Principles for Managing Community Relocation as a Hazard Mitigation Measure

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Permanent relocation of communities away from hazard-prone areas is becoming an important mitigation option for emergency management authorities throughout the world. By moving citizens permanently, one realizes two special benefits. First, relocation prevents death or injury from hazards that are minimally subject to human control – that is, where structural mitigation measures are ineffective and forewarning is insufficient for simple evacuation. Secondly, relocation provides monetary saving so that government hazard insurance programs need not pay for repeated restorations of the same residences in the same hazard areas over a period of years.

Simultaneously, there are two inherent problems with the use of a relocation policy: it constitutes a serious intrusion into citizens’ lives; and non-hazard related relocations (such as for dam construction or urban redevelopment) have a long history of negative outcomes. This paper traces the history of a community relocation in the southwestern United States, documenting citizen needs and responses to the event. Then, based on the hazards research literature and the case data, a series of principles are elaborated for creating ‘positive’ relocation experiences. In closing, the paper looks at the international use of relocation and the potential for applying the principles.

Introduction

The relocation of communities, or segments thereof, is one strategy for influencing human habitation patterns to reduce vulnerability to environmental hazards. Indeed, especially with environmental threats that are not susceptible to structural mitigation or human influence, the practice of physically moving humans away from harm is an important preventive measure. Ultimately, relocation becomes more desirable as a means of mitigation when negative consequences of an environmental threat are high and measures which yield significant protection are limited in efficacy, safety and feasibility, or when the monetary cost is high. Historically, permanent relocation of threatened populations has been only sporadically used as a mitigation measure in Western societies (Drabek, 1986). However, there is a much longer history of relocations used in connection with urban renewal and community development (Niebanck, 1968), and with the construction of dams, highways, airports and other public projects (Fried, 1967; House, 1970; Napier, 1972; Wilson, 1973). In disaster management, the bulk of forced relocations have been either temporary, as in the case of Darwin, Australia (Scanlon, 1979), or relatively short-term and appropriately classified as evacuations (Aguirre, 1983; Lindell and Perry, 1992). In recent years, however, permanent relocation of threatened populations has gained in acceptance as a hazard mitigation strategy (Mileti and Passerini, 1996). Research in England and Australia has examined, in the broader context of water planning, the technical and political aspects of non-structural flood mitigation projects (Parker and Penning-Rossell, 1980; Higgins and Robinson, 1981; Penning-Rossell, Parker and Harding, 1986; Oliver-Smith, 1991; Parker and Handmer, 1992). In the United States, the Federal Emergency Management Agency (FEMA) (1995) has incorporated relocation into its national hazard mitigation strategy.

While the body of literature on the conduct of relocations is growing, there remains a shortage of studies that address relocation from citizen perspectives and discuss approaches to the relocation process that minimize negative consequences (Erikson, 1994; Kirschenbaum, 1996). This notion is important, because while some relocations have been handled in ways that produce positive outcomes for relocatees (Wadley and Ballock, 1980), the bulk of research concludes that, in practice, ‘…residential...
relocation, whether due to urban renewal, job transfer or institutional transfer, often has deleterious effects on people’s mental and physical health’ (Heller, 1982: 488). Because relocation can be very effective as a mitigation measure, it is important to avoid developing a similar vision of it as problematic—a characterization that could discourage emergency managers from considering the option.

The purpose of this paper is to recount the results of a case study of a community that was permanently relocated to mitigate a continuing flood hazard. The analytic perspective involves examining the relocation in terms of the viewpoints of those relocated and the actions of the relocation authority. This type of analysis can serve to establish broad parameters for the development of government policy for relocations conducted to mitigate natural hazards. In particular, based on the case data, a series of guidelines are proposed for the conduct of relocations that seek to maximize the probability of positive outcomes for relocation participants and managers.

**Research Method**

The focus of study was the community of Allenville, Arizona, located in the southwestern United States. The research used traditional case study methods (Mileti, Perry and Gillespie, 1975; Yin, 1989) to reconstruct the history of the relocation experience. Two groups were targeted as principal actors for research purposes: citizens and leaders of Allenville and officials of organizations involved in managing the relocation. Data collection efforts began approximately six months after the relocated citizens had moved to the new town site of Hopeville, Arizona. The relocated community was composed of 15 permanent homes and 20 mobile homes; 26 of these households were interviewed. An additional six families who relocated to other parts of the Buckeye Valley area (but not the new site) were traced and interviewed. To obtain data on the management of the relocation, interviews were conducted with officials of the Arizona State Division of Emergency Management (DEM); the Army Corps of Engineers (the Corps); the Phoenix office of the Department of Housing and Urban Development (HUD); and the Maricopa County Department of Community Development. These interviews were supplemented by a variety of documentary data including newspaper articles, staff reports from the Arizona Division of Emergency Management, the Army Corps of Engineers and copies of statutes and other legislative records pertaining to the relocation.

The presentation of data collected from all these sources and interviews was organized in terms of two phases of the life history of the relocation effort. First, the pre-relocation conditions are examined, paying particular attention to the organization of the community and the evolution of the decision to relocate. Secondly, attention is devoted to the period between the time citizens left Allenville and the time they were able to move into their new community. The paper closes with a discussion of the implications of the Allenville case for the conduct of community relocations in general.

**Allenville History**

The community of Allenville was established near the Gila River in the early 1940s by unskilled agricultural workers. Virtually all of the founders, as well as nearly all subsequent residents, were black Americans. The town remained homogeneous in terms of racial and economic makeup and quickly developed a tradition of supportive interactions among residents. In subsequent decades, Allenville remained a small, close-knit community, rarely exceeding fifty households, oriented to the traditional rural lifestyle. At the time of relocation, the population of Allenville could be characterized as older, with more than 20 per cent over the age of 60 and another 30 per cent between 41 and 59 (Army Corps of Engineers, 1980). Many residents were retired and living on fixed social security income. The median family income in Allenville was just above $7,000 per year and approximately one-third of the families earned total incomes which placed them below the federally established poverty level (Arizona Division of Emergency Management, 1979). The dominant employment pattern had begun to shift toward blue-collar work and most residents lived in single family dwellings, though many households were of the extended family (multi-generational) type. Most interviewees reported that they had lived in Allenville for many years, ranging from 4 to 37; the average residence was 16.8 years (median = 15 years).

Allenville Citizens for Progress (ACP), a non-profit organization formed in 1965, provided an institutional forum for community members to tap the resources of the larger society in pursuit of improving the quality of life in Allenville. Although the community was not incorporated legally, ACP served ‘like’ a town government. ACP was composed of an elected Board of Directors who controlled the organization’s agenda and daily operations. The board was composed of seven respected and visible members of the community who believed that ACP should be heavily oriented toward citizen
participation. Board members held regularly-scheduled monthly open meetings at which information was disseminated to residents, feedback on activities and plans were solicited and member suggestions for new activities and agenda items were sought.

Recurrent, severe flooding was the ultimate undoing of Allenville. The community never had frequent major flooding until the construction of a water management and conservation project in the desert regions of southern Arizona. Reservoirs located upstream from Allenville on the Salt River, Verde River and Agua Fria River required major water releases during periods of heavy rains and snow-melt on northern Arizona watersheