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STRENGTHENING POST DISASTER MITIGATION:
A SOCIOLOGICAL PERSPECTIVE*

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Often a title of a paper is not a sufficient guide to its content.
However, within the title there is some indication that there is some
"sociological" perspective concerning post-disaster mitigation. In most
interdisciplinary conferences,it is somehow assumed that a "sociologist" is a
defender of people. And people are usually seen as being problematic to any
cherished or planned post-disaster activity. Often the assumption is made
that certain activities are appropriate and important for mitigation, but they
fail because of the "people". Consequently, this problematic source--the
people--are considered the province of sociologists with the implication that,
if sociologists were able to "solve" the people problem, all else would be
right with the world, especially since technological schemes could be
implemented. Such schemes are assumed to be in the interests of the people,
anyway. Thus, it is assumed that, if sociologists can solve the people
problem, planning efforts would usher us into some new utopia. The role of
sociologist is considered residual, rather than central, in the planning
process.

While that is a common view, it is an incorrect one. It is much more appropriate to assume that, if you ignore "people" in your planning, your planning will be ignored. In fact, instead of assuming that people are incidental to mitigation related activity, it is more appropriate to assume that disaster itself is essentially a sociological concept, rather than one which is based in the geological, atmospheric or toxological world. In effect, it will be argued here that "disaster" has to be seen in terms of social disruption. That disruption is only partially and incidentally related to physical damage.

Disaster, of course, is one of those words which has many meanings and which is used in many different ways. Disaster often is used to refer to the impact agent, such as a hurricane, a fire, etc. Disaster most often refers to the physical impact which the agent has, i.e., the physical damage and the personal injury. Other meanings are more psychological and sociological. Disaster can mean the evaluation of the physical impact. We see some physical damage and evaluate it as "disasterous". That evaluation is dependent not just on the extent of the physical damage but on our standard of evaluation. The final meaning refers to the social disruption which can occur as a result of the physical impact. Social organization at many different levels--family, neighborhood, organization, community, region and nation--can be disrupted.

In effect, I will argue here the most appropriate sociological perspective is to view disaster as social disruption and, in turn, point out that such disruption is only partially and incidentally related to physical damage. Unfortunately, we have few measures of this type of disruption. On the other hand, we do have a number of measures concerning disaster agents. We can measure wind speed and direction. We can measure storm surges and

flood stages. We have Richter and Mercalli Scales to measure earth movements. We have Geiger counters and gas detectors. Too, we have measures of physical damage. We can do body counts, and assessments of injuries. We can delineate "injuries" to building structures and to other environments. But when we do damage assessment, none of the measures we traditionally use touch on the most important impacts on social life. We have no good measures of broken social relationships, created by death or relocation. We have few clues as to the costs of fractured work patterns and other dimensions of disrupted lives. We keep no records on the segmentation and disorganization of community life nor do we have a clear idea of the social costs of delayed and destroyed futures.

It is also probable that what we call disaster assistance has only incidental and tangential effects on such problems. There is an emphasis on the immediate and the basic, often centered around food, shelter, and clothing. Such "needs" are seldom problematic, however. Especially in rather massive impacts, the response itself creates new needs for communication and coordination and sometimes can lead to making the response more traumatic than the initial impact. That possibility is symbolized in the grafitti painted on the wall in a recent disaster. It said: first, the earthquake, then the disaster.

If that is possible as a result of disaster assistance, let me also suggest the possibility that disaster mitigation measures aimed to reduce some future physical damage may also increase the risk of disaster in the sense of social disruption. Many disaster mitigation schemes involve, in one way or another, the relocation of populations at risk. Such schemes are based on a logical assumption that, if people were not in the area of risk, "nothing would happen to them". Following that assumption, there have been efforts to relocate people from flood plains and from earthquake risk areas. Such actions are often defined by the relocating agencies as being successful and

