

University of Delaware
Disaster Research Center

Preliminary Paper
#140

DISASTER ASSISTANCE
AND SOCIOECONOMIC RECOVERY:
SOME OBSERVATIONS*

E. L. Quarantelli

1989

*Written version prepared for presentation during the Emergency Preparedness Canada Symposium held at Arnprior, Ontario, Canada on September 28, 1989.

Introduction

We are going to cover three general topics in our remarks.

First, we will note that what seems a simple enough term or word -- namely "recovery"--covers a variety of very complex matters which need to be addressed in any practical and/or theoretical discussion about the issue. It makes a difference in consequences as to what something is called.

Second, we will highlight and summarize some ten general themes from the research literature about what is known about those who are **assisted** in the recovery effort after disasters. There are substantial differences regarding for instance the sources of aid, the kinds of help provided, and the effects of the assistance given to victims--especially at the individual, family and household levels--in the recovery process.

Third, we will conclude with a few briefer comments about what the research literature says about those who **give** or provide recovery assistance in the aftermath of a disaster. The givers or providers are somewhat different and have more complex problems than usually recognized.

Our remarks are drawn from the existing social science research literature. The core of this material consists of about three dozen publications which deal unevenly with diverse topics in the disaster recovery area. The major sources are not only indicated but annotated in the selective bibliography at the end of this paper.

The Term "Recovery"

What does the term "recovery" mean?

In the research literature, in everyday disaster planning, and in actual practice, the referent of those who use the word is not very clear and often inconsistent and confused. While the general referent is obviously to a temporal dimension--part of what goes on in the postimpact phase at some point after the emergency time period of disasters--but practically all other aspects are rather murky in the thinking, writing, and doing of most people and groups.

In fact, there is not even much agreement on the specific term, word or label to use, or if the different concepts used have reference to the same or different kinds of phenomena. The very title of this session uses three words--recovery, rehabilitation restitution. Presumably they mean something different, for otherwise why three different names?

Our impression is that most of the terms frequently used and sometimes interchangeably by both researchers and operational personnel, with the more common ones being reconstruction, restoration, rehabilitation, restitution, and recovery are not quite always pointing to the same thing or process.

Let us give our general impression of how the terms seemed to be mostly used.

Those that use **reconstruction** seem to stress almost exclusively the postimpact rebuilding of the physical structures destroyed or damaged in a disaster. While for social scientists and most operational personnel that probably is not the most important dimension to consider, it is nevertheless what some individuals and groups primarily attempt or do--putting up buildings and material infrastructures to replace those impacted by disasters.

Restoration appears to be a statement about reestablishing prior or preimpact physical and social patterns. Whether one thinks of this as a goal, a measure of success, an indicator or personal and/or social change, it would seem to indicate a putting back into nearly or quite the original form that existed in the past before the disaster.

Rehabilitation would seem to also suggest a restoration although more of people than things. There is also the connotation of raising the restored level to a better one than before the disaster.

Restitution seems to suggest some kind of restoration to rightful claimants or owners. It implies legal actions to return to a former state.

Finally, the term **recovery** often seems to imply that attempting to and/or bringing the post disaster situation to some level of acceptability. This may or may not be the same as the preimpact level.

What's in a name?

A great deal and in this instance there is far more involved than semantic quibbling. There are, for example, policy implications linked to different labels. What something is called does make a difference.

Our intent here is not to lay down in an arbitrary manner what should be called what, but rather to call attention to the necessity whether by researchers or operational personnel to specify what they mean when they use one and/or all the different labels we have noted before. Likewise, others to whom the terms are directed must also have the same meaning in mind for

otherwise there will be miscommunication at best and conflict at worst. If you tell someone their property will be restored--having in mind bringing it to the preimpact state--and they have in mind reconstruction to a better than preimpact status, for instance, insures difficulties and problems.

For our purposes in these remarks, we will primarily talk of the recovery process following major disasters. By that we mean that after the impact of a community type disaster and after emergency time needs have been met, there will be a period of time where deliberate actions are undertaken to routinize everyday activities of those individuals and groups whose daily routines have been disrupted. These activities may restore old patterns and/or institute new ones; what actually results is an empirical matter and is not part of the symbolic conceptualization of the process. For purposes of identification our emphasis is on the process, not the end product.

Nevertheless, there are policy implications from this approach in considering what might constitute **success or failure** in recovery. Let us mention six.

