a viable sociological approach, must eschew a priori causal explanation. Translated, the message (again) is to proceed empirically. Yet on the other side, Nicholas Mullins insists that this is precisely what Kreps et al. have done—and, by implication, too much so. Mullins insists that Kreps is a data analyst, not a theorist—even when he is engaged in the most abstract of theoretical discussions (i.e., the thematic paper in part 2).

Most generally, the work of the Kreps group may be understood as an effort to advance a structural sociology. There is sharp disagreement on how that sociology should look and on the method appropriate to the task. Alexander interprets the Kreps group's empirical work as an effort to specify structural theory; that is, to specify the theoretical construction that preceded the research. As already noted, others are pursuaded that the important work to be done is mostly a matter of empirical discovery. There is some agreement among the authors in part 2. They agree that there is signficant disagreement on what structure means in sociology generally and on the future of structural theory in disaster research.

E. L. Quarantelli and Russell Dynes (in unpublished symposium presentations) provided (respectively) a historical view and a prospective evaluation of structural explanations of disasters. Quarantelli described the strong influence of collective behavior and symbolic interactionist perspectives among disaster researchers: "The two theoretical perspectives were so deeply ingrained and so taken for granted in the thinking and work of most of them, that the possible use of different theoretical perspectives within sociology was not often entertained." Dynes took note of the strong influence of "public policy issues" that drive research funding and observes that "it is more likely . . . that future research will be conditioned by (these) issues than it will be by the need to develop some coherent set of concepts." At the same time he noted that he was drawn to disaster research by his interests in organizations and that subsequent research in the field has ". . . moved the organizational and collective traditions closer together to the benefit of both."

> the history of this research program has involved a
> tion of ideas with data. While empiricist approaches emph
> tion and description and rationalist approaches emphasize deduction
> and explanation, dialectical approaches emphasize both at the same time. . . . In sum, we think that what is needed is a useful tension between empiricism and rationalism, much along the lines suggested by Wallace (1971) himself some time ago.

Bruce Mayhew compares Kreps to Sorokin (in style of work), and that he always discusses fundamental issues and agrees and disagrees every point of view. He concludes: "Consequently, those of us who know what is really going on must find him partially right even when he is wrong and partially wrong even when he is right" (p. 201). Perhaps this is as it must (or will) be when scholars are working at the margins. The work of the Kreps group challenges us to take seriously the presuppositions of our research. It provides a model of the dynamic interplay between data and theory. It demands that we appreciate the unity of social reality. The papers of this volume reflect the exciting and paradoxical challenges that confront sociology and point toward a viable strategy for social inquiry

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