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PROBLEMS AND PROSPECTS OF
COLLABORATIVE CROSS-CULTURAL
DISASTER RESEARCH*

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INTRODUCTION

First of all, I want to thank Dr. Metreveli for inviting me to this symposium. I am very glad to be here for two reasons. One is a personal reason - this symposium will allow me to meet distinguished researchers and scholars I have heard or read about (such as Professor Geipel and Dr. Frey), but have never met. Such personal meetings will allow me to learn about studies and works that are new to me.

But, the other reason I am glad to be here is a more professional one. An international symposium such as this one on disasters and accidents is important for what it symbolizes. It indicates we are moving beyond just talking about international cooperation in research. We are starting to move towards collaborative efforts in research and theory.

Last year in a Congress in Sweden, about twelve different countries in which systematic disaster research is being conducted were represented. The meetings at that Congress had two significant results. One was the creation of an International Working Group on the Study of the Social and Behavioral Aspects of Disasters. This Working Group has several hundred members and has a newsletter, Unscheduled Events, which is circulated around the world. Another outcome of the Congress in Sweden was a strong recommendation that national, regional and international meetings of disaster researchers should be held. Dr. Metreveli has indicated that this meeting is partly a response to that recommendation. At least four of the countries present in Sweden are also represented at this symposium.

Meetings such as this one are good for learning about one another, for exchanging ideas, and in general for establishing an international network of researchers and scholars interested in the disaster area. But another purpose

can also be served by these kinds of meetings. They provide an opportunity to allow suggestions and recommendations to be advanced which might help bring about international and collaborative research efforts.

Thus, my remarks today should be taken as proposing a series of steps which might move us closer to actual joint or common research by disaster students in different societies. Such research, carried out on an international scale, would be truly cross-cultural research. It would certainly be cross-cultural in the sociological and anthropological senses insofar as it would involve social and behavioral scientists from two or more societies working together on disasters in at least two countries.

Actually, Dr. Metreveli asked me to talk about both disaster and accident research. But, since my own work has been almost exclusively in the disaster area, I will primarily address issues about disasters rather than accidents.

Nevertheless, I must confess I am not certain if, where and how the line should be drawn between disasters and accidents. There are many questions which could be asked about the two phenomena. Is a disaster merely a big accident? Is an accident a small disaster? The Red Cross in the United States classifies an emergency is a disaster if five families or more are involved. Why are some incidents involving loss of life and property in a coal mine called accidents, and others called disasters? Why is there a tendency to call emergencies created by natural agents, such as earthquakes and floods, "disasters," but to call those incidents involving man-made or technological factors, such as motor traffic crashes and wrecks or electric power system failures "accidents?" Yet, in a current study being conducted by my organization, the Disaster Research Center (DRC) at Ohio State University, we are treating transportation accidents (either motor or rail) that involve the release of dangerous chemicals as disasters. Was the recent threat at the

Three Mile Island in Pennsylvania in the United States an accident or a disaster?

Obviously, considerable thought should be given to the relationship between accidents and disasters. Conceptually, they could be visualized as the ends of a continuum, or they could be thought of as qualitatively different even though both might be seen as part of a larger category of stress or crisis situations. This is just to mention two possibilities.

I will not attempt to resolve this problem here. I will talk primarily about those kinds of mass emergencies which tend to be called disasters or catastrophes. Hopefully, someone else will soon address the conceptual problem of the differences, if any, between disasters and accidents. Probably the two fields of disaster and accident research can be fruitfully pulled together, as the fields of fire and disaster research are currently coming together in the United States and Japan.

In my talk here, I want to discuss three major problems involved in undertaking any international or cross-cultural disaster research. In the broad sense of the terms, I think there are theoretical, methodological and ideological problems involved. Until we resolve these three problems, or more accurately, until we reach some agreement or consensus about them, we will not be able to actually start or launch any cross-cultural research.

First, as I see it, we need to have some agreement about the theoretical framework which we will use in conducting studies. If we are going to do any kind of comparative research, we need to have a common theoretical framework. What I specifically mean by this will be detailed in just a few minutes, but it involves agreement on the basic units of study.

Second, we need some consensus on the methodological perspective which will be used. I am not referring to the particular research techniques to be

used, but rather how any collaborative study is to be organized. I will shortly suggest that we cannot work together if we do not have some agreement on how we should work with one another.