1. The goals of recovery.

One could assess recovery in terms of restoration of whatever previously existed prior to the impact of the disaster. On the other hand, the process could be evaluated in terms of bringing the postimpact level up to a higher level than existed in the preimpact phase. This is a decision that sometime has to be made at the operational level.

In the past although not now, for example, the American National Red Cross took the position that their criteria in providing assistance was need not loss, that individuals and families ought to be assisted to the extent that they would have a certain standard of living irrespective of whatever they had lost. One result of this is that some victimized by disasters ended up living better than they had before impact, whereas others who had lost substantially more were given the same kind of assistance which left them considerably below their prior-to-disaster standard of living. This also illustrates there can be problems if organizations providing recovery aid have different goals in mind than those that are assisted.

But apart from the view of those assisted, those helping or assisting should be clear about their goals. Whether it be about individuals, households, organizations or communities, what is the goal or the criteria to be used for assessing success in recovery? Is it enough to bring back the past, or is something new or different necessary?

2. The levels of recovery.

Not only is it necessary to specify what the goal is in the recovery process, but it is also necessary to note that the process might not proceed at the same rate or in the same way at different levels of the social units involved. This is to say that while the recovery of individuals, households, organizations, the community, and the society are not totally independent of one another, neither is the linkage or correlation necessarily very tight.

For example, a community might lose part of its tax base or some particular industrial plant or business and in that sense might not recover well from a disaster. However, individual citizens or households in the impacted area might recover well from the same disaster in the sense of reestablishing routine patterns and not be directly or even indirectly affected especially in the lifetime of the person or family by the community loss. In terms of a concrete example, Valdez, Alaska (of more recent notoriety) obtained much better port facilities after the 1964 earthquake than it had before whereas, conversely, certain families and households were forever destroyed by the disaster.

Thus, any assessment of success in recovery has to specify what social level or unit is being evaluated; it may vary from one level to another.

3. The size of the recovering unit.

We can also probably say that the larger the social unit involved, the more likely there will be postimpact recovery. Several families may, for instance, be literally destroyed by a disaster but in terms of the overall community of which they were a part, their loss could be completely insignificant insofar as overall community recovery from a disaster is concerned. The specific families may not recover in any sense from the disaster; the community involved might recover completely.

In fact, Drabek has written: "for most disasters studied--aside from a few cases that appear to have important differentiating qualities--the overall picture is one of mixed, but relatively minor, ripples in the long-term developmental cycle. Thus, impacts are mixed, in the sense that some could be regarded as negative, others as positive. Resiliency is high for most, but not all systems impacted. For example, a tornado killing seven people may evidence no discernible impact on the total community, but the families from which these seven were lost will be disrupted severely" (1986: 250).

In one sense, an implication here is that smaller units or lower social levels have more recovery problems. The exceptions would be, as implied in the quotation, if for example in a company

town, a mining community, the local mine operation was forever shut down by the disaster. But generally, the larger social entity absorbs rather easily smaller internal losses. Peter Rossi and his colleagues, for instance, found no discernible effects on demographic or housing characteristics at the county level in the United States a decade after smaller neighborhoods within counties had been impacted by a disaster.

Thus, in assessing recovery, it is necessary to recognize that it will be affected by the size of the recovering unit with the larger ones more likely to recover well.

4. The perspective on recovery.

There are also some other interesting policy implications from the probability that larger social units are more likely to recover from disasters. It has to do with the perspective that is taken on recovery as a result of prior experience. What might be deemed an unsuccessful recovery from the viewpoint of one local community may not be deemed unsuccessful from the viewpoint of higher levels such as the province or state and particularly the federal or national level which normally will have to deal with more disasters within their larger geographic area of jurisdictional responsibility. Higher levels will have relatively many experiences of disasters, while for most given communities, it is the experience of a lifetime. As such, the former are more likely than the latter to have realistic rather than idealistic conceptions about recovery.

Our point here is that assessment of recovery is not just a matter of what actually occurs, but also prior experiences which affect perceptions of the process.

5. The recovery from secondary or ripple effects of disasters.

There is a strong tendency in disaster occasions to focus on the obvious and direct destruction and damage. One consequence is that the recovery process sometimes ignores or downplays the secondary or ripple effects of disasters.

