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CONCEPTUALIZING DISASTER IN WAYS
PRODUCTIVE FOR SOCIAL SCIENCE RESEARCH

by

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INTRODUCTION

Over the course of the next several days, we will have the opportunity to conceptualize a research agenda which will be appropriate for a region as well as significant for the social sciences. This is an unusual opportunity since research problems for the social scientists are usually a part of some one else's agenda, either governmental policy agencies or by implications derived from other scientific endeavors. For example, meteorological agencies have often asked the question "Why do people ignore our warnings?" but are seldom content to listen to distinctions which point out the difference between meteorological forecasts and warning messages. Nor do they formulate the question "How can meteorological agencies issue messages in such a way in which people will give attention to them?" In other agendas, questions are often phrased so tat they imply technological answers, rather than "social" solutions. For example, the question of "what can be done to prevent flooding?" usually evokes answers about building more dams and levees when part of the answer might emerge if the question were raised "what is the most efficient and rational use a society can made of flood prone lands?"

Understanding disasters in terms of the social sciences will be most useful when the questions are formulated in terms of the theoretical approaches which exist within the social sciences and not by questions posed by government agencies or by other sciences. That does not deny the legitimacy of other formulations but only suggests that the better answers might come from a body of social science research which is built on the traditions of those disciplines.

In order to move in that direction, several preliminary tasks need to be accomplished. First, I want to provide a quick overview of the field. For some, it will be truncated and repetitious but for others, it might provide a context for what follows. Second, I want to provide, as an example, an overall theoretical scheme which some, at least, have found useful. In doing that, I run the risk of structuring the discussion around

that scheme. This is not my intent but, on the other hand, I consider it a useful orientation, since it is one social science view of disaster which is capable of generating a number of research leads. It can also provide us with some semblance of a common vocabulary in our discussions. Third, I want to provide other conceptualizations of disaster, organized in a somewhat different way. Fourth, and finally, I want to make several anticipatory comments about the nature and direction of the seminar and of its future implementation.

ORIENTATION TO THE RESEARCH FIELD

1.   There is a research tradition within the social sciences on disaster.   Perhaps the best comment summary is Thomas Drabek, Human System Responses to Disaster: An Inventory of Sociological Findings, Springer-Verlag 1986.

2.   Much of that work focuses on community disasters-crises situations which cannot be handled by routine emergency actions. One of the issues which can be raised is whether the research tradition should extend beyond those usual situations.

3.   Much of that work has focused on western, industrialized societies and one of the issues would be how the research tradition can be extended to other types of societies and other regions.

4.   The fact that much of the previous work has been derived from western industrialized societies does not imply that this research is not applicable in other types of societies.   If theories are properly stated, they should be applicability in a variety of types of societies. For example, if a theory of warning is stated in terms of communications theory, it would not be dependent on a particular form of technology. A theory of community action can be phrased in a way in which it is applicable to a wide variety of community forms.

5.   The advantages of cross national and comparative research is, of course, to provide a greater range in certain important social variables: for example, the degree of centralization/decentralization in governmental structure, the relationships between various governmental structures, patterns of institutional interdependence, difference in the perception of governmental responsibility and in the response capabilities of various social units. There are variables in which there is considerable diversity. Since they do vary, comparative research should provides the opportunity to understand the consequences of such differences.

6.   While comparative and cross national research provide the opportunity for research on different forms of social structure, disaster also provides the opportunity to understand both the

scope and perhaps the limits of social change. Disasters, as such, constitute unique social laboratories in which ethically acceptable social transformations take place. Thus, they help understand the forces of tradition and change within the same society.

7. From the viewpoint of the social sciences, there are a number of significant advantages in studying disasters because

    a. a variety of social units can be studied-from individuals, to families, to communities and to national and international systems

    b. most of the social processes in which social scientists are intended can be observed in disaster

    c. a variety of theoretical schemes can be utilized

    d. and the range of familiar social science methods can be used.

8. In addition, the study of disasters holds the potential for providing knowledge for application in policy. As a consequence, there is often support for research, which might not necessarily be available for other "problem" areas. However, one should not anticipate too much interest in research funding – some agencies assume that they know everything anyway and it is a matter of simple application; other agencies structure research so that it excludes any social science research; and still other agencies show an alternating policy of interest and disinterest which plays havoc with research continuities.

9. It is important at this point to make several comments about the intellectual history of disaster research, both to point to the diversity of interests and topics that might be included. Obviously, it is a multidisciplinary field, perhaps with limited coherence. I can speak most accurately about developments in the United States where social science interests developed in the early 1950, primarily among sociologists. A somewhat parallel and separate stream developed among geographers, primarily an extension of the work of Gilbert White. Over the years, individuals in other field, such as communications, political science and more recently, public administration have developed interests in disaster as well as have other scholars around the world. In no country, perhaps with the exception of the U.S., Japan and Italy, is there a significant concentration of scholars. A rather fragile network of scholars is maintained by the Research Committee on Disasters of the International Sociological Association, although not all members identify as sociologists.

A somewhat different stream of scholarship, even more diverse, has developed around certain issues relating to developing countries, especially famine, drought, forms of ecological degradation, and, to a certain extent, refugees where the term disaster has been used more with more evaluative than

conceptual consistency. Often, this topic has interested anthropologists, agricultural economists, economic historians, development economists, nutritionists, public health specialists, epidemiologists, area specialists, international agency personnel as well as a number of political advocates. It is my impression that this very diverse literature is becoming more orderly with the assembling of a bibliography on famine by Bruce Curry and others as well as by attempts to utilize notions of mitigation, preparedness and response in conceptualization. In particular, I find that the work of Sen, Dreze and others very important for the view that famine involves changes in "exchange entitlements" rather than changes in food availability. In addition, I think the efforts to develop early warning systems based on social indicators, rather than on rainfall, crop data, yield data, etc. creates a major opportunity for new social science conceptualizations.