Third, in order to conduct collaborative cross-cultural research, we have to agree on our ideological orientation towards research. For what purpose do we seek knowledge? In a little while, I shall indicate that we eventually need to agree on the value of disaster research in terms of the ultimate goal of the research--is the work to be basic, applied or evaluative?

In previous talks and papers, I have advocated cross-cultural research and have even suggested some first steps which need to be taken. Many of my earlier ideas were initially presented at a disaster symposium in Australia, an updated version of which will appear in the next issue of the British professional journal, Disasters, under the title of, "Some Needed Cross-Cultural Studies of Emergency Time Disaster Behaviors: A First Step." My remarks today build upon that earlier work and are intended to help us actually implement, actually undertake cross-cultural disaster research. Not only must cross-cultural studies be advocated but also the concrete steps which have to be undertaken in working together must be spelled out. My comments today are primarily an attempt to detail some of these concrete steps.

But first and very briefly, why should we be interested in cross-cultural disaster research, and what has been done and found in previous cross-cultural research in the disaster area?

PREVIOUS CROSS-CULTURAL RESEARCH

It is commonplace to advocate cross-cultural studies in the social and behavioral sciences. Of course, the call for such research far exceeds the implementation of such work. Unfortunately, cross-cultural examinations are perhaps more necessary in looking at the social and behavioral aspects of

disasters than in most other areas of scientific inquiry. This is due to the up-to-now overwhelming American pressure in the disaster area. This is true with respect to both the national background of disaster researchers and the geographic site of disasters studied. The exact extent of this high selective involvement by Americans varies somewhat depending on the criteria of exclusion and inclusion used. However, a preliminary inventory of all social and behavioral science research of disasters ever undertaken indicates that perhaps 85 percent of all disasters studied have occurred in the United States and a slightly higher percentage of the empirical studies have been undertaken by American nationals. Fortunately, the situation has been rapidly changing in recent years as French, Japanese, Canadian, German, British, Belgium, Australian, Swedish, Italian and other researchers around the world have launched studies into disasters. But, the bulk of the work and the studies continue to be American in orientation.

The potential ethnocentric bias of observations and interpretations that may be involved because of this argues for a need to redress this imbalance. But apart from that, disaster study provides an exceptional opportunity for the comparative analysis of societal, community, institutional, organizational, group and individual behaviors. Disaster events are particularly useful for comparative description and analysis. This is because they activate a variety of social structures and processes through which group and personal actors attempt to cope with the unusual situation. Unlike many other happenings, disaster agents, by their very nature, irrespective of cultural settings, force some sort of adjustive response. They cannot be ignored given their literal threat to life, disruption of routines and endangerment of property. In addition, such extreme stress situations allow an examination of complex social and psychological phenomena which in "normal times" remain hidden or

only partly emerge. As often has been said, great stress brings out the generic or fundamental aspects of behavior divorced from the superficial or the accidental. Mass emergencies surface panhuman and pansocial features. Finally, disaster events are also useful for comparative purposes because they not only help us understand the more immediate adaptation to extreme stress but also allow us to better assess longer-run consequences. In fact, the latter may often be more socially and politically important than the former, for disasters are not only the embodiment of ephemeral news but the stuff of permanent history.

Despite these alluring features, there is a surprising lack of disaster research which cuts across societal boundaries. As several recent reviewers of disaster literature have noted, cross-cultural studies of disasters have been, both relatively and absolutely, very few in number. As far we have been able to ascertain, to this time there have been only four explicit comparative studies completed; although several other pieces of relevant research are underway. A brief look at what the finished studies cover reveals that very little of a cross-cultural nature has even been the subject of a glance, much less of intensive examination.

The first explicit study was undertaken by Clifford in 1955. He seized the opportunity presented by a flood that threatened two neighboring communities on opposite sides of the Rio Grande River which separates Mexico and the United States. His major finding was that Mexicans, when compared to Americans, were more dependent on the kin group as a source of advice and help and were more reluctant to accept formal or official pre-disaster warnings and post-disaster aid. In Mexico, also, there was greater resistance to cooperative relationships among emergency-related organizations and a stronger dependency upon "heroic," personalized leadership rather than on "rational", bureaucratic authority and cooperation. Clifford suggests that the gross differences in

response could be attributed to basic cross-cultural differences between the two societies. In Mexico, there is a tendency to place greater emphasis on ascriptive criteria such as age, sex, social class and kinship in ordering social relationships. In contrast, in the United States there is greater emphasis on formal group positions rather than informal personal relationships in the activation and on-going activities of complex organizations and agencies.

