

UNIVERSITY OF DELAWARE
DISASTER RESEARCH CENTER

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A REPORT ON THE ACTIVITIES OF THE
DISASTER RESEARCH CENTER (DRC)*

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Research Objectives

The Disaster Research Center (DRC) was founded in 1963. In the more than a decade of continuous operation since then it has engaged in a variety of different studies. But the basic focus has remained the same.

At the time of its founding the Center set as its major research objective the analyzing of emergency organizations and their response to as well as prior planning for large scale community emergencies, particularly where a natural disaster agent was involved. This focus was taken because while there had been prior studies of disaster responses, they had primarily focused on the victims. Particallly no attention had been given to the activities of the emergency organizations in the community, even though the actions of such groups generally determine the efficiency and effectiveness of the reactions in the emergency period. In a basic sense, this focus on organizations during the emergency period has continued to be the major focus in most of the studies undertaken by the Center.

However, in many ways during this last decade DRC has extended the range of its general research interests. For example, while field studies of responses during the emergency period have continued, during the last five years the Center has actually conducted considerably more studies of pre-impact and emergency planning than it has of actual disaster-time activities. Twenty-two American cities were regularly monitored for community crises between 1968 and 1974.

In addition, the Center has increased the number of longitudinal studies, using the emergency period responses as a base line against which to measure change in organizations and community planning in the months and years after the event. Some such studies are currently underway at the Center and some restudies have been made as late as five years after the disaster.

When civil disturbance flared in American cities and on university campuses, the Center turned for comparative purposes to an analysis of such events attempting to see in what ways organizational activity differed in them compared to what happened in natural disasters. While this line of study is presently being phased out, for about five years many of the Center studies concentrated on this kind of research.

In its early years the Center also focused almost exclusively on unexpected and sudden natural disasters, but the range of disaster-potential events considered has been increasingly enlarged. Thus, technological disasters and the more diffuse natural agents have been given consistently higher priority in recent studies undertaken.

In addition, while organizations have continued to be studied, a complementary emphasis has been developed with respect to overall community coordination at times of disasters. In fact, many of the current research designs and field instruments of the Center use the community as the unit of study and analysis.

Also, increasing emphasis has been placed on the study of organized behavior as compared with organized entities, so as to incorporate a collective behavior perspective into the research. Now as much attention is paid to the emergence of informal groups as is paid to the functioning complex formal bureaucracies.

Finally, as a last example, DRC has increased its attention to problems of delivery systems of certain kinds of crucial services in disasters. Thus, we have commenced studies of the delivery of health care and of the delivery of mental health services during and after disasters.

In addition to these general research interests, the Center has and is conducting a series of more specialized studies. At the present time, research is being undertaken on legal aspects of natural disasters, the role of the local community in preparing for diffuse emergencies such as water pollution, factors that influence the handling of large number of dead bodies, difficulties in implementing emergency and disaster planning, short and long run problems of financial and religious institutions in very large scale disasters, mass media reporting of community crises, and methodological problems in field and observational studies of social phenomena. Past research has dealt with cross-cultural responses to national catastrophes, the operation of rumor control centers during community emergencies, the emergence of new groups during periods of stress, problems in the use of emergency operating centers and long-run consequences of hospital emergency responses to major disasters, to mention but a few.

Research utilizing audio and recording devices in a laboratory has also been conducted that simulated conditions paralleling real life stress on social processes; these have ranged from studies of the communication behavior of police dispatching units to an examination of cross-cultural interaction in stressful contexts. Occasional large scale mail surveys have been conducted to study, among other things, innovations developed by police and fire departments in the face of massive civil disorders, the emergency planning of radio and television stations, and the long run consequences of disasters on selected social and psychological aspects of households in disaster areas, including non-victims as well as victims.

This research of the Center has kept alive in the United States the tradition of social science study in the disaster area when it threatened to disappear. The Disaster Research Group in the National Academy of Sciences in Washington, D. C. flourished in the late 1950s, but ceased operation in 1963. The Disaster Research Center at Ohio State University not only took over the somewhat decimated archives of the Disaster Research Group, but far more important, maintained the continuity of an American social science orientation in disaster by building on their pioneering effort. For years the Center stood along with its ongoing program of disaster research and prevented a gap in continuity of disaster studies. It still continues to be the only organization in the United States that conducts new field studies of a wide range of disasters, and has the capability to engage in research on a wide variety of pre-, trans- and post-disaster problems.

