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SOME OBSERVATIONS ON THE  
CONCEPT OF DISASTER SUBCULTURE

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## The Concept of Disaster Subculture

In examining the reaction of a particular community throughout the various phases of a disaster, it must be noted that this response is, at least in part, dependent upon its previous experience with similar disaster events. That is, previous community activity provides some residue of learning which is applied in subsequent situations. Disaster "cultures" or "subcultures" appear to develop in many communities that experience repetitive impact from specific disaster agents. These communities in effect have institutionalized methods of response to disaster agents, and incorporate various elements of these response mechanisms into their local culture.

Moore (1964) was the first to develop this concept to indicate a set of cultural defenses which are developed to cope with recurrent dangers. He proposed that a disaster culture included "those adjustments, actual and potential, social, psychological, and physical, which are used by residents of such areas to cope with disasters which have struck or which tradition indicates may strike in the future" (p. 195). Other writers have subsequently theoretically refined and/or utilized the concept in empirical applications (W. Anderson, 1965; J. Anderson, 1968; and Wenger and Parr, 1969). In general it has been offered that a disaster subculture serves as a blueprint for individual and group behavior before, during, and after the impact of a disaster agent. It includes norms, values, beliefs, knowledge, technology, legends, and institutionalized and routinized patterns for intra and interorganizational response. The valuative elements in the subculture tend to define what is important in the disaster situation. Normative elements include such factors as prescriptions on how the threat is to be perceived, what individual action is to take place in specified conditions, how organizational members are to respond, etc. Beliefs vary widely. On the one hand, they may involve the notion that certain areas are immune to particular kinds of danger, or the cultivation of certain types of attitudes representing "defiance of nature" and "community self-sufficiency." On the other hand, beliefs about the causal factors in a disaster, or attitudes mirroring an acceptance of fate or resignation may develop. Furthermore, within the subculture legends of the exploits of others in past disasters and myths about various aspects of the disaster experience are likely to develop. The subculture often includes knowledge of such factors as how warning cues are to be interpreted, the potential destructiveness of various disaster agents, and the efficiency of particular types of action, such as flooding basements prior to an approaching flood crest. Technologically, sophisticated methods of detection and warning may be present. Physical safeguards including levees and other tools to lessen the impact of the disaster agent may exist (e.g. hooks on the ceiling to hang furniture in flood conditions, taped plywood covers for windows, homes constructed on stilts, the prior designation and stocking of shelters, etc.). Finally, the subculture may involve institutionalized patterns for intra and interorganizational response. The existence of disaster plans, the control of emergency relevant resources, and routinized methods for response by emergency organizations may be evident. Newcomers to the community are socialized into the subculture. Both formal and informal mechanisms exist for providing them with requisite knowledge and other cultural elements.

In sum, in certain communities "disaster" may be expected and the local system's response institutionalized. They learn, gradually, that certain events are repetitive and perhaps predictable. In fact in fully developed subcultures, the local community may not even perceive or define the impact of a disaster agent as being "disastrous." Some communities have institutionalized their mode of response to the point where they view such events as floods as simply nuisances, or possibly even look forward to the flood period as a time of "carnival."

Within the United States evidence of disaster subcultures is most clearly seen in certain sections of Texas, Louisiana, and Florida which often experience hurricanes; areas of the midwest that are subject to tornadoes; and communities along some of the major waterways in the country. The Disaster Research Center has examined disaster subcultures in New Orleans (Louisiana), Cincinnati, Marietta, and Circleville (Ohio), La Crosse (Wisconsin), Mankato and North Mankato (Minnesota). At this time, let us briefly note a few preliminary findings from these studies.

First, communities tend to specialize in their disasters, and the subsequently developed subcultures tend to be keyed to a specific type of agent. Due to the repetitive nature of differing types of disaster agents, and the specific problems they pose, certain communities tend to be "flood cities," while other areas may represent "hurricane communities." This specialization may aid in response to the focal agent. However, it can prove to be detrimental in responding to other types of agents.

Second, the latent disaster subculture contains both facilitating and debilitating factors relevant to emergency response. Many of the facilitating factors are obvious. With routinized and institutionalized methods of response, developed and previously implemented disaster plans, diffused knowledge on the implementation of technological devices to lessen the scope of the impact, etc., the possibility of rational, effective, ameliorative activity is increased.