There are similar possibilities in the application of "disaster" derived theories to other persistent problems. For example, William Shawcross, The Quality of Mercy is an excellent descriptive account of the "politics" of international agencies which would be a source of many hypotheses for future situations. In addition, the historical and comparative approach of Ressler et al in examining the problem of the "unaccompanied" child in wartime and conflict situations, starts with the Spanish Civil War and "ends" with Cambodia. It contains not only important historical analysis but hopefully future policy application. It is a useful look at a social category in varied situations.

There is another recent development closely related to "traditional" disaster concerns but now conceptualized as risk. That concept has brought together other rather diverse disicipilinary interests and much of the concern for risk has centered on "new" technological systems, primarily evoked by Three Mile Island, Chernbyl and Bhopal. While this concern is often characterized by statistical models of risk, it has, more recently viewed risk in the "social" world and into other areras, not just fixed site plant accidents. While it is difficult to see the course now of this interest and emphasis, it is clearly not just one of those concerns which only "industrialized" societies have the luxury of entertaining. More recently, the World Bank has convened a group of experts in a series of conferences to develop an international research agenda. It is quite probable that the World Bank's motive is not directly to encourage research but to use such knowledge as a criteria for granting loans to developing countries. Consequently, such issues may be of critical importance in the future for developing countries.

10. In this brief sketch of these intellectual traditions, there is no necessary implication that there should be some unifying intellectual tradition, since disciplinary traditions are important. Nor are all of the situations which are termed

disasters by someone necessarily the same nor should they be treated as such. However, the way in which issues are conceptualized have "political" implications of inclusion and exclusion. For example, in the evolutionary process of planning for the UN International Decade, it was originally conceptualized as a decade of natural hazard reductions, which was interpreted as only involving the geological, atmospheric and biospheres sciences. Over time, the name was changed to natural disaster education which meant a greater participation for social scientists and others in the decade. (That distinction, however, may not be interpreted that way in the composition of country committees which are now being formed.)

While most social scientists might applaud such a shift, James Lewis wrote an open letter to Natural Hazards Observer (March 1988) in which he complained that the decade would exclude his favorite "natural" disaster-famine. (As a matter of fact, later the UN Committee did decide to include drought but decided to narrow that concern not to encompass such derivative conditions as famine, civil strife or refugees. This change does not imply any causal connections of the letter and decision, since it is unlikely that any of the committee members had read the letter.) The point is that scholarly conceptions can have political consequences. It suggests that the vocabulary of natural hazards places severe restrictions on the role that the social sciences can play, while disaster carries with it a meaning which is much more social science friendly. Lewis does make that point well in a later portion of his letter.

> Scientific knowledge must surely include a greater measure of those sciences of sociology, anthropology and geography, for example, so eminently represent in North America and which have been internationally at the forefront of field analysis and understanding of natural disaster analysis.

RESEARCH FOCUS

There are a number of rather complex understandings which need to be identified first which provide a sharpened focus for social science research. These can be briefly summarized as follows.

1. The research focus should be on social systems, not physical agents.
2. The research focus should be on social organization, not on social disorganization.
3. The research focus should be on social response, not on individual "victimization".
4. The research focus should be on the continuity of behavior, not on its discontinuity.

Those ideas are based on the conviction that social science research should be generic rather than agent specific. This marks it off from a quite different orientation to research in the atmospheric, geological and hydrological sciences. For the social sciences, it makes little difference whether the disaster "agent" is a cyclone, a chemical spill or a flash flood in determining what factors relate to warning messages or adherence to evacuation. When agents differ on factors which can have social import, such as predictability, speed of onset, length of forwarding, scope of impact, these need to be described in terms of their social, not their physical, consequences. Thus, physically dissimilar agents can have similar consequences and physically similar agents can have dissimilar effects. (This orientation is especially important for the application of research to disaster planning. The direction of disaster planning around the world is toward more generic or integrated planning. Such a shift, in fact, reflects the impact of previous disaster research on policy.)

It is also important to approach the study of disaster, not as an exercise in social disorganization or pathology but as the occasion for understanding some of the more important "normal" structures and processes, such as communication, interaction, organization and decision making. Thus an approach which emphasizes social adaptability, not social pathology, and problem solving, not social chaos, should have primary emphasis.

Neither should the study of disaster be wholly preoccupied with studying the "victims.", perhaps with the exception of trying to understand the complexity of that concept. Nor is it productive to approach the field to assess the blame and find the villain. The media will do that anyway. The intent should be to understand the complexity of the social processes which characterizes a disaster occasion. With that focus, contributions can be made both to social science theory and to the formulation of social policy.

One final bit of advice is not to read too much uniqueness and discontinuity into social life which the word "disaster" usually evokes. It is important to continually reaffirm the importance the concept of the continuity of behavior. Disasters do not create dramatic, abrupt changes in behavior. Thus the key to understanding post disaster behavior is not found in the dramatic event itself but in a knowledge of pre-disaster behavior. While disaster may involve complex and subtle transformations, even those have to be understood in terms of the continuities to past behavior and existing structures. Consequently, a research focus should approach the topic in terms of the viability of social structure and its ability to deal with new and often dramatic problems.

TOWARD AN INITIAL CONCEPTUALIZATION OF DISASTER

Let us start with an initial conceptualization of disaster which has considerable value for the following reasons.

1. It is based on a social unit.
2. It is based on a social unit which has cross national and cross cultural applicability.
3. It is a social unit that has the capacity and resources to activate a response to the disaster.

The particular social unit-the community-is a universal locus of social activity. Every community occupies physical space and has, in most cases, territorial boundaries so that the social entity can be characterized in part by its terrain and climatic conditions. Communities have names and some degree of permanent settlement. But these physical, legal and material features are only one dimension since communities are very complex systems of human activity. It is useful to think of a community as a structure which has evolved to meet needs and to deal with problems as well as to allocate resources to problems. This allocation process takes place within an organized division of labor as groups and organizations engage in efforts relating to one or more community need. Thus, the community has to be conceptualized as a multiorganizationsl system. In this conceptualization, the <u>location of social action</u>, is the community.

Since one can frame disasters and community action in terms of a process of social time, then some choice has to be made of the phase of that activity to include.

1. The time focus here will be on the "emergency" period.
2. The emergency period represents the most socially complex phase of the disaster spectrum.
3. Understanding the emergency is most critical since other phases-mitigation, preparedness and recovery are dependent on the activity and the consequences of the emergency period.

So the focus will be on the community, with particular attention of the response which community organizations make during the emergency period. The next step then is to deal with a question which has not be faced but only assumed up to this point – <u>what is a disaster</u>?

The simple but very complex answer to that question is that disaster "agents" are not self evident. Both the historical and current practice are replete with examples of how communities have had "disasters" and the effects have been justified by religious and political ideology. The following formulation would seem to capture the relativity of the concept.

A DISASTER IS A NORMATIVELY DEFINED OCCASION IN A COMMUNITY WHEN EXTRAORDINARY EFFORTS ARE TAKEN TO PROTECT AND BENEFIT SOME SOCIAL RESOURCE WHOSE EXISTENCE IS PERCEIVED AS THREATENED.

One should note several implications of that formulation. There are no references to disaster agents. It suggests that all disasters are socially caused and that traditional distinctions God/man, technological/ "natural" are less statements of scientific causation than they are remnants of previous normative arguments whose proponents still think represent statements of truth. It also suggests that yesterday's inattention may be a disaster today. It means that what might be defined as a disaster in one country or community as may not be defined in another. It also suggests that the same "agent" will have quite different consequences in what are seemingly equivalent communities.

The relativity of such a definition will probably bother those who require certainty and clarity. One "solution" to that problem would be to try to identify the normative dimensions which come into play in evaluating social harm. Quarantelli, at one point, has suggested that the following dimensions might be important the proportion of the population involved, the social centrality of the involved population, the length of involvement, the rapidity and predictability of involvement, the unfamiliarity f the crises, the "depth" of involvement and possible recurrence.

With such criteria, it might be possible to predict with a high degree of accuracy characteristics of situations likely in defined as disaster in most contemporary societies. That is, occasions where there is extensive damage to community resources and to the health and social status of those who are central to the life of that community (e.g. community leaders) and those who are dependent on those community resources (e.g. children, old and sick.) If such a community were involved rapidly and unpredictably and if that involvement were expected to be for a long period when that community would continue to experience relative deprivation, it is quite likely that such an occasion would be defined as a disaster.
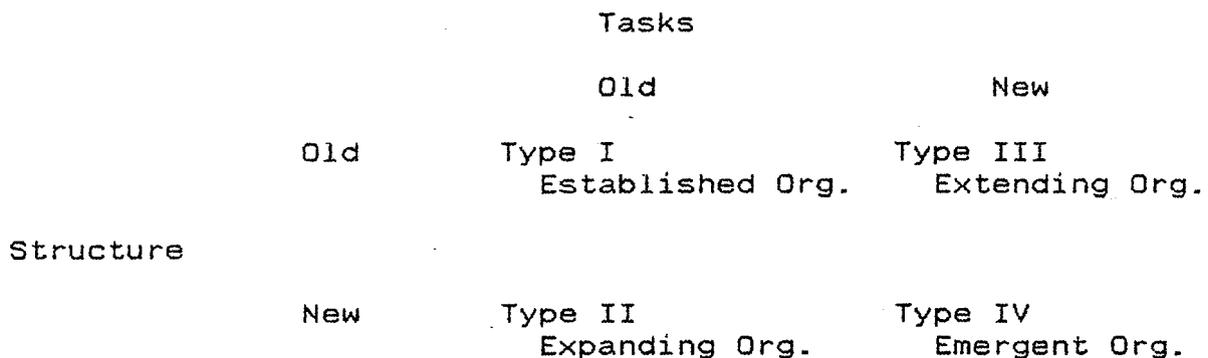
Of course, in the contemporary world, there is an important mediating element in the evaluation process and that is the media. One of its functions has been to "define" disasters. Media coverage usually plays on themes drawn from the normative criteria - damage, on children and elderly victims, on the destruction of aspirations and the dimming of hope. (Research Note: It should be possible through multivariate analysis to examine the rational "calculus" that persons give to various factors in the evaluation process. The weighting of factors might change over time. It also might be possible to study the media not from the viewpoint of the accuracy of its coverage but on the distributional patterns of certain evaluative criteria.)

· However, a focus on normative criteria, embedded in "public" opinion and in media coverage, however interesting, explains only a part of the definitional process. Values need to be embedded in concrete social structures to influence action and activities. In addition, most of the "factual" information on which these normative judgments and made are not known at the time when community organizations become involved. In fact, one of the characteristics of the emergency period is the search for information. Thus, the concrete exemplification of normative judgments can move accurately be found in the involvement of "community" organizations.

