"Of all of the problems I have heard about during my lifetime, none of them have ever been solved."

Attributed to Charles DeGaulle

The issue here is the relationship between disaster and development. In part, the focus of interest is on how the development process is affected by disaster. This is important since many countries trying to implement development goals are also locations which are hazard prone. In such circumstances, disaster may present obstacles to development. There is also the implication that disaster has more serious effects in less developed nation states and may absorb resources necessary for development. Too, delays in recovery might affect "progress" in development. Such concerns are motivation for understanding how development might be protected from the effects of disaster or how disaster assistance, especially international aid, might be incorporated into the development process.
A major problem has been that two separate literatures have developed. The first literature has attempted to understand disaster and has given little attention to understanding the development process. The second literature has involved understanding the political economy and alternative conceptions of development which has arisen quite independently of considerations of disaster. The effort here is to look at both streams of literature on the relationship of disaster and development.

Development in the Disaster Research Tradition

Research within the disaster tradition is generally predicated on the assumption that any disaster was an impediment to development and in developing countries turning relief resources into developmental objectives could have important consequences. The first person to systematically relate disaster and development was Fredrick Cuny, publishing a book with that title in 1983. Those ideas had been germinating for a number of years, but Cuny had most recently been working on a housing construction education project after a Guatemalan earthquake and his experience provided a motivation for the book. Cuny had considerable experience in delivering disaster assistance for both governmental and non-governmental organizations and he had interest in and knowledge of existing disaster literature. His argument was straightforward that disaster relief was usually wasted and instead should be tied to development, especially through implementing mitigation and preparedness during the recovery. This involved the transformation of the direction of both governmental and voluntary agencies and on the local participation of those who received the assistance. Cuny did not base his appeal on the development literature, but on his pragmatic understanding and experience in the
response and recovery phases of several international disasters. In the book, Cuny’s criticism of the lack of understanding of donor agencies in providing assistance relevant to development is quite muted. The main thrust of his book was his argument that relief should be turned into developmental assistance, especially into mitigation and preparedness, which would allow future development with fewer negative consequences.

Within the disaster research tradition, one might argue that cross-cultural and comparative studies would have important implications for development theory. Earlier, Dynes identified two studies, both on disaster response rather than development that attempted to make comparisons which might be relevant to development. (Dynes, 1972) The first is by Clifford (1956) on two communities, one in Texas and another in Mexico, on their reaction to a flood. Using distinctions popular at the time in modernization theory, the study indicated, in Mexico, a greater dependence on the kin group as a source of advice and help, a greater reluctance to accept “official” warnings, and a greater tendency to depend on “heroic” leadership than was found in the United States. The second study by McLuckie (1970) looked at disasters in three different societies, subject to similar disaster agents, in the U.S., Italy, and Japan. The three had somewhat similar demographic, social, and political variables, but differed in the degree of political centralization – Japan being the most centralized and Italy being the intermediate case. There were indications that in more centralized states, preventative action involving warning and evacuation were often delayed. Also, established patterns of decision-making, which traditionally involved “higher” authorities made it difficult for local officials to make decisions, even though they had a more realistic assessment of the disaster situation. This study focused on immediate response, rather than long-term
delays. In addition to these explicit comparative studies, one could argue that most disaster studies outside the U.S. often used the literature, based on the United States as a primary source of ad hoc explanations for results, although these generally focused on more short-term response issues rather than longer-term development issues. (Lessa, 1954; Dynes, Haas, Quarantelli, 1964; Dynes, Quarantelli, Wenger, 1988)

Probably the most systematic recent research attempt to link disaster and development has been Bates and Peacock (1993), which was prompted by their previous work in Guatemala in the late 1970’s. Using that work as a beginning, they formulated a six-country study to measure progress towards recovery by focusing on living conditions of household groups. That study was placed in a theoretical context relating to development. Based on certain ideas derived from Lenski (1966), they argued that sociocultural evolution was a process that reduced vulnerability to natural hazards. One major “function” of this evolution was the ability to protect human systems against disaster. When there was a failure to protect a population, this indicated an unsolved adaptive system in the process. In that context, all disasters are man-made. They suggested that adaptations may create other vulnerabilities. For example, constructing a house might reduce the effect of climatic or health hazards, but the structure of the house may make people more vulnerable to death or injury in an earthquake. They emphasized that all adaptations involved tradeoffs. Technology can “solve” one problem, such as the creation of new energy sources, but create another such as pollution. But their general theoretical thrust is that development should reduce vulnerability and protect against disaster. Disasters thus were failures of the adaptive system.
After developing this interesting theoretical framework, Bates and Peacock moved toward a measurement of domestic assets suggesting that development involves the greater accumulation of capital assets, both at the household level and for economic enterprises. Arguing that disasters destroy and damage domestic assets and thus represent negative economic cumulation, the scales that they developed gather information on losses including changes in living conditions which have a direct relationship to health and sanitation, and measure dependency of the loss of energy sources which might be produced by disaster. In effect, their empirical cross-cultural work was directed more toward domestic asset losses, which households might evidence in the development process, rather than on adaptive systems.

