

VICTIMIZATION IN NATURAL DISASTER

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On 31st May 1970, the Peruvian coast and highlands north of Lima experienced a devastating earthquake which virtually leveled most communities in an area exceeding 80,000 km². The emergency which followed affected all survivors to some degree, but the worst conditions were generally found in urban centers. Smaller communities in this agricultural region did not escape the effects of the disaster, for the majority of adobe structures – as many as 80% – crumbled during the few moments of the earthquake. Even with destruction so widespread, however, the rural sector did not, as a whole, suffer the extremes of collective stress characterizing the larger towns and cities, so that some segments of the population in north-central Peru were more victimized than others by the event and its repercussions.

The Peruvian case is not unique in this respect. As in other natural disasters not all survivors were injured, nor did everyone lose family and friends. Unequal distribution of wealth, moreover, meant that some victims could better cope with some aspects of the emergency, while the greater number lost most of their personal possessions and faced a difficult struggle for survival and recovery. Despite such differences in kind and degree of victimization, a number of authors maintain that natural disasters tend to level the social order and to eliminate hierarchical distinctions because the dangers “indiscriminately affect persons of all groups and statuses” (Fritz, 1961). Drawing upon studies conducted primarily in industrialized countries, particularly in the U.S., analyses seem to reinforce the myth that crises bring out the best in people, with ‘best’ often defined in terms of the Western values of the authors themselves. Thus the social order is *democratized* by disaster conditions (Fritz, 1961; Quarantelli and Dynes, 1976) and this period of high esprit de corps is therefore not surprisingly called the post-disaster *utopia*, a term first used by Wolfenstein (1957) and appearing frequently in disaster literature. One can almost detect a note of moral order in Silone’s assertion that “an earthquake buries rich and poor, learned and illiterate, authorities and subjects alike beneath its ruined houses” (Silone, 1952). Death and destruction may be indiscriminate in some cases, but people are affected differently by the aftermath.

Other authors have more recently recognized that natural disaster brings with it degrees of stress and need, but the

assumption now seems to be that the poor are most victimized by destruction and by disruption of the affected sociocultural system. Westgate and O’Keefe (1976), for example, believe that when an earthquake, flood or storm occurs the rural and urban poor “lose little because they have little to lose. But that which they do lose is probably all they have. Consequently, they lose all and because of this stay lost, with no hope of immediate or near-future recovery”. As with the ‘indiscriminately affected’ hypothesis, the ‘poor suffer most’ proposition is only partially correct.

Effective response to disaster is in large part a function of the distribution of resources available within the stricken area or brought in by relief organizations. If those who control the flow of emergency supplies and services assume that all survivors suffer equally, then resources will be allocated in a more or less egalitarian fashion. In view of the fact that potential recipients of disaster aid do not suffer to the same degree or in the same way, an alternate procedure would be to distribute the relatively scarce supplies and services on the basis of need. Such a procedure requires a somewhat clearer definition of the concept ‘disaster victim’ than is currently found in literature.

In this article I propose 4 categories of victims associated with the 1970 earthquake. Two groups, event and context victims, were in north-central Peru when the event occurred, while two other populations, peripheral and entry victims, were outside the stricken area on 31st May. I focus on conditions in 2 adjacent highland communities, Huaraz and Marian, which are located in the Andean valley known as the Callejon de Huaylas. Because the Peruvian case is in some ways unique, particularly in terms of the magnitude of the emergency, I cannot insist that the categories I discuss are applicable to all extreme situations. My purpose is to demonstrate the need to examine differential victimization in the disaster process and to recognize as possible victims persons outside the area of impact.

HUARAZ AND MARIAN PRIOR TO THE EARTHQUAKE

The Callejon de Huaylas is a narrow river valley running roughly parallel to and 80 km from the Peruvian coast and was formed by the erosive action of the Santa River. The western wall of the valley is the Cordillera Negra whose mountains

seldom exceed an altitude of 4,500 m and do not reach into the zone of perpetual ice. To the east stands the Cordillera Blanca. Their name derived from the snow and ice which adorn them all year round, the peaks of the 'White Range' reach a maximum altitude of nearly 6,800 m, and 29 mountains are over 6,000 m above sea level. The entire region is geologically unstable, and the continuing process of orogeny is manifest in numerous tremors and occasional great earthquakes. What orogeny creates, gravity seeks to destroy, so that the entire Andean region is subject to rapid erosion, landslides and avalanches, most of which take their toll on the people who cling precariously to the mountain slopes.

Huaraz is located toward the southern end of the Callejon de Huaylas and before the 1970 earthquake was typical of medium-sized highland cities. Most of its 30,000 inhabitants lived and worked in buildings constructed of adobe blocks, and the white-washed, red-roofed structures stood close to one another to conserve arable land. Streets were narrow, usually only 4 m wide, flanked by two-storey homes. Small family-owned businesses were numerous and often located in the front room of the family dwellings. Each *barrio*, or neighborhood, of the city had its own grocery stores, carpenters, tailors and similar establishments serving a block or a street, while larger or more specialized businesses were near the center of town. Those requiring more space, such as auto repair shops and transportation agencies, operated on the outskirts of Huaraz where additional land was available and access easier.

The impersonal nature of the coastal cities was largely absent in Huaraz although the small town atmosphere was disappearing even before the disaster. The departmental capital nearly doubled in size between 1940 and 1961 as families moved to the urban center from the surrounding farming communities (Peru, 1961, 1966, 1974). By the time of the 1970 earthquake the population approached 30,000 inhabitants, and twice that number lived in the urban-oriented communities of the district. The relative importance and size of Huaraz was reflected in 1972 statistics which indicated that nearly half of all urban residents in the Callejon de Huaylas lived in the capital (Peru, 1974).

Sitting in the shadow of the Cordillera Blanca to the east of Huaraz, Marian retained a degree of autonomy characteristic of many peasant communities despite numerous links to the departmental capital only a few km away. Economic specialization was limited to a few craftsmen and artisans, and more than 90% of the 225 heads of household cited agriculture as the primary occupation in 1970*. The remainder were either landless or, as in the case of craftsmen and artisans, derived a significant proportion of their income from farming activities. Interdependence among the community members was main-

tained by kin and fictive kin relationships, by participation in religious organizations, and by a complex system of reciprocity. Outside the household, which represented the productive unit, reciprocal obligations were the single most important mechanism promoting community solidarity.

Agricultural production, for example, depended on balanced labor exchange whereby a household obtained needed assistance during planting and harvesting by offering labor in return, a common practice in highland communities (Montalvo, 1967). Reciprocal debt so incurred could be repaid in other ways, however, usually providing goods and services (often a share of the harvest) needed by the worker. Distribution of foodstuffs was also based on the system of reciprocity, and time was an especially important dimension. Because a debt created by acceptance of a food gift did not have to be cancelled immediately, there existed an obligation between giver and receiver which was the foundation for strong social bonds. Delayed return of the gift, moreover, served to counteract periodic fluctuations in the household's income since a surplus harvest could be 'stored' in the reciprocity network to be drawn upon at a future date when harvests were insufficient to meet the family's needs.

Thus the community system of Marian functioned to provide at least for the most basic of requirements and permitted a degree of autonomy despite dependence on Huaraz for goods and services other than food and labor. Like the departmental capital, however, Marian was changing before the earthquake as the system was increasingly affected by external socio-economic forces and the increasing importance of Huaraz. These factors were undermining the solidarity of the farming community, altering traditional institutions and spurring out-migration of individuals and families. Autonomy and self-sufficiency were giving way to acculturation into the larger Peruvian society, and the peasant lifestyle was being modified by social, economic, and political changes taking place in Huaraz and the country as a whole. It is in the context of the dynamic process of change and increasing interdependence of the urban and rural sectors that the earthquake of 1970 must be viewed.

THE EARTHQUAKE

The last day in May 1970 was a Sunday, a day when many people from outlying communities converged on Huaraz to attend Mass, to buy and sell in the week's largest market, to visit family or friends, or just to enjoy the hustle and bustle of the departmental capital. At 3:23 pm the first tremors were felt, and within a few seconds the earth was moving so violently that no person could stand upright. The heavy clay tiles began to pour from rooftops, striking people below who had fled to the narrow streets, and soon the adobe walls of the buildings crumbled and collapsed. Screams, sobs and prayers were lost in the roar of the earthquake and many voices were stilled as the rubble buried at least a third of the city's population. The tremors grew less violent and then ceased altogether, and for a few moments there was a deathly silence as survivors lay

* These data are taken from an unpublished census of Marian conducted by the Peruvian government in 1970 in connection with 'Operacion Techo.' Because the information was gathered soon after the earthquake, and because so few people perished in the community, I assume the figures cited were not changed by the disaster event and therefore reflect predisaster patterns.

stunned in the debris. A dust cloud began to rise from the ruins, and with it the wail of thousands of voices lifted in a monotone dirge of despair. The earthquake had ended, but disaster had just begun.

The physical dimensions of the impact were incomprehensible. As many as 20,000 persons died in Huaraz alone and destruction of homes and infrastructure was nearly complete. Many of the survivors in the capital were seriously injured or trapped in the rubble, and too few were left to rescue all the more unfortunate victims. Within minutes of the earthquake, however, individuals began digging in the ruins in the oftentimes vain attempt to find relatives, and the frantic search for loved ones continued long into the night. Rescue teams were spontaneously organized and the injured were carried to the hospital which remained miraculously intact, but a significant number of medical personnel had perished or were themselves incapacitated by injuries. The hospital therefore provided some protection against the cold Andean night, but could not attend to all of the needs of those brought for medical attention. Survivors in Huaraz were to wait 4 days before outside assistance arrived.