ORGANIZATIONS INVOLVEMENT AS THE KEY DETERMINANT IN DEFINING A DISASTER

Two additional concepts will be introduced here with relationship to organizational involvement in disaster. The first sometimes termed the DRC topology contains a conceptualization of organizational involvement which looks at the relationship of pre-disaster tasks and structure to post "impact" involvement. Type I organizations caary on the same tasks with the same structure, Type II organizations expand their structure to carry out anticipated emergency tasks. Type II organizations have no emergency responsibilities but may become involved. Finally, the complexity of earlier involvement produces Type IV organizations which have new tasks and structures-emergent organizations.

FIGURE I

Tasks

		Old	New
	Old	Type I Established Org.	Type III Extending Org.
Structure			
	New	Type II Expanding Org.	Type IV Emergent Org.

In an extension of work on that typology, Kreps identified four basic elements of organized social response - domain, tasks, activities as well as human and material resources. Domain refers to organizational responsibility. Given certain domains, there are particular tasks to be undertaken. Tasks are definitions of what should or must be done if an organization domain is to be achieved; activities are what is actually done in the situation. Activities are often the basis of an evaluation

of achieving one's tasks. Finally no response can be made without human and material resources. Those distinctions make it clear that there are a number of ways in which an organization can become involved in an emergency, not just by being activities by its particular domain responsibility. In fact, Kreps suggested that, with the four factors, there were 64 theoretical possible combinations, including every one, two, three and four patterns. Those various combinations are not just hypothetical. In an examination of a number of actual disaster situations, 57 of the 64 theoretical possibilities of involvement were identified.

Brief mention of that organizational typology and the previous research on the pattern of organizational involvement is the best indicator of normative judgments defining a disaster. The fact that some organizations have emergency responsibility within their domains serves to define the situation. Put more simply, if emergency organizations are involved it must be an emergency, since that organization has defined it that way by its involvement. The fact of organizational action implies that normative criteria are being evoked. This "behavioral" indicator is a much more concrete evidence of definition that abstract "public opinion".

These brief comments about rather extended theoretical considerations within the disaster literature do not do them justice but, on the other hand, they serve as a base to reformulate a distinction which is sometimes useful-that is a difference between sudden and slow onset disasters. Often this is seen as an inherent attribute of some "physical" agent. In the terms just presented, a sudden disaster is one in which there is rather uniform consensus on the normative criteria and that consensus is evidenced by the rapid involvement by community organizations for which the situation is clearly within their domains. Coversely, a slow onset disaster is one which evidences less consensus because of minimal organizational involvement. In part, that minimal involvement may reflect the lack of organizational resources within the community. Consequently, the conditions may become chronic but, on the other hand, consensus may be gradually achieved by the additional involvement of organizations external to the community. In effect, the distinction between sudden and slow onset reflects difference in organizational attention rather than being some inherent attribute of a "disaster" agent.

Extending those ideas, it is possible to develop a taxonomy of different community disasters, which focuses on the pattern of relationships among community organizations. That discussion follows.

CATEGORIES OF COMMUNITY DISASTERS

From the viewpoint of the community system, it is possible to identify several model types of disaster. The first type and the "basic" model is called the <u>Autonomous Community Disaster.</u> This type would fit many disasters in developed countries. The community system is the location of the "impact" and the response by local community organizations. That involvement reflects a consensus that an extraordinary efforts are being undertaken to deal with the social resources which are being threatened. An important sub-type of Autnomous Community Disasters is what will be called <u>Community Accident.</u> The difference implied here is that the response is focused on the activities of institutionalized emergency (Type I) organizations. In effect, it is a delimited disaster and better characterized in "accident" terms.

The second major type is what will be called <u>Dependent Community Disasters</u> which implies that additional response resources are provide by other social systems, external to the community. Three sub types are identified 1) <u>Conflict Dependent,</u> 2) <u>Client Dependent</u> and 3) <u>Proxy Dependent.</u> These are all situations in which the local community is seen as dependent by external agencies, both national and international, that can become involved. This in effect creates a "dual" system, which creates an emergent pattern of organizational involvement.

There is a final category added for completeness and that is what will be called non-community disasters. The first sub type is called here <u>a sector/network disaster</u> and the final subtype is labeled a <u>non-institutionalized disaster,</u> which represents a linguistic contradiction. In effect, these two subtypes represent conditions where there is limited "consensus" on social harm as well as limited institutionalization within community organizations about the nature and propriety of involvement. (See Figure 2).

The rationale for the development of different disaster types is not to create meaningless and academic distinctions but as a basis for illustrating important similarities and differences among types. One of the persistent problems of the interpretation of research has been that "conclusions" are drawn based on one disaster type and then generalized to other quite different types. The rational here for the taxonomy is to point to different research questions.

The major difference among the types is centered in the notion of the capability of communities to respond on the basis of their own social resources. Resources here are conceptualized in terms of the organizational structure of the community. I am assuming that there will also be considerable complexity of informal activity. This Barton has called the mass assault, that is "helping" activity on the part of persons, small informal

groups and families which would constitute an important part of the total community response. The more formally organized structures of the community, however, constituted the core of the organized response.

AUTONOMOUS COMMUNITY DISASTERS

Two sub types are differentiated (1) community accidents and (2) community disasters.

(1) <u>Community Accidents</u> These are situations in which an occasion can be handled by Type I or emergency organizations. The demands which are made on the community are within the scope of domain responsibility of the usual emergency organizations- police, fire, medical and health personnel. Such accidents create needs (and damage) which is limited to the accident scene so few other community facilities are damaged. Thus, the emergency response is delimited in both location and to the range of emergency activities. The primary burden of emergency response falls on those organizations which incorporate clearly deferred emergency responsibility into their domains. When the emergency tasks are completed, there are few vestiges of the "accident" or lasting effects on the community structure.

<u>Research focus</u> - In these situations, research interests might focus on search and rescue, delivery of emergency medical services, security at the disaster site, coordination of multiple emergencies, handling of temporary interruption of community services, etc. Another focus could be on the "first responder", on the implementation of mutual aid pacts, the emergence of patterns of coordination, study of covergence on accident site, social control of convergence.

Possible Empirical examples: Lockerbie U.K. plane crash: New World Hotel Collapse, Singapore: Train Crash, Bintaro, Indonesia.

(2) <u>Community Disasters</u> This type represents the more traditional disaster. Differentiating this type from a community accident is the extensiveness of involvement of organizations and other segments within the community. In community accidents, the emergency organizations will have developed some familiarity and accommodation to the domain definitions of other Type I organizations. In a community disaster, the pattern of damage may extend to several different places in the community rather than being focalized as it is within a community accident. Too, a number of community structures, perhaps including those which might house the traditional emergency organizations, might be damaged or destroyed. To determine whether such conditions exist requires the collection of information - from other organizations. The increased involvement of other "non-emergency" organizations then creates the need for coordination

of activity and for new patterns of communication among parts of the community that previously had no reason to communicate.

The need for coordination and the development of new forms and channels of communication have been termed "response generated" demands as opposed to "agent generated" demands. In other words, they are demands which arise because of the response itself and not because of the agent. (This distinction, however, is frequently overlooked during the emergency and is often ignored in disaster planning which assumed that the demands being made on the community organizations derive from the disaster agent itself.. ` The combination of agent-generated demands and response-generated demands creates a new an generally unfamiliar complexity to social relationships within the community.)

In terms of the previous comments about slow and gradual onset disasters, a sudden onset disaster would involve Type I and II organizations in rapid mobilization, quickly followed by Type III organizations and the rapid emergence of Type IV while gradual onset would involve a more deliberate sequential pattern of I, then II, the III and perhaps then IV organizations.

Research Focus: Many of these ideas are already reflected in the literature so that some of the research focus would be on the elaboration and replication of those notions; the time phasing of organizational involvement has not to my knowledge been studied directly; much more needs to be done on response generated demands Possible Empirical Examples: This category would encompass most disaster cases occurring in urban areas in developed countries and perhaps in most developing countries. It is important to note that the same "agent", such as cyclones, might create several different disaster types within communities which are in close geographical proximity.

DEPENDENT COMMUNITY DISASTERS

In certain ways, these disaster types are extensions of the previous type, except that the local community response is compounded by outside assistance. This perhaps implies that, in such situations, the capacity of a community is "weak", incapable or perhaps even non-existent. That may be the case, but in actual experience it would seem that higher levels of government as well as other extra-community non-governmental agencies make a "prior" determination within their domains to provide "assistance". That definition of "obligation" overrides and precludes determination of need. There may be examples of where community organizations are overwhelmed but nearly that assessment is made by organizations external to the county as a matter of course in justifying its involvement. Such external involvement, of course, may be "requested" by local officials, at at times perhaps by uninformed and inexperienced officials. In any case, the differentiation of this type from the previous type

is marked by extensive organizational involvement by extra community organizations.

Three different dependent community disasters can by identified. In all of the subtypes, the assumption is made by organizations external to the community that the local response capacity is weak, damaged or non-existent. The three subtypes are 1) Conflict Dependent 2) Client Dependent and 3) Proxy Dependent.

1) <u>Conflict Dependent</u> Perhaps a better term would be "violent" conflict or the concept of civil "strife". Certainly, conflict is a common feature of every community, however, conflict usually operates within a context of some normative limits. e.g. within the "governmental process. There are many occasions when violence, or force or threat of force is used as a method of conflict directed toward some political end. This is an area of many complex issues in conceptualization which will be slighted here but the simple observation will be made that aspects of violence often become institutionalized to the extent that units external to the community see themselves as "necessary " to support the local "deteriorating" and perhaps polarized community organizations. Such external interests may serve to strengthen perceptions of unfairness and can lead to further divisiveness. Increasing divisiveness is then seen as justification for additional external assistance. The pattern of organizational involvement is, by its very nature, "emergent" and a frequent outcome is the creation of a dual assistance system, somewhat isolated from one another and at times "opposed" to one another.

2. <u>Client Dependent</u> A rather common pattern of disasters, especially in developing countries, are what can be called client dependent disaster. The assumption is made that the local community is unable or incapable of dealing with the range of disaster demands. Thus, high levels of government assumes that such communities have to be supplemented or "strengthened". In certain instances, this assistance could be the result of disaster preplanning but in most cases, the judgment is made case by case, so that the pattern of organizational involvement is amost always emergent.

3. <u>Proxy Community</u> These disasters are defined most frequently by media, national and international organizations relating to gradual and perhaps chronic demands which over time are assumed to have lowered the capacity of community systems to act as a responding unit. To a large extent, the "response" community are "surrogate" composed of fragments of previous social structures. Those fragments may come from the consequences of other disasters when in response smaller social units, such as families, have migrated, thus lowing their "old" community. The interest here, however, is not on tracing the complex casual links but on the notion that, at some point in time, a "catchment' area develops and is identified as containing aggregates of people who have

been earlier "disinfranchized". i.e. hold citizenship in no viable community. These circumstances result in the creation of an "ad hoc" community or "surrogate" community, an amalgam of many local, national and international elements of social structure which cumulate. That process creates a new "community" with the primary function of responding to immediate disaster needs as well as to develop longer term "solutions", perhaps the re-establishment of some "real" community.