good. Such a definition is often recorded in the literature so that others
are encouraged to develop similar policies for some future implementation.
Such a definition of "success" is maintained by the absence of studies of the
longer term consequences of such relocations. However, casual observations of
so-called success raise a number of questions about such attempts. For
example, Ian Davis has pointed out that the relocation of Gediz, a town in
Turkey, after a 1970 earthquake, has lead to the development of a new town and
the perpetuation of the old town as well as the uneasy symbiotic relationship
between the two. We know, in India, Egypt, and the U.S., there have been
massive relocations relating to dam projects. The point here is that
relocation as a tool is frequently used but seldom studied, either in terms of
its immediate or long range consequences. In the absence of such research, it
is still possible to point out, using certain sociological concepts, some of
the issues involved in relocation.

ON RELOCATION AND ITS CONSEQUENCES

It is no accident that populations, families, groups, and communities are
physically located in cetain neighborhoods and places. Such physical
placements are the result of very complex and historically rooted natural
social forces. A village is located in a particular spatial locaton for many
reasons--it just does not happen to be there by accident.

There are some very imporant implications of the general observation just
made. Relocation could be working against natural social forces which have
led that specific population or community to be located in that specific
place. This is particularly true with respect to the short run. Thus, you
might want to relocate a village which has been in a particular locality for
hundreds of years because of the possibility of flooding in the next ten

years. The time dimensions involved simply reflect the fact that in one case
there has been a slow, natural social evolution, and that in the other case,
there is a sudden, planned social intervention. The intervention act is often
not consistent with the former process.

Furthermore, relocation involves not so much the moving of "people", but
of families, villages, and communities. In fact, in a fundamental sense, you
have to move a way of life. There has to be movement not only of where people
live, but where they work, where they play, where they worship, and where they
carry out the multiple integrated functions that constitute social life.

Put still another way, relocation involves moving a collectivity--the
complex of the physical and social which is the neighborhood, the village, and
the community. It is relatively easy to move physical entities per se. It is
much harder to relocate the psychological webs, the social networks, and
social support systems which are the heart of social life. In some post
disaster recovery efforts in the United States, individuals and families have
been moved from their destroyed homes to distant trailer camps and parks. The
results have often been a second disaster as victims have been uprooted from
familiar settings, symbolically important things, crucial social ties, and
interactions. Uprooting people from their way of life is bad enough in an
evacuation from a disaster, but at least the evacuees can look forward in such
situations to their returning to their old way of life. In a relocation
situation, with the idea of permanancy in the move, the negative consequences
could even be worse.

In developing countries in particular, the web of social life at the
village or community level is very complex and there are a number of highly
interrelated physical and social elements. In many respects the whole is more
than the sum of its parts. What has to be relocated is the whole--the
collective way of life. It is in this sense that we suggest that relocation

involves far more than moving individual persons or particular physical entities. They are part of what has to be moved, but only part, and they have to be relocated as a whole.

It is sometime thought that force or at least involuntary means could be used to mandate relocation. There is an element of truth in that view. However, it is necessary to note that even very totalitarian societies during wartime have had extreme difficulty in trying to force semi-permanent evacuations on their own civilian populations. Studies of wartime evacuation in Germany and Japan during World War II found that there were definite limits to the population movements which could be forced even when drastic sanctions, such as taking away ration coupons, were used.

There is reason to believe forced disaster threat relocation as a whole would be even more difficult to implement than civilian wartime evacuation. In addition, such actions would run contrary to the actual or pseudo democratic values which prevail in most societies around the world today. Most governments are reluctant to be seen as forcing their own reluctant citizens to relocate, and as the current famine disasters in some African countries show, there is a desire to avoid being perceived on the international scene as engaging in such actions. All of this does not mean that forced relocation cannot be attempted, but that there are limits to what can be achieved operating that way, and also, that there are both internal and external political factors which will often discourage public use of force.