There are also, however, debilitating factors. We noted that subcultures tend to be specialized around certain agents. This specialization can be detrimental to community response if a different agent, with different characteristics and response requirements, strikes the community. For example, New Orleans is a "hurricane city." During Hurricane Betsy the city was able to prepare adequately for the impact of the storm. Floods, however, were spawned by the hurricane. These secondary impact agents constituted a serious problem for the community. They were the true "disaster." Many of the emergency relevant organizations in the community were simply not prepared, or ill prepared, for this type of agent. Routinized and institutionalized preparations that are specific to one type of agent, therefore, may not be flexible enough to offer proper preparation or response in differing situations. In addition, the "defiant" attitude existant within some disaster subculture communities can prove to be detrimental to effective response. In effect, the community has met the disaster agent in face-to-face battles on previous occasions; the continued existence of the community "proves" that it was victorious! When the impact of the approaching event, however, exceeds prior impacts in destructive potential, the attitude of defiance and self-sufficiency can be deleterious to survival. In Pass

Christian, Mississippi, for example, many local citizens had experienced previous hurricanes and near-misses. On the basis of that experience, they were defiant in the face of the approaching Hurricane Camille. Thus a number of them made plans to "ride out the storm" during its impact. Some of those who did so were killed as a result of their failure to evacuate. Many examples could be given of individuals who refuse to evacuate potentially flooded areas or to take shelter after being warned. Few subcultures are geared to the 100 year disaster; they are based on the recurrent, routine agent. When faced with a very destructive agent, defiance and confidence can become pernicious obstinance.

Third, with the exception of certain locales that experience mine disasters, explosions, and the like, most disaster subcultures tend to develop around focal agents that allow for at least a moderate degree of warning, e.g., floods, hurricanes, blizzards, etc. As such, the operation and effect of a disaster subculture can be most apparent during the pre-impact phases of warning and preparation. The period of forewarning, in effect, allows the community to "control" the impact of the agent by instituting planned and routinized measures to lessen the consequences of the impact.

For example, perhaps the most massive flood preparation ever undertaken within the United States occurred in the spring of 1969 in the upper Mississippi and Minnesota river basins. As early as January, the Minneapolis Weather Bureau began predicting that record floods would occur in the spring and inundate the areas along these rivers. For the past two decades, communities such as La Crosse, Wisconsin, Mankato and North Mankato, Minnesota have experienced recurrent flooding. The development of a "flood subculture" has begun in these cities. With the initial warning, they began massive flood preparations. Large-scale diking operations were begun in the Minnesota cities at a cost in excess of \$400,000. (In North Mankato the city council had authorized allocation of funds for diking in excess of the year's entire city budget!) Community-wide and organizational flood plans were revised and activated. Local organizations contacted outside agencies and instituted plans for securing needed equipment for the forthcoming "flood fight." News of the approaching floods appeared on the front page of the newspaper for a period of two months. In most cases, flood preparation was undertaken by the city government, its agencies, and other community emergency organizations. However in North Mankato, a community that lies over 90 percent in the flood plain of the Minnesota River, public meetings, flood preparation seminars, and a large number of volunteers were also utilized. The "flood fight" was successful. The communities had been warned daily that an "all-time high" flood was likely to occur. Under incessant warning, they undertook massive preparations. Although the rivers fell just short of record heights at most locations, the communities were prepared for floods in excess of those that occurred. They stayed dry; they "controlled" the situation.

What is perhaps most unique in this situation -- and an indicator of the existence of a flood subculture in these communities -- is that due to the massive financial, material, and technological demands required for this preparation, the local Minnesota communities asked the governor to request that the President institute Public Law 275 on February 14, 1969. In effect, they requested that they be declared a federal disaster area, and

thus be eligible for federal funds, fully two months before the disaster was expected to occur! The request was denied. Public Law 99, however, was instituted in March and the Army Corps of Engineers assumed the major financial and technological role in the diking operations. Later, the President of the United States did pre-date Public Law 875 to February 1 to include the period prior to impact. Thus communities such as Mankato did receive federal funding for the disaster.

