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DISASTER RESEARCH IN THE SOCIAL SCIENCES: LESSONS LEARNED, CHALLENGES, AND FUTURE TRAJECTORIES

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Disaster Research in the Social Sciences: Lessons Learned, Challenges, and Future Trajectories*

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Abstract

The Disaster Research Center (DRC) at the University of Delaware, with the financial support of the National Science Foundation (NSF) and the College of Arts and Sciences, held a two-day conference titled "Disaster Research in the Social Sciences: Lessons Learned, Challenges, and Future Trajectories." The conference highlighted the interdisciplinary and international nature of the disaster research field and focused on: 1) the growth and development of the field of disasters, from the perspective of the Social Sciences; 2) theoretical, methodological, and public policy contributions of the field; 3) lessons learned and best practices that have emerged from this area of research; and 4) future trajectories or opportunities for Social Science research in the study of disasters.

Conference participants included leading scholars and researchers, practitioners, representatives from funding organizations, and graduate and undergraduate students. The conference allowed participants to discuss substantive, theoretical, and methodological issues and concerns relevant to the field as well as to generate new research initiatives that will contribute to our understanding and knowledge regarding the study of disasters. Substantive and critical issues discussed during this two-day conference included: the growth and development of disaster research in the Social Sciences; theoretical and methodological contributions and challenges in disaster research; impact of disaster research for practitioners; the role and importance of multi- and inter-disciplinary research in the disaster field; the development of an international research agenda; the role of research centers in training the new generation of researchers; funding disaster research and priorities for the future in a post-9/11 environment; major research areas and issues that need to be developed and explored over the next decade at both the national and international level; and efforts to establish collaborative research initiatives across disciplines and geographical boundaries.

DRC was the first Social Science research center in the world devoted to the study of disasters, so it was appropriate and timely that a conference of such magnitude was held at the University of Delaware at a particularly historical moment for the DRC and the field of disaster studies. This conference not only provided a stimulating intellectual environment but it also presented an opportunity to celebrate DRC's 40th anniversary and to examine the impact and contributions of the Center to the field of disaster research both nationally and internationally. Moreover, during the two-day event, conference participants had an opportunity to pay tribute to Enrico L. Quarantelli and Russell R. Dynes, two of the founding fathers of DRC and disaster research from a social science perspective.

Introduction and Background

The Disaster Research Center (DRC) at the University of Delaware held a two-day conference that focused on: 1) the growth and development of the field of disasters, from the perspective of the Social Sciences; 2) the theoretical, methodological, and public policy contributions of the field of disasters at the national and international level; 3) lessons learned and best practices that have emerged from the study of disasters; and 4) future trajectories or opportunities for Social Science research on disasters. The conference was designed to elicit discussion on the impact of disaster research over the years and to examine the opportunities and challenges for future disaster research. An important outcome of this conference was an extensive discussion focusing on recommendations for the development of an ambitious disaster research agenda regarding new and emerging cutting-edge issues in the social sciences. Panel discussions highlighted the need and importance of developing and enhancing interdisciplinary and international collaborations in the disaster field.

Scholars and researchers interested in the study of disasters have limited opportunities to come together, take stock, provide an overall assessment of the field, exchange new ideas emerging in the field, and generate collaborative and interdisciplinary working agendas for future research. The DRC conference provided a unique opportunity to engage leading disaster researchers and scholars in the discussion of substantive, theoretical, and methodological issues and concerns relevant to the field and to generate new research initiatives that will contribute to our understanding and knowledge regarding the study of disasters. The conference generated a stimulating intellectual environment. This gathering of leading Social Science disaster researchers, students, and practitioners also provided an opportunity to celebrate DRC's 40th anniversary and examine the national and international contributions of the Center to the field of

disaster research. It is noteworthy that DRC was the first Social Science research center in the world devoted to the study of disasters, so it was appropriate and timely that a conference of such magnitude was held at the University of Delaware at this particular historical moment for the DRC and the field of disaster studies.