Paul Slovic, for instance, argues that it is inappropriate to focus only on the number of people killed and injured and the amount of property damaged in a disaster. He has written: "Unfortunately, things aren't this simple. The accident at the Three Mile Island (TMI) nuclear reactor in 1979 provides a dramatic demonstration that factors besides injury, death, and property damage impose serious costs. Despite the fact that not a single person died at TMI...no other accident...has produced such costly societal impacts. The accident at TMI certainly devastated the utility that owned and operated the plant. It also imposed enormous costs (estimated at 500 billion dollars by one source) on the nuclear industry and on society, through

stricter regulation, reduced operation of reactors worldwide, greater public opposition to nuclear power, reliance on more expensive energy sources, and increased costs of reactor construction and operation. It may even have led to a more hostile view of other large scale, modern technologies, such as chemical manufacturing and genetic engineering. The point is that traditional economic and risk analyses tend to neglect these higher-order impacts, hence they greatly underestimate the costs associated with certain kinds of mishaps."

If this kind of socioeconomic cost analysis has validity, it is a question if the United States and other societies have yet and fully recovered from the Three Mile Island incident (and we leave aside here in what ways there has been recovery from the Chernobyl disaster with more far reaching effects of all kinds). At any rate, our point is that in assessing recovery it is necessary to take into account whether not only direct effects but the more likely wider ranging indirect consequences of a disaster have been dealt with in the process.

6. Recovery from disasters differs from recovery from catastrophes.

Finally, it is easy to be misled in North America by the fact that the great majority of all the disasters that have happened up to now have been community disasters at worst. We have not had the regional or even national catastrophes that have impacted certain Latin American or Asian countries, for instance, where losses up to three percent of the annual gross national product have been sustained or as in Jamaica a few years ago where the basic industries of the country (in this case, tourism and sugar) were badly damaged, and therefore what occurred was a national rather than community level disaster. It is possible to see these kinds of differential effects on different social systems in what Hurricane Hugo did a few weeks ago. For example, in Montserrat nearly all of the island's 12,000 residents were made homeless, a truly catastrophic occasion for that island system while at worst, Charleston, South Carolina suffered a disaster and not a catastrophe.

One major difference between community level and regional or national level disasters is that in the former there typically is a convergence of assistance from nearby communities. But the more a disaster encompasses nearby geographically contiguous areas, the less likely will those localities, themselves impacted, be able to help in emergency relief or recovery activities. Thus, the larger the disaster, not only is there more likely to be greater short and long run needs, but there is **less likely** to be available certain kinds of nearby assistance that would be present in smaller type disasters.

A policy implication of this is the need for a different kind of planning and managing for catastrophes compared with disasters. This is as true, if not more so, for recovery processes as it is for anything else.

Let us now present some short selective comments about ten major themes derived from the research literature regarding those who are assisted. Our remarks will primarily be about individuals, families and households.

Themes From the Research Literature On Those Assisted

1. Disaster victims tend to judge not only their losses but also what they obtain in recovery efforts in **relativistic** rather than absolute terms. Loss and assistance is often evaluated in terms of what others known to the victim have undergone or gotten. There is an additional tendency for this to be even more prevalent the larger the disaster impact, that is, the more there are disaster victims the more probable is this relativistic attitude likely to prevail. This principle is far more applicable in community type disasters and less so in other kinds of disaster occasions such as transportation accidents where survivors tend to come from a variety of different of social settings to which they return for recovery.

2. Certain preimpact social locations or placements affect being helped in the recovery process. In general, those **outside** of the everyday mainstream remain outside in the postrecovery period. For example, single people, older women, the homeless, or non-religious persons in an area with strong religious affiliations, as social categories tend not to receive equivalent degrees of aid. Everything else equal, large metropolitan areas are more likely to have isolated individuals and households than other areas, and this carries over into the recovery period.

3. Some families/households receive more help from various sources than others with roughly equivalent losses/needs. Just as in everyday life some social units are in more formal and informal **interaction patterns** and **networks** than others, the same occurs in the postrecovery period. This is why some families from tightly integrated ethnic groups do so much better in recovering than other family units who are less linked into extended kinship patterns. Thus the social heterogeneity of a community is not necessarily bad for disaster recovery purposes.

4. Somewhat of a different nature, but involving the same principle, there is differential knowledge in terms of social status of where to go for help and how to obtain assistance. There are considerable differences in knowing how and where to approach bureaucracies, filling in forms and doing other paperwork, etc. Interestingly, low status and upper status

individuals and families seem to know better "how to work the system" than do those from middle class status.