All of this research is intended to provide basic knowledge about group behavior and social life under stress conditions as well as information which can be used to develop more effective plans for future emergencies. At the basic level there is the intention of some contribution to social science, especially sociological theories and methodology. At the applied level there is the goal of helping to improve disaster planning and emergency responses.

Research Procedures and Operations

The Center conducts much of its research by sending teams of trained research associates, most graduate students, to disaster sites. In some cases, where there are long warning periods, as in the case of floods and hurricanes, DRC teams have reached disaster areas before impact. The initial team sent usually conducts a reconnaissance study, making systematic observations of disaster related activities, and establishing contacts for possible later studies. After the team returns to DRC, an assessment is made of the value of conducting an in-depth study of one or more disaster questions that the Center is currently researching. If an in-depth study is decided upon, teams of field researchers equipped with tape recorders and appropriate interview guides and documentary checklists return as often as is necessary to the disaster locality.

Following this general procedure, DRC has conducted 117 field studies of natural or technological disasters including everything from chlorine gas spills to earthquakes. The two most frequently studied disasters have been floods and tornadoes with DRC having made 33 field studies of the former, and 18 field studies of the latter. A total of 23 disasters have been studied outside of the United States. For purposes of comparison, teams have been sent to study organizational response to 27 civil disturbances in the United States and Curacao in the West Indies.

DRC has also conducted field research of 38 Rumor Control Centers, 40 studies of civil disturbance planning, and 45 field studies of disaster and emergency planning, usually at the community level. In all, up to the present time, 267 field studies of different events have been carried out, involving around 800 field trips.

These events have included: earthquakes in Japan, Chile, Yugoslavia, Italy, Iran, El Salvador, Greece, Alaska, and California; hurricanes in Japan and most of the southern and eastern United States; floods in Italy, Canada and more than a dozen states in the United States; and tornadoes all around America. Large explosions and forest fires, toxic spills and shore erosion episodes, destructive seismic waves, major dams breaks and massive blizzards have also been studied in Australia, Italy, Canada, and different parts of the United States.

Data is obtained in a variety of ways in the field with prime reliance being put on systematic participant observations and in-depth interviewing,

supplemented by the gathering of documents and statistics. At times, mailed survey questionnaires have been used to complement field data. Up to the present about 4300 tape recorded interviews averaging around two hours each have been collected (transcriptions of about 80 percent of the tapes processed so far total over 65,000 pages); several thousand mail questionnaires have been accumulated and thousands of after-action reports, disaster plans, organizational logs, and similar documents have also been gathered.

All data is obtained on a confidential basis; that is, the Center never identifies or uses names of actual persons in any of its reports. Tape recordings, documents, and other material obtained by Center personnel during the course of the field work once brought back to the Center are available for use only by Center personnel for specific research purposes. In most DRC publications even the identity of the communities or organizations in the disasters studied are either masked or left out of the reports.

The Center, while maintaining a scholarly and scientific approach to disaster research, has not assumed that there is only one methodology or theory that could be used in disaster studies. Thus, the techniques used have ranged from quantitative to qualitative, from laboratory experiments to the clinical case study, and the theoretical frameworks applied have come from the range in social psychology and social organization, and have dealt with social phenomena ranging from international or national complex bureaucracies to small informal ephemeral and emergent groups. Certain social science methodologies and theories have been used more than others, but a conscious effort has been made to avoid the delusion that there is only one true path to knowledge and understanding about disaster phenomena. It is possible that the approach of the Center has prevented the congealing of a rigid research orthodoxy and has made it easier for current and future researchers to employ diverse means and divergent theories without feeling that it would be a violation of a traditional way of conducting disaster studies.

Research Training and Service Functions

DRC is part of the Department of Sociology at The Ohio State University. The Co-Directors of the Center are Professors of Sociology and almost all professional staff members are concurrently enrolled in degree programs. The research associates, which have numbered as many as 19 at any given time, are primarily graduate students in sociology pursuing the Master's or Ph. D. degree.