Given the growth and development of the disaster field in the Social Sciences (see Quarantelli, 1998; Mileti, 1999; National Research Council, 1999; Tierney, Lindell, and Perry, 2001), the DRC conference allowed us to generate an interdisciplinary dialogue focusing on the current knowledge, lessons learned, and future directions in the field. Although the study of disaster research in the United States has experienced significant theoretical and methodological changes, it still remains primarily focused on the United States. The participation of national and international scholars in this conference contributed to in-depth discussions aimed at generating and strengthening research agendas in the study of disasters with an international focus. This conference allowed us to take a more detailed and critical look at the US experience vis-à-vis the experiences of such regions as Europe, Asia, New Zealand, the Caribbean, Latin America, and the Middle East in an effort to promote the continued development of the field, and increasing collaborative research efforts in the study of disasters. Panelists and participants from a broad range of academic disciplines and from around the world were invited and participated in an effort to further bridge both disciplinary and geographical boundaries in the disaster field. In essence, the DRC conference allowed for detailed discussions on how Social Science research has and will continue to enhance our understanding of the human and social dimensions of disasters.

Conference Structure and Organization

The DRC conference consisted of a variety of panel discussions in which three to four experts shared their perspectives, ideas, and recommendations in their corresponding thematic

areas (see below). Every attempt was made to include panelists with different academic and research backgrounds and perspectives. Following the panelists' presentations, an extensive discussion and question and answer period allowed the general audience to provide their perspectives and to expand on some of the issues presented. This was an important opportunity to provide constructive feedback to the panelists and to discuss and recommend the inclusion of other issues, areas or topics that may have not been addressed in the panel discussions. Most importantly, however, the objectives of each session were to stimulate discussion and provide some concrete recommendations as to where the field needs to go next. The session titles were not new to disaster-related conferences, but panelists and participants were challenged by organizers to approach the topics in new ways, considering ideas and implications in ways they had not done so before and with contributions that were bold, creative, truly forward-thinking, and set the stage for an intellectually stimulating discussion.

Conference Participants

The DRC conference allowed us to bring together leaders and key individuals, recognized experts in the field of disaster research, as well as junior faculty and researchers to participate in this two-day event. Graduate and undergraduate students with strong interests in the field also participated in this conference, therefore, contributing to the professional growth and development of future researchers in the study of disasters. Approximately 100 persons participated in the conference. Leading scholars, researchers, practitioners, and students representing 18 countries (including, Canada, the Czech Republic, Dominican Republic, England, France, Greece, Israel, Japan, Mexico, New Zealand, Puerto Rico, Russia, Spain, Sweden, The Netherlands, Turkey, the United States, and Venezuela) were present to discuss issues from interdisciplinary and international perspectives that are at the forefront in the field of

disasters. Twenty (20) states, in addition to Washington, D.C., in the United States, 33 universities, and 26 national and international agencies and private sector organizations were represented in this event. Representatives from the National Research Council (NRC), the Federal Emergency Management Agency (FEMA), the American Sociological Association (ASA), the United Nations, Oak Ridge National Lab, the Earthquake Research Engineering Institute, and the Natural Hazards Research Center, among others, were all present to contribute to the discussions that were generated in this conference and to pay tribute to Drs. Quarantelli and Dynes. Representatives from funding agencies (such as NSF, the Public Entity Risk Institute-PERI, the National Oceanic and Atmospheric Administration (NOAA) Sea Grant Program, the Center for Disease Control (CDC), and the United States Geological Survey-USGS) participated in this conference, thus directing much attention to their funding priorities, needs, and interests.

Reflecting the interdisciplinary nature of the conference, participants represented a diverse set of disciplines/fields, including Anthropology, Crisis Management, Engineering, Geography, Journalism, Land Use and Environmental Planning, Law, Nursing, Political Sciences, Psychology, Public Administration, Public Health, Social Work, Sociology, Urban Planning, and Urban & Public Affairs, among others. Finally, in order to incorporate the perspectives and experiences of new generations of scholars in the hazards/disaster field, these researchers actively participated in a number of the conference panels and in the general discussions.