Research Focus: Certainly one common thread among the three sub-types is the emergent system which characterizes the disaster response, in large part because prior disaster planning is likely possible only by external agencies, consequently, the pattern of response then centers around the needs of the external agencies, rather than the clients. In effect, the emergent systems are likely to be rather paternalistic. Perhaps instances which do not fit the pattern of paternalism should be especially sought out to study..

In conflict dependent, the dual system might best be studied from the viewpoint of the community conflict literature and in terms of political and social movements. There is some literature of the differences in the functioning of emergency organization in conflict and consensus disasters. There is also some literature on forms of "deviant" behavior in the contrasting situations as well as the emergence of new "accommodating" leadership roles. Not a great deal is known of the longer term consequences of community violence and the adaptation which family units make to that, although considerable insight might be derived from "wartime" situations.

In the proxy community, a research focus could be directed toward the continuities of social life which persist among the 'victim" population(s), continued patterns of migration, the reinfranchisement process, the integration of local and external elements in the social "construction" of the community, differential patterns of response by different international agencies and by differing organizational philosophies, the shifting pattern of community needs in relationship to external political considerations, etc.

Possible Empirical Examples: Many examples could be drawn form major disasters in developing countries. Conflict-Central Mindanao, Sri Lanka, Lebanon, Sudan, El Salvador. It would seem to be that most "famine", drought, and perhaps refugee situations should be studied from the viewpoint of the "proxy dependent" community, at other times as client dependent and perhaps on occasion as autonomous community disasters. There is no reasons to assume that they should be any different than any other "agent" in having differential effects. It is quite possible that a more detailed typology of proxy community could be developed by examining existing "case' studies. Such research might result in more complexity or perhaps the category does not

reflect a core of reality. There is some literature on the creation of "intentional" communities and there is also a scattered literature on relocation and resettlement which provide certain hypotheses.

NON-COMMUNITY DISASTERS

There are two other disaster "types' which will be mentioned here for completeness although they may not merit extensive attention at this time. The differentiation important here is that the central analytical social unit is not the community. In these types effects and the response is focused on other social locations. The primary example will be identified here as the sector/network "disaster".

   Sector/Network "Disaster". This type is best explained by contrasts to the previous discussion. In contrast with community disasters, demands ae primarily confined to one sector (institutional area) of the community and thus have little significance for the broad range of potential emergency organizations. That is, the effects do not directly affecting normative domains of many other organizations. Thus, the "disaster' a sector "problem" rather than a "community" problem. The response structure does not take the usual community format but is sectorial, linking a network of people and organizations together but that response does not demand extensive or total involvement of most community emergency organizations.

   It would seem that most current environmental issues are best described as sector disasters, as well as responses to most disease entities. it is also important to note that there are parallel sub-types in reference to sector accident, which would describe now most incidents of hazardous materials spills in developed countries. In addition, there are examples of what might be called dependent sector disasters, which now characterize many of the environmental-ecological issues in developing countries. The network within the sector links persons and organizations within the local community with others at the national and sometimes the international level. Those linkages often create the opportunities for potential conflict when national and international members of the network demand greater local concern and involvement than the "locals" feel is merited.

   Research on sectorial disasters would substitute a social network focus for research, rather than a community focus. In addition, the perception of community members as to the obviousness and seriousness of demands would be reseachable. One might hypothesize that most community member would reflect rather little concern. Consequently the network might attempt to create a hightened awareness of the disaster demands and their consequences. The vocabulary they use to define the problem may

be apocalyptic and epidemic. In these types of disaster, the media might play important "defining" role. In fact, one of the strategic direction of sector networks would be to convice other sectors in the community that sector disaster are actually "community disaster and a few empirical situations, sector disasters might become community disaster that status might describe Love Canal in relation to toxic materials USA as well as San Francisco in reference to AIDS. Careful research on the expansion of sector disasters to community disasters might provide one research focus.

Non-institutionalized Disaster. The final "type" is a contradiction in terms of the theoretical scheme just presented so an accurate label is difficult to find to convey empirical reality. Perhaps the terms of "near-disaster, public opinion disaster, movement disaster or perhaps non-disaster might describe certain cases which are at the margins of consideration, especially when the term has been defined here in terms of the institutionalization and involvement of emergency organizations. Its very description of not being well institutionalized within organizations could preclude its consideration within the typology. There are periods of time when "potential" demands become a part of public discourse. That discussion centers on "shifting" what previously have been considered "personal" problems to the level of concern which deserves institutionalized attention within the community.

Such public discussion centers on the criteria of social harm the capability of the victims, their characteristics and the scope of social responsibility. That is, there are discussions about effects, about victims and social responsibility.

These issues are not only the focus of media attention but can be a focal point in the development of social movements and political protests. It is quite possible that these "non-institutionalized" disasters are simply an early evolutionary stage of sector or community disaster. It may be the identification of social harm, particularly among innocent victims, is a necessary precondition to the discussion of the location of social responsibility. Too, the focus of social responsibility may shift from "private' to governmental organizations in that evolutionary process. While this is not the place to further explore these issues, they should offer many research opportunities. The issues, however, are more likely to utilize theories of mass communication, collective behavior and social movements than organizational and community theory. A careful examination of historical materials might reveal a "stage" theory of disaster more clearly linked with their "origins" in social movements, rather than linked to physical conditions.