The situation in Marian was quite different although, as in Huaraz, most buildings were destroyed by the earthquake. Because homes in the farming community were more widely dispersed, individuals could easily and quickly move to open spaces until the tremors subsided. Out of 1,200 persons only 11 died, therefore, and loss was measured almost entirely in terms of personal property. Separated family members were soon assured of one another's safety, and the immediate task was that of building temporary shelters for the evening. Small lean-tos were promptly constructed of various materials, and small fires were built for warmth and for the cooking of simple meals. In some sections of Marian, activities centred around the immediate family. The only organization beyond the primary group occurred in one area of the community which was in danger of flooding if lakes in the box canyon burst their natural dams, and persons in the path of the possible flood gathered together on a nearby hillside. The small, *ad hoc* commune of about 70 individuals remained in existence several days and was disbanded when the first emergency supplies arrived from Lima.

The one-lane dirt roads into the Callejon de Huaylas were finally cleared and the first relief organizations entered the valley 4 days after the earthquake. The trickle of aid soon became a flood as volunteers poured into the area to assist the victim population, and at least 52 governments became directly involved in the humanitarian effort (Cryrza, 1971). Numerous private organizations from many nations also sent their representatives to north-central Peru to distribute emergency supplies and to provide medical, technical and social services. The initially chaotic multinational relief program soon prompted the Peruvian government to create a coordinating agency which was designed to oversee all projects and through which international aid would flow.

Response of national and international organizations was at least partially determined by presumptions held by relief

agents regarding who had been victimized by the earthquake and its aftermath. It was presumed, for example, that only residents were in need of assistance and that everyone in the stricken area was more or less equally affected. I suggest that these presumptions were erroneous and decreased the effectiveness of response to the crisis and that there were at least four major groups of disaster victims: event, context, peripheral and entry victims. I will define and discuss each category in the following sections.

EVENT VICTIMS

In the broadest sense, victims of the Peruvian earthquake of 1970 were those persons who were subjected to deprivation, suffering and hardship attributable both to the earthquake itself and to its physical, psychological and sociocultural repercussions. I state the initial definition in all-inclusive terms to avoid what I believe to be implicit assumptions made by the authors and relief agents alike, namely (i) that the disaster event (i.e. the earthquake or other destructive natural phenomenon) and the disaster are synonymous, (ii) that victimization is a direct consequence of the event, and (iii) that a person must actually experience the disaster event to be classified as a victim. As I refine the definition, some distinctions may seem self-evident but are necessary to clarify the underlying assumptions. In the Peruvian case I distinguish, for example, between victims of the earthquake itself and the victims of the context created by the event. The former, whom I call 'event victims,' were directly affected by the earthquake and in part include all persons killed or injured during the few moments of destruction. Nearly 70,000 people died as they were buried by collapsing buildings or swept away by avalanches, floods and landslides (Unesco, 1970). At least another 150,000 were seriously injured, although total figures are difficult to estimate because many individuals did not report their injuries.

Even more difficult if not impossible to measure was the psychological impact of the earthquake. I do not refer to the consequences of the disrupted sociocultural patterns but rather to the emotional trauma derived from the actual event. Although tremors are frequent in the Andes, residents tend to take for granted the stability of *terra firma*, and the uncontrollable violence of even minor movements of the earth can be terrifying. Nevertheless, having lived in Huaraz before and after the 1970 earthquake, I observed a change in reaction to tremors. Prior to May of that year a sudden earthquake would occasion genuine concern and people would move quickly from buildings to open spaces. The concern, however, was generally concealed by an outward display of calm acceptance, and only a few individuals would kneel in the streets and cry or pray. In the months following the great earthquake the general response seemed more emotional and fear was less concealed.

The validity of observations in Peru is borne out by studies conducted in other disaster situations. In 1972, for example the West Virginian town of Buffalo Creek was flooded when several days of heavy rains were followed by the collapse of a nearby dam. Lifton and Olson noted several patterns among

survivors attributable directly to the flood rather than to the aftermath. One such pattern was *death imprint*. "memories and images of the disaster (event), invariably associated with death, dying, and massive destruction" (Lifton and Olson, 1976). The authors observed over a period of time that "the anxiety and fear associated with these images took on chronic form — fear so strong in many as to constitute permanent inner terror." Survivors suffered recurring nightmares and became frightened when it rained. Unable to sleep, many would pace their houses or continually check the water level of the river even though they admitted their fears were irrational.

Similar patterns were evident in Huaraz, for many people with whom I spoke told of frequent dreams of earthquakes, of awakening with unexplained feelings of panic (sometimes realizing that a truck was rumbling by their homes), and of pre-occupation with the memories of dead relatives or with the thought of future disasters. Such responses were not common in Marian, however, and the subject of the earthquake did not arise spontaneously as it often did in casual conversations in the capital even several years after the event. Members of the farming community felt that Marian was a relatively safe place to live, though there was some concern that lakes in the box canyon could burst their dams. No one reported nightmares or increased sensitivity to minor earth tremors, and I did not talk to anyone who wanted to leave the area because of their fear of another major earthquake.

Considering only the event victims, then, one can conclude there was differential victimization in the urban and rural sectors due to the higher death toll and greater destruction in the city. Within the urban center, moreover, the effects were not uniform. About 95% of the capital was destroyed and a significant number of its population killed, but sections of the capital withstood the earthquake better than others. The barrio Centenario on the north side of the Quilcay River which divides the city was noticeably damaged but not leveled, while few structures remained standing to the south. Larger homes owned by the more affluent were either better constructed or contained more open space (e.g. patios) within their walls where residents could possibly avoid being buried. Poorer neighborhoods, on the other hand, were more densely inhabited and buildings were deathtraps. There are no precise data regarding the socioeconomic status of the dead and injured in Huaraz, however, and the psychological effects of the event among different segments of the population were not studied.

