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THE DISASTER RESEARCH CENTER: ITS HISTORY AND ACTIVITIES

E. L. Quarantelli
R. R. Dynes
D. E. Wenger

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INTRODUCTION

The Disaster Research Center (DRC) is frequently asked questions about its origin and history, its research activities and operations, its services and publications, its ongoing work, etc. This document attempts to answer the major questions typically asked.

Part I primarily presents background material on the Center's research objectives, its field procedures and operations, its training and service functions, and its publication outputs and funding sources.

Part II, where the last Annual Report of DRC is reproduced, gives a summary picture of the very recent activities of the Center.

Part III consists of a brief statement on the current work of DRC.

PART I
HISTORY AND ACTIVITIES OF DRC

Research objectives

Emergency response studies

The Center was established in 1963 at Ohio State University and remained there for 22 years until it relocated to the University of Delaware at the end of 1984. Prior to its formation, most social science studies had focused on individual victims and their behavior and reactions to disasters. Practically no attention had been given to the activities of the emergency organizations in the community even though the action of such groups generally determines the effectiveness and efficiency of the reactions just prior to, during, and immediately after impact. Thus, DRC took as its basic starting focus such organizations as police and fire departments, civil defense offices, the Red Cross and the Salvation Army, hospitals and utilities, and other disaster relevant agencies which respond to large-scale community emergencies. This was the start of the sociological and social science research on human, group, organizational, and national preparations for, responses to, and recovery from community-wide emergencies, particularly natural and technological disasters which the Center undertakes today.

Preparedness studies

In the two decades following its establishment, the Center, while continuing to focus on emergency organizations at impact times of disasters, broadened its research interests. Studies were initiated on pre-impact planning for major emergencies. For example, between 1968-74, twenty-two American cities were intensively studied as to their disaster preparations and regularly monitored for community crises; in 1979-82, nineteen localities whose disaster planning had been ascertained by DRC field work were monitored in connection with research on acute chemical emergencies. Thus, the Center has come to make frequent intensive and extensive examinations of organizational and community planning for major emergencies.
Recovery studies

In addition, DRC increasingly added to the number of its longitudinal studies, using the emergency period response as a baseline against which changes in planning the months and years after an event could be measured. Some restudies were undertaken as long as five years after the disaster and an initial DRC study. In 1981-84, as part of a nation-wide study of 50 groups, several dozen citizen groups which had developed and formed after disaster threats or incidents were studied. Recovery or post-impact studies have, therefore, become part of the DRC research focus being added to the initial emergency time focus and the later pre-impact time focus.

Natural and technological disaster studies

In its early years, DRC primarily, although not exclusively, looked at unexpected and sudden natural disasters, but the range of disaster potential events included in the Center's studies was increasingly expanded. Disasters resulting from technological accidents and more diffuse natural agents were increasingly given higher priority in Center research. In fact, the study of preparations for and responses to acute chemical disasters was the largest research effort of DRC up to that time.

Civil disturbances

In addition, when civil disturbances flared in American cities and on university campuses, DRC undertook analyses of such events so that a comparison could be made between organizational activities present in those situations and those occurring in disasters from natural and technological agents. For about five years, the Center concentrated on this kind of research; however, for the most part, this line of study on conflict situations has been phased out.

Emergent groups, formal organizations and communities studies

Also, while emergency type formal organizations continued to be the DRC's prime research interest, studies were broadened out in two different directions to include other kinds of social groupings. For example, the Center increasingly focused on community level responses during disasters, such as the overall coordination of local and outside group responses during mass emergencies. In fact, most of the later research designs and field instruments of the Center have used the community as the unit of study and analysis for preparedness, response and recovery activities. In the other direction, increasing emphasis was also placed on the study of organized behavior in contrast to organized entities. Thus, through time, attention was paid to the emergence and activities of informal groups as was paid to the functioning of complex and formal bureaucracies.

Threats and impact studies

Threats of disasters, as well as actual incidents of disasters, have been studied from the beginning of the Center. It was early found that if a situation is defined as real, it is real insofar as consequences are concerned, with respect to at least the social aspects of disasters. The Center's focus on threat situations, as well as instances of actual impact, was markedly different from most disaster studies undertaken prior to the establishment of DRC.
Specific studies

Within these general research thrusts, a variety of more specialized studies have been undertaken. A few years ago, the problems encountered by delivery systems of certain kinds of crucial services in disasters became a major subject of Center research. DRC conducted very 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. Also studied have been the providing of shelter to disaster evacuees, the handling of the dead in catastrophes, the role of volunteers in disaster, legal aspects of natural disasters, 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 (EOCs), long-run consequences of hospital emergency responses to major disasters, the role of the local community in preparing for diffuse emergencies such as water pollution, 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. (See Part II, The Annual Report, for current studies.)