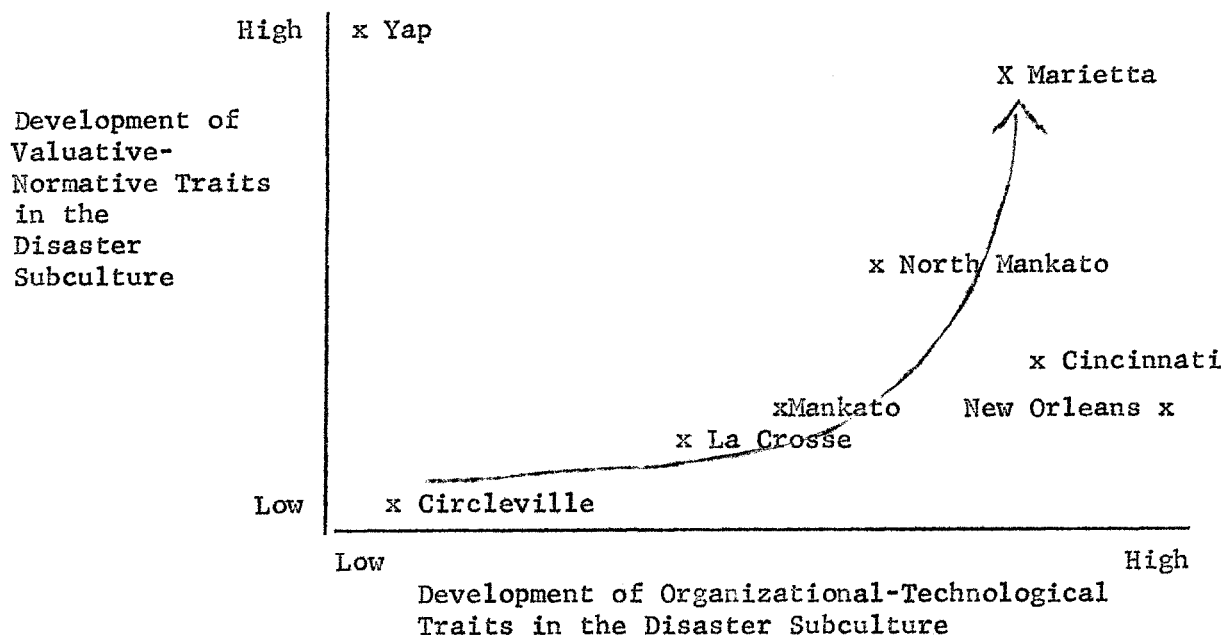
Fourth, on the basis of empirical examination, it is evident that the concept of disaster subculture is in need of further refinement. There is great diversity among disaster subcultures. In some communities resources are available for response, plans exist that coordinate and direct organizational activity, and response technologies are a part of the resources of emergency relevant organizations. These elements, however, may not be known to the public. In effect, the disaster subculture is limited to the formal organization structure of the community. In other communities, the organizational and technological elements are in evidence, but the values, norms, beliefs, and other non-material artifacts of the culture are not present. In still other communities, all of the aforementioned components of the culture can be found.

In order to capture this diversity, it would appear fruitful to differentiate between two major dimensions or sets of traits within a disaster culture. On the one hand, there appear to be technological and organizational elements. These traits include standby resources, pre-existent intra and interorganizational plans, and highly routinized expectations for activity held and developed by local emergency relevant organizations. These elements tend to develop together in a subculture. We can refer to these as simply the organizational-technological traits. On the other hand, there are the valuative, normative, attitudinal, legendary and mythological elements of the culture. In their fully developed form, these elements are widely diffused throughout the general population, are a salient part of "local" culture, and are not limited to the instrumental response patterns of local disaster relevant organizations. Also included in this dimension is practical knowledge held by individuals about ameliorative activity that can be undertaken. For simplicity, let us refer to these elements as the valuative-normative traits. It is possible for these two general types of traits to exist in varying degrees of development within the same community. Figure 1 illustrates how certain communities might be classified on these two continua.

There are three general observations that should be made about this model. First, it is highly tentative. We have the feeling that a three-dimensional model, consisting of organic, mechanic-expressive, and mechanic-instrumental traits, is needed. Second, the placement of the communities on the continua is not exact. No quantitative measurement of the two dimensions has yet been achieved. On the basis of empirical observations within the communities, however, the placement would appear to be generally accurate.

Third, within American society the development of a disaster subculture would appear to follow the pattern described by the arrow. Marietta has the most fully developed disaster subculture in our sample. Recurrent flooding has been a way of life in Marietta for over a century. In addition,

Figure 1: An Empirical Classification of Disaster Subcultures



the community is relatively small and isolated. Serious, recurrent flooding in La Crosse and Mankato, however, is a more recent phenomenon. In the latter city, for example, four of the five worst floods in history have occurred since 1951. Within the past decade these communities have developed rather elaborate organizational and technological mechanisms for response within their sets of emergency relevant organizations. While they are also relatively small and independent, they have yet to develop complex sets of valuative, normative, legendary and mythical traits. North Mankato would appear to be between these communities and Marietta in its stage of development. Cincinnati and New Orleans, which both possess elaborate organizational-technological traits, may indicate that the diffusion and development of complex valuative-normative patterns may be complicated in large, complex community systems. In general, however, with respect to development, there may be a tendency for the valuative-normative traits to "lag" behind the organizational-technological elements. Further investigation is needed with respect to the question of development; these ideas should be accepted as heuristic notions for further research. Let us look more closely at a few of the specific communities.