McLuckie, in a much later piece of research in 1970, drew on field studies conducted by DRC at Ohio State University in three of the dozen countries in which it had undertaken empirical work. He looked at certain aspects of disaster responses in Italy, Japan and the United States - countries very similar in regard to a number of demographic, economic and political variables and subject to similar types of disaster events. However, these societies differ in their degree of political centralization. Japan is the most highly centralized, the United States the least centralized, and Italy falling between them as to degree of political centralization. By matching as many variables as possible, McLuckie was able to isolate the consequences of political centralization in these societies on the performance of similar tasks in each of three different disasters, one earthquake and two floods. For example, he found that preventive actions involving warnings and evacuations were often delayed in the more centralized societies. Traditional patterns of decision-making, which typically involve higher level authorities, make it more difficult for local people to make decisions, even though they may have a more realistic assessment of the danger in a situation. McLuckie also found that disaster task responses which were of an immediate emergency nature tended to involve less centralized decision-making, regardless of the social structure. However, his analysis showed that the degree of centralization in decision-making varied with the time order of the disaster. For example, political centralization was less

important in the initial stages when high priority or emergency tasks were involved, but its importance was reasserted in the later stages of disaster activity.

The third cross-cultural study is by Anderson. In a secondary data analysis, he pulled together independently conducted field studies by DRC on the response of the military in five different societies - in Chile, El Salvador, Italy, Japan and the United States. He observed that in all societies the structural characteristics of the armed forces, such as their established command systems, allow them to provide valuable emergency time services to disaster-struck communities. On the other hand, in more politically centralized societies there is a tendency for military organizations to become involved in post-disaster relief activities in a leadership role rather than in a supportive capacity. However, Anderson also found that the involvement of the military in natural disasters is a function of the structure of local communities. Thus, the military is more likely to get involved in emergency relief activities when the affected community does not have an effective organization and leadership to cope with the emergency created by the disaster.

Finally, the fourth cross-cultural study was conducted by social scientists from the University of Colorado and Clark University. They undertook an explicit comparison between responses to the Managua, Nicaragua earthquake and to relatively recent, as well as past, disasters in the United States. One focus was on family responses. It was found that there are societal differences in the degree to which aid from kin is used, in the amount of aid from extra-familial sources, and in the extent to which disaster victims rely on personal resources.

Apart from these four explicit cross-cultural studies, there have been about a dozen other studies which have used an implicit cross-cultural framework. That is, the social dimensions used to look at and observe disasters

in one society have been used to order and look at a disaster in another society, although only one society was actually studied by the researcher making the comparison.

For example, several decades ago, an intensive study of the Holland flood of 1953 was particularly informative because it was primarily guided by what was known up to that time about individual and group disaster reactions in the United States. A little later, in 1964, Grimshaw took what was known about family and governmental disaster responses in American society and looked at the responses in Indian flood in those terms. At about the same time, DRC compared its early research findings on organizational responses to the 1964 Alaskan earthquake and its later research on the 1964 Niigata, Japan, earthquake. A few years later, Wettenhall and Power took much of the contemporary disaster literature and attempted to see to what extent findings about group behavior observed elsewhere were also observable in the massive brush fire that affected Hobart in Tasmania in Australia. Last year, Italian researchers looking at the Friuli earthquake reported on similarities and differences in what they found and what other researchers have reported about behavior and reactions to disasters in American society. In 1979, Oliver-Smith examined if the sequential patterns of community consensus and conflict observed in the post-disaster period in American society were manifested in the aftermath of the 1970 Peruvian earthquake, particularly the avalanche in Yungay. As a final example, we can note that Ahearn has just reported his initial impressions on whether the mental health consequences of the Managua, Nicaragua earthquake do or do not parallel those which reportedly follow disasters in the United States. There are still other studies which could be cited but these are a good representation of the implicit or indirect cross-cultural studies which have been done.

The major values of these studies, limited though they may be in number and scope, are that they do indicate that cross-cultural studies can be done, and that there appears to be universalistic as well as particularistic features in disaster response. These may seem obvious things to say. However, they do appear worth saying.