5. For the great majority of victims, relatives and kin are the major helping sources in the recovery period. More often than not the help is offered, not requested. In particular, housing help is often provided through such a source (although while short run sharing of housing with others is acceptable, serious stress in relationships occur if common quarters are shared for extended periods of time). But while recovery through the kinship system is usually the most important, there are of course families whose recovery is almost totally dependent on institutional help. Bolin in his study of how families recover after disasters also notes that there are even some relatively rare cases where recovery is rather autonomous, relatively independent of kin or organizational help.

6. The family **socioeconomic** status is important in the recovery process. The higher the socioeconomic level of the family, the more likely will it recover to a preimpact level. The converse is also true. While it would be an overstatement to say that disasters result in the "rich getting richer and the poor getting poorer", there is little evidence that disasters in the long run will materially change overall preimpact socioeconomic status differences, despite some individual case exceptions to the contrary.

7. The later a victim family is in the **life cycle**, the less likely will there be recovery to a preimpact level. Both economic and psychological factors appear to be involved. For instance, retired couples who have suffered losses find it more difficult to obtain bank loans to rebuild a house and also they think, probably correctly, that they will simply have less time in the rest of their lives to be able to do so. This is simply another way of saying that not all socioeconomic losses are equivalent even though in financial terms the figures might be the same.

8. There is a difference, and no necessary strong correlation, between **perceptual/symbolic** recovery and economic recovery. That is, sometime there is recovery in terms of material things but often there can be no restoration of lost symbolic possessions or things, be these important family remembrances such as photographs or the old trees that will never exist again in the front or back yard. For some families, the past can never be recovered no matter what is provided materially in the recovery process.

9. The more temporary housing **relocations** occur, the more difficulties there will be in the recovery period. Moving victims more than once into temporary shelters seems to prolong or delay recovery. Victims usually cope relatively well with the

immediate disaster impact and the first move into emergency quarters, but show sharply decreasing adaptability to cope with additional moves. This is why sometime the postimpact period is more stressful and may be, in one sense of the term, more of a "disaster" than the actual impact of the disaster agent itself.

10. There can be positive as well as negative consequences from involvement in the recovery process, social psychological as well as socioeconomical. For example, household family ties often tend to be strengthened among victim families. This appears to be somewhat more true at the perceptual than the behavioral level. To a certain extent there is also the strengthening of ties with other kin. On the other hand, while initial responses to recovery aid tends to be favorable, hostilities frequently develop in later phases. In fact, at the collective level, there is almost always a "bitch phase" with a striking out and negative criticisms of whoever happens to be around even though they may be helping groups.

Overall, running through our remarks and the research literature is the idea that what occurs in the recovery period reflects considerably whatever existed in the preimpact period of the social system involved. This stands out most clearly in extreme cases of what might be called shortcircuited recovery efforts. Thus, in St. Croix after Hurricane Hugo, a part of the local population engaged in behavior very rarely seen in disasters, namely, widespread, public, collective and socially supported looting--something which research has consistently found to be almost nonexistent in most community disasters (but which is the pattern that typically surfaces in civil disturbance and riot situations). But what occurred in St. Croix was essentially a continuation of the preimpact social situation, an almost anomic social system characterized by widespread poverty and extensive stealing of goods (although it is very important to note that poverty per se does not automatically lead to criminal behavior; other sociocultural factors must be present). After the hurricane, some parts of the population involved took advantage of the situation to attempt to shortcircuit their recovery from the disaster. In more general terms, if we know what exists before a disaster impact, we can have good although not perfect prediction about what will affect what will happen in the emergency and recovery time periods.

Themes From the Research Literature On Those Who Assist

It is easy in talking of disaster recovery to focus almost solely on those assisted. However, it is important that we have understanding and knowledge of those who provide assistance. In some ways, from the viewpoint of disaster planning and managing, it probably is easier to change those who assist than those who are helped. Furthermore, as we have often discussed elsewhere,

the locus and source of most postdisaster problems are the helping organizations rather than individual victims as such.

At any rate, we indicate about five selective general themes from the research literature about those who assist after disasters. Some of the specific findings are simply the converse of those we have reported about with respect to those that are helped in the recovery process (e.g., the tendency of agencies to help victims in the mainstream of social life and to miss those outside), but some are not. However, our comments here are in terms of general themes, not specific research findings.