Overall, the conference offered a stimulating and unique opportunity to generate discussions that will inevitably lead to the development of a variety of collaborative disaster research initiatives and projects in the near future.

Conference Goals, Substantive Areas, and Outcomes

As mentioned previously, one of the core goals of the DRC conference was to generate (and to some extent shape) a disaster research agenda for the years to come. Another important goal was to focus on the growth and development of DRC and to examine its impact in shaping the field of disaster research at the national and international level. Specifically, through a variety of panel discussions, we were able to address the following topics (see Appendix A).

Foundations, Growth, Development, and Contributions of Disaster Research in the Social Sciences: Drs. Enrico L. Quarantelli and Russell R. Dynes provided a historical overview on the emergence of the study of disasters and the role of DRC in shaping the growth and development of this field. Quarantelli and Dynes discussed the pre-history disaster legends, myths, and folklores and the importance of the Lisbon earthquake (1755) in shaping how disasters were earlier considered. Dynes argued that the Lisbon earthquake was the first "modern disaster" and that the "first social science concept of disaster" emerged out of this incident. Quarantelli and Dynes focused on the importance of WWI in our thinking of "collective crises." The role and impact of WWII, the Donora Incident (1948), and the Cuban Missile Crisis (1962) on the study of disasters were also discussed. Quarantelli and Dynes provided a historical overview that included the emergence, growth, development, and contributions of DRC. They highlighted the important role that the University of Chicago's National Opinion Research Center (NORC) and the multiple committees in the National Academy of Sciences, that focused on disasters and their management, played in this process.

Disaster Research: Theoretical and Methodological Contributions and Challenges: This session was intended to focus on recent theoretical and methodological contributions that are shaping the disaster research field as a whole or within specific disciplines, recent or emerging

challenges and opportunities in the disaster field, and the directions that should be encouraged in the future. Panelists focused on the importance of theoretical and methodological innovations in order to promote the growth and development of social science research in the field of disasters. Patrick Lagadec (Ecole Polytechnique-Paris) initiated the discussion by indicating that we must be willing to share our research and the information that we generate, and the need to work collaboratively. Deborah Thomas (University of Denver) discussed the role and contributions of geographic information systems in the study of disasters. She emphasized the need to integrate new technology, as well as quantitative and qualitative methodology, into our disaster research efforts. William L. Waugh (Georgia State University) focused on the role, problems, and contributions of Political Sciences in the study of disasters. He indicated that research in this area is limited and somewhat scattered, and the research methodology is quite heterogeneous. There is an impending need to continue to publish our research in mainstream journals in order to disseminate the research and findings in the field of disasters, he argued. Elaine Enarson (Independent Scholar, Colorado) focused her attention on gender and disasters and the contributions and challenges that we confront in this area of study. She stated that we must always consider gender and power in order to determine how communities are organized, political decisions are made, and how people act. There is a need to continue to generate research, develop resources, and educate people in the topic of gender and disasters, concluded Enarson.

From Theory to Praxis: The Impact of Disaster Research for Practitioners and Needs for the Future: Panelists in this session were asked to consider how successful disaster research has been in meeting the needs of practitioners, the types of research that has proved most beneficial in the day to day implementation of emergency management practices, the questions they would

like to see addressed by the research community, and the opportunities and challenges of participating in research studies. Panelists focused on why and how should disaster researchers take into account and incorporate into their research agenda the interests, needs, and recommendations of practitioners in the field. For example, Roy Popkin (former employee of the American Red Cross and the Environmental Protection Agency) challenged conference participants, particularly researchers, to generate research findings that are relevant, useful, and understandable to practitioners in the disaster field. He indicated that, generally speaking, practitioners do not read academic journals, and, therefore, have no access to important research findings. Sarah Norman (Ministry of Civil Defence and Emergency Management-New Zealand) discussed the need to "bridge the divide between theory and practice" and the importance of having well-trained, competent, experienced, and educated practitioners in the disaster field. Richard Rotanz (Nassau County Office of Emergency Management) emphasized that practitioners rely on researchers to learn and obtain information about hazards and disasters and that it is important to built relationships between researchers and practitioners before a disaster event takes place. Everett Ressler (UNICEF) indicated that researchers need to broaden the scope and quality of disaster research, that they must connect with practitioners, and must meet their needs. In essence, we must generate research that is also relevant for the end-user communities.