For one, it is easy to advance in the abstract reasons why cross-cultural studies are impossible to conduct, especially in a disaster context. What has been done shows that projections about the hopelessness of such research may be exaggerated. Not only implicit and indirect, but explicit and direct cross-cultural disaster studies can be done.

Second, at least seemingly tenable hypotheses about universal human and group responses to disasters seem to be emerging. Some anthropological commentators on disaster studies do appear to believe no valid cross-cultural generalizations have yet been established. Part of this is simply a traditional anthropological obsession with seeking cultural variations in behavior. It also appears that in some cases, at least, there has been an incorrect reading of only part of the existing disaster literature relevant for comparative cross-cultural purposes. Our view is that even the limited work which has been done strongly suggests that we will be able to derive universalistic generalizations about disaster behavior in different cultures (e.g., regarding panic behavior) as well as note, of course, what is particularistic or culturally distinctive about other kinds of responses (e.g., regarding volunteers).

FUTURE CROSS CULTURAL RESEARCH

So much for the past. What of the future? What must be done if we are to move ahead?

Almost all previous explicit and implicit cross-cultural research in the disaster area has been quite unsystematic and non-cumulative. This has been repeatedly noted at international meetings of disaster researchers. In a week-long Japanese-United States Seminar on Organizational and Community Responses to Disasters, a major conclusion was that if cumulative findings were ever to be obtained, it was time to start laying the groundwork "for joint and/or cooperative research in the disaster field." A later meeting in Paris in 1975 involving researchers from Belgium, England, France, Japan and the United States formally proposed that the next meeting of international disaster researchers actually start to formulate some common research project. At the congress in Sweden last year which I alluded to earlier, there was considerable consensus among individual researchers present that cooperative efforts be launched. A joint Japanese-United States research effort will probably be started next year. Thus, we have inched closer and closer to cross-cultural work.

However, as I have already indicated, we need to address certain theoretical, methodological and ideological questions and issues before any actual collaborative effort can be undertaken. I do not assume that what I will suggest is either the only way or even the best way to handle the problems discussed. It is one possible way, and if what I say evokes the explicit formulation of other and better ways, I will have achieved my purpose, namely to move cross-cultural research in the disaster area closer to actual implementation.

A THEORETICAL FRAMEWORK

Many different kinds of schemes or frameworks could be used to guide and to order cross-cultural studies. Totally apart from the disaster area, examination of the literature indicates that no particular formulation dominates cross-cultural studies. If anything, scholars involved in such research push the theme that any scheme used should reflect important aspects of the specific topic or area being studied.

In line with my earlier comments, I, therefore, propose a theoretical scheme whose basic dimensions are relatively free from cultural bias and capture the range of phenomena which are involved in all disasters no matter where they may occur in the world. Essentially, I suggest that there are at least six different units of study and 14 different problems which are potentially universal in all disasters. That is, these six are the possible acting units in disasters, and these 14 are the possible problems which have to be solved in disasters.

My position is that these are the acting units and the kinds of disaster problems which can be found in all societies irrespective of other cultural differences. Furthermore, both the units and the problems are relatively independent of any particular theory of human and social behavior although their selection does reflect a general sociological bias on my part. Additionally, the formulation has already been shown to have some research value. When this scheme was applied in an exploratory fashion to most of the 23 different disaster events in eleven countries which have been the object of DRC field studies, the scheme proved useful in structuring field data gathering efforts and/or in ordering data analyses. This does not mean that the formulation advanced is without flaws

or that more powerful schemes might not be developed. It does, however, mean that our formulation has some operational research value.

The six units of study which I think should be used in cross-cultural studies are: (1) individuals; (2) small groups; (3) organizations; (4) communities; (5) institutions; and, (6) societies. I cannot justify here in detail the choice of these six or itemize the important ways in which they differ from what a few other writers have presented as ordering schemes. Clearly, I take those social clusters which I see as the major actors which tend to respond to disaster events in all settings, as the possible units to be studied. Perhaps the least self evident of all I list of otherwise standard sociological concepts for responding social entities is "institutions." By that term, I am referring to complexes, such as emergency medical care health delivery systems which usually extend beyond community boundaries and yet are far from being societal units.