Over the past decade, the Center has been a means of support for the graduate education, in whole or in part, of about 70 graduate students, for as long as four years (and have provided employment for nearly 200 undergraduate students). The Center's research activities have been a source of data for 18 dissertations. Center research projects have provided its staff members with a forum for the development of ideas and practical experience in field research techniques as well as an understanding of the whole research process from problem formulation to report writing.

A special agreement exists between DRC and the National Emergency Planning Establishment in Canada whereby holders of NEPE Fellowships in the sociology department at The Ohio State University are research associates at the Center. In this way, the Research Fellows obtain intensive research training in the disaster area and DRC has their services for field research in Canada and elsewhere. This arrangement has brought six Fellows to the Center thus far, two of whom have already graduated with a Ph.D. degree.

Almost all the currently active sociological researchers in North America with major interests in social science aspects of disasters, have either at one time been staff members of the Center or have been trained by sociologists who themselves came out of DRC. When no one else was doing it, the Center was producing sociology graduates with an interest, background and competence in disaster research and the socio-professional links to one another so crucial for advances in scientific knowledge. They have been or are now members of the faculties in universities ranging from the University of Canterbury, New Zealand to Columbia University, USA, from Corpus Christi College, Fiji to Michigan State University, USA, and from the University of Calgary, Canada to the University of California at Los Angeles (UCLA), USA. Many former DRC staff members have continued their professional interest in disaster research after leaving the Center and are now starting to make their own independent contributions to disaster research and the disaster literature.

DRC is often called upon to address and advise organizations throughout the world on topics related to disaster research. These service activities -- speeches, lectures, committee and workshop participation, consultation -- have involved a variety of public and private groups and agencies.

National groups which have included Center personnel on their program have ranged from the American National Red Cross to the Council of State Governments, from the School of Aerospace Medicine, Texas to the International Association of Chiefs of Police, and from the National Association of State Civil Defense Directors to the American Hospital Association. DRC staff have consulted on several state disaster plans and have briefed groups of top officials in the Department of State and in Health, Education and Welfare, and have participated in disaster conferences held by the National Institute of Mental Health, the Office of Emergency Planning, the Defense Civil Preparedness Agency, the Agency for International Development as well as several church groups, and the Center has hosted a symposium on Human Responses to Disaster attended by representatives from many of the medical schools in the U.S.

The DRC Co-Directors have served as members of a number of national bodies including the Advisory Committee on Emergency Preparedness of the National Academy of Sciences, the Advisory Board on the Assessment of Research on Natural Hazards, the Special Advisory Board on Emergency Housing of the National Research Council, and the Panel of Public Policy Implications of Earthquake Prediction.

At the international level, consultations and meetings have been held with governmental officials and disaster planners in Greece, Holland, Japan, Canada, Yugoslavia, France, Turkey, England, Egypt, Italy, India, Switzerland as well as with the League of Red Cross Societies and the United Nations Disaster Relief

Office. The Japan-United States Disaster Research Seminar on Organizational and Community Responses to Disasters was hosted for a week by DRC in 1972. The Center is regularly visited by emergency planners and disaster researchers from many nations around the world.

Many visitors come to use the DRC specialized library holdings. This library, housed at the Center, has many items not available anywhere else, including primary interview data from pioneering studies done in the early 1950s. The Center has been the only such repository of disaster research material since its founding. The collection includes what survived of the original archives of the Disaster Research Group of the National Academy of Sciences as well as items donated to the library by disaster researchers elsewhere (e.g., from past studies done at Michigan State, the University of Texas, the National Opinion Research Center at the University of Chicago, Wichita State University and Goshen College). An effort is made to obtain copies of all disaster-relevant published and unpublished reports and papers, dissertations and theses, and books and monographs in the country or elsewhere that come to the attention of the Center. In addition to the printed works, the library also has a small microfilm, microfiche, film, and photo collection of disaster related items.

Publications

The studies and research of DRC have been reported in a variety of ways to different kinds of audiences. The bulk of the reporting has been by way of lectures and papers, seminars and conferences, professional articles and monographs, and the Center's own publications. Close to 400 items have been published by DRC personnel.