A RESEARCH FOCUS ON OTHER SOCIAL SYSTEMS

Although the previous discussion has focused on the community and variants of it as a key analytical unit for analysis, there are obviously other choices. Several others could be mentioned:

Mass Assault   —   informal and spontaneous behaviour, involving search and rescue, debris clearance, etc; activities which center on "unorganized" helping

Family   —   adjustment of risks, preparedness actions, decisions to evacuation, collective interpretations of warnings

Task Subsystems-   search and rescue, "damage" assessment, emergency medical services, warning, evacuation, coordination

Organizations   —   the relationship between political and
Interorgani-   administrative systems; the question of
zational   the consequences of emergency response
Political   being placed in security, welfare, or
Administrative   "political sectors
Systems

National Systems

International Systems

Keeping a focus on the interrelationships between systems is especially important when doing individual psychological research and in the use of questionnaires directed to individual respondents. For example, many studies of warning messages seem to assume that people only get messages from the mass media and therefore the primary explanation of whether on heeds warning messages is whether they understand certain "words". Obviously warning is a very complicated social process in which information and confirmation of warning as well as decisions to take preventative action occur. Questionnaires directed to individual respondents often do not measure that social context and therefore "conclude" that heeding warning is a consequence of individual rationality and knowledge. Similar errors are made in studies of victims. Most studies would show that "victims" will respond that they are not bad off but the people over there are much worse off. The people over there will report that they are o.k. but the people over there (whom you have just questioned) are the ones in really bad shape.

The point to be made is that individual responses always have to interpreted in some social context, not as some inherent personality attribute or not even as some inferred cultural

trait, such as "fatalism". Thus research which looks at the individual patterns of interaction or in terms of reference group theory is much more likely to understand behavior. Perhaps the primary point is that studying system interrelationships is essential. As a general principal, behavior at lower level system, such as the individual, can seldom be explained without understanding of the social context in which that individual apparatus. That is also the lesson provided by studies of hazard perceptions. Hazards are perceived differently by people in different social systems and there is no "objective" measure which will supplant that fact. This is why the earlier emphasis has been on the importance of normative judgments in defining disasters

A RESEARCH FOCUS ON SOCIAL PROCESS

While the previous discussion has focused on social structure-various social units, that focus centered on a particular time frame of the disaster occasion the emergency. By implication, that formulation implied the possibilities of viewing the disaster occasion along some continuum of social time. In general, there is a common vocabulary which has emerged which includes mitigation, preparedness, emergency response and recovery. Those stages should not be measured in chronological time but as a characterization of types of activities and processes which hold the potential for reducing the negative consequences of the disaster occasion. Mitigation refers to activities and processes which reduce the occurrence of a disaster occasion. Preparedness refers to activities and processes which minimize disaster impacts and damages. Response refers to actions to provide the most efficient and effective behavior in fact of a actual threat or threatening impact. Recovery has reference to those processes and activities intended to move the unit back to a re-establishment of routine social life. The various "stages" are intended to exhibit some continuity and are, in potential, circular in nature, since recovery can involve mitigation attempts.

The advantage of such a formulation is that it structures social reality in terms of processes and consequences. From a researcher's point of view, however, there are a number of important questions about the continuity of the stages. Can mitigation be successfully implemented during the recovery period? Does disaster "preparedness" have any influence on the emergency response"? There are all reseachable questions and others will discuss them in greater detail.

In addition to maintaining a focus on social units and on social processes, there are other conceptual possibilities which allow certain topics to be dealt with some degree of completeness. For example, it can be useful to take a social systems approach in the consideration of such topics as warning,

since that process involves actions by organizations that monitor threats in transferring information to organizations that prepare warning messages which then communicate those messages to "populations". This population interpret those messages in differential ways and then this evokes various forms of social interaction and, as a consequence, certain behavioral responses. This is a complex social process involving several stages as well as different levels of social structure. It can best be treated as a middle range theory so missing knowledge within the theory can be more easily identified. There would be other "middle range" theories centering around concepts such as evacuation, relocation, mass assault and converge and, organizational change, interorganizational coordination and longer term community changes which hold the possibilities for clarification.

Finally, there are always opportunities in disaster occasions to test theories and concepts derived from completely different contexts. For example, when the Disaster Research Center started organizational research, the initial models used were drawn from the existing organizational literature. Those models were found to be too static to deal with organizational behavior in disaster. Consequently, this lead to the development of other conceptualizations, such as the typology of organizational involvement introduced earlier. If more general theory has validity, then they should have application in the disaster concept, for example, family decision making theory should "work" in the decision to evacuate and family "adjustment" theory should be applicable in understanding the recovery process at that level. Perhas the point is which is being stressed is this, since disaster behavior is human behavior, good theories of human behavior should be applicable in disasters. If they are not, then they are not good theories.

GOALS OF THE SEMINAR

The previous comments are intended to provide a rather brief introduction to some of the way which social scientists might approach disasters. This was only a prelude to implementing two major themes of the seminar: 1) to develop a research agenda which is appropriate to the region and 2) to discuss how that agenda might be implemented. Since the outcome will be our collective responsibility, it is difficult to anticipate our outcome, but let me suggest certain guidelines which might be considered important for our discussion.

1. Research Agenda The development of a research agenda is a complicated social process, although in its final form, that process is often disguised by abstract statements. It is possible to develop a research agenda based on different, not necessarily compatable criteria. An agenda might be based on individual personal interest. It might be based on disciplinary grounds. It might be based on pragmatic judgments about possible

application. It might be based on perceived "relevance" to a particular locality or region. I suppose that it would be difficult for each of us to sort out the weight of the various considerations in our own evaluations. It would be my judgment that the prime criteria to be utilized in the final agenda should be scientific and theoretical ones. This is simply based on my own experience that a good theory is the most practical thing that one can have.

The seminar also has a regional reference in its title which, I hope, is a more accurate description of the residence of many of the participants than it is as a rationale for delimiting the scope of our agenda. While "regional" concerns may be relevant for certain issues, my own experience in research activities in different countries has been to reinforce view that we are dealing with similarities of behavior, especially in terms of the response to threat. The differences in structural arrangements which are unique to the region do not delimit existing research but only provide an opportunity to explore their consequence. In other words, it is more important to emphasize similarities, especially if the differences are not substantial.