Such questions as "are the responding entities systems?"; "what is the nature of the relationship between them?"; "what is their relative importance in affecting what occurs?"; and numerous similar issues and questions which legitimately can be raised, are, I believe, empirical matters. In our view, these questions are not to be decided by definition or conceptualization.

Responding units attempt to deal with the demands created by disasters. These disaster demands are essentially of two kinds: agent-generated demands and response-generated demands. The former has reference to problems and requirements for response created by the disaster agent itself. The latter refers to another set of problems and requirements brought into being by the very activities that take place in response to the disaster agent.

There are at least nine agent-generated demands: (1) warning;
(2) pre-impact preparations; (3) evacuation; (4) search and rescue;
(5) care of the injured and dead; (6) welfare needs; (7) restoration of
essential community services; (8) protection against continuing threat;
and, (9) community order. There are at least five response-generated
demands: (1) continuing assessment of the emergency; (2) communication;
(3) mobilization and utilization of resources; (4) coordination; and,
(5) control and authority.

I do not have the time needed to detail each specific demand today,
but they have been described at length elsewhere in our writings. From
my point of view these demands are important because they are universal-
istic. That is, they will always be found in all disaster situations,
although their particular content will vary considerably from one setting
to another. In fact it is this combination of variation in content in
a universalistic form which makes these dimensions particularly useful
for application in a cross-cultural study.

Furthermore, and even more importantly, these 14 different universal
disaster problems can be cross-classified with the six previously dis-
cussed universal responding units. Or stated another way, it is possible,
for example, to study organizational level response with regard to all
14 problems, or it is possible to do research ascertaining how small
groups, established or emergent, deal with the range of problems and re-
quirements indicated. In a total cross-classification, 84 cells of dis-
tinctive phenomena for possible cross-cultural research are generated
if one were to depict it in a diagram or table.

In the long run, it would be necessary to conduct research into the
behavior involved in all 84 cells. In the short run, given that every-
thing cannot be studied at once, some priorities have to be assigned.

I have discussed priorities elsewhere so I will not touch on that issue here. But in general terms priorities can be assigned on at least three different bases, each of which I shall briefly comment upon.

One, some lines of research have either more theoretical and/or practical payoffs than other possibilities. A case can be made that greater payoffs will be found in those substantive topics or areas in which the greatest amount of empirical research has already been conducted. It can be argued that priority in research should be assigned to topics on which something is already known. If that is done, accumulation of valid knowledge is more likely.

Another argument, not necessarily inconsistent with the first one, is that priority in cross-cultural disaster research should be given to those studies examining panhuman and pansocial responses, that is, responses which are potentially universal and cut across cultural differences. Work which would focus on responses to disaster warnings and evacuations might be an example of such studies. To some extent, the work on panic flight which has already been undertaken in Japan, France, England, the United States, Sweden and West Germany would also seem research focused on panhuman and pansocial responses.

A third line of argument with respect to research priorities is that easily overlooked phenomena should be singled out for examination, for example, emergent groups rather than bureaucracies. In disaster studies in the United States, it has been observed "numerous writers have described various types of emergent groups that become organized to confront various challenges." It would seem particularly useful to attempt to see such phenomena in a disaster setting drastically different from American society. The major point here is the need to

study new and emergent social forms as well as the more traditional and established entities which respond to disasters. It is very easy to overlook the former and to overemphasize the latter. Because formal bureaucracies loom large it does not necessarily mean that in emergencies they are more important in disasters than informal emergent groups.

A METHODOLOGICAL PERSPECTIVE

There are only some passing remarks in scattered sources which address the question of how cross-cultural disaster research might best be undertaken. Yet discussions with Japanese disaster researchers suggest to me that the organization of research in different countries varies substantially. There are differences ranging from the way research funding is provided and the freedom allowed the researcher in conducting studies to the importance given to research publications and how this is affected by disciplinary affiliations. The differences can be of considerable magnitude, and in any case will require explicit attention before collaborative cross-cultural research can be undertaken by students and scholars from different societies.

Time will not allow me to address the full range of problems involved in the methodological perspective which could be taken. However as a simple illustration I want to briefly touch on how a collaborative research effort could be organized. What method of organization could be followed? At least three major possibilities suggest ehemselves, each with advantages and disadvantages. Collaborative research could be done through a separate but parallel effort through an independent but common effort, or through a joint effort.