Among the scholarly journals in which Center research has been reported have been: Social Forces, the American Sociological Review, Issues in Criminology, International Journal of Legal Research, Journal of Communication, Public Opinion Quarterly, Society, Phylon, the American Journal of Sociology, Human Organization, Indian Sociological Bulletin, Psychology Today, New Society, Trans-Action, Sociology and Social Research, Il Politico, Sociological Inquiry, Journal of Broadcasting, International Journal of Contemporary Sociology, and The Journal of Police Science and Administration. Center personnel have also authored articles that have appeared in more than three dozen readers and collections of articles.

Two special issues of the American Behavioral Scientist have been edited by the DRC Co-Directors. The January 1970 issue had as its theme "Groups and Organizations in Disaster." The 14 articles cover a range of topics from disaster research methodology to cross cultural perspectives. "The Dynamics of Organizational Involvement and Change in Racial Civil Disturbances" is the theme of the January 1973 issue of ABS. The focus is on the local community and the consequences of disturbances on its organizational life.

The Center's own major publication effort has been in the production of a DRC Monograph Series and a DRC Report Series. The Monograph Series numbers

nine publications with the next scheduled being Group Adaptation, Emergence and Change in Urban Riots. The Report Series numbers 17 publications with the next item to be issued being an Inventory of Social Science Research Literature, which will be the only annotated bibliography of all the social science literature that has ever appeared on disaster topics.

The Center also publishes a quarterly newsletter, Unscheduled Events with an international circulation. The newsletter reports primarily on non-DRC disaster research and the disaster literature. Its purpose is to keep all interested parties informed about disaster research and planning in the social and behavioral sciences and related applied and public policy activities anywhere in the world.

DRC personnel have presented papers at many professional meetings such as the American Association for the Advancement of Science; Canadian Sociology and Anthropology Association; International Symposium on Victimology; American Sociological Association; American Water Resources Conference; National Symposium on Law Enforcement Science Technology; Society for the Study of Social Problems; World Congress of Sociology; Inter-American Conference on Criminology; Southwest Sociological Association, among others.

In these days when policy relevance is so much in the news, the work of DRC has had some impact on disaster planning and emergency operations, certainly within the United States and probably elsewhere also. This is particularly gratifying for not all researchers ever see any practical implementation of their studies. But the Center has noted that some of its research findings and observations have directly and indirectly been taken over in the planning and operations of many public and private disaster agencies. The findings of disaster research are now taken seriously, a position not very widespread in the social sciences even in those areas where the research has important policy implications.

Funding Support

The work of the Center would have been impossible without substantial financial support. DRC has absolutely no endowment, and receives (and that solely in recent years only) some minor, indirect support from the University. Funds for its operations have come almost exclusively from grants and contracts, about two dozen in number from interested agencies or organizations.

The initial funding support, and the most continuous research funding has come from what used to be called the U. S. Office of Civil Defense, now the Defense Civil Preparedness Agency (DCPA). The Center for Studies of Mental Health and Social Problems, Applied Research Branch, National Institute of Mental Health, has also been a very important research supporter since 1968. For an extended period of time, from 1964 through 1970, the laboratory work of DRC was sponsored by the U. S. Air Force Office of Scientific Research, out of which in part was developed the facilities of the Behavioral Sciences Laboratory at The Ohio State University.

Other governmental agencies providing less extensive research and administrative support to the Center include the Office of Water Resource Research of the U. S. Department of the Interior; the National Science Foundation; the Law Enforcement Assistance Administration of the Department of Justice; the Applied Research Branch, Extra-mural Research Program of the National Institute of Mental Health; the State of Ohio Department of Mental Health; and the Advanced Research Projects Agency. Non-public organizations that directly or indirectly (through personal grants to Center personnel) have supported the work of the Center on a small scale include the National Association of Broadcasters, the Ohio Council of Churches, Disaster Research Services, and the Social Science Research Council. Another very important source of research funding, since most of DRC's field studies outside of the United States have been supported by funds provided by it, has been the Social Science Program of the Merston Center of The Ohio State University.