1. Almost all of the assistance provided informally and also by relatives and friends is less noticed and reported, giving formal agencies the impression that they proportionately provide more recovery help than is actually the case. It is not that official relief and recovery groups do not provide substantial and important help; they do, but not to the extreme extent that they usually believe. This may lead to a formal overestimation of disaster related individual and household needs in a stricken community, and also to duplication of recovery assistance along some lines. More important, this lack of attention if not unawareness of the influx of informal and/or kinship recovery assistance leads to an ignoring of the process in both the planning for and the managing of recovery.

In particular, religious and quasi religious groups play a more important informal role in recovery activities than is usually realized. There are many such groups and many of them operate very informally. Only to the extent that they may take an advocacy role on behalf of victims, do they tend to become publically visible. In certain city neighborhoods, ethnic groups may play a similar unnoticed role in recovery.

2. A very typical characteristic of disasters is the appearance of new groups and new ways of doing things, what has sometime been called the "emergent" quality of disaster response. This is as true of recovery organizations and recovery activities as it is of any disaster phenomena. Sometime rather different ways of providing help and even at times new groups are created for giving recovery assistance. Emergence is forced by the fact that traditional agencies and procedures cannot always deal effectively with disaster generated needs and difficulties. In particular, bureaucracies often do not have the flexibility necessary to cope with unusual or unexpected demands, the very aspects typical of recovery situations. In fact, to the extent there is not some degree of emergence, recovery will not be handled well by responsible organizations.

But while emergence is usually functional for disaster recovery, it is not without problems. Traditional and emergent procedures do not always mesh well. Established organizations and new

groups likewise often have difficulty working together. Furthermore, whatever innovations there might be will become quickly status quo, that is relatively inflexible and unresponsive to changing or different social situations.

3. Even leaving emergent groups aside, there tends to be relatively little coordination among the formal organizations involved in recovery efforts. While this problem is not peculiar to groups that provide recovery assistance, it is sometime magnified among them. Many such agencies, unlike emergency oriented community groups such as police and fire departments and hospitals, do not have planning for disasters as a central or major responsibility. As such the necessity not only for intra but inter organizational coordination is easy to overlook until the time of a disaster impact.

There can be several negative outcomes from this lack of prior planning. Duplication of recovery activities can occur. In the worst cases, this could lead to serious interorganizational conflicts. At times there might be recovery needs of victims which might go unmet because they fall in a territorial or domain gap between two organizations. Overall community recovery will be impeded.

4. Often overlooked are the personnel or staff problems of the organizations that undertake to provide recovery aid and assistance. There are a number of different factors involved. Staff members will often be working at non-regular tasks. Recovery organizations sometime expand to deal with new or extended responsibilities; at times volunteers are used but such personnel are almost always troublesome. Those organizational workers who have to interact directly with victims are seldom trained for dealing with persons under extreme stress. These and other factors do not make for efficiency and effectiveness in providing disaster recovery assistance.

5. Finally, unless there is systematic record keeping and a formal critique, there will be few lessons learned about organizational operations in recovery. On an everyday basis, most organizational bureaucracies are not very interested in obtaining accurate evaluations of their functioning. This is even truer of agencies which undertake traditional and new tasks in disaster recovery operations. Consequently, systematic assessments of what was done, particularly of innovations for recovery purposes, is seldom undertaken in the post recovery period.

There are several unfortunate consequences of this inaction. It makes it difficult to reach judgments about specific organizational success or failure in disaster recovery. It partly explains why most formal groups seem to learn very little for the future from a disaster experience. It is one reason why

structural and functional innovations which might be useful for both everyday and disaster purposes seldom get institutionalized. Instead, what is often left in the collective memories of organizations in the aftermaths of disasters, are only "war stories" which are really not very useful for developing strategies and tactics that will make for more efficient and effective recovery assistance and for better socioeconomic recovery.

A Concluding Observation

In almost any area of study, including those that have nothing to do with disasters, it can almost always be anticipated ahead of time that the research results will eventually reach two general conclusions. One is that the phenomena being studied, whatever it is, is more complicated than might appear to be the case and in terms of first observations. The second is that apart from finding complexity rather than simplicity, research will typically find that many widely held beliefs about the phenomena will be doubtful if not downright incorrect. In our remarks we have tried to indicate in what ways recovery from disasters is complex rather than simple and that the research findings are not necessarily supportive of common beliefs about the process.

Our view is that with such a perspective and with such knowledge, planning and managing of disaster recovery can be made more efficient and effective. Of course, we do not pretend that we have presented a complete and final picture about the recovery process, even of just socioeconomic aspects. But we do hope we have given enough so that those who have certain responsibilities for preparedness planning and management response may have been given some new and different intellectual tools for a difficult and important job, that of helping in recovering from disasters.