Perhaps two other sources might be mentioned here. In 1994, a book entitled *At Risk: Natural Hazards, People’s Vulnerability and Disasters* was published and it avoids the vocabulary of development, although it concludes with an appeal to sustainable reduction of disaster. The book’s major focus was on “vulnerability” which they defined as “the capacity to anticipate, cope with, resist, and recover from the impact of a natural hazard.” (Blaikie et al, 1994, pg. 9) Using materials, from Third World studies, the authors’ draw on rural economic studies, which emphasize how access to resources changes when prototypical vulnerable groups are affected by disaster. In large part, the analysis uses famine as the prototypical hazard type and as the basis for ideas about access and then extends them to other hazard types -- floods, earthquakes, etc. A second stream of work comes from a network of researchers centering their interests around social studies of the prevention of disasters in Latin America -- LA RED. (Maskrey, 1993; Wilches-Chaux, 1989) The research of this network has a strong community and
ecological orientation, a concern for vulnerability issues and an emphasis on preparation and mitigation. In certain ways, both of these sources can be seen as updates and extensions of Cuny. They argue the importance of valuing and integrating local coping strategies, maximizing the transition from relief to development; avoiding relief and dependency, and incorporating mitigation into the development process. These were all-important themes initially stressed by Cuny, but now updated, reaffirmed, and elaborated by other authors.

In attempting to summarize the major themes on development coming from the disaster research tradition, it is fair to characterize them as a bottoms-up approach focusing on victims. These victims tend to be drawn from more vulnerable groups within the society and suffer economic losses. Some attention has been given to the utilization of coping skills of such groups in programs which might reduce their vulnerability in the future. On the other hand, there has been little research done from a top down approach, with the exception of the conceptualization by Bates and Peacock. There has been little attention to that larger social context of development. While there has been an interest in economic losses of victims, there has been less attention given to the consequences of disaster for the economic system itself. There has been little work on the relationship between the economic and political institutions. In addition, especially, but not exclusively, there has been little work on the impact of disasters in nations involved in external and internal conflict. Disaster impact in one political context might have different social consequences than in another context. Fortunately, independently of the research focused on disasters, there has been considerable vitality in the research tradition on development. In part, this vitality has come by the introduction of political factors into
the development discussion, which in the past has focused primarily on economic factors in explaining modernization and industrialization. Also, there have been new paradigms which assess the necessary conditions that include both a bottom up and a top down approach to the development process. But before discussing such paradigms, it will be useful to look at a recent analysis of the macro economic consequences of disaster, which can provide a different view of vulnerability.

The Macro-economic Consequences of Disaster

While there have been studies of the economic consequences of disaster in developed countries, notably in the United States (Friesma, 1977; Rossi, 1983), the most inclusive study to date has been Albala-Bertrand’s macro-economic analysis of disasters which has a focus on the developing world. (1993) Taking 28 disaster situations over a twenty year period (1960-1979), he develops an analytical scheme which suggests that most of the assumptions about the economic effects of disaster had failed to grasp the web of interaction between the affected disaster area and the rest of the economy. He points out that the economic and political institutions and the continuity of behavior in a social system is hardly hampered by setbacks and interference like disasters. He develops these ideas in the following way:

Disasters are few and far between.

Most disasters are localized.

Disasters are geographically, rather than sectorally, localized.

Disasters affect the more economically marginalized groups.

Disasters do not, as a rule, have any significant effect on the overall economy.
Disasters lead to significant capital inflows in the form of grants and low interest loans.

These capital inflows benefit those social groups reluctant to make structural change that would lessen vulnerability.