On the other hand, if relocation is left up to purely voluntary action or on grass-roots action, almost certainly nothing will happen. To inform a population or community that they are at some indefinite risk at some indefinite time from some dangerous agent will not provoke a relocation effort. People and groups tend even not to evacuate in the face of specific warnings about specific dangers in specific places. If there is no evacuation

in such situations, it is much less likely there will be relocation in even less clearly dangerous situations. Put another way, permanent relocation is very unlikely when temporary evacuation, as study after study has demostrated, is not that common a response in the face of immediate danger.

Presumably, there are certain mixtures of direct and indirect means, and of rewards and punishments, which would be better than others. However, we feel that there are probably no universal sets applicable to all situations. Our view on this is influenced by the fact that there are different cultural values and beliefs in different societies around the world. Some cultures tend to emphasize rewards more than punishments, and vice versa. Some societies, such as some in Asia, value indirect rather than direct ways of talking about and doing things. Such cross-societal cultural differences would undoubtedly influence the use of different sets of means which could effectively be used to bring about relocation in different countries. To give another kind of example, populations differ widely in their expectations and reactions to different governmental levels--the national, regional or prefectural, the city, village or community level. What would be seen as the proper initiative at a particular governmental level in one society could be seen as completely inappropriate in another society.

There is an important implication in all this for anyone planning a relocation program. The implied suggestion is that one should first analyze the characteristics of the population targeted for relocation. From this analysis it ought to be then possible to estimate or project which mixtures of direct and indirect means might be most effectively used with that particular population. This approach is contrary to the view that certain means or techniques are universally and inherently better for bringing about relocation and that one should first select certain means and then apply them to those targeted for relocation. We suggest the reverse procedure would be a better

starting point. This would prevent trying to use those direct and/or indirect means which are alien for that particular socio-cultural setting. Developing countries, in particular, would escape trying to use social technologies created for Western-type societies but inappropriate for their own socio-cultural settings--a problem in technology transfer which has been increasingly recognized in many areas, and which should be kept in mind in the relocation area.

OBSTACLES TO RELOCATION

Perhaps to be first recognized is that in some cases there are, for all practical purposes, insurmountable obstacles. For instance, in many developing countries there is simply no vacant or unused land to which a threatened group could be relocated. There is hardly need to document population pressure upon the land in many places. Or if there is land which is not populated, it is almost a certain sign that land cannot support for a variety of reasons a population, such as would be true of deserts or rocky mountain region.

To be certain, in some societies, there may be nominally useable land not given over to agricultural and/or residential purposes. Could not such empty space be used in relocation efforts? Probably not, for such cases probably reflect the natural social forces we mentioned earlier. They may be indicative of the land tenure pattern of that society, where perhaps a small elite of absentee owners for reasons that make sense to them, do not allow and cannot be made to allow more productive use of their land resources.

This last example, primarily of a political nature, indicates that there are a whole variety of social institutional factors--legal, economic, psychological, and cultural--which at worst are obstacles to relocation attempts, or at best make for inertia. Many social scientists have long recognized that the societies and their institutions tend to be weighted in

favor of the status quo, the form of which can vary considerably in space and time. Revolutions in social structure can and do occur in the long run, but in the short run--which is the time frame for a relocation effort--the overall traditional pattern is not favorable to social change.

Legal systems vary considerably around the world. But such legal institutions and norms as do exist in many develoing countries would not facilitate attempts at relocation. For instance, ownership of land and sometimes other resources is of a collective nature, in many nations around the world. In other places, title to resources is formally unclear. In either case, such kinds of socio-legal arrangements and understandings do not make change easy, do not facilitate relocating a neighborhood or village. If a specific group or village collectively owns the land, think of the difficulties involed in trying to relocate only part of that group or village.

Then, too, there are economic factors. It is often the poorest of a population which may live in a risk or vulnerable zone or area, such as a flood plan. Thus, those populations which should be relocated, are those with the least economic resources to do so. Furthermore, there is a parallel problem if the question of relocation is examined at a higher or more macro-level or social organization. Under almost all circumstances, there will be economic or financial costs for any relocation. But developing countries tend to have those populations most at risk from disasters. Therefore, such nations should be making the greatest efforts at relocating endangered coummunities. Of course, such countries are least likely to have the economic resources to use for relocations. We leave aside here the fact that, when financial resources are scarce, national priorities have to be set for their use, and relocation of population from high risk but low probability events is not likely to rank high on the agenda.

In talking about the political, cultural, psychological, economic and legal institutions and factors, I have primarily stressed how they can act as obstacles, or at least inertial elements, in efforts to initiate and sustain relocation activities. Some of these factors, depending on their content in specific situations, could facilitate the relocation process. For example, there has recently been the relocation away from dangerous areas of three small communities within the United States. But in these situations the residents wanted to move, and all the factors we have discussed, for various reasons, were supportive of the efforts. However, these are the rarer situations, so we have emphasized that the content of the social structural aspects are usually not a supportive nature for relocation. Nonetheless, the examples are enough to indicate that relocations are more than hypothetical, never realized possibilities; they can and have happened.

THE PURPOSE OF RELOCATION

That something can be done, even rarely, does not necessarily mean it should be done. Apart from the matters already discussed, there are other considerations that need to be taken into account. I shall discuss a few of the more significant ones and try to indicate that it is important in planning to specify clearly what is being attempted in a relocation attempt.

High risk areas are far from being all alike. Two areas which are equally at risk from a natural disaster agent are not necessarily equally vulnerable. One area may be able to undertake preventive or protective measures, such as building levees, which may not be possible in the other area. This is another way of saying that the possibility of relocation has to be evaluated against other actions which could be taken to neutralize or mitigate a disasterous impact. If it is easier and simpler to implement other hazard mitigation measures, that ought to clearly signal caution on insisting on relocaltion as the measure to implement. Put another way, relocation is

almost always one of several options for dealing with the problem which will be available. Very seldom, perhaps never, is the situation one just of relocating or not doing anything else at all.

Also, it should not be automatically assumed that experts always know best. Experts tend to look at the world from the technical perspective of whatever are their specialties. Such a perspective, which usually is of very high quality from a technical point of view, is necessarily selective and uses only certain criteria. The average citizen or official is likely to use a more general perspective and to use different criteria in making judgements. <u>While it does not follow that the latter view is, therefore, better than the view of the expert, the converse is not necessarily true either.</u>

Apart from the matter just discussed, the average lay person may grant the greater knowledge of the experts, but still may not be moved to behaving differently, especially taking such a drastic action as is involved in relocation. People live in a risky world. They take chances everyday when they do such things as smoking, driving, or drinking. They "know" the negative consequences of the just indicated behaviors are more likely than whatever may happen in such low probability events as major disasters. To be certain, such views are "intuitive" and are not derived from statistical probability theories. Nonetheless, possible major disasters are only one of many risks for individuals, families, officials, and communities, and are less probable in negative consequences than a number of the other risks. Given this, it should not be surprising, and it certainly should not be seen as irrational, that even if people are convinced of a possible danger, that they will not undertake such a severe and life disrupting action such as would be involved in relocation.

If the objective in relocation is more than a simple movement, the kinds of questions and issues just discussed have to be put into the equation. There obviously should be far more pluses than minuses if relocation is to be attempted and implemented. If on balance there are more negatives than positives, as a result of the effort, the removal from a risk area would not seem totally warranted. At least a very systematic cost-benefits analysis including far more than economic factors ought to be undertaken.

CONCLUSION

While the illustration used here has been focused on relocation and the discussion of that issue has been extensive, that example should not obscure the major point which the paper attempts to make. A disaster is best defined sociologically as social disruption. That social disruption is only tangentially related to physical damage. Therefore, actions taken during the emergency and recovery period which increase that disruption are "disasterous". The same assessment can be made for attempts at disaster mitigation. Such attempts often cast in terms of increasing physical safety may also have unintended consequences of increasing social disruption. The trade-offs between those competing values are obviously not easy to resolve, but issues are not resolved by "ignoring" the social consequences. A better solution is to try to fit planning to people rather than trying to fit people into plans.