2.   The Implementation of a Research Agenda   Perhass more important than the details of the research agenda will be to make some process in the oration of research network which might implement that agenda. Perhaps one way to start is to accept the self definition that, as social scientists interested in disaster research, we are perhaps the smallest minority group in the world. Few of our colleagues, either in academic or in any other circles will understand or especially appreciate that idiosyncratic interest. Consequently, we must seek out own "kind" wherever they are. This, in itself, guarantees that the research network be interdisciplinary and international. Given that fact, then the question becomes what do we need to do to sustain that fragile network. Part of the answer may come in our attempts to identify literature and information sources. Part of the answer might be in the development of cooperative research projects. Part of the answer might be in the development of national and international professional association. Again, implementing any research agenda is fundamentally a social process and sometimes the results may not be evident for many years. but, in addition to good ideas, we need to think out ways that we can be of assistance to one another. We need to be able to sustain with some grace and hope, our own minority status within a world that gives us little attention. Because that "world" gives us little attention, we still need to give it our attention.

FINAL COMMENTS

I have perhaps exceeded my prerogative in the opening session by suggesting too many alternatives but I do want to finish with two observations for your consideration.

In large part, researchers look at problems which is already in existence, and to study past solutions to look to the part. Disaster relevant organizations find problematic the <u>last</u> "big" disaster which happened to them. Researchers, then, often are asked study <u>past</u> problem, those identified by disaster related organizations. ·In developing a <u>future</u> research agenda, we cannot afford to focus our attention exclusively on "past" problems. We need to focus on the future-future disasters and future types of organizational response to those agents. The very concept of developing countries implies change and, in some instances rather rapid change. This suppests that attention only to "past" disasters will not be adequate for the that future. Most developing countries are becoming industrialized and urbanized, since that is inherent in the concept of development. Increased technology will bring on new threats, now unknown in more traditional societies. Technological advances also add complexity to old threats. In any case, it may be important to anticipate future disasters rather than focusing on the "past".

In addition to the development of a research agenda, some continuing thought needs to be given to the process of how research is translated into action, especially into planning action. While this is a generic problem, there ae differences between the transfer of technology and those of new and different ideas. As it stands now, there is a considerable body or research on the social aspects of disasters which is widely "known" within the research community and also in some policy communities which is not nw being applied. For example, a number of problems concerning warning systems and based not on technological "faults" but on the reluctance of officials to issue relevant information, predicated on their belief that people will "panic". One direction of research might be to explore images of "disaster" behavior among various governmental and non-governmental agencies. Those images range from deep grounded notions of the inability and incompetence of people to deal with threat and/or danger. This attitude is often compounded by notions that the functions of government are to "control" the erraticibehavior which they assume always accompanies disasters. This notion of the necessity to "control the "people" and the rather standard view of the inability of social structures to cope with disaster problems is distributed differentially in various levels of government and in some societies more than in others. In any case, one item in a final research agenda might center the acceptance and utilization of social science research by governmental agencies. Those research findings "challenge" conventional wisdom but, in pratice conventional wisdom usually prevails.

CONCLUSIONS AND SUMMARY

It is the goal of the seminar to develop a research agenda on disaster which is cast in terms of social science concerns and concepts. Several preliminary ideas were presented about the intellectual history of the field as well as certain lessons have been learned. The prime lesson is that it is important to study disasters in the context of social structure and social process. To understand disasters, the sources of explanation have to be found in the predisaster structure of social life and its adaptation to disaster occasions, rather than viewing disasters as episodes of social pathology and disorganization.

One conceptualization of the disaster occasion was presented, starting with the idea that disasters were normatively defined. The locus of such definitions in this conceptualization was the local community since that form of social life is always the responding unit. In particular, the response was characterized in terms of organizational involvement, since disaster demands have to be related to community organizational capabilities. Two major types of disaster were identified - Autonomous Community and Dependent Community and two non-community based types, sector-network disasters and "non-institutionalized" disasters which have firm normative base within the community. Certain research opportunities were identified for each type.

Alternative conceptions of disaster occasions can also be based on social processes, systems theories and also be used as a context for testing general theories within the social and behavioral sciences.

The development of a research agenda which is based firmly on previous research is critical. If that base can be expanded to reflect new research opportunities which are provided in societies within the Asian-Pacific region, then the knowledge base becomes more secure. To reach such a goal will require the concerted effort of many people in many places who can be sustained by resources drawn from an international network of researchers. Such a network might gain increasing attention from the policy community since many national and international agencies now show increasing interest in reducing the social costs of disaster. The reduction of those costs are much more likely to be achieved if the directions are guided by good research.

NOTES

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1.   I have deliberately minimized bibliographic references to ideas expressed in the text and to specific mention of particular sources,

2.   This form of definition was suggested to me by Everett Ressler, although I have made minor modifications in his overall idea.   I have dropped the term "event" used in early ..... for occasion", since event conveyed to some a determinism which was not intended.   It would seem that "occasion" suggests more effectively the notion of an opportunity for something to happen, as used by Erwin Goffman while event suggests an predetermined outcome.   In the rethinking process, I have benefited from a paper by my colleague E.L. Quarantelli, entitled "What Should We Study?" which was his presidential address at the ISA Research Committee on Disasters at the World Congress of Sociology, New Delhi, August 1989.

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Figure 2

Types of Community Disasters

Disaster

Conflict

IV   IV

Client

IV

Proxy

IV

Dependent Community

I   III
II   IV

CO

Accident

I

Non-Institutionalized   Sector Network   Autonomous Community