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The Role of Archives for Comparative
Studies of Social Structure and Disaster

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Traditionally, this little area of empirical examination has been known as "disaster research." There are a few interesting implications of that label. For instance, it should be noted that the field is not called "disaster studies" or "Disasterology." Logically, one can imagine "Disasterology." It would probably be an independent discipline with its own concepts, theoretical explanations, and paradigms. Now it must be noted that some of our European friends, such as Carlo Pelanda, and some of our colleagues in this country, would prefer to have something like "Disasterology" (Swisher, 1985). They believe that the development of a unique discipline, fertilized though it would be by multidisciplinary contributions, is needed for the field to reach fruition.

Others strongly disagree and support the inherent essence of the label of "disaster research." They argue that the purpose of studying disasters is not to learn more about geophysical and technological crises, but to learn more about social forces, structures, and processes. As the field has developed within the United States, the disaster setting has been conceived as somewhat a natural laboratory for examining important concepts and theoretical notions from the traditional social sciences. The role of "research" in "disaster research" has been viewed as attempting to empirically examine critical issues having relevance for various theoretical schemes, ranging from psychological and stress studies of individuals to macro level response patterns of social systems.

Over the past decade, however, some have criticized the sociological branch of disaster research as being atheoretical, or at least as lacking theoretical relevance or importance. It is charged that the "raison de etre" of the field has been forgotten or at least ignored. Some critics argue that the field should exist to serve as a crucible for examining

important theoretical issues, but it has become isolated from theoretical and conceptual concerns. More than ten years ago Mileti, Drabek and Haas concluded their review of the field by noting that "Existing studies on behavior in disaster have been conducted... as if no theory existed in the social sciences to provide a basis for the direction of inquiry." They further offered that the almost total exclusion of established theory has been the "disaster of disaster research" (1975: 146).

Now in fairness to the authors, they do note that there are some exceptions to this charge. They are absolutely correct; there are a number of exceptions to this charge! In fact, one can make a strong case that theoretical issues have not been ignored in sociological research on disaster. In particular, a significant body of research on disasters has been guided and enlightened by theoretical concepts and explanations.

The contributions of theory to research inherent in the theory-research relationship have been fairly extensive. The early NORC and NAS research efforts were embedded within the contemporarily compatible fields of symbolic interactionism and collective behavior (Marks and Fritz, 1954; Quarantelli, 1957; Demerath and Wallace, 1957; Fritz, 1961). Certainly, the classic work by Barton (1970) is not devoid of theoretical relevance. One can argue that Barton's use of social psychological and organizational analysis in an understanding of emergent role structures is still a rich source of theoretical explanations that await much deserved empirical examination. Similarly, Dynes (1970) was significantly influenced by organizational theory in his contribution on organizational behavior in disaster. The works of Drabek (1981), Kreps (1983, 1985), Perry (1982) and Turner (1986) have all utilized organizational, structural, collective behavior, and social psychological theoretical schemes. Quarantelli's

(1978) volume, Disasters: Theory and Research, offers a number of theoretically enlightened discussions of disaster phenomena, including those on the community (Wenger), interorganizational relationships (Dynes), organizational structure (Stallings) and emergent groups (Forrest). Currently, the theoretically-relevant nature of disaster research is being highlighted in a volume that examines the relationship between disaster research and various subfields within sociology (Dynes and Pelanda, forthcoming).

If a number of disaster research efforts and discussions have been guided by traditional sociological theoretical concepts and paradigms, why does the charge of "atheoretical empiricism" originate and appear to have some validity? Perhaps the problem is one of which concepts and whose theories have been utilized in disaster research. Basically, the research has been enlightened by taking concepts from a variety of "little theories" and "tiny paradigms" and employing them in a sensitizing manner for ex post facto explanations. Collective behavior concepts on group emergence, crisis behavior, and social control have been borrowed. Also, various concepts from the fields of social organization or formal organization have also shed light on research findings. Structure-functional analysis at the community level has also served research. The field certainly has a "middle-range" flavor to it. Therefore, some critics may be upset because the "wrong" theories have not been utilized. ("Wrong" being those other than the schemes and paradigms they prefer.) It is true; there is no grand theory of disaster studies. (To produce one would be to lead the field down the path of "Disasterology." This sojourn might be a pleasant journey for emergency managers and practitioners; it would be a walk into oblivion for serious, social scientists.) Furthermore, because conflict, dialectical and metatheoretical concepts and paradigms are extremely rare

in American disaster research, their proponents may perceive an atheoretical bent to the research area. Lacking "big" theories either of its own genesis or from major sociological paradigms, the "little theory" field of disaster research seems somewhat theoretically marginal.