One of the strengths of Albala-Bertrand's analysis is in his effort to measure so-called indirect effects of disaster. In his discussions of the developmental consequences of disaster, direct effects are often dismissed and indirect effects are assumed to be more consequential. He examines four areas: households, health, economy, and public activities. He argues that the effect on households is mitigated by endogenous factors, such as the extended family, self-help, and local community assistance, which are in place long before external assistance. He suggests that the health effects, beyond immediate impact, have been greatly exaggerated. The effects in the economy from losses are not likely to spread to other parts of the economy. In more advanced economies, there are counterbalancing effects while in less integrated economies, the effects are isolated so there is no significant spread. (This last generalization holds for sudden impact situations, but may not hold for widespread famine situation.) The impact on public activities depends more on pre-existing social conditions than from the direct effect of disaster. He suggests that the short-term effects of disaster disappear rather quickly. For example, while there may be short-term unemployment, this is compensated by increases in employment in the recovery process. He concludes that most of the effects on economic aggregates fade away after two years and he notes that while physical recovery can have developmental overtones, these changes are not likely to resolve existing social inequalities.
Alba-Bertrand concludes that "Disasters are primarily a problem of development, but essentially not a problem for development." (1993, p. 202) This implies that the higher the level of development, the smaller the human and material losses and the more effective the response. On the other hand in less developed countries, disaster being localized, geographically and sectorally, is not likely to have important economic repercussions for the social system. This does not mean that individuals might not have significant losses, but that the economy as a whole appears to be compensated for them. He suggests that even if direct disaster losses are large, indirect disaster effects may be irrelevant when the internal social mechanisms come into being.

He contends that the long-range effects do not depend primarily on disaster losses, but with the interference with the ongoing social dynamics within the society. He also concludes that while there are some developmental consequences from disaster response, these are likely to be quite modest. There may be some changes in physical inputs, such as new construction materials, but social change, even a new emphasis on disaster planning, is likely to be filtered through the system so that the existing government controls the effects of the innovation. Measures which change the social structure are likely to be resisted, not implemented or are modified beyond recognition. On the other hand, political structures are not dramatically affected by engineering and physical resource measures. This reinforces the technological bias in international disaster assistance. In fact, the adaptive social system is often seen as an impediment to technological assistance on the part of international donors.

Alba-Bertrand sees vulnerability as a social political issue, not significantly changed by a disaster situation. Vulnerability is a result of poverty, powerlessness, and
limited options, and thus vulnerable groups do not gain access to economic or political institutions. On the other hand, increased modernization and disaster situations can increase vulnerability. External assistance in disaster situations may reinforce rather than undercut narrow power structures. International agencies often see the emergence of a variety of endogamous responses on the part of vulnerable people as being an impediment to the intentions of new helping agencies. This inattention to emergent activity, in turn feeds the technological bias in disaster assistance since it does not threaten or modify the existing political structure.

In subsequent work, Albala-Bertrand has differentiated complex emergencies from natural disasters, although he considers them within the same analytical framework. He suggests:

"The key feature of a long lasting complex emergency is the societal/institutional weakness that fails to accommodate entrenched and violent competing identity groups, while the key characteristic of a natural disaster is the physical weakness of structures and processes that fails to compensate for extreme natural events." (2000, p. 202)

The critical difference between natural disasters and complex emergencies is the way social institutions are affected. In natural disasters, while there can be some significant interference with social institutions, in complex emergencies, most of the impact and effects are intentionally induced and are meant to be deliberately disruptive. In natural disasters, aid is usually focused in a particular area and that area does not increase. In complex emergencies, one often has to deal with displaced populations and aid is often used as a weapon. Access to displaced populations may be limited. This makes any
response more complex, difficult, and unstable, often making an international response necessary. The duration of the emergency is much longer.

Reconstruction must aim at reconstituting social institutions rather than replenishing economic stocks. Perhaps most importantly, in disasters, the “interference” with the social structure is usually incidental and not long term. In complex emergencies, most of the impact seeks to interfere with and modify the social structure and that interference is deliberate, intense, and long-term.

The preoccupation with losses from disaster impact usually overlooks the response. The response is structured in social and human terms, and in all societies, the economy and the polity are ever active in dealing with a response to any setbacks and to interferences. As Albala-Bertrand suggests, “Human tragedy cannot be equated to economic setback nor can local severity be equated to national calamity and neither can recovery be equated to only financial or international aid.” (1992, p. 24) This does not deny that certain people may not be more vulnerable to disaster, but he adds, “The reduction of people’s vulnerability to disasters and to economic fluctuations is a socio-political issue relating to reforms, development, and power change.” (1993, p. 205)