Selective Annotated Bibliography

Alexander, David

1981 "Disaster in southern Italy: November 1980,"
Geographical Magazine 53: 553-561.

An examination of the impact of the earthquake on industrial production, the cost of reconstruction, the effect on agriculture, and the distribution of disaster aid.

Anderson, William

1970 Disasters and Organizational Change: A Study of the Long Term Consequences in Anchorage of the 1964 Earthquake. Newark, DE.: Disaster Research Center, University of Delaware.

A postimpact study which found over an eighteen month period that seventeen of twenty three organizations had experienced some structural and/or functional changes as a result of the earthquake.

Bates, Frederick, Charles Fogleman, Vernon Parenton, Robert Pittsman and George Tracy

1963 The Social and Psychological Consequences of a Natural Disaster. Washington, D.C.: National Academy of Sciences.

A longitudinal study conducted over four and a half years after Hurricane Audrey. Examined were the rehabilitation and recovery activities after the disaster and the longer run social changes which occurred.

(no author)

1979 Bibliography on Natural Disaster Recovery and Reconstruction. Boulder, CO.: Institute of Behavioral Science, University of Colorado.

A partially annotated bibliography of about 135 published and unpublished sources.

Bolin, Robert
1982

Long Term Family Recovery From Disaster. Boulder, CO.: Institute of Behavioral Science, University of Colorado.

A longitudinal study of family recovery from tornadoes that struck Wichita Falls, Texas, which found that most families resumed their daily patterns of living that reflect general continuity with their respective pasts. Dimensions of recovery included economic, housing, quality of life and emotional recovery. Aid and social support were found to be important factors in affecting recovery outcomes. By far the strongest determinant of emotional recovery was economic recovery.

Bolin, Robert
1986

"Disaster impact and recovery: A comparison of black and white victims," International Journal of Mass Emergencies and Disasters 4: 35-50.

Differences between black and white tornado victims were found to be related to variation in losses, psychosocial impacts, aid utilization and social support, but not any demographic or socioeconomic factors.

Bolin, Robert
1989

Temporary Sheltering After the Whittier Narrows Earthquake. Final Report. Las Cruces, NM.: Department of Sociology.

This research roughly over an 18 month period focused on emergency and temporary shelter use, as well as short term recovery issues (e.g., utilization of federal, state and local aid programs) within households after the Whittier, California earthquake. About a third of those sampled made little or no economic recovery in the first five months after disaster impact, with the best predictors of recovery being amount of loss, whether one had problems with temporary shelter, was the receipt of federal aid, and got social support from family and friends. Since the quake was a relatively moderate disaster at best, implications for a greater disaster are noted.

Bolin, Robert and Patricia Bolton

1983

"Recovery in Nicaragua and the U.S.A.,"
International Journal of Mass Emergencies and
Disasters 1: 125-152.

This reports on a longitudinal study of family recovery from a flash flood in the United States and an earthquake in Nicaragua. Perception of recovery in the former seems explained by losses sustained, recovery of predisaster income levels, and aid received, whereas in the latter country the aid provided had little effect--continuity of employment took precedence over other factors.

Caporale, Rocco

1989

"Toward a cultural-systemic theory of natural disasters: The case of the Italian earthquakes of 1968 in Belice, 1976 in Friuli and 1980 in Campania-Basilicata," in E. L. Quarantelli and Carlo Pelanda (eds.) Proceedings of the Italy-United States Seminar on Preparations for, Responses to and Recovery from Major Community Disasters. Newark, DE.: Disaster Research Center, University of Delaware.

It is argued that problems of recovery and reconstruction reflect not just the nature of the damage sustained, but the entire complex of sociocultural and political-economic characteristics of the social order involved. It was found in the Italian situation that a variety of social, economic and political factors account for a highly differentiated patterns of recovery in different earthquake impacted villages.

Dacy, Douglas C. and Howard Kunreuther

1969

The Economics of Natural Disasters: Implication for Federal Policy. New York, NY.: Free Press.

The volume attempts to formulate a case for the development of a comprehensive system of disaster insurance as an alternative to the current federal policy in the United States. One chapter deals with reconstructions and economic development following a disaster.

Davis, Ian
1978

Shelter After Disaster. Oxford: Oxford Polytechnic Press.

This volume provides an analysis of the problems faced by homeless disaster victims and the kinds of shelters that are often offered and provided especially in developing countries.

Drabek, Thomas
1986

Human System Responses to Disaster. An Inventory of Sociological Findings. New York: Springer Verlag.

This volume summarizes much of the sociological and related research literature on disasters. Basic findings regarding restoration and reconstruction are presented in two chapters.

Drabek, Thomas
1984

and William Key
Conquering Disaster: Family Recovery and Long Term Consequences. New York: Irvington.

An intensive and extensive study of how families coped with the Topeka tornado of 1966. Taking advantage of predisaster baseline data, control groups were used to compare disaster impacted and nonimpacted families three years after the event. Instead of finding increases in pathology, most of the impacted families showed better psychological and social adjustment than did the control nonimpacted families.

Dynes, Russell
1989

R. and E. L. Quarantelli
Reconstruction in the Context of Recovery: Thoughts on the Alaskan Earthquake. Unpublished paper.

Argues that any reconstruction after disaster has to be seen in the larger context of recovery which in turn reflects the social structure and social fabric of the impacted society. As such reconstruction involves far more than physical matters, it is rooted in social factors and group interests. This view is illustrated through an examination of what happened in Anchorage, Alaska in the aftermath of the disaster.

Francaviglia, Richard
1978 "Xenia rebuilds--effects of pre-disaster conditioning on post-disaster redevelopment," Journal of the American Institute of Planners 44: 13-24.

Shows how preimpact factors of a social, political and economic nature affected the planning and the actual reconstruction and rebuilding of the tornado impacted town.

Friesema, H.P., J. Caporaso, G. Goldstein, R. Lineberry and R. McCleary
1979 Aftermath: Communities After Natural Disasters. Beverly Hills, CA.: Sage.

A study which attempts to identify long term social and economic disruptions resulting from natural disasters (two tornadoes, a flood and an hurricane) as well as to ascertain variations in disaster recovery associated with event severity and external assistance. There were few significant social or economic changes in the impacted communities which lasted more than a few months. However, both governmental and nongovernmental external aid was far more complex and generally more extensive in the United State than available reports of disaster expenditures would suggest.

Golec, Judy
1983 "A contextual approach to the social psychological study of disaster recovery," International Journal of Mass Emergencies and Disasters 1:255-276.

A study of a flood dam disaster which found that the preimpact social location and networking position of victims as well as postrecovery governmental policies strongly affected the individual and household recovery process.

Greene, Marjorie
1987 "Skopje, Yugoslavia: Seismic concerns and land use issues during the first 20 years of reconstruction following a devastating earthquake," Earthquake Spectra 3: 103-117.

Notes that early administrative decisions affected the longer run reconstruction of the earthquake devastated city and how therefore some unexpected problems were created.

Haas, J. E., Robert Kates and M. Bowden (eds.)
1977 Reconstruction Following Disaster. Cambridge, MA.:
The MIT Press.

Presents case studies of reconstruction following the Rapid City flood and the Anchorage, Managua and San Francisco earthquake. Notes that the central issues and decisions are based upon value choices which give varying emphases to easy return to normalcy, the reduction of future disaster vulnerability, or to opportunities for improved equity, efficiency or amenity.

Huerta, F. and R. Horton
1978 "Coping behavior of elderly flood victims," The Gerontologist 18: 542-546.

The research results suggest that older victims more than younger victims may be better able along certain lines to adjusting to disaster impacts.

Kunreuther, Howard and E. S. Fiore
1966 The Alaskan Earthquake: A Case Study in the Economics of Disaster. Washington, D.C.: Institute of Defense Analysis.

A study of the immediate post disaster recuperation, the long term economic recovery and the role of the federal government in the United States after the earthquake. Topics discussed include: supply and demand problems, external assistance, labor migration patterns, public and private reconstruction efforts, and economic improvement.

LaPlante, Josephine
1988 "Recovery following disaster: policy issues and dimensions." Pp. 217-235 in Louise K. Comfort (ed.) Managing Disaster: Strategies and Policy Perspective. Durham, NC.: Duke University Press.

A discussion of the policy issues involved in programs for recovering from disasters.

Minnis, Mhyra S.

1971

The Voice of the People in Disaster and After: A Study in Residential Integration. Lubbock, TX.: Texas Tech University.

A study of the adjustments of different ethnic groups when tornado victims from former segregated neighborhoods were relocated together. Also contains information on how housing decisions were reached and how they were affected by financial assistance programs and administrative decisions.