Furthermore, while it can be shown that numerous disaster studies have benefited by utilizing theoretical concepts and frameworks, it is more difficult to demonstrate the reciprocal contributions of disaster research to basic theory. In the area of collective behavior, findings from disaster research were instrumental in challenging the traditional orientation of contagion and convergence theories (Wenger, 1986). From the early work on convergence behavior by Fritz and Mathewson (1957), and the findings of the NAS research on crisis behavior, the findings from disaster studies were instrumental in spawning emergent norm theory (Turner and Killian, 1972) and questioning traditional views on panic and blame. Similar contributions can be noted with regard to role theory (Killian, 1952; Barton, 1970) and community (Erickson, 1976). While other examples could be offered, it is somewhat difficult to detail the contributions of specific disaster research findings to the formulation and examination of social theory.

Kreps (1985), of course, is attempting to alter this situation. Firmly believing that taxonomic development is an essential element necessary to forestall theoretical nihilism through abstracted empiricism, Kreps has been able to profitably utilize findings from disaster research to generate a taxonomy of organizational forms that attempt to bridge the gap between static and dynamic approaches to social structure.

Which brings us to the central issue in this brief discussion. To what extent can archival data gathered in disaster situations be a

significant factor in the comparative analysis of social structure? In other words, to what extent can research findings feed back to theoretical notions of social structure? To examine this issue, we will discuss one major data set in detail. The magnitude and nature of the data will be described. In addition, the discussion will consider some of the benefits and some of the problems inherent in utilizing this data for comparative structural analysis. Finally, some possible uses of the data for comparative structural analysis will be suggested. It will be concluded that a massive data base exists for structural analysis.

The Disaster Research Center Archives

A number of collections of data on the social aspects of disaster exist in a variety of locations in the United States. Major data bases can be found at the University of Massachusetts, University of Georgia, University of Denver, University of Pittsburg, Arizona State University, University of Minnesota, Colorado State University, and the University of California at Los Angeles. These archives range from population surveys of victims (Massachusetts) to cross-cultural data on developing countries (Georgia); from survey research on evacuees (Arizona State) to detailed data on family units in disaster (Denver). They are a valuable source of information that has theoretical relevance.

The largest collection of data focusing upon organizational and community response to natural disasters, however, can be found in the archives of the Disaster Research Center at the University of Delaware. This collection is a massive compendium of material that has direct relevance to structural analysis, and a detailed description of the material is warranted.

Before discussing the magnitude and nature of this data collection,

however, a few words may be useful regarding the research projects that spurred this effort. (The following material draws heavily upon Quarantelli, Dynes, and Wenger, 1986.) The Disaster Research Center has been undertaking a continuous, detailed examination of organizational and community preparation for and response to both natural and technological disasters. Since its founding in 1963, the Disaster Research Center has undertaken studies of over 475 different crisis events. These events have involved over 1300 separate field research trips. The research has been carried forth in a variety of settings (research has been conducted in 44 states and 11 foreign countries) and has investigated a variety of disaster agents (floods, hurricanes, tornados, toxic spills, earthquakes, transportation accidents, mine disasters, dam catastrophes, etc.)

More central to our current interests, however, are the variety of sociological topics examined by the Disaster Research Center over the past 23 years. Roughly, the many Center investigations can be grouped into the following categories:

1. Emergency Response Studies

Since its beginning, the Disaster Research Center has focused upon the activities of emergency relevant organizations during the emergency or crisis period of disasters. Both established organizations, such as police, fire, civil defense, Red Cross, hospital and utility outlets, and emergent organizations, such as ephemeral search and rescue groups, have been examined. This focus continues in current Center studies.

2. Preparedness Studies

In addition to examining the activities of organizations during the time surrounding disaster impact, the Disaster Research Center has also studied pre-impact planning for major emergencies. For example, between

1968-74, twenty-two American cities were intensively studied with regard to their disaster preparations; in 1979-82, nineteen localities were monitored for planning for chemical emergencies.