CONTEXT VICTIMS

The magnitude of disaster is often stated in terms of the destructive energy of the triggering event, the number of people killed and injured, and the extent of destruction to property. Such factors are only indirect — and perhaps misleading — indicators. While the disaster agent claims its direct victims, the widespread death and destruction caused by the earthquake, flood or storm can in turn disrupt established sociocultural patterns to such a degree that the local system fails to operate

effectively. There follows then a state of extreme deprivation and collective stress which constitutes the true disaster (Barton, 1969).

When I speak of the 'context victims' in Huaraz and Marian I refer to persons victimized by physical and sociocultural environment characterizing the immediate post impact period. The death of so many thousands of individuals precluded rapid location and disposal of corpses, and decaying bodies posed a health problem of significant proportions in more densely populated urban centers. Contamination of water supplies also threatened to spread hepatitis, typhoid and other water-borne diseases. Fortunately, the fear of epidemic did not materialize. Another danger posed by physical conditions was injury caused by collapsing structures as survivors searched in the partially destroyed homes for loved ones or for material possessions. Much of the food, medicine and clothing was buried in the rubble and unavailable to the survivors.

While stress was due in part to direct and indirect effects of the earthquake, context victims faced social disorganization and loss of the cultural framework within which to deal with personal and collective needs. Death or incapacitation of key personnel meant that important positions in the social structure were not filled, so that organization of activities was disrupted at a time when demand was greatest in the stricken area. Health delivery, for example, was effectively curtailed not only because material resources were destroyed but also because many doctors, nurses and medical technicians could not perform health-related roles. Some had died, some were injured, some were emotionally overwrought, and some were more concerned with their own immediate family members. The same was true for other aspects of the sociocultural system. Social control became a problem in urban areas, as did food distribution, for the associated institutions lacked the personnel to operate effectively. The result of disorganization was collective deprivation, and affected individuals were victims of the context created by the 1970 earthquake.

Many individuals were psychologically overwhelmed by the problems they faced, and some either wandered aimlessly through the ruins or engaged in activities seemingly inappropriate to the emergency which existed. A few actually perished in the days following the earthquake because they were oblivious to exposure and hunger. At least part of the explanation for such behavior lies in the conditions created by the earthquake, and the state of shock is characteristic of what Anthony Wallace calls the 'disaster syndrome.'

"This is a behavior sequence that may last for minutes, hours, or days, depending on individual circumstances. In the first stage, the individual is described as being 'dazed,' 'stunned,' 'apathetic,' 'passive,' 'aimless.' He is (literally) apt to be insensitive to pain, to be almost completely unaware, consciously, of his own injuries or the seriousness of the injuries of others, and to ignore the extent of the physical damage." (Wallace, 1961).

Although the syndrome cannot be totally separated from the disaster event, it is primarily derived from loss of predisaster

organizational patterns and their underlying cultural cues. A sociocultural system not only provides for more readily identified biological needs but also constitutes the conceptual framework of all members in its population. Shock is a "result of the perception that a part of their culture is ineffective or has been rendered inoperative, and the person reacts (unrealistically it may be) to this perception as if a beloved object were dead" (Wallace, 1957). Loss of cultural continuity deprives the context victim of familiar reference points necessary for meaningful and predictable interaction with the physical and social environment now drastically changed by the aftermath of the disaster. The one way in which to maintain at least a simulacrum of cultural continuity is to withdraw from the reality of death, destruction and sociocultural disorganization.

Later phases of the disaster syndrome were also evident in Peru and further distinguished the context victim. Stunned passivity was replaced by hyperactivity as some individuals became involved in rescue and assistance. Apparently spurred both by the urgency of the situation and a kind of euphoria, persons would often work to the point of exhaustion, ignoring their own need for sleep and food. There was an esprit de corps among the rescuers while personal rivalries and hostilities were temporarily forgotten in the face of common danger. This phase of disaster syndrome is characteristic of the "helper role."

The depressed person often has strong feelings of anger and disappointment, which are blocked from expression by excessive guilt. In depression the anger is turned inward against the self, so the individual feels incompetent and worthless. Especially is this so when life circumstances give few opportunities for meaningful affection, or for the development of self-esteem. The role of the helper (in the Topeka tornado disaster) provided an escape from such dilemma. The role tasks were clear-cut, and obviously meaningful. To be a helper was to be on the side of the angels; aggression was permissible since the ends were clear and valued. Residual anxieties could be dissipated in motoric expression. Finally, the sheer grubbiness of much of the work — its low status implications — carried two meanings: it was Good because it involved self-sacrifice, and it also met characterological needs for punishment. It would be hard to imagine a social role more congruent with the dynamics of certain types of depression (Taylor *et al.*, 1970).