An Initial Conclusion of the Relationship Between Disaster and Development

Traditionally, the link between disaster and development has been sought in the targeted utilization of disaster assistance for development ends, not simply for compensating immediate losses. Albala-Bertrand’s analysis suggests that the infrequency and the localized nature of disaster in less developed countries has little significant effect on the overall economy because of endogamous corrections and since capital inflows are
likely to go to groups reluctant to innovate and change. As we shall see, more recent theories of the development process focuses less on abstract economic factors and more on the changes necessary in social relationships and on the creation of responsive institutions which link the economic and political sectors in a form that creates a climate for change. Given that paradigm, it is necessary to re-ask the question of what effect disasters have on development? In particular, the question needs to be asked as to how disaster might change the social relationships central to the development process. The most immediate answer is not much. In complex emergencies which are characterized by “violent competing identity groups,” and if social cohesion is a necessary condition for development, certainly disaster is likely to be used as an opportunity by the competing groups to undercut existing institutions. In disasters, most consequences are localized and have little direct effect on the larger social system, and by Albala-Bertrands’ analysis, the indirect effects quickly fade away. In addition, the more general finding from previous disaster research suggests the notion of the “continuity of behavior.” That is, while there may be instances of emergent behavior in disaster response situations, the best predictor of behavior in disaster response is pre-disaster behavior, since the manifestations of emergence quickly fade away. So the most realistic conclusion as to the relationship between disaster and development is that complex emergencies are destructive of development and that disasters in less developed countries are by and large irrelevant to the development process.
Issues in Development Theory

As has already been suggested, research in the disaster tradition has on occasion considered the relationship of disaster to development. By contrast, discussions concerning development theory have seldom considered the effects of disaster. When there is attention, it is focused on the association of disaster and poor countries. Easterly (2000) points out that, “Between 1990 and 1998, poor countries accounted for 94 percent of the world’s 568 major disasters, and 97 percent of disaster related deaths.” (p. 197) He adds to this tally similar associations with famine, refugees, HIV, and notes that poor countries sensitivity to disaster creates a much larger range of growth rates than do the richest countries.

There has been considerable intellectual ferment in the development area, much of which will be slighted here. Developmental scholarship arose in response to major social changes after World War II when many European colonies were attempting to develop economic and political stability. Models drawn from European experience were created toward improving economic performance by a shift in values. (Rostow, 1996) Others suggested that it was impossible to see national economies as being independent, since former colonies were dependent on advanced economies for markets and emphasized “dependency” as a major factor in development. (Cardoso and Faletto, 1967) Others have argued that economic relations were not a simple exchange between nation states, but resembled a global economic system where core states were able to determine the real alternatives for other nation states on the periphery of that system. These sets of theories emphasized the historical roots of the existing world system. (Wallerstein, 1974) After the collapse of the Soviet Union, which until then had provided an alternative
model to capitalist development, some were quick to argue that the global marketplace should be organized around free competition, concluding that the needs of the market should determine the shape of the nation state. (Sachs, 1993) It is ironic that while each theory had its distinctiveness, whether the orientation was Marxist or “free enterprise”, all theories concluded with the “market” as the central variable to explain the success and failure of development.

The diversity of theoretical approaches to development, in part, reflects different disciplinary research agendas as well as shifting aid policies at both the national and international levels. Such policies fall on geopolitical strategies rather than pragmatic considerations of effectiveness. Therefore, this complicates the assessment of the relationship between disaster and development. Four specific issues are identified here, which complicate any assumptions about a simple relationship between disaster and development.

First, the core theme in development theories has centered on economic growth, generally measured in aggregate terms by changes in Gross National Product. (GNP) But, there are controversies as to what economic facts contribute to that economic growth – the role of investment in creating technological change, the encouragement of savings, the role of imports and exports, etc. Others suggest that development might be better measured by increases in per capita income or in educational attainment or by reductions in poverty or by reductions in infant mortality. Still others have argued that more substantive changes in social institutions, such as increasing equity in the justice system, narrower income distribution, greater political participation, or improvements in the status of women, constitute “development” even though such improvements might not be
directly tied to economic growth. While many of these changes may be correlated with economic growth, they may not be easily targeted by economic assistance.

There has been, of course, growing disappointment and disenchantment with an economic approach to development. Easterly (2000) in his masterly review of research has said, “Many times over the past fifty years, we economists thought we had found the right answer to economic growth.” (p. 23) In reviewing the cumulative evidence, he suggests, “Neither aid nor investment, nor education, nor population control, nor adjustment lending, nor debt forgiveness proved to be the panacea for growth.” (p. 143) This suggests that in order to understand the relationship between disaster and development, it first requires a more adequate theory of development than one that just focuses on economic growth as the central core. We shall return to that issue again, but there are other complications to be noted.

Second, the initial consideration of development, especially after 1950, centered on what are usually termed less-developed countries, but more recently, with the collapse of the Soviet Union, there have been a number of nation states moving from one economic system to another and could be described as transitional economies and perhaps require a different set of explanatory variables. Newer development theories emerged, usually centering on the free market solution but it soon became apparent that in the former Communist nations, the free market solution, faltered badly since while these new countries were characterized by “excess” governmental institutions, there were failures in developing the private institutions in civil society to facilitate economic growth. In any case, the question emerges as to whether different theories are necessary
to explain transitional development compared to more familiar theories of less development.

Third, some of the differences in the process of development are certainly due to historical factors. For example, a number of scholars have commented on the fact that the initial European migration to the United States developed a pattern of family farms which allowed an easier transition to middle class status than some Latin American countries where mining and plantation economies produced a small elite and a large underclass, often with slavery. Those original settlement patterns have provided different starting points for development.

Fourth, development occurs in the larger context of the world economy. This factor is of particular importance in the analysis of growth over time. For example, from 1950 to 1974, there was general prosperity and many efforts to spur development were successful because of the worldwide economy. However, from 1975 to 2000, the worldwide economy has been less encouraging, except for the East Asian countries known as the Tigers. However, countries that exhibited lower growth rates in the poorer economy were characterized by weak institutions and were often ethnically divided. In this context, it is important to note that the initial interest in the relationship of disaster to development stemmed from the earlier period of enthusiasm as to how disaster might be tied productively to development. On the other hand, the importance of disaster in transitional economies has not been as yet a significant research focus.

UNDERSTANDING THE RELATIONSHIP BETWEEN DISASTER AND DEVELOPMENT

The fact that Albala-Bertrand’s analysis that the macro economic effects of disaster were minimal and complex humanitarian emergencies were destructive of
development will, of course, be examined in future research. It is suggested here that the relationship between disaster and development will require (1) a more adequate theory of development, (2) the use of methodologies which capture long-term change and modifications in the social structure, and this might require (3) the observation of variables that have been previously ignored.

Toward a More Adequate Development Theory

One potentially fruitful paradigm of the developmental process is that of social capital, and it has emerged in recent years, although its roots are deep into the sociological tradition. It first looks at the nature of prevailing social relationships in the context of Durkheim’s distinction between organic and mechanical solidarity and the linkages necessary for vulnerable groups to generate social ties outside the group to achieve developmental outcomes. As Simmel noted:

As long as the small primitive group is self sufficient, a pervasive equality exists in that each member of the group works for the group itself; every achievement is sociologically centripetal. However, as soon as the boundaries of the group are ruptured and it enters into trade in special products, internal differentiation develops between those who produce for export and those who produce for domestic consumption – two wholly opposed modes of being. (1971)

The focus here in term of development is the transition between small-scale informal exchanges in the village market to large, more extensive market networks, coordinated by formal institutions.
The second dimension centers on the role that public institutions play in fostering or impeding economic growth. A starting point is Weber’s analysis of bureaucracy, which was set in contrast with earlier forms of governmental organizations. Weber postulated that bureaucratically structured public institutions, with their own decision rules, were a necessary complement to market based institutions. Such organizations were characterized by meritocratic recruitment and long term career rewards. In other words, development has occurred in states that were willing to construct the bureaucracies necessary for coordinating complex market exchanges.

The modern capitalist enterprise rests primarily on calculation and presupposes a legal and administrative system, whose functioning can be rationally predicted, at least in principle, by virtue of its fixed general norms… The modern enterprise finds incompatible the theocratic or patrimonial governments… whose administrations operated according to their own discretion and, for the rest, according to inviolably sacred but irrational traditions… The specific features of modern capitalism, in contrast to these ancient forms of capitalist acquisition, nowhere developed in such irrationally constructed states… (Weber, 1968)

Of particular importance is the development and involvement of the State. Such an emphasis is reflected in the title of a book “Bringing the State Back In” (1985) which in part focuses on “States as Promoters of Economic Development and Social Redistribution.” Based on comparative – historical research in a variety of circumstances, this approach argues the importance of the development of the state which is able to transcend markets. That effective state intervention is dependent on the
development of autonomy. The creation of the state autonomy is long term since cohesion is dependent upon creating institutions able to maintain a supply of collective goods, independent of market operations. Of particular importance are the structural conditions necessary for the development of state autonomy. Of critical importance is the avoidance of domination of the state by the dominant class. This is facilitated by divisions within the dominant class, for example, between land owning and commercial interests, and by the emergence of bureaucracies which not only implement policies, but also organizationally become actors in developing policy. Of importance is the emergence of technocrats with their own interests and career paths. Interest based divisions within a society much more amenable to material based inducements and to coercion from the state than are racial and ethnic divisions. Racial and ethnic divisions are more static and provide rigidity rather than cohesion. Autonomy is necessary for effective state action. Too, there is the need for decentralized decision making to avoid issues arising from rigid state authority, but the state must develop bureaucratic forms that provide sufficient cohesion to facilitate state action. Such cohesion is developed over a long-term process of institution building, rather than from a sudden infusion of economic resources. The development of state autonomy can be achieved in a variety of ways and there is no linear causation, which was implied in modernization theory. Understanding these procedures underscores the importance of comparative historical research in advanced societies, those states within the periphery in world system terms, and those transitional economies which had been part of the Soviet Union, not just underdeveloped economies. Recently, there has emerged a considerable body of literature that looks at the manner in which institutional structures contribute to development. In
general, this research centers on the idea that government, corporations, and civic groups are variables in the attainment of collective goals, such as development. Partnerships within and across the various institutional sectors are required and identifying the conditions under which these relationships emerge is a central task of understanding the development process. (Woolcock, 2001; Evans and Stephens, 1998)