The Role, Importance, and Need for Multidisciplinary Research in the Disaster Field:

Challenges and Opportunities: The participants in this session were asked to address the challenges and opportunities in carrying out multidisciplinary work, the approaches that may foster successful collaborations, the areas that are in most need of such research, and the research directions that should be encouraged in the future. Risa Palm (Louisiana State University) highlighted that risk assessment is an important area in the study of disasters in which multi-

disciplinary research is necessary. Anthony Oliver-Smith (University of Florida) indicated that disasters are a "natural context" in which to conduct multi-disciplinary research and, in order "to do it well," we must have a multidimensional perspective. He also argued for the development of a theoretical focus and a common language that engages multiple disciplines. Linda Bourque (UCLA) noted that in the disaster field there is too much "side-by-side" and not enough "integrated" research work. She emphasized that there is a need to become an inter-disciplinary not just a multi-disciplinary area of study.

David M. Simpson (University of Louisville) highlighted the challenges to multi- or inter-disciplinary research, such as: 1) institutional barriers: there are essentially no rewards for multi-disciplinary approaches; 2) limited funding; and 3) discipline-based and cultural problems: there are "turf" battles and biases that limit this type of research. In the question and answer period, Kathleen Tierney (Natural Hazards Research Center) indicated that the earthquake centers (MCEER and EERI), funded by NSF, are good examples for multi-disciplinary research collaboration. John Sorenson (Oak Ridge National Lab) noted that the leadership and messages generated by key funding agencies are instrumental for the growth and development of multi- or inter-disciplinary research.

Developing an International Research Agenda: Opportunities, Challenges, and Potential for Growth and Leadership: The participants of this panel were asked to address a number of important and challenging issues, including: the substantial contributions of international studies and cross-national collaboration in shaping the disaster research field; the successes and failures of bridging the research conducted and the literature produced in different countries; and the recent or emerging challenges for cross-national research collaboration. This panel included Boris Porfiriev (Russian Academy of Sciences), Jesus Macias (CIESAS-Mexico), Nicolas

Petropoulos (Emergencies Research Center of Athens, Pedagogal Institute of Greece), and Neil Britton (Earthquake Disaster Mitigation Research Center-Japan). Panelists highlighted the importance of increasing international research collaborations. The generation of a more global approach to disasters and the distribution of risk were seen as priorities. Panelists stressed the need to incorporate community participatory research and argued that the Social Sciences need to play a more critical role in research.

Porfiriev called for more intensive and in-depth cross-cultural and transnational Social Science studies focusing on hazards, risks, and crisis which contribute to or are embedded in disasters. He also cited several successful initiatives and discussed how they could be used as models for collaboration. Macias stressed the importance of prioritizing Social Science contributions to understanding disasters in Mexico and the need to attract support and interest in this area of study. He also called for more collaborative and international research efforts in the disaster field, focusing on issues such as vulnerability, development, and preparedness.

Britton pointed to how best practices developed in the US and endorsed by development agencies are not always appropriate in the international context. These can lead to "unintended consequences that may jeopardize both disaster management and wider sustainable development goals." He also stressed the need to integrate the Social Sciences into "the newly emerging area of integrated disaster risk management." Petropoulos called for more innovative theoretical approaches to studying disasters and suggested that wedding the symbolic interaction perspective with the critical, political-economic perspective to disasters would benefit our understanding of these processes. He emphasized the need and "increasing pressures for disaster researchers to go beyond the local, state, and federal levels... and focus on the distribution of risks across countries." He also called for "a more applied orientation" within disaster research and pointed

to the need for more funding mechanisms to support cross-cultural disaster research and transnational collaborations.

The Role of Research Centers in Training Researchers: Transforming the Field of Disaster Research: Panelists in this session focused on the impact of research centers in training new generations of researchers, the challenges and opportunities associated with this objective, and the directions that should be encouraged in the future. Panelists discussed a variety of topics, including the difficulties or complexities associated with research vs. training, providing research training and professional development opportunities to graduate and undergraduate students, seeking funding opportunities and financing for the growth and development of research centers, and the challenges in engaging students in multi- or inter-disciplinary research. Brenda Phillips (University of Oklahoma-Stillwater) discussed the importance of transitioning into virtual research centers, which takes into account the increasing technology available to researchers and scholars. She emphasized that with the use of this technology we can engage historically disadvantaged populations in the research training process. "What we must do is transfer what characterizes the best of DRC, its people, and their approach to research, into virtual environments," concluded Phillips.

Jack Harrald (George Washington University) discussed the growing importance of terrorism and homeland security in the study of hazards and disasters and the need for disaster researchers to incorporate these emerging issues and complexities into their research agendas. Further, it was highlighted that government decisions regarding homeland security, for example, need to consider the feedback and contributions of the disaster research community. Susan Cutter addressed the challenges and opportunities that research centers confront. She indicated that the disaster research community is a very small one and not well-positioned within the broader

scientific establishment. This community must move beyond disaster response into mitigation and preparedness. She also noted that we must take advantage of the emerging research opportunities regarding homeland security; that we must link the theoretical with the applied science by working with local emergency managers; and that we must make our research "relevant."

Lori Peek (Natural Hazards Research Center, University of Colorado) focused on the role of disaster researchers in training the next generation of researchers. Peek indicated that research centers must foster commitment, maintain integrity, develop research agendas, and disseminate research findings. She also indicated that leaders at research centers must be good mentors and show how disaster research relates to the broader goal of lessening human suffering; that we must focus on what is important, not just what is easiest and most easily funded; that we need to recognize the gaps in our knowledge – theoretically, empirically, and globally; and that we must encourage and generate interactions between researchers and practitioners.

Funding Disaster Research and Priorities for the Future in a post-9/11 Environment:

Panelists focused on the funding priorities for disaster research, current funding challenges and opportunities facing researchers and the agencies that provide such funding, emerging research priorities, and the directions that should be encouraged in the future. Representatives from the National Science Foundation (NSF), the Public Entity Risk Institute (PERI), the Center for Disease Control (CDC), the National Research Council (NRC) and the Global Alliance for Disaster Reduction discussed the challenges and opportunities in obtaining funding for research in the disaster field. Gerald Hoetmer (PERI) indicated that the September 11, 2001 disaster "showed how ill-prepared we were for an event of such catastrophic proportions." This event also manifested the importance and funding needs for quick response programs such as those

provided by NSF and the Natural Hazards Research Center. Hoetmer acknowledged the impact of disaster research on public policy and disaster management and planning. He also expressed concerns regarding potential shifts in priorities as the nation focuses even more so on terrorism and civil defense while diverting its attention from natural disasters. "What is needed is a broader education of the public and public administration about the relative probabilities of risk" as well as examining the impact of new technologies on the "saliency of warning messages," indicated Hoetmer.

Walter Hays (Global Alliance for Disaster Reduction) asked the public if we (the disaster research community) are still "alive and moving ahead or are we paralyzed and dying in the post-9/11 environment." Hays emphasized the need for additional funding aimed at disasterreduction-research and disaster-applications at the local, national, regional, and global level. He presented at least 37 areas that merit further research and for which funding must be made available, ranging from improving community sustainability, reducing vulnerability, enhancing public awareness, improving emergency management, addressing issues dealing with human rights and disasters, and improving public-private partnerships, among others. William Anderson (NRC) and Dennis Wenger (NSF) focused on the importance of Social Science research in the disaster field and NSF's role in funding this type of research. Anderson stressed that it was important for researchers to become familiar with funding agencies and to also pursue unfunded research as another option to generate scientific knowledge in the field. Wenger outlined some of the funding opportunities at NSF, particularly focusing on the new "Human and Social Dynamics" priority area. Panelists also discussed the importance of multi-disciplinary research. They emphasized the need to generate research proposals which address critical issues in the

study of disasters while emphasizing the intellectual merits and broader impacts of the proposed initiatives.

Establishing a Research Agenda: Other Critical Areas and Issues that need to be Addressed in Disaster Research: Panelists focused on lessons learned, challenges, and opportunities and potential for growth and leadership in the study of disasters. They discussed the research areas and issues that need to be developed and explored in the next decade or so at the national and international level, which are collaborative across disciplines and geographical boundaries.

William Anderson (NRC) focused his presentation on the importance of integrating the study of minorities, women, and youth into disaster research, which "have received less attention than they deserve." "Where are the children and youth in Social Science disaster research?," asked Anderson. He indicated that more studies in these areas would "also shed light on the role of class, race, gender, and age in society, in addition to helping to understand the differential impacts of disasters and furthering more effective mitigation and preparedness decision making."

Kathleen Tierney (Natural Hazards Research Center, University of Colorado) focused on how the post-9/11 policy environment has generated a new set of questions and new areas for Social Science research in the hazard/disaster field. Given massive reorganizations efforts in the United States, including the creation of the Department of Homeland Security (DHS) and the mandated adoption of the National Incident Management System (NIMS), Tierney indicated that we need to consider a number of important issues or questions, such as: are disaster models appropriate in understanding terrorism-related behaviors?; are post-9/11 institutional arrangements capable of addressing emerging threats; and, how or if homeland security funding is enhancing or detracting efforts to manage hazards of all types at the federal, state, and local level.

In his presentation, Arjen Boin (Leiden University, Crisis Research Center) indicated that "given the continuing prevalence and relevance of "natural destruction" forces, it seems safe to predict a sound future for disaster sociologists, their centers, and their students." However, he raised the concern that the field has some self-imposed limitations and that our current definitions of disasters do not adequately consider the many crises that beset modern societies. Boin called for the inclusion of new and emerging systems (e.g., transportation, communication, research, technology) in an interdisciplinary disaster research agenda, which would better consider a number of threats, including computer viruses, terrorism, and economic crises, among others.

James Kendra (University of North Texas) concurred that the attacks on the World Trade

Center and the Pentagon confirmed the emergence of a new kind of complex threat. Although the
threat was always there, it was more nebulous and ephemeral. He stressed the ambiguity inherent
in the terrorist threats, in defining the post-event stages following a terrorist event, and in our
responses to emergencies or disasters when the cause is unknown. Kendra indicated that
terrorism (and other types of newly emerging events) has been added to the familiar but now less
threatening hazards that have always plagued us. He argued that researchers are also confronting
an increasingly lack of access to information given the increased security at the national level
thus generating additional data collection problems among disaster researchers, despite the fact
that they "are acting in the public service."

A History of Contributions, Transformations, and Leadership in the Disaster Research Field: In this panel, Jim Kerr (retired from FEMA) and Joseph Scanlon (Carleton University) focused on the role, contributions, and impact of Dynes and Quarantelli in the growth and development of the disaster field, from a Social Science perspective. Kerr discussed the role of

the Office of Civil Defense (OCD) in providing the initial research funding to The Ohio State
University, which allowed the creation of the Disaster Research Center (DRC). This funding
was a result of a proposal by Quarantelli and Dynes which indicated that DRC would study
peacetime disasters in part to see if the findings could be extrapolated to wartime situations.

While there was some resistance in OCD to supporting such research, others in the agency
thought that this was a good opportunity to have the government support a systematic and longterm study into peacetime crises. The initial funding of about \$900,000 was for a five-year study.