Peacock, Walter G.. C. Killian and F. Bates

1987

"The effects of disaster damage and housing aid on household recovery following the 1976 Guatemalan earthquake," International Journal of Mass Emergencies and Disasters 5: 63-88.

A study of the effects of community type, disaster damage, housing programs and other social determinants on household recovery after the earthquake. Reconstruction aid was the single most important determinant of recovery, but it was the type and not the value of aid that was critical. There was strong support for the conclusion that temporary housing as a form of aid retards recovery while permanent housing programs produces net improvement in living conditions.

Petty, Geraldine, L. and M. Krahenbuhl

1977

Economic Recovery Following Disaster: A Selected Annotated Bibliography. Santa Monica, CA. : The Rand Corporation.

Major emphasis is on sources dealing with recovery in wartime situations in industrialized societies, Parts IV and V cite the disaster literature.

Prince, Samuel

1920

Catastrophe and Social Change. New York, NY: Columbia.

The first social science study to examine the links between disaster and social change, it reports on the recovery from the ship explosion which devastated Halifax, Canada in 1917. (Prince's work is analyzed by Joseph Scanlon in a review article in Volume 7, the November 1989 issue of the International Journal of Mass Emergencies and Disasters.)

Quarantelli, E. L.

1982

Sheltering and Housing After Major Community Disasters: Case Studies and General Conclusions. Newark, DE: Disaster Research Center, University of Delaware.

Suggests the need to distinguish between emergency sheltering, temporary sheltering, temporary housing and permanent housing for disaster victims. In the United States there is little overall planning for any kind of postdisaster shelter/housing, but to the extent it exist at the community level is aimed at temporary sheltering. To the extent temporary sheltering planning is undertaken it is fragmented among various emergency organizations. Many sheltering and housing problems stem less from individual evacuees but from the organizations trying to help them. The permanent housing which develops after a major disaster depends upon the predisaster housing situation and the influence of various local interest and power groups.

Quarantelli, E. L.

1989

Disaster Recovery: Comments on the Literature and a Mostly Annotated Bibliography. Newark, DE: Disaster Research Center, University of Delaware.

Brief comments on the literature and a 92 item bibliography.

Rogers, George W.

1970

"Economic effects of the earthquake." Pp. 32-38 in The Great Alaska Earthquake of 1964: Human Ecology. Washington, DC: National Academy of Sciences.

Population, employment, personal income, industry and state revenue figures from 1960 through 1967 are used to trace the economic effects of the earthquake. Overall the economy benefitted but effects differed among communities and areas.

Rossi, P., J. Wright, E. Weber-Burdin and J. Pereira
1983 Victims of the Environment: Loss From Natural Hazards in the United States, 1970-1980. New York, NY: Plenum Press.

A survey study of the average annual damages suffered in between 1970-1980 from five hazards: household fires, floods, tornadoes, hurricanes and earthquakes. Analysis of aid received in the form of insurance payments, gifts, grants and loans showed that floods presented the most serious problems to households, not only resulting in more damage but also less likely to be covered by insurance and more likely to lead the household into enlarging its debt burden.

Rubin, Claire
1981 Long Term Recovery from Natural Disasters: A Comparative Analysis of Six Local Experience. Washington, DC.: Academy of Contemporary Problems.

Research conducted from six months to three years after disasters such as ocean flooding, a hurricane, flash flooding, and recurrent urban flooding, examined the success of community recovery programs and identified significant new mitigation measures which had been adopted.

Rubin, Claire
1985 "The community recovery process in the United States after a major natural disaster," International Journal of Mass Emergencies and Disasters 3: 10-28.

In a study of fourteen communities impacted by disasters, it was found that the key elements of recovery were: personal leadership, ability to act, and knowledge of what to do. In those localities where speed and quality of recovery was greater, local officials found ways to ensure more productive intergovernmental relationships, compete effectively for scarce resources, and better manage community level decision making during the postdisaster period.

Wurtele, Zivia S.

1972

A Case Study of Corpus Christi After Hurricane Celia and a Methodology for Evaluating Economic Impacts of Disasters and Disaster Assistance Programs. Santa Monica, CA.: System Development Corporation.

Presents two different models for approximating the economics of a disasters, as well as a socioeconomic profile for monitoring a regional economy in the year after a disaster. Application of the model and profile indicates that despite damage estimates of over a third of a billion dollars, much reconstruction was accomplished in the year after the hurricane.