The disaster-related depression of which Taylor speaks may derive from several causes. One is *death guilt*, which is "the survivors' sense of painful condemnation over having lived while others died" (Lifton and Olson, 1976). Another source of depression in a disaster situation is personal loss, not only of loved ones and property but also of the cultural patterns with which victims identify. Wallace believes that "the emotional impact of the perception of cultural damage is as 'shocking' as, and for some is more shocking than, private loss; and conversely, many persons will suffer any degree of private loss, even death of self and family, before permitting loss of identification with their culture" (Wallace, 1957). Parenthetically,

while event victims in Peru were likely also to be victimized by loss associated with sociocultural organization, context victims were not necessarily event victims.

Contrasting Huaraz and Marian leads to the conclusion that context victims were not equally affected. Huaraz was not only physically devastated but ceased to function as an integrated system primarily because of the high death toll. There was also damage to homes and infrastructure in Marian, but many dangers did not arise. Drinking water was not contaminated which meant that epidemics were less of a threat, especially with the lower population density. Marian was not dependent on outside sources for food, and the only immediate physical need for shelter, a problem readily resolved by use of temporary huts. Therefore, just as the trauma of the disaster event was less than in Huaraz, so the physical conditions characterizing the aftermath were within tolerable limits in Marian. Sociocultural continuity, moreover, reduced psychological repercussions of the post impact period in the farming community which remained intact as a system because key personnel did not perish in the earthquake. Local behavioral patterns were not drastically altered, and established interactional strategies were sufficient to cope with the existing emergency.

In a broader sense, however, the people of Marian were victims of the disaster context. The farming community was not a closed social unit, completely self-contained and self-sufficient, but was tied to Huaraz and the region in numerous ways. Marian, while itself relatively unaffected by the earthquake and associated stress, operated as one component of a larger, regional system which included Huaraz and the entire disaster zone. Although only 11 individuals died in Marian, many more friends and relatives of community members perished in Huaraz, Casma, Chimbote and other urban centers. Families depended on medical facilities in the departmental capital and obtained other goods and services once provided in Huaraz. Hunger forced some outsiders to enter the community to steal crops and cattle, depriving the residents, and the politico-judicial institution based in Huaraz could no longer effectively handle personal disputes, crime and legal problems. To the extent that the regional sociocultural system provided for individual and collective needs at the community level, the people of Marian experienced deprivation attributable to disaster conditions. Conversely, lower levels of stress reflected reduced death rates and the greater degree of self-sufficiency of the community system.

Victimization cannot be analysed solely in terms of an urban-rural dichotomy. Even within the densely populated departmental capital, some groups were more likely to be victimized, and these were not necessarily the poorest segments of the urban population. Before the earthquake, the urban poor were often recent migrants who maintained close contact with kinsmen in the rural areas. Periodic gifts of food from relatives often provided a significant portion of their income, and the migrants could rely upon their personal social networks in times of trouble. The earthquake did not

change this pattern, for the rural community systems remained relatively intact and the urban poor either returned to live with kinsmen or continued to receive support from family members.

I do not suggest that the rural and urban poor were unscathed by the Peruvian disaster, but I do believe that the vulnerability of populations on the 'margins' of society in underdeveloped countries should be reassessed. In north-central Peru, rural areas were relatively unaffected, and the community of Marian illustrates that the earthquake did not create an intolerable situation for its members. Many of the urban poor, while marginal to the larger society, remained integrated into the sociocultural systems of the farming communities. For these individuals, marginalization actually may have *decreased* their vulnerability because the migrants were less dependent on an urban system undergoing disorganization. The assertion by Westgate and O'Keefe (1976) that the rural and urban poor lose all of what little they have is inaccurate for at least some situations and does not take into account the supportive social networks which link populations in traditional agricultural societies.

My observations regarding the vulnerability of the urban and rural poor contradict analyses by other authors, but I doubt that anyone will be surprised when I state that the wealthiest members of the population in the Peruvian disaster zone were generally the least vulnerable and therefore least affected. As I previously noted, the belief that "an earthquake buries rich and poor . . . alike" is not in all cases valid. Nevertheless, many rich people died, and material wealth could not mitigate the emotional impact of the disaster event or the death of friends or family members. Coping with the physical and social aftermath, however, was not as difficult for the affluent because they could draw upon material resources to cope with the many problems of recovery. Much of their property was destroyed, of course, but in most cases it represented only a fraction of their total capital, a significant proportion of which was safely deposited in banks or invested in land or business. The elite found it was an easy matter to move to Lima and thereby to avoid the hardships found in the stricken area.

Perhaps the most vulnerable segment of the population in the departmental capital during the crisis period comprised the merchants who owned small businesses such as grocery stores, novelty shops, clothing establishments, and similar family-run enterprises. Vulnerability of these context victims derived from two sources. First, the greatest share of family capital was as a rule tied up in buildings as well as in merchandise, machinery and other material goods which were lost in the earthquake. Since capital was continually reinvested to maintain the stock of merchandise, moreover, comparatively little was placed in savings accounts or invested in businesses outside of Huaraz. Secondly, the merchants were the most dependent on the urban sociocultural system. These families had fewer close familial ties with farming communities than did the recent migrants and even fewer such ties in the coastal cities.

The major part of their social network was in Huaraz itself, and the supportive kinship structure was severely disrupted by the death of so many persons in the capital. The group also relied upon the operation of other components of the system, particularly the market system. Poor migrants could obtain food from relatives in the rural communities and the wealthy (if they remained in Huaraz) could ask that kinsmen in the coastal cities send foodstuffs. Merchant families, with fewer external ties, were confronted with a serious shortage. Multi-national disaster relief operations in the stricken area compensated for the inoperable distributive system and solved the more urgent problems, but such assistance did not arrive for several days. Even then, food distribution was hampered by factors to be discussed later in the article.

PERIPHERAL AND ENTRY VICTIMS

Because event and context victims were in the stricken area on 31st May 1970, they experienced the earthquake which occurred on that day. The experience itself became an implicit criterion for defining the victim population and hence for determining who was to receive humanitarian aid provided by relief organizations. Location at the moment of impact, however, was not the only factor to be considered. Although residents were more likely to suffer the direct effects of the earthquake and ensuing crisis, repercussions of the disaster were not confined to north-central Peru. Moreover, localized stresses created by sociocultural disorganization affected not only the individuals present at the moment of impact but also anyone who later entered the region. I therefore suggest two additional categories: peripheral and entry victims.

Peripheral victims were persons with strong ties to the stricken area who suffered as a consequence. There were, of course, few people in the country whose lives were not touched however remotely by the 1970 disaster. Just as each affected community was part of a regional system, so the region itself was a component of socioeconomic networks which defined the national system. Thus, adverse changes at one level were inevitably felt at all levels to one degree or another. I will limit the definition of peripheral victims, however, to the group with more direct links, and perhaps the most readily identified were the individuals who had family and friends in the earthquake zone.

A number of peripheral victims lived in Huaraz but happened to be travelling in other parts of the country at the time. News of the disaster understandably had a profound impact which was intensified by the uncertainty surrounding the fate of loved ones in the departmental capital. Initial reports were contradictory but all estimates of the death toll increased daily, leaving the true magnitude of catastrophe to the imagination. Often, the travellers attempted to return to their homes but found that roads in the valley were closed by numerous landslides triggered by the earthquake and its aftershocks. Fear of the well-being of kinsmen drove many to cross the Cordellera Negra on foot.

A similar type of peripheral victim was the person who was born and brought up in the area but left to settle elsewhere. The migrant almost always maintained close relationships 'back home,' and emotional ties were manifest in continuing communication, frequent visits, and the countless clubs whose members hailed from the same community or region (Doughty, 1970; Mangin, 1964). The reaction of the migrants living outside the earthquake zone, therefore, did not greatly differ from that of individuals who were only temporarily absent. They desperately sought to learn the fate of relatives and friends, and some joined the trek across the mountains into the Callejon de Huaylas.

Because individuals outside a disaster-stricken area at the moment a destructive natural phenomenon occurs have never been considered part of the victim population, they have received little if any attention. I too focused on groups inside the affected zone and only later began to realize that the crisis in north-central Peru was a source of suffering for people in areas surrounding the impact zone as well as those within it. However meagre the data, they strongly indicate that the effects of the Peruvian disaster on peripheral victims were often profound. The population should be studied if only because their convergence on affected communities prompted by concern directly contributed to the emergency situation, although I suggest that victimized outsiders would have benefitted from some program of assistance provided by relief agencies.

Fritz and Mathewson (1957) discuss the problem of convergence during extreme situations. Natural disaster draws the curious, the concerned and the helpful in numbers which often impede the efforts of relief organizations and local institutions to deal with emergency conditions. The presence of outsiders also places additional strains on a system already seriously overloaded by demands of event and context victims, for everyone in the area requires satisfaction of the minimal needs such as food, shelter and medical attention. From one viewpoint, therefore, the convergence can be stated in terms of the adverse consequences for those persons generally considered the 'victim population.' From another viewpoint, the influx of personnel creates still another victimized group, the entry victims.

Entry victims in Peru did not experience the earthquake but did enter the stricken area during the period of crisis. As I pointed out in connection with event and context victims, conditions prevailing in Huaraz following the disaster event had physical and psychological consequences derived from widespread death and destruction. The subsequent disorganization of the sociocultural system gave rise to extreme collective stress due to loss, deprivation and disruption of cultural patterns. Anyone who entered the area was subject to many of the same factors and was a potential victim of the disaster process. Peripheral victims who crossed the mountains from the coast, for example, arrived tired, hungry and suffering from exposure but found no place to rest, no food to eat, and no house to shelter them.

An even larger group of entry victims, however, were the freelance volunteers and the national and foreign agents sent

into the area to provide assistance. Although their plight was in some ways different from that of other kinds of victims, these outsiders nonetheless had to cope with similar stresses associated with the crisis. Since few buildings remained intact, adequate housing was not available. For the first weeks and months, residents and relief agencies alike slept in tents or makeshift shelters, and the more substantial temporary structures built later did little more than protect the occupants from the rain. The breakdown of the network of food distribution also affected everyone in the stricken area, and entry victims were as dependent as residents on supplies brought in from other regions and distributed by relief organizations.