3. Recovery Studies

Longitudinal studies have also been undertaken. In these investigations, the emergency period response has been utilized as a base line for examining changes in planning and in organizational and community structure. Some restudies were undertaken as long as five years after the disaster. In 1981-84, as part of a nationwide study of 50 groups, several dozen citizen groups, which had developed after disaster threats or incidents, were studied.

4. Natural and technological disaster studies

In the early years of its work, the Center focused almost solely on unexpected and sudden natural disasters. The variety of hazards studied by the Disaster Research Center, however, has greatly expanded. In fact, the study of preparations for and responses to acute chemical disasters was the largest research effort by the Center prior to the time of the publication of its final report in 1982.

5. Civil disturbances

When civil disturbances flared in American cities and on university campuses, the Disaster Research Center undertook analyses of such events so a comparison could be made between organizational activities present in those situations and those occurring in disasters. Although this line of research lasted for about five years, it has now been terminated.

6. Emergent groups, formal organizations and community studies

While emergency formal organizations have been the Disaster

Research Center's prime research interest, studies have broadened in two directions. First, the Center has increasingly focused upon community level responses during disasters, such as the overall coordination of local and outside group responses. Second, increasing emphasis was also placed on the study of the emergence of informal groups and associations.

Within these general thrusts, a variety of more specialized studies have been undertaken. The problems encountered by delivery systems of crucial services in disasters became a major subject of Center research. Large-scale studies of the delivery of emergency medical care in large mass casualty situations and also of the delivery of mental health services during and after disasters were conducted. Among the other topics examined are the following: providing shelter to disaster evacuees, the handling of the dead in catastrophes, images of behavior in disaster movies, role conflict in emergencies, short- and long-term problems of financial institutions in very large-scale disasters, cross-cultural responses to national catastrophes, panic flight behavior, the emergence of new groups during periods of stress, problems in different kinds of evacuations, crisis intervention in disaster-related mental health problems, and methodological problems in field and observational studies of emergency situations.

Other research has dealt with the operation of rumor control centers during community emergencies, problems in the use of emergency operating centers, long-run consequences of hospital emergency responses to major disasters, the role of the local community in preparing for diffuse emergencies, difficulties in implementing emergency and disaster planning, organizational changes as the result of disasters, police and fire department activities during disaster, as well as problems in community crises such as civil disturbances, the implementation of community disaster

planning, the role of religious groups in mass emergencies, and the state of American disaster planning.

At one time research was conducted on the effects of stress upon social processes by utilizing audio and recording devices in a laboratory in such a manner as to simulate conditions paralleling real life stress situations. These studies ranged from an examination of the communication behavior of police radio dispatching offices to cross-societal and cultural interaction in stressful contexts. This laboratory research was undertaken for about ten years, although it has now been completely terminated.

Occasional large-scale mail surveys have been conducted for studying innovations developed by police and fire departments in the face of massive civil disorders, the emergency planning of radio and television stations, and the patient intake of hospitals in casualty situations. In addition, the Center has done some large-scale population surveys focused on the long-run consequences of disasters on victim populations. The Disaster Research Center surveys of populations in the Xenia tornado and the Wilkes Barre flood are among the very few systematic large data sets drawn on a random basis.

In gathering data on these and other topics, the Disaster Research Center has produced 223 different field instruments. These instruments range from observational guides for studies of crowd behavior and emergency operating centers, to detailed, fixed-alternative, closed-end questionnaires to be completed by victims. The Center's research techniques have ranged from the quantitative to the qualitative, from laboratory experiments to the clinical case study. The theoretical frameworks have been drawn primarily from social psychology, collective behavior, formal organization and community sociology.

The vast majority of the 223 different field instruments, however, are detailed, open-ended interview guides. These interview guides average over 30 questions in length, and the normal interviews take about two hours to complete. In-depth interviewing of organizational informants has always been the central thrust of the Center's field research, however, it is augmented by systematic participant observation, as well as the gathering of documents and statistics. Over 7,000 different questions are included in these interview guides.

Presently the archives contain slightly more than 9,000 tape-recorded interviews. Transcriptions of about half of the tapes processed so far total over 65,000 pages. Notes from hundreds of non-recorded interviews also exist. In addition, thousands of after action reports, disaster plans, organizational logs, and similar documents have also been gathered. Several sets of mail questionnaires numbering in the hundreds have also been accumulated, as well as sets of newspaper runs for a month or a year after disasters.