Kerr pointed out how new findings - such as an understanding of disaster subcultures, the rarity
of role abandonment by emergency responders, and the importance of emergent behavior at
times of crises - were contributions by DRC that bettered disaster planning and managing, and
led to the institutionalization of the Center.

Scanlon pointed out that the research initiated by Quarantelli and Dynes, and continued by the DRC and others, has created a firm foundation for researchers and practitioners in the field. The impact of Dynes and Quarantelli's research in generating public policy, their research collaborations with the Office of Civil Defense, FEMA, and other government and funding agencies were instrumental for the study of disasters and for future researchers in the field. Scanlon concluded by indicating that they (Dynes and Quarantelli) "ask for nothing in return [for everything they have given to the field] except that the quality of our own research matches the standards that they have set."

In recognition of Drs. Quarantelli's and Dynes' significant and long-lasting contributions to the growth and development of the study of disasters, the creation of the DRC, in testimony to their prolific and illustrious research careers, and in honor of their friendship and mentorship, DRC staff and conference participants presented them with plaques that read "On the 40th

anniversary of the founding of the Disaster Research Center, from your students, colleagues and friends: In heartfelt appreciation of your scholarship and integrity." Each was also presented with a book of congratulatory letters submitted by conference participants as well as friends and colleagues whom were unable to attend the event. Further, in recognition of Dr. Quarantelli's work, over the past 40 years, in creating, maintaining, and developing DRC's Resource Collection, it was renamed to the "Enrico L. Quarantelli Resource Collection." It is noteworthy, that DRC serves as a repository for materials collected by other agencies and researchers. DRC's specialized Resource (library) Collection contains the world's most complete collection on the social and behavioral aspects of disasters - now numbering more than 50,000 items. This collection is accessed on a regular basis by a variety of users, including scholars, researchers, practitioners, students, and other members of the general community, both at the national and international level.

Concluding Remarks

Nationally and internationally renowned researchers, junior scholars, practitioners, and students convened at the University of Delaware to participate in DRC's 40th anniversary conference. This two-day event allowed us to address important issues, trends, and opportunities for future research in the disaster field. A number of important issues, concerns, and recommendations for disaster research had emerged by the end of this conference. While conference participants recognized the important role and the impact of Social Science disaster research in shaping public policy and in enhancing disaster planning and management, they also highlighted a variety of issues, concerns, and areas for future research which merit our immediate attention, including:

1. The impending need to generate collaborative research efforts that bridge geographical boundaries. Researchers need to develop an international research agenda or a "globalistic" approach to the study of disasters. In this context, some participants highlighted the importance and need of additional Social Science research focusing on disasters, vulnerability, and development, particularly in the international context.

- 2. Disaster research must also cut across disciplines. Panelists emphasized the need to move from multi- to inter-disciplinary research work. The study of disasters is a very appropriate or "natural" field in which to generate interdisciplinary research.
- 3. Disaster researchers must take into account and introduce into their research efforts new and emerging technology.
- 4. Although some progress has been made, researchers must study the intersection of race, ethnicity, gender, class, and age and disasters. A research emphasis on how disasters impact children is extremely important.
- 5. Our research must respond to and must take into account the needs, interests, and recommendations of practitioners in the field. We must generate research that is relevant, useful, and understandable by practitioners and the general community.
- 6. Conference participants highlighted the importance of terrorism in the study of disasters, particularly after the September 11, 2001 terrorist attacks on the United States. Panelists argued that 9/11 has generated a new kind or "complex threat" or new crisis events, which researchers need to consider. It has also generated new questions and new priority areas for disaster research. However, many participants expressed their concern that the shifts in public policy and funding opportunities for terrorism may be occurring at the expense natural disasters. Further, participants were concerned that the trend towards "national security" was restricting access to research sites, data, and information that is essential for disaster researchers and to the study of hazards/disasters in contemporary society.
- 7. Participants highlighted their frustrations and concerns with the limited funding opportunities for disaster research, particularly in the Social Sciences. Funding initiatives generated by NSF and PERI, among others, are important but additional funding mechanisms are of paramount importance.
- 8. Finally, disaster research must broaden its horizons; it must focus on the new and emerging threats; on new theoretical and methodological innovations; it must take into account the emerging systems (i.e., technological innovations in communication and transportation systems) which generate new types of crises. Disaster research must maintain its attention on the "old" threats while incorporating the "new" ones. Again, the need for interdisciplinary and international disaster research in these areas is extremely important.