Seismic disturbance continued for several months following the major earthquake, moreover, and outsiders learned quickly that tremors might destroy natural dams in the box canyon and loose the mountain lakes. The deep rumble of the earth in the early morning hours would waken an individual instantly with heart pounding. Some people took to leaving a packed suitcase by their door, but such measures afforded scant security since one could not hope to avoid a quickly descending wall of water.

The danger of another natural disaster was not as immediate as that of illness. Everyone in the earthquake zone had little to eat despite donations from all over the world, and much of the food was unsafe because of unsanitary methods of storage and preparation. Even minor ailments and injuries were sufficient cause for concern given the lack of adequate medical services, and foreign volunteers were especially susceptible to local viruses and bacteria.

Working conditions in Huaraz were yet another source of hardship for relief agents who attempted to meet the needs of all victims with limited supplies and equipment. Food, clothing, building materials and other necessary items were rarely to be found in sufficient quantities, and even the primary task of rescue and evacuation was hampered by a lack of vehicles to transport the sick and injured.

Beyond the frustrations caused by shortages, dangers of illness and injury, the threat of another natural disaster, and chaotic working conditions, entry victims were affected by factors whose emotional impact could never be expressed or measured. The ever-present misery of victims, the overflowing clinics and hospitals, the debris of a once-thriving community, the stench of decaying human flesh transpiring from the rubble, all of these things called to mind unwanted thoughts of one's own mortality and vulnerability to nature's destructive whims. The psychological effects of disaster are apparent in one entry victim's account of his visit to Huaraz.

I arrive at my encampment at nightfall. The tents, lit from within by candles, are like street lamps. Dinner sticks in my throat. The noose of anguish strangles me. In my tent, at 8 o'clock, I lie down on my bed. The sound of the Quilcay River thunders in my mind. It is scarcely a 100 m away from me. I think of the enormous distance that separates me from the survivors of the earthquake. I think of the destruction, of the death of thousands of children, of thousands of human beings. I am sure that most of them

died resenting the rest of the world. Had I died I would have been angry and resentful, for I would have believed I was to die alone, forgotten by everyone else [(Yauri, 1971) my translation].

Reaction to disaster was manifest in the behavior of some entry victims, especially foreign volunteers, and a parallel can be drawn with Wallace's disaster syndrome. Individuals were not stunned or dazed, nor did they wander aimlessly, yet many did become rather lethargic and apathetic during the crisis period. They reported feeling helpless and were at times immobilized by a sense of inadequacy, particularly when their respective relief organizations pressured them for tangible results of their efforts. Some were shaken by the death and destruction around them and sought to avoid tasks which immersed them in a sea of misery. Contingents of foreign volunteers usually were housed together in compounds of temporary shelters, and these compounds became for them islands of normalcy where they would sometimes spend days on end. Interminable card games provided an excuse not to venture into the reality of the disaster area, while interpersonal tensions led to frequent quarrels. Some foreign volunteers became despondent, taking to their beds to remain morbidly quiescent for long periods, drinking alcohol, taking drugs, or simply going mechanically through the day with little to say to anyone.

A number of entry victims reacted in quite different ways. Rather than withdraw physically or psychologically from the stressful situation, they plunged into the tasks of rescue and relief with seemingly unbounded energy. Working from the early morning hours until late at night, these volunteers from outside the stricken area pushed themselves to the edge of exhaustion and kept up their frenetic pace without food and rest. Playing the helper role permitted the entry victim to cope with conditions in the earthquake area, but it also led to a sense of alienation between the outsiders and residents. The outsiders not infrequently perceived themselves as self-sacrificing humanitarians, an attitude expressed in interaction with residents. Projects were pushed through to completion despite all obstacles, and aid recipients themselves were often blamed for the failure of the programs. Irritability grew in proportion to frustration and anxiety, so that the relationship between relief agents and residents was in some cases a negative one.

I do not suggest that all psychological problems of relief agents and freelance volunteers derived only from disaster conditions, for there are other factors to consider. Not the least of these was 'culture shock,' the disorientation which is a consequence of operating in an alien cultural milieu. There were, on the other hand, mitigating factors. Outsiders, for example, knew that they could easily escape the pressures by leaving the stricken area, an option open to few residents. This knowledge allowed outsiders to put some emotional distance between themselves and the otherwise intolerable circumstances. Still, one could not avoid the psychological impact of living among the debris of peoples' homes and lives. The fact that outsiders often became entry victims had an inevitable effect on disaster relief operations in the days, weeks and months following the earthquake.

CONCLUDING REMARKS

I have discussed four populations affected by the Peruvian catastrophe. Two of them, peripheral and entry victims, were not even present when the earthquake occurred, and the other two, event and context victims, were not generally recognized as different groups with differing needs. My purpose has not been merely to create categories but to demonstrate the inadequacy of current definitions which tend to lump victims into one rather homogenous population with similar requirements of equal urgency. To assume that only people who experience the disaster agent are victimized ignores the suffering of outsiders who have or come to have an emotional investment in the stricken area. On the other hand, to assume that victims are similarly affected ignores differences in the degree and kind of victimization. While my analysis of the Peruvian case may not be precisely applicable to other extreme situations, the propositions that outsiders may suffer the repercussions of natural disaster and that individuals are differentially victimized are, I suggest, universally valid.