The data repository also contains material from the original archives of the Disaster Research Group of the National Academy of Sciences, as well as items donated to the Center by disaster researchers elsewhere. For example, data from past studies undertaken at Michigan State University, the University of Texas, the National Opinion Research Center at the University of Chicago, Wichita State University and Goshen College are stored at the Center.

It should be noted that the data are available for use by any qualified researcher, however, certain stipulations on its use do exist. For example, all data are obtained on a confidential basis; that is, the Disaster Research Center never identifies or uses names of actual persons in any of its reports. Tape recordings, documents and other material

acquired by Center personnel during the course of field work are only available for use at the Center, and those individuals availing themselves of the data must conform to the Disaster Research Center's requirements on confidentiality and protection of the respondents.

Some Advantages and Difficulties in the Utilization of the Disaster Research Center Data Archives for Comparative Research on Social Structure

Before suggesting some general areas of structural research that can be pursued with this data base, let us briefly consider some of the advantages and difficulties associated with this particular data collection. With regard to the advantages of archival data in general, these are widely known and deserve no more than a brief listing (Webb, et.al., 1981: 34-144). Archival data provide obvious economies of cost and time. They allow for historical and cross-cultural comparisons that are not available through other techniques. Furthermore, important data gathered during the emergency period of past disasters is ephemeral, if not fugitive; it is only available in the archives. The breadth of the data base allows for comparative studies that would not be possible in a single investigation.

For those interested in structural sociology, however, the data archives of the Disaster Research Center hold a special treasure. When the Center first began field investigations, it treated the individuals who were interviewed as respondents; i.e., they were queried about their personal involvement and activities in the disaster. About two years later, somewhere between 1965 and 1966, a very subtle, but significant, shift occurred. At that time the Disaster Research Center began treating all of its interviewees as informants, not respondents. What were these individuals informing the Center about? Structure. All of those

interviewed provided information on the structure of the organizations and community within which they were role incumbents. No longer were they asked what they, personally, did, or saw, or understood. Now they were questioned about what the organization or community did, how it was organized, how its organization changed, etc.

Therefore, the Center now has over 8,000 interviews with organizational informants. With the exception of the population and victim surveys conducted by the Disaster Research Center, all of the data concerns information on organizational, community or societal structures. In addition, since the Center generally interviews at least two (and usually more) informants within each organization it studies, cross-checks and a form of triangulation of the various informant observations are possible. This is a valuable data base for those interested in studying social structure in a discipline that still relies heavily on individual surveys, respondents, and reductionist, nonstructural data.

There are, however, some problems and difficulties involved in using this data collection. Some of these are common problems for all archives, e.g., discovering that none of the 7,000 questions is exactly the one that you would like asked for your purposes, or finding that all the probes that you would have asked to get at the essence of the question were never offered. These problems of lack of control plague all who use archival data.

This particular data set, however, has additional problems. The data are qualitative in nature. The 9,000 interviews are detailed, long narrative accounts. One has to dig, search, and sort through a vast amount of material. For those interviews that have been transcribed, it may mean reading 60 pages of text to find the two or three sentences that directly relate to your interest. In the case of interviews that have not been

transcribed (literally thousands), the problem is one of listening intently to two or three hour tape recordings to catch the material you want.

After you have located the desired material, the problems do not disappear. At this stage, one encounters the difficulties of systematic analysis. The technique of content analysis has important contributions to offer at this stage. In effect, what one attempts to do is analyze the content of these recorded conversations. All of the concerns of categorization, units of analysis, operationalization, reliability and validity that are involved in content analysis come into play (Holsti, 1969; Krippendorff, 1980). Both quantitative and qualitative content analyses can be undertaken.

Simply put, with the exception of the population and victim surveys, the data are difficult to massage. One cannot simply boot up the system, run the disc or tape, and check the codebook. However, if you are interested in structural data that is neither global nor attribute, but represents the informed observations of role incumbents within the structure, the output is worth the effort.

Some Suggested Areas for Application of the Data for Comparative Analysis of Social Structure

The data obviously were gathered relevant to specific research questions, and the primary analysis of the data has been in light of those research topics. (The Disaster Research Center has produced a publication list of approximately 500 items based upon this data set.) However, the data are not limited to the topics that guided the initial research, and the possible utility of the information is only limited by the insight and ingenuity of the researcher.

It would be folly to attempt to designate all of the possible topics

for research that could be examined. Given that none of us can agree on exactly what the terms "disaster" and "social structure" mean, it would be presumptuous to offer anything more than a few suggested topics that fit within my definition of "social structure." Having examined every question ever asked on those 223 different interview guides, however, allow me to make a few suggestions.