In conclusion, it is noteworthy that DRC has established a conference website (http://www.udel.edu/DRC/drc40conference/index.html) that will be updated on a regular basis and will include a variety of information concerning the goals, objectives, and the conference outcomes; the formal agenda; list of participants; a conference white paper; and PDF copies of

the abstracts of presentations made by the participants. The abstracts contain more detailed information about the strategies suggested by conference participants and how they recommend achieving those objectives. Also, we will be working on a number of publications that will summarize and synthesize the most important results and recommendations that emerged from this conference.

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Appendix A:

Conference Agenda

University of Delaware
Department of Sociology and Criminal Justice
Disaster Research Center (DRC)

Disaster Research and the Social Sciences: Lessons Learned and Future Trajectories

April 30-May 1, 2004

Friday, April 30, 2004

8:00 Registration and Continental Breakfast

8:30 Welcome and Brief Remarks on DRC; Goals & Objectives of the Conference

8:45 Welcome to the Workshop by Invited Dignitaries

9:00AM: Foundations, Growth, and Development of Disaster Research in the Social Sciences and DRC: A Historical Perspective

Panelists: E.L. Quarantelli & Russell Dynes

Moderator: Joanne Nigg Recorder: Brian Monahan

10:10 *Break*

10:30AM: Disaster Research: Theoretical and Methodological Contributions and Challenges

Panelists: Patrick Lagadec. Elaine Enarson, Deborah Thomas & William Waugh

Moderator: Gary Webb Recorder: Susann Ullberg

11:50 Lunch and Photo Exhibit

1:15PM: From Theory to Praxis: The Impact of Disaster Research for Practitioners and Needs for the Future

Panelists: Roy Popkin, Sarah Norman, Everett Ressler & Richard Rotanz

Moderator: Everett Ressler Recorder: Jennifer Wilson

2:40 *Break*

3:00PM: The Role, Importance, and Need for Multidisciplinary Research in the Disaster Field: Challenges and Opportunities."

Panelist: Risa Palm, Anthony Oliver-Smith, & Linda Bourque

Moderator: David Simpson Recorder: Rob Cameron

4:20 Tour of DRC Facilities, 87 E. Main Street 5:30 Dean's Reception, The Blue and Gold Club

Saturday, May 1, 2004

8:30AM: Developing an International Disaster Research Agenda: Opportunities, Challenges, and Potential for Growth and Leadership

Panelists: Boris Porfiriev, Jesus Macias, Nicolas Petropoulos & Neil Britton

Moderator: Tricia Wachtendorf Recorder: Arthur Oyola-Yemaiel

10:00 *Break*

10:20AM: The Role of Research Centers in Training Researchers: Transforming the Field of Disaster Research

Panelists: Brenda Phillips, John Harrald, Susan Cutter & Lori Peek

Moderator: Walter Diaz Recorder: Susann Ullberg

11:45 Lunch

1:00PM: Funding Disaster Research and Priorities for the Future in a Post 9/11 Environment

Panelists: Dennis Wenger, William Anderson, Gerard Hoetmer & Walter Hays

Moderator: Erik Auf der Heide

Recorder: Rob Cameron

2:30 Break

2:50PM: Establishing a Research Agenda: Other Critical Areas and Issues that Need to be Addressed in Disaster Research

Panelists: William Anderson, James Kendra, Kathleen Tierney & Arjen Boin

Moderator: Nuray Karanci Recorder: Lauren Barsky

4:15PM: A History of Contributions, Transformations, and Leadership in the Disaster Research Field

Panelist: Joseph Scanlon and Jim Kerr

4:45PM: Concluding Remarks and Adjourn Meeting