Research, at one time, was conducted on the effects of stress upon social processes by utilizing audio and recording devices in a laboratory in such a way 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. Although this kind of research has now been completely phased out, laboratory studies were done for about ten years.

Occasional large-scale mail surveys have been conducted for studying, 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 patient intake of hospitals in casualty situations. In addition, DRC has done some large-scale population surveys focused on the long-run consequences of disasters on selected social and psychological aspects of victim and nonvictim householders in disaster areas, as well as surveys of behavior during the emergency time. The DRC surveys of populations in the Xenia tornado (which mostly involved face-to-face interviewing) and the Wilkes Barre flood are among the very few systematic large data sets drawn on a random sample basis which have ever been obtained by disaster researchers in the United States.

Center research kept the tradition of social science study in the disaster area alive in America when it threatened to disappear. The Disaster Research Group in the National Academy of Sciences in Washington, DC flourished in the late 1950s, but completely ceased operations in 1961. DRC not only took over the somewhat damaged and incomplete archives of the Disaster Research
Group, but, far more importantly, maintained the continuity of an American social science orientation in disaster research by building on their pioneering effort. For about a decade, the Center stood alone with its ongoing program of field research on mass emergencies and prevented a gap in continuity of disaster studies. New research groups and researchers dealing with the social and behavioral aspects of disasters have emerged in the last few years. However, the Center still continues to be the only organization in the United States that continuously conducts new field studies on a broad range of disasters, and has a standby capability to engage in research on a wide variety of pre-, trans- and post-disaster questions and problems.

Research goals

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 planning for future emergencies. At the basic level, DRC's objective is to contribute to social science, especially sociological theories and methodology. At the applied level, the Center's goal is to help improve disaster preparedness, emergency responses, and disaster recovery.

At a time when policy relevance is of utmost concern, the work of the Center has been of practical value to those involved in disaster planning and emergency operations, both in the United States and elsewhere. In fact, some of the Center's research findings and observations have directly and indirectly been incorporated into the planning and operations of many public and private disaster agencies. This is particularly gratifying since many researchers never see any practical implementation of their studies. The findings of disaster research are now taken seriously, a position not very widespread in the social sciences even in those areas in which research has had important policy implications.

Research procedures and operations

Much of the Center's research is conducted by teams of trained research assistants, mostly graduate students, who are sent to disaster sites. Usually DRC can mobilize a field team within 4-6 hours after hearing news of an event. In some instances where there are long warning periods, as in the case of floods and hurricanes, Center teams have reached disaster sites before impact.

The initial team sent to a site may carry out a reconnaissance study, making systematic observations of disaster-related activities and establishing contacts for possible later revisits to the locality. After the team returns to DRC, a decision is made as to whether or not this incident merits an examination of one or more disaster questions that the Center is researching. If it is determined that an in-depth study would be valuable in terms of Center research interests, teams of field researchers, equipped with tape recorders and predesigned interview guides and documentary checklists, return as often as is necessary to the disaster locality. At other times, the initial reconnaissance work is combined with an immediate on-the-spot in-depth field study.
In accordance with these general procedures, DRC has mounted a variety of field studies of actual and potential natural and technological disasters, as well as other kinds of community mass emergencies. The two most frequently studied kinds of events have been floods and tornadoes, although in recent years dozens of toxic chemical emergencies have been researched. Apart from the work on several hundred incidents of actual or possible disaster, there have been dozens of field studies of emergency planning. For comparative purposes, organizational responses to 27 civil disturbances and 40 studies of civil disturbance planning have been done. More than two dozen field studies have been conducted outside of the United States. As of 1985, DRC had carried out more than 470 field studies of different events, involving close to 1300 field trips.

These events have included earthquakes in Japan, Chile, Yugoslavia, Italy, Iran, El Salvador, Greece, Alaska, and California; hurricanes in the southern and eastern United States and in Japan; floods in Italy, Canada and many places in the United States; and tornadoes and hazardous chemical emergencies in Canada, Mexico, and dozens of states. Large explosions, forest fires, plane crashes, shore erosion episodes, destructive seismic waves, major dam breaks and massive blizzards have also been studied in Australia, Italy, Canada, and different parts of the United States.