1. Studies of Emergent Structures

The first questions ever asked by the Disaster Research Center in an interview schedule were, "Where were you when you first heard about the disaster?", "When did you first hear of the disaster?", "What did you do after hearing of the disaster?" The attempt was made to construct a chronology of the activities of the respondent. Over 220 interview guides later, that attempt at reconstructing individual and organizational action in time and space remains central to the Disaster Research Center's data gathering methods. As such, it provides a rich data base for examining emergent behavioral structures and processes.

It is these detailed, chronological and integrated accounts of activities that have been so profitably mined by Kreps (1985). By detailed reconstruction of the timing of certain activities, he has developed a typology of organized responses to disaster based upon the dimensions of domain, resources, tasks and activities. While attempting to bridge the gap between positivist and interpretive sociology, Kreps' analysis focuses upon the dynamics of social action essentially from a positivist stance.

Structural sociology, however, is not the only branch of social science that is concerned with patterned action and emergent, integrated systems. One can also approach the subject of emergent groups and organizations from the perspective of collective behavior. Perhaps more interpretive in its orientation, collective behavior, through its analysis

of crisis, milling, rumor, keynoting, emergent patterns of interaction, normative and organizational structures, offers a counterpoint to the formal, structural perspective. In some respects, collective behavior examines the nature of emerging structure through the analysis of emerging behavioral processes.

The data set of the Center's archives are rich with material relevant to the study of emergent social forms. Studies of search and rescue units, volunteer damage assessment and security groups, and emergent coordinative groups have all been undertaken. While focusing upon the emergency period, the data collected include information on emergent structures of decision-making, task allocation, power and influence, and normative behavior. It is estimated that over 3,000 interviews include data related to the emergence of new group structures during crisis.

In addition, the Center undertook a separate, contained study of emergent citizen groups. This study was not limited to the emergency period, and focused upon the development and activities of new collectivities in pre and post disaster periods. This data is a valuable source of information on social movements and provides detailed reconstructions concerning the process of group formation and structural adaptation.

2. Organizational Structural Alterations Under Stress

As noted, the major focus of the Disaster Research Center's work throughout the years has been on emergency relevant organizations. Although a total of 67 different organizations have been studied over the past two decades, most of the data come from examinations of emergency management, police, fire, hospital, public utility, social welfare, and mass media organizations. The focus of these studies has been to examine

alterations that occur in the intraorganizational structure of these organizations from the pre-impact period, through the impact period, to the post-impact phase of disasters. The data are voluminous and are included in more than 4,000 interviews with organizational informants.

Among the structural dimensions considered are the following: the division of labor, normative structure, authority structure, structure of interpersonal relationships, patterns of activities, inventories of material and non-material resources, and patterns of communication. Therefore, an analysis of the structure of decision-making during non-disaster periods can be compared with the decision-making patterns during times of crisis. Waxman, for example, examined the "gatekeeping" structures of radio stations during normal and disaster periods and found that the structure of decision-making was compressed or flattened under stress conditions (1973). Similar types of comparisons can be made for other structural elements.

3. Interorganizational and Community Structure

The image of formal organizations held by the Center has not been a "closed-system" perspective. Patterns of interorganizational relationships have been a central concern of data gathering since the beginning of the Disaster Research Center. Not only has information on liaison roles, linking mechanisms, and interorganizational relationships been gathered as a matter of course in most Center research designs, but a major study of interorganizational coordination was undertaken over a period of five years in 16 different cities. In particular, patterns of interorganizational communication and exchange relationships have been sought.

The data lend themselves to network and sociometric analysis. Information on both normal and emergency period exchanges of resources,

personnel, decisions, activities and information have been gathered. Patterns of dominance among organizations, elements of reciprocity in exchange relationships, and the development of an emergent division of labor among interacting organizations can all be examined and should provide important empirical data for exchange theory, theories of organizational sets, and structural sociology.

Furthermore, data has been collected at the community level. The data primarily are of three types. First, data was gathered on ten communities in the midwest that concerns the power structures of these systems and analyzes how the local structure of power defines, perceives and attempts to solve local problems. (Although the field of community power studies has recently hit a lull, the archives of the Center have an incredibly rich supply of data that have relevance for a structural approach of the distribution of power.) Second, data has been gathered on "disaster subcultures." Information on the extent of previous disaster experience and the patterns of community preparation for, interpretation of, and response to disaster events has been gathered. Third, data concerning the "crisis management capabilities" of communities has been collected. In combination with the information on disaster subcultures, this data will allow for the analysis of communities as reactive subsystems.