Ideally, a joint effort would be the best approach. That is, a truly integrated team of social and behavioral scientists from different

cultural backgrounds and societies might be assembled in the field to study together the same disaster phenomena. The advantages of such a joint effort are many and obvious. In fact, such an approach could have all the positive research outcomes that are typically attributed to large-scale comparative studies.

However, there are many problems and difficulties with any even well organized attempt at a joint effort. They range from very mundane and practical problems to very profound and abstract differences in the method of organizing research in different societies. Accounts of inter-disciplinary and other cross-cultural efforts outside the disaster area suggest that even in well established fields, a joint research effort is not at all easy to carry out. Given such difficulties elsewhere and given the status of current disaster theory and studies, I am inclin to feel that the time is not at hand for venturing a joint effort. I do believe that such an enterprise ought to be the goal of disaster re-searchers; it is the ideal state towards which they should strive. But my feeling is that this is an objective that could more realistically be tackled by a second or third generation of international disaster re-searchers, and not by the first generation, which we represent.

A separa e and parallel effort could far more easily be undertaken. However, it would not be that much different from the disaster studies discussed earlier that have used an implicit, comparative framework. Continuations, or even extensions, of such work are better than no implicit cross-cultural studies at all. However, it is difficult to see how any cumulative findings can be obtained and how systematic coverage of im-portant questions and truly comparable research designs would not be left to chance through such an approach. This method of organizing

cross-cultural research is better than nothing, but far more is needed.

Consequently, I think that an independent but common research effort would be the best strategy to follow at this time. Cross-cultural research could be handled this way. As I see it, this would involve teams of researchers in different countries agreeing to the study of some common disaster problem--perhaps one of the high priority research topics noted earlier--exchanging ideas about a possible research design, agreeing that at least part of the research in their respective societies would use identical research instruments, and, finally, exchanging such data as have been collected through the common research design. There would be many advantages to such an approach. For example, natives of the country involved would struggle with the conceptual and linguistic equivalency problem that much of the cross-cultural literature, particularly on interviewing, mentions as a major difficulty. The issue of outsiders doing research in another country would be fully circumvented. Researchers versed in interpreting data from their own societies would prevent absurd perceptions of the data by analysts from other countries, who, in turn, would balance somewhat the ethnocentric tendencies of native observers. There are, naturally, some disadvantages in an independent but common research effort, but given the choices actually available, I feel this would be the best path for international disaster researchers to follow at this time.

AN IDEOLOGICAL ORIENTATION

Not only must we have a common comparative framework, but also we must have some agreement on how we organize ourselves for a collaborative effort. In addition, we need some consensus on the purposes of the research. For what is it to be used?

There can be and are differences in the value placed on different kinds of scientific work. These differences lead to different assessments of any work done, as well as to the asking of different kinds of questions. Any of us, who has done work with scientists from different disciplines or with scientists trained in a society other than our own, can easily testify that while science may be universal in principle, it is often very particularistic in specific application.

In very rough terms, I see at least four different major kinds of scientific goals we might have in a cross-cultural disaster effort. We might be interested in basic research, the obtaining of generic knowledge. This knowledge could be obtained solely within the framework of one discipline, or it could be interdisciplinary. Besides these two, a third objective might be applied research. This usually means looking at the research problem from the perspective of a research user. Finally, our interest could be in what these days is called evaluative research. We might look at the research question from the viewpoint of the population served. This latter kind of orientation is especially becoming popular in the consumer-oriented societies of the West.

To illustrate these different ideological orientations more concretely, let us take the matter of evacuation in a disaster. It could be approached as a matter of population displacement. From the perspective of the discipline of psychology, it could be studied as a question in social motivation. From a sociological perspective, evacuation could be seen as the outcome of the interplay of various social structural factors. If a researcher took an interdisciplinary approach, it might be possible to ask how evacuation was influenced by the interplay of psychological, social, economic and legal factors in the situation. In all these cases,

the research goal would be that of ultimately contributing to the basic knowledge and principles of the discipline or disciplines involved.

Applied research, instead, might look at evacuation as primarily a management problem. It would attempt to find out how evacuation could be brought about as seen from the viewpoint of some emergency organization. The goal in such applied research is how an organization can attain its goals as it sees them.