Data are obtained in a variety of ways in the field, although the primary source of information is derived through in-depth interviewing. This is supplemented by systematic participant observation, as well as gathering documents and statistics. On occasion, mailed survey questionnaires have been used to complement field data. At this time, around 6,000 tape-recorded interviews, averaging about two hours each, have been collected; 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 afteraction 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.

All data are obtained on a confidential basis; that is, DRC 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 the field work are only available for use by Center staff for specific research purposes. Most DRC publications either mask or omit the names of the communities and organizations which were studied.

The Center, while maintaining a scholarly and scientific approach to disaster research, has not assumed that only one methodology or theory can be used in disaster studies. Thus, the techniques used have ranged from quantitative to qualitative, from laboratory experiments to the clinical case study. The theoretical frameworks which have been applied have been drawn primarily from 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 (such as qualitative field work) and theories (such as collective behavior in sociology and symbolic interactionism in social psychology) have been used more than others, but there has been a conscious effort not to
advocate any one approach as the only one true path of knowledge and under-
standing about disaster phenomena. It is possible that the Center's attitude
has prevented a rigid research orthodoxy from being adopted in this area
and has made it easier for current and future researchers to employ diverse
means and divergent theories without feeling that it would be violating
traditional ways of conducting disaster studies.

Research training and service functions

DRC is administratively a part of the Department of Sociology at the University
of Delaware. It is headed by Professor E.L. Quarantelli of the Department
of Sociology, who has been directing the Center since 1963. He, along with
Professor Russell R. Dynes, current chair of the Sociology Department at
Delaware, co-founded the Center that year. Dynes, with Professor Dennis
Wenger, an Associate Professor of Sociology, are also current co-directors
of DRC.

Almost all professional staff members have been or are concurrently enrolled
in master's or Ph.D. university programs. While the great majority have
been, or are, graduate students in sociology, there have been representatives
from such disciplines as public administration, social work, political science,
business organizations, communications, counseling psychology, anthropology,
and journalism. The graduate research assistants who primarily comprise
the field work staff have numbered as high as 19 at one given time. Adminis-
trative and secretarial personnel, along with undergraduate library and
research aides, provide the necessary supportive services. On occasion,
there have been full time DRC field directors and project managers. As
many as 59 persons have been on the DRC staff at certain times, although
the average number has been about 18-20 in recent years.

Throughout its history, the Center has provided either complete or partial
support to over 130 graduate students for as long as four years. In addition,
the Center has given employment to over 300 undergraduate students. Data
gathered through DRC's research activities has been the subject of 30 disser-
tations. Center research projects have presented staff members with an
opportunity to develop ideas and gain practical experience in field research
techniques, as well as to come to know the whole research process from problem
forming, through research designing, to data gathering and analyzing, to
report writing.

For about a decade, a special agreement existed between DRC and Emergency
Planning Canada (EPC) whereby recipients of EPC fellowships in the sociology
department at Ohio State University became graduate research associates at
the Center. Thus, these fellows received intensive research training in
the disaster area, and DRC, in turn, drew upon their services for field
research in Canada and elsewhere. This arrangement brought eight fellows
to the Center; six obtained a Ph.D. degree.

A majority of the currently active sociological researchers in North America
with major interests in the social science aspects of disasters are either
former DRC staff members or have been trained by sociologists who were at
one time associated with DRC. At a time when no one else was involved in
disaster research, the Center was producing graduates with an interest,
background and competence in this area, as well as providing them the opportunity
to establish the socio-professional links to one another so crucial for
advances in scientific knowledge. These former staff members have been,
or are presently, members of 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. After leaving the Center, many have maintained their
professional interest in disaster research and have made their own independent
contributions to disaster research and literature. Some have moved into
very responsible positions in disaster oriented agencies such as the National
Transportation Safety Board or are research administrators in such organi-
izations as the National Science Foundation.

DRC is often asked 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 governmental/private groups and agencies. Several hundred
such contacts have been made by DRC personnel.

Domestic activity

Center staff persons have participated in domestic disaster-related programs
and activities of such groups as the American National Red Cross; the Council
of State Governments; the International Association of Chiefs of Police;
the U.S. Office of Foreign Disaster Relief; the National Emergency Training
Center; the Army Corps of Engineers; the National Association of State Civil
Defense Directors; the National Park Service; the American Hospital Association;
the Ohio National Guard; the Tri State Emergency Association; Dade County
Florida Disaster Nursing Council; the Air Force School of Aerospace Medicine,
etc. Staff members of DRC have participated in disaster conferences held
by the National Institute of Mental Health; the Office of Emergency Planning;
the Defense Civil Preparedness Agency; the National Bureau of Standards;
the Agency for International Development; the Federal Emergency Management
Agency; the Institute of Emergency Administration and Planning; the University
of Michigan School of Public Health; and other groups, as well as several
religious organizations and associations. The Center once hosted a symposium
on Human Responses to Disaster attended by representatives from many of
the medical schools in the United States. There has been DRC involvement
in workshops ranging from a John Hopkins University Workshop on Fire Casualties,
to a Southern Regional Educational Board workshop, to an NIMH Workshop on
Aircraft Accidents.