4. Organizational Change and Innovation

With primary data collection focusing extensively upon organizational and community structural elements, the potential for examining structural change and innovation is obvious. Some of the field instruments include retrospective accounts of alterations in resources, personnel, activities, decision-making and the division of labor that occurred in the past. This type of information can be found in thousands

of interviews from hundreds of different organizations. In addition, some sets of data allow for longitudinal comparisons of organizational structures across time and through different disaster events. For example, the Disaster Research Center, over the past two decades, has undertaken 14 events in Los Angeles, 11 in Houston, 11 in New Orleans, 7 in Chicago, 7 in San Francisco, and 12 in Cincinnati, 5 in Miami, 4 in Denver, 7 in Boston, 5 in New York City, and 8 in Buffalo. Four trips alone have been taken to the hurricane subculture of Gulfport, Mississippi. In many of these communities we have multiple data points extending over decades on the same organizations. In particular, emergency relevant organizations, such as city governments, police, fire, and hospitals have been repeatedly studied using similar research instruments.

In addition, a number of the studies specifically sought to document structural change related to the impact of the disaster agent. Returning to the field from six months to five years after the event, the primary data collection task was to gather information that would allow for the comparison of pre-disaster and post-disaster structure. The vast majority of this data remains to be analyzed in depth; it is a gold mine of information for those students interested in structural change.

5. Cross-cultural Comparisons

A total of 23 different disasters have been studied by the Disaster Research Center in 11 foreign countries. The foreign studies range from disasters in western, developed societies, such as Canada, to developing Third World nations, such as Mexico, El Salvador, Chile and Iran. Politically, the diversity of structures runs from Communist Yugoslavia to capitalistically democratic Japan. McLuckie (1977) has undertaken the only systematic, cross-cultural study utilizing this data. He examined the influence of the degree of centralization in the social

structures of Japan, Italy, and the United States upon patterns of disaster response. The data gathered in the archives primarily concerns the patterns of activity undertaken by national and local level emergency and relief organizations. As such, information is gathered on decision-making structures, communication patterns, normative understandings, and technological development. In combination with other secondary data existant in additional archives, such as demographic, technological, political, economic and ecological information, important cross-cultural comparisons of emergent and established structural responses to disaster can be made.

6. Historical Comparisons

The data base allows for some interesting possibilities for historical, comparative analysis--at least relatively modern historical analysis. For example, a massive collection of data exists on the Alaskan earthquake of 1964. The data are fugitive. They could not be obtained or reconstructed if they had not been captured over two decades ago. The information concerns not only the emergency response of public and private organizations to the earthquake, but also insight into an expanding, social system. Similarly, the data gathered on the civil disturbances of the late 1960's and early 1970's is a rich source of historical record. What is unique about the data, however, is that it has information on how social control systems and the broader society responded to, planned for, and were influenced by the collective action. Once again, this information could not be gathered presently.

A number of additional suggestions could be made. For example, the data allowed for an investigation of the patterns of consensus and conflict that occur within community systems during various time phases of the

disaster. Although there was no manifest attempt to collect information on conflict relations, the data has been gathered for both the emergency and restoration periods as an offshoot of collecting material on interorganizational relationships. Hopefully, however, we have given some indication of the utility of the data archives.

Conclusion

In sum, disaster research can be a meaningful contributor to concepts and theories within general sociology. The potential utility of archival data is significant. If you like your sociology "structural," if you prefer that individuals and individual-level attributes not muddy your structural analysis, then the data set of the Disaster Research Center may be a rich source of empirical information on social structure. Furthermore, by utilizing data from thousands of informants, the data bridge the gap between purely global or attribute data and individual-level measures. It has long been assumed that natural disasters are settings for analyzing social structure under stress conditions. For those interested in structural emergence, alteration, and form, the potential output from examining this data base is exciting.

We began this discussion by considering the relationship between theory and research. It was noted that while theoretical concepts and paradigms have often influenced disaster research, the contributions of research findings back to theory are more difficult to document. Hopefully, utilization of archival data, such as that discussed here, will prove to be valuable in both generating and empirically verifying structural theory.

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