As noted, the flood subculture in Marietta appears to have a rather complex development with respect to both sets of traits. The business district of this community is located on the flood plain of the Ohio and Muskingum rivers. Flooding occurs almost annually and particularly devastating floods have crested in 1913, 1936, 1937, 1943, 1959, 1964, and 1969. Flooding and flood response have become accepted elements of life in the community. Technologically, the organizations in the community have developed

complex plans and procedures for response. For example, businesses have developed elaborate plans for moving their stock "up the hill" and storing it, along with the other citizens' possessions. Certain banks have flood doors in their basements and vaults. Clean water is pumped into these areas prior to the flood to equalize pressure and lessen the problems of clean-up caused by dirty flood water. The local utilities have instituted procedures for cutting off service to flooded areas. Local emergency relevant organizations have supplies of flood relevant resources, shelter supplies, and equipment. In addition, methods for socializing newcomers into the disaster subculture include flood seminars, the publication of a list of bench marks for the city that can be obtained in stores and hotels, and the efforts of neighbors to inform the new residents about "proper" normative flood behavior. Attitudinally, the floods are viewed as nuisances at worst, and as carnivals at best, as "everyone pitches in to fight the flood." Finally, the folk lore of the community is replete with legends of past floods. Certain local individuals, such as a retired riverboat captain who predicted crests, have become famous because of their flood related activities.

At the other extreme, Circleville exhibits few, if any, subcultural traits. Although the city has experienced flooding in the past, neither the organizational-technological nor the valuative-normative dimensions have developed to any significant degree. Three factors might be partially responsible for this lack of development. First, floods in Circleville are of a "flash flood" variety. They involve little, if any, warning, and allow little preparation prior to impact. Such a situation does not facilitate the development of elaborate, instrumental, routinized patterns of response. Second, the floods effect a more limited geographical area of the community. As opposed to the situation in Marietta and other subculture communities, the downtown business district is not seriously threatened. Third, the floods do not cut across class and status lines. The residents of the flood plain tend to be of a lower socioeconomic class position; the poorer elements of the community tend to experience the flood. As a result, the development of a community wide flood subculture is complicated.

Jon Anderson (1968: 303) has described the response of the public of Yap to typhoons. This society exhibits a highly developed complex of valuative-normative, legendary and mythical traits, but practically no development along the organizational-technological dimensions. The Yaps view typhoons as being symptomatic of community conflict and the result of magicians who act upon the orders of a chief who is punishing his people. Resignation highlights the citizens' preparations and response to the storm. Some preparations are made by individuals and family members; in general, however, they await the storm, resigned to its coming, observant of its symbolic meaning for local life.

When a typhoon is imminent, a local chief calls upon the magician to intercede with the supernatural and ward off the disaster. Individuals and family groups take whatever protective measures they have learned, moving the boats to higher ground and returning to wait out the storm in the house where protection by their ancestral spirits is provided. It is proper then to pray and to remain in the house even if it collapses, for to leave it is to

abandon spiritual protection. Each person tries to put himself in the best possible light for supernaturals by carefully-observed rituals and by adhering strictly to social norms. During the impact there is a generalized tension, and a standard startled reaction is mandatory in periods of special ferocity.

Within American society, it is possible that certain communities that experience mine disasters, for which there is little warning, may also exhibit this pattern of complex sets of valuative-normative traits and miniscule development along the organizational-technological dimension.

Finally, cities such as Cincinnati and New Orleans exhibited highly complex and institutionalized organizational-technological traits. The elements of the disaster subculture in these communities appear to reside most strongly within the local set of emergency relevant organizations. Although elements of the valuative-normative dimension are present, they are not as widely diffused throughout the public or as complex as those in Marietta. As we noted previously, the size and complexity of these communities may not facilitate the diffusion of expressive and instrumental valuative-normative traits throughout the local system.

Even on the basis of these preliminary observations, it seems apparent that the concept of disaster subculture is deserving of additional theoretical refinement and empirical examination. In particular, examination is needed into the development and types of subcultures. Such findings would not only be beneficial for disaster planning, but contribute to a greater understanding of group preparations and responses to extreme stress situations.