The DRC co-directors have served as members of a number of domestic scientific
organizations including the following in the National Academy of Sciences;
the Advisory Committee on Emergency Preparedness, the Advisory Board on
the Assessment of Research on Natural Hazards, the Special Advisory Board
on Emergency Housing, the Panel on Public Policy Implications of Earthquake
Prediction, the Committee on Mass Media and Disasters, and the Committee
on International Disaster Assistance.

Consulting work has been provided for organizations ranging from the Committee
on U.S. Emergency Preparedness of the National Research Council, to the
State of West Virginia, to the City of Cincinnati Department of Health,
to local mental health agencies, as well as private corporations and citizen
groups.
International activity

At the international level, consultations and meetings have been held with governmental officials and disaster planners in Greece, Holland, Japan, Canada, Sweden, 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. Additionally, DRC staff members have made presentations at such organizations as the International Disaster Institute in London, Great Britain; the Tokyo Metropolitan Police Board in Japan; the Canadian Emergency Measures Organization; the Swedish Civil Defense Administration; the Greater Manchester, England Emergency Planning Council; the Association of Greek Civil Engineers; the Pan American Center for Human Ecology and Health in Mexico, as well as many others.

Up to 1985, Center personnel had participated in about 100 international conferences and meetings such as the International Red Cross Pre-Disaster Preparedness Seminar (in Trinidad), the International Seminar on the Ecology of Natural Disasters (in Belgium), the Workshop on Crisis Research (in Sweden), the International Conference of Disaster Researchers (in France), the United States-Japan Workshop on Fire Research (in Japan), the Australian Natural Hazards Symposium, the International Symposium on Disasters and Accidents (in West Germany), the Third International Conference on Social and Economic Aspects of Earthquakes (in Yugoslavia), the 9th World Congress of Civil Defense (in Morocco), Emergency 82: The International Conference on Disaster Preparedness and Relief (in Switzerland), the International Conference on Disaster Mitigation (in Jamaica), the Earthquake Planning and Protection Conference (in Greece), the First International Conference on Urban Emergencies (in Mexico), and many others.

The Center has close relations with Canadian, Italian, Australian, Swedish, French, Japanese, Indian, and West German disaster researchers, a number of whom have been visiting Research Associates at DRC for periods up to a year. (See Part II, the Annual Report, for a listing of recent international, as well as domestic, visitors.) The first pre-planned cross-societal collaborative disaster research which involved parallel field studies on mass media operations in emergencies was recently carried out by DRC with Japanese colleagues. DRC is also the locus of international work in the area, partly because it is the home of the President of the International Research Committee on Disasters and the co-editor of the International Journal of Mass Emergencies and Disasters. The Center's newsletter, Unscheduled Events, which it published for nearly a dozen years, was given to the Research Committee a few years ago to serve as its newsletter.

The research collection

However, most of the domestic and foreign visitors to DRC are probably drawn to it by the Center's research collection. This specialized library of about 18,000 items on the social and behavioral aspects of disasters is by far the largest such collection in the world. The collection holds many items practically unavailable anywhere else (e.g., all of the earlier writings in the disaster area including "classics," an almost complete set of all English language Ph.D. dissertations on the social aspects of disasters,
a collection of Japanese language disaster literature more complete than can be found anywhere in Japan, as well as strong holdings of Italian and Swedish language disaster reports, and many unpublished papers on disaster topics presented at professional meetings). Besides standard print material, there is also a small microfilm, microfiche, film, videocassette, and photo collection of disaster-related items. All of these general holdings are open for use by any responsible visitor.

The holdings of the research collection have been increasing at about five percent annually in recent years. Exchange agreements regarding publications exist between DRC and disaster relevant research organizations and libraries around the world (such as in China, Great Britain, Australia, Belgium, Japan and Spain). Over 100 different emergency oriented periodicals, bulletins, journals and newsletters are received regularly.

In addition, the research collection at the Center houses the field and other primary data gathered by DRC field teams through the years. 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 (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). Access to the data repository, unlike the general research collection holdings, is limited in some respects (see Rules Governing Use of DRC Library Material by Other Than Current DRC Staff Members and Visiting Associates) but qualified researchers who were given permission to do secondary data analyses have produced significant publications from their work.