Underdeveloped and developing countries are most vulnerable to destructive natural phenomena (United Nations Association, 1977). When earthquakes, floods or storms strike these nations, high death tolls and extensive destruction may result in social disorganization precluding effective response at the local level. Subsequent intervention by national and international organizations may provide the additional human and material resources needed to cope with the emergency, but it also means that allocation of those resources is in the hands of personnel more or less alien to the stricken area.

The pattern of aid distribution is largely determined by how national and foreign volunteers perceive conditions in the affected zone, and perception in turn is influenced by presumptions regarding victimization. Thus humanitarian assistance is generally offered only to persons who experienced the disaster event and, except in cases of injury or illness, the needs of others may not be viewed as disaster-related and deserving of consideration. Also, the assumption that everyone within a stricken area is in need leads to indiscriminate distribution of supplies and services. Given that food, shelter, medicines and other emergency items are limited in quantity, the egalitarian distributive pattern may deprive the needier victims and overcompensate the less needy. Even the wealthiest families in Peru were able to obtain a disproportionate share of aid because agents assumed property destruction to be indicative of the degree of victimization.

Attempts to set priorities on the basis of need may likewise derive from invalid assumptions. Outsiders may confuse the effects of disaster with long-standing conditions of poverty, concluding that marginal segments of the population require the greatest amount of assistance. As I pointed out, however, the relatively poorer rural communities in north-central Peru experienced less social disorganization and associated collective stress than did the urban centres, despite the extensive destruction of dwellings in both sectors. The urban poor, often represented by migrants from farming areas, maintained social ties

in the countryside and could either return to live with kinsmen during the crisis or receive gifts of food and clothing from relatives. Established patterns of reciprocity, therefore, served as an adaptive mechanism and permitted participants to cope with the emergency to some extent.

In short, resource allocation during crises depends on the definition of 'victim' and determination of disaster-related needs. The effectiveness of local, national and international response, however, also depends on factors other than patterns of aid distribution, and again definitions play an important role. If, for example, relief organizations do not take into account the peripheral victims, the outsiders will enter the stricken area and thereby increase demands placed on the affected system. In some cases the convergence problem can be partially resolved by blocking entry, but the procedure is not effective when the impact area is large.

If the fears and pain of loss of outsiders are recognized, relief organizations can make some attempt to meet the needs of peripheral victims and, perhaps, to diminish the disruptive convergence process. Improving communication during emergencies, for example, can help to account for individuals within the stricken area and to relay news to worried relatives in other parts of the country. Peripheral victims may be encouraged to organize and to participate some way in relief efforts, but not within the impact zone itself. For several days following the Peruvian earthquake, individuals in the U.S. who had family and friends in the Callejon de Huaylas initiated a telephone 'tree.' If one person received any information, he or she would call several others who would each in turn call several more parties. The network involved dozens of people and effectively served to relay news and messages. Relief organizations can assist in formalizing 'helper roles' for peripheral victims and mitigate some of the stresses experienced by involved outsiders without contributing to the convergence problem generally associated with disaster.

Another aspect of victimization is the relief agent who is severely affected by conditions prevailing in a disaster-stricken area. Not only might limited resources be diverted to meet the needs of the agents, but the incapacitation of key personnel in the humanitarian program diminishes the overall effectiveness of response to the crisis. In Peru, volunteers who became

depressed and withdrawn were often thought to have personal problems unrelated to the disaster or, more unfairly, to be incompetent. Rarely were they considered victims, and the loss of their services were generally accepted as unavoidable.

The problem of entry can be resolved if the disaster process is understood as a *psychological* phenomenon only indirectly linked to the triggering event and if measures are taken to reduce the emotional impact of working under extreme circumstances. Skills and good intentions are alone insufficient, for the agent must be trained beforehand to deal with the stresses associated with disaster. Volunteers, moreover, must be selected on the basis of maturity, emotional stability, experience and sensitivity to cultural differences, and their training should include familiarization with research results of scholars who have studied collective stress situations. Such a procedure presupposes prior planning by relief organizations. Once disaster strikes there is little time to select and prepare the volunteers, and failure to do so will increase the likelihood that the relief agent will become an entry victim.

I have limited discussion to populations victimized during the initial period of crisis immediately following the occurrence of a destructive natural phenomenon, and I focused on the disaster in north-central Peru to demonstrate how different groups were affected by the 1970 earthquake and its aftermath. The categories — event, context, peripheral and entry victims — could be modified in any number of ways, and probably should be when other disaster situations are discussed. Definitions and resulting categories are merely conceptual tools which should be readily discarded when they prove inadequate to the task. So I discard the narrow definition of 'victim' which guides response to disaster, and I offer a broader definition which I hope will prompt others to consider the topic. Whatever the tool used, the task remains the same, to meet the needs of people whose lives are touched by natural calamity.

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