To try to capture these ideas; one potentially fruitful paradigm has been developed by Michael Woolcock in which he uses the concepts of embedded and autonomous social relationships as key variables, both at the micro and macro levels. The idea of embeddedness points to the fact that all economic relationships are enmeshed in social relations and that development comes about by a change in the kind, not necessarily the degree of embeddedness. Many of the benefits gained by embeddedness in a given network are not without cost. The social relationships that characterize village market often prevent successful members from making a transition to larger more extensive participation in networks, coordinated by formal institutions and the rule of law. In addition, in the development process, new social mechanisms are needed to protect from the dangers that interaction among powerful actors can easily move into corruption, nepotism, and other forms of exploitation.

In addition to embeddedness, the notion of autonomous social ties is also necessary. This idea focuses on the extent that community members have access to a range of non-community members. At the macro-level, this would require examining the extent to which senior policy makers were not just connected to industrial leaders, but also were governed by a professional ethos and were recruited and rewarded on the basis of merit.
In effect, there were different types of embeddedness and autonomy. Embeddedness was thus a necessary, but an insufficient condition for coordinating long term development efforts. Autonomous social relationships compliment the beneficial aspects of embeddedness, but offset the costs. In Woolcock’s analysis, the sense that embeddedness and autonomy is used at the micro and macro level is not the same. Embeddedness at the micro level refers to intra-community ties and labeled integration, while at the macro level, it refers to state/society relations and is labeled synergy. Autonomy at the micro level refers to extra community networks and labeled linkage, while at the macro level, it is labeled integrity referring to institutional capacity and credibility. Thus, social capital is reflected in four distinct forms. Those distinctions have been useful in studies of ethnic entrepreneurship. (Portes and Sensnebrenner, 1993) and in studies by comparative institutionalists. (Evans, 1985)

In the context of the previous paradigm, it is necessary to recall that most previous disaster related studies have emphasized the importance of economic losses and have given little consideration to how disaster might change social relationships. We shall return to that issue later, but one additional research effort needs to be included here. The World Bank, initially prompted by a grant from the Danish Government, has begun to explore the utility of a social capital approach in understanding development. In part, the thrust of this conceptual basis for that approach is centered on the notion of social cohesion, which is essential for generating the trust necessary to implement reform and to develop effective social institutions. Using the term social cohesion as a summary measure of various aspects of social capital, Ritzen, Easterly, and Woolcock (2001, p. 6) define social cohesion as a “state of affairs in which a group of people (delineated by a
geographical region, like a country) demonstrate an aptitude for collaboration that produces a climate for change.” In their analysis, social cohesion is seen as the other side of the coin from social exclusion, which is reflected in poverty, unemployment, ethnic, racial, and gender discrimination, etc, and which undermines the trust necessary for the action necessary for collective growth. Utilizing a number of direct and indirect measures, including measures of participation, income distribution, attitudes of trust, ethnic heterogeneity, quality of bureaucracy, rule of law, and governmental effectiveness; they examine the consequences of cohesion for economic growth. Using measures of ethnic fractionalization (low) and middle class share (high), they show that more cohesive societies have always grown faster than less cohesive societies and this difference has accelerated since 1980. Also associated with cohesion is the quality of institutions, measured by rule of law. In effect, the causal chain suggests is that more social cohesion leads to better institutions and better institutions leads to higher growth. This research takes advantage of the culmination of macro measures of various nation states drawn from other scholars. This suggests that best measures of the development process are not to be found in rather static economic measures, but in understanding social capital.

Toward a More Adequate Methodology

There are a number of methodological issues which complicate the examination of the relationship of disaster to development. One issue is the timing of the research in terms of disaster phases. For research which focuses on the emergency period, changes observed may not be incorporated over time into lasting social structure. Bates and
Peacock (1987) in their discussion of disaster and social change suggest that until change is incorporated, it remains only a temporary modification. Too, many studies of response lack baseline measures. Anderson (1969) found that most of the changes in organizations in Anchorage after the Alaskan earthquake had been initiated prior to the quake. In addition to timing and baseline issues, the object of research attention is important. Many studies focus on individual attributes and not on social relationships which would be critical for social capital theory. Other studies focus on “victims”, not necessarily on institutional change. The conceptual leap from victim to development is immense.

If development is a long term historical process, the details of such a process are not likely to be uncovered by studies, two years or five years after an isolated disaster impact, which is usually identified in the disaster literature as constituting “long term” change. This means that understanding the development process might require more in depth examination of particular disaster events in which significant policy changes were implemented which had long-term social consequences. For example, in another context, the Lisbon earthquake in 1755 has been called the first modern disaster since Portugal became the first nation state to give attention to disaster reconstruction. (Dynes, 2000) In this example, a new Prime Minister was able to undercut the interests of the court to firm up his own concerns about the fragility of trade with Portugal’s South American colonies. In order to accomplish his ends, he favored the rising commercial class while undercutting the interest of many of the court, the Church, especially the Jesuits, and many peasant interests at that time. For the reconstruction of the port, he borrowed engineers from the Army bureaucracy to implement his reconstruction of the commercial center of Lisbon. His actions were intended to protect his nation’s control of its colonial
empire and its domestic economy. His use of state resources and his notion of state vulnerability set a precedent for other emerging states. The point here is that to understand the relationship between disaster and development require an historical understanding of particular critical events rather than post impact survey of victims of routine disasters.

Toward the Identification of Critical Variables

In addition to our usual condensed frame on what constitutes long-term developmental change, it is quite possible that if our interest is on development and disaster, we do not know what factors to observe relevant to development. For example, if embeddedness needs to be balanced with linkage, this might require a consideration of consequences of relocating the victims after a disaster. In general, much of the Third World disaster literature suggests that relocating victims after a disaster is too disruptive and that village traditions need to be maintained in order to reduce disruption. From a development view, relocation can have positive consequences since it will require villagers to make new linkages, to develop new occupational skills which are on the cutting edge of the new economy and those relocated may in turn develop new markets.

In addition, there are many examples of how “marginalized” groups such as religious minorities have played critical roles in the development process primarily for their ability to make unique linkages. Kuran (2001) has suggested that in the Middle Ages, Islamic Middle East religious minorities (chiefly the Greeks, Jews, Armenians, and Christian Arabs) were able to conduct business since they had the option of using Islamic Law or a law of their choice. This was especially important since the Islamic inheritance
system kept contractual partnerships small and ephemeral and did not allow the accumulation of capital or to achieve an economy of scale, which characterized European enterprises. This gave minorities a decided advantage at the critical point in the development of Capitalism. The suggestion here is that the vulnerability of certain populations which are usually seen as disruptive, might also be adaptive for development. Too, marginalized groups usually signify that such groups are less embedded and can have "better" links to the development process.

In addition, there is the possibility at the macro level that linkages created by delivering assistance to geographically isolated disaster areas might provide the initial step of integrating such areas more firmly into the national economy. Too, reconstruction efforts might bring new "residents" who have linkages which are different and unique so that they can act as pioneers in the establishment of new relationships. Also, disasters in developing countries usually draw international agencies which bring "foreign" staff and provide local employment for those who have appropriate skills. Often those hired have skills above and beyond other locals. They move into new linkages because of their work and when the immediate relief or recovery tasks are completed, that experience is useful in seeking other bridging employment.

It is difficult to identify empirical indicators which would indicate increases in organizational integrity or increases in synergy between state and society. We have no theoretical models of how state structure is modified by disaster. It is quite possible that in most routine disasters, there are few changes in macro relationships and only in exceptional circumstances, like the Lisbon example, are there any modifications. Many researchers, focused on a bottom up approach consider state changes as opportunistic and
politically motivated, and in general, somewhat irrelevant to the recovery process. Since there are no ready models, the suggestions here point to dimensions which might be important. One would be the routinization of entitlements to disaster assistance, moving away from the somewhat random politicalized direction of assistance toward some notion of equity in an inclusive conception of citizenship in the state. Another might be the expansion of risks which are considered the responsibility of the state as well as the expansion of state concern for damage, e.g. the provision of food and shelter to the addition of additional services, such as mental health or an extension of the time of assistance from immediate relief to long term recovery. Another might be the creation of programs directed toward specialized issues or populations – bearing the cost of repairing public facilities or the creation of programs which provide loans to private businesses. The synergistic effects of such changes would be in strengthening “citizenship” ties in the state. If some type of assistance and concern for disaster victims is evidenced, this means recipients are an integral part of the society and that assurance often means that there are obligations to others and to the state. Such assurance reduces ethnic, racial, and religious fractionalization and it would not increase income differentials within the society.

Such changes might also be reflected in the enhancement of organizational integrity. One indicator might be the emergence of a separate governmental agency, dealing with disaster, which is established independently of social control agencies, such as the army or the police. Such an agency might change the focus from a preoccupation with the concerns of central government toward decentralization and direct attention to the needs of local communities. Such agencies might increase and enlarge their concern of new risks or extend their interests beyond the simple provision of immediate relief.
Such agencies might develop rules which rationalize entitlements based on established ideas of equity. Such agencies might begin to employ personnel with technical rather than political qualifications and begin to develop training opportunities for such a long-term career path. Professionalization provides a shield against overt political concerns.

In addition to the possible development of organizational integrity dealing with disaster response, it is possible that reconstruction efforts, if well handled, might provide increased evidence of organizational integrity and provide added synergy between public and private organizations. Too, there may be long lasting consequences of the effort to deliver relief in the sense of incorporating distant disaster locations into the larger national economic system. In fact, new markets might be created which then persist long after the initiating disaster event. Such changes are usually ignored or do not seem relevant at the time of post disaster research. Consequently, an important next step would be to examine the historical roots of changes in disaster policy in a variety of state settings.

Aside from the methodological issues and the importance of examining different variables, some version of social capital theory seems promising. Easterly (2001), in his analysis of past economic remedies for underdevelopment, suggests that the optimum conditions for pro-growth policies occur when class conflict and ethnic tensions are reduced. The failure to develop a “middle class consensus” about the importance of change explains many of the existing differences in development between North and South. The more recent failures in the transitional economies of Eastern Europe can be attributed to the failure to develop a new middle class to replace the older middle class based on a planned economy. Too, many of these countries had sizable ethnic minorities.
who retained their historic animosities. This also explains why complex humanitarian emergencies, which target existing institutions, are so destructive of development. Such failures might institutionalize pessimism, but it should more properly insure humility about the proposition that disaster provides a window of opportunity for development. In unusual circumstances, there are consequences, often only visible over many years, when disaster creates the type of change which furthers economic growth. It is on those special circumstances which future research needs to concentrate.

Summary

The research literature on disaster and the research literature on development have evolved separately. In the disaster area, Fred Cuny was the first to apply his pragmatic understandings to the relationship between disaster and its implications for development. Too, almost all cross-cultural research on disaster has implicit developmental overtones. Bates and Peacock used their Guatemala experience to build a theory of adaptive systems and to develop a scale to measure domestic asset losses cross culturally. In addition, a network of researchers, LA RED, focusing on Latin America, has created a body of work on vulnerability, community development, mitigation, and prevention using a political economy view. Blaikie, Cannon, Davis, and Wisner recently have updated Cuny’s concern focusing on vulnerable populations. In general, the disaster side has been interested in the economic losses of the victims and has elaborated a bottoms-up approach to development.

Adding to our understanding has been Albala-Bertrand’s analysis of macro-economic losses in disaster in less developed countries. He suggests that both direct and
indirect economic losses have been exaggerated and that endogamous adaptations mute the effect on economic aggregates. He suggests that, “Disasters are primarily a problem of development, not essentially a problem for development.” He also makes a useful distinction between disaster situations and complex emergencies where effects are internally induced and deliberately disruptive.

On the development side, recently there has been a lively debate about development theory. In that debate, the impact of disaster on development has not been an important consideration. Among the more recent theories relevant for disaster research has been the idea of “social capital.” This theory has considerable appeal to sociologists since it is based on concerns derived from Durkheim, Simmel, and Weber. It centers on changes in social relationships and in institutional patterns as keys to the development process. It focuses on the role of embedded and autonomous relationships and adds a concern for top-down to the traditional bottoms-up approach. The paper argues that victim losses in disaster may not be significant in the development process, and by their very nature, complex emergencies are destructive for development. The paper examines how changes in social relationships as a result of disaster can affect the social capital necessary for development and growth.
This stand in contrast with the private conversations we had when I chaired the Committee on International Disaster Assistance, National Academy of Sciences/National Research Council, 1976-79.

Olson and Drury (1997) consider the casual connection between disaster and political instability. Selecting 12 countries with disasters with a high death rate during the period 1966-1980. Their analysis uses aggregate national indicators two years before the disaster event and seven years after. Such analysis is difficult since the sample is composed of countries which were politically unstable before and after the disaster event. Too, measures before and after assume that nothing besides the disaster happened within the social system during that period. This suggests that historical case studies are needed to supplement indicators at two different time periods.


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