Publications outlets

DRC has reported its studies and research to different kinds of audiences in a variety of ways. This information has been disseminated by means of lectures and papers, seminars and conferences, professional articles and monographs, and the Center's own publication series. Over 500 items have been published by DRC personnel.


DRC co-directors have edited special issues of different journals. Among these was the January, 1970, issue of the American Behavioral Scientist whose theme was, "Groups and Organizations in Disaster." The 14 articles
covered a range of topics from disaster research methodology to cross-cultural perspectives. The January, 1973, issue of American Behavioral Scientist was devoted to, "The Dynamics of Organizational Involvement and Change in Racial Civil Disturbances." It focused on the local community and the consequences of disturbances on its organizational life. In 1977, a special issue of Mass Emergencies had as a theme, "The Delivery of Emergency Medical Services in Disasters." Most of the nine articles reported on the Center's research in the area. In 1981, a special issue of the Journal of Hazardous Materials on Social Aspects of Acute Chemical Emergencies primarily reported DRC's study of socio-behavioral responses to acute chemical emergencies.

The Center has its own publication program and produces a Book and Monograph Series (20 volumes up to 1985), a Report Series (18 items), and a Historical and Comparative Series (6 items). One of the Book and Monograph Series volume is the Inventory of Field Studies in the Social and Behavioral Sciences 1919-1979, the only comprehensive annotated bibliography on all the social science studies in the disaster area up to that time. A companion volume is the Inventory of the Japanese Disaster Research Literature in the Social and Behavioral Sciences with summaries and annotations on all the relevant literature. In addition, by 1985, DRC personnel had published over 180 articles, 105 preliminary papers, 33 final project reports, plus dozens of research reports, miscellaneous reports and working papers. (For an up-to-date listing of all items available for public purchase, see the most recent DRC Publication List.) By formal agreement, the Center also acts as the North American distributor of all publications issued by the major Italian disaster research organization.

DRC personnel have presented papers at dozens of professional meetings of such groups as the American Association for the Advancement of Science; the Popular Culture Association; the Canadian Sociology and Anthropology Association; the International Society of Victimology; the American Meteorological Society; the American Sociological Association; the American Chemical Society; the American Water Resources Association; the Society for the Study of Social Problems; the American Public Health Association; the American Psychological Association; the International Sociological Association; the American Society of Criminology; the Southwest Sociological Association; the Human Factors Society; the Western Social Science Association; the Hellenic Sociological Association; the National Council of Community Mental Health Centers; the Rural Sociology Society, and many others.

The variety of topics covered is illustrated by the fact that, in 1984 alone, DRC presentations ranged from papers at the National Association of State Dam Safety Officials National Conference, to the Natural Hazards Research Application Workshop, to the Eighth World Conference on Earthquake Engineering, to the Annual Meeting of the North Central Sociological Association, to the Third National Conference on the Treatment of Post Traumatic Stress Disorders, to the Pan American Chemical Emergency Preparedness Program, to a Planning Conference on Medical Disaster Training, among others.

**Funding sources**

Since the Center has no endowment, its work would have been impossible without substantial financial support. Although there is currently direct University support for some everyday operational expenses and some staff positions,
almost all of the research work, and much of the library operations, have been funded by interested agencies and organizations. The grants and contracts received from such groups total around three dozen in number, most of them involving multiple year funding, with the largest of them being in the half million dollar range.

DRC has received major funding from the following sources: initial funding support and the most continuous research funding has been provided by the US Office of Civil Defense, which later became the Defense Civil Preparedness Agency (DCPA) and is now incorporated into the Federal Emergency Management Agency (FEMA). The Center for Studies of Mental Health and Social Problems, Applied Research Branch of the National Institute of Mental Health was also a very important research supporter from 1968 through 1978. From 1964 through 1970, DRC's laboratory studies were sponsored by the US Air Force Office of Scientific Research. More recently, by far the greatest amount of funding for Center research has come from the National Science Foundation.

Other governmental agencies which have provided less extensive research and administrative support to the Center include the Health Resources Administration; the Office of Water Resource Research of the US Department of the Interior; 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. The NHK Foundation in Japan also sponsored a joint American and Japanese disaster research study.

Non-public organizations that have supported the work of the Center on a small scale, either directly or indirectly (via personal grants to Center personnel), include the National Association of Broadcasters, the Ohio Council of Churches, the Disaster Research Services, the Social Science Program of the Mershon Center, and the Social Science Research Council.