The fourth scientific goal possible would be illustrated by evalua-tive research. In that kind of study, the question to be asked could be the following. "Was the threatened population well served by being or not being evacuated?" The knowledge sought in such an undertaking is not for the purpose of contributing to the basic understanding of a discip-line. It is not for the purpose of helping some agency carry out its tasks. Evaluative research seeks as its goal an answer to the question of whether the population involved was or was not properly served by being or not being evacuated.

My illustration, of course, is somewhat oversimplified. But I think all of you will acknowledge that even this simple example shows how there can be different ideological orientations in disaster research. The purposes or goals for which the research is conducted may be varied and different.

What is the most effective ideological strategy for cross-cultural disaster research? Personally, I have found value in all four orienta-tions discussed and have done all four kinds of disaster research, i.e., basic disciplinary, basic interdisciplinary applied and evaluative re-search. There are advantages and disadvantages to each of the strategies.

If forced to make a decision, my choice would be dictated by that which would best fit the particular collaborative cross-cultural effort involved. In the practical sense, this means that in the vast majority of cases, applied research would be the best choice. It is a strategy which funding agencies understand. It is an approach which has a self-evident justification. It is an ideological orientation which is meaning-ful across cross-cultural lines.

In closing, I do feel the need to note one major potential problem in regard to applied cross-cultural research. Emergency organizations do not always ask the right questions. For a long time, the U. S. National Weather Service thought the applied question it had to answer was why people didn't pay attention to its disaster warnings. It took some sociologists years to convince the organization that it was far more meaningful and worthwhile to ask why the U. S. National Weather Service did not issue messages which people could and would perceive as warnings. Of course, this example shows that even funding agencies can be taught that perhaps their initial applied research questions may not be the right ones. Nevertheless, as we move towards collaborative cross-cultural research and accept the ideological strategy of doing applied research, we should be alert to the strong possibility that in the begin-ning we may not be posing the best research questions if we take the stance of the funding agencies.

There are many other things we could discuss which can affect cross-cultural disaster research. We all suffer from cultural biases. If a researcher comes from a decentralized political system as I do, it takes considerable time and effort to communicate with researchers from central-ized systems who think the important organizational questions to ask about disaster responses revolve around the position of the central

government and its local representatives. In addition to cultural dif-
ferences, there are also social structural ones which can affect collabor-
ative disaster research. In the United States, all university based
research is subject to very stringent bureaucratic rules with respect
to the kinds of data which can be obtained from human subjects. In
many societies, there exist no such formal, legal protection for the
subjects of social research. Collaboration between researchers from
societies having such different expectations and norms regarding infor-
mation which can be obtained in interviews from informants can obviously
be rather complicated.

It would be rather easy to cite other cultural and social structural
differences. However, I say this not with a sense of despair about all
the obstacles confronting genuine cross-cultural research. Rather,
I am implying that the sooner we make the problems explicit and some
agreement is reached, the easier it will be for us to move ahead together.

CONCLUSION

Rather than summarizing or repeating what I have already said, let
me conclude by emphasizing the following three points.

First cross-cultural disaster research is necessary. We can all
learn from one another. Just a month ago, I was in China. We went
rhrough Tangshan and stopped in Tienstein. both of which were hit in
the 1976 earthquake that killed 750,000 people according to an official
Chinese report. While I did not learn as much as I would have liked, I
saw and heard enough to confirm again for me that the more cross-cultural
disaster research we undertake, the better it will be for all of us as
disaster researchers, planners, responders or citizens of our society.

Second, cross-cultural research can be done. At least, I am convinced from even the little that has been done, that there are no insurmountable difficulties in the way of such research. There are problems but not impossibilities. Furthermore, my personal contacts with disaster researchers dispersed around the world from Australia to Italy, from Japan to Belgium indicate to me that my feeling about doing cross-cultural research is widely shared. The belief exists; it is a question of making it a reality.

Third, cross-cultural research can only be started if some explicit attention is given to the kinds of problems addressed in my remarks. We need to solve or at least agree upon the theoretical, methodological and ideological issues I have just finished discussing. I have offered some ideas on those matters. If they do no more than generate ideas better than mine in regard to the theoretical framework, the methodological perspective and the ideological orientation that we disaster researchers ought to use, then my remarks will have accomplished their purpose. I invite all of you to join what I hope will be an ever-expanding dialogue among disaster students around the world.

I appreciate very much this opportunity to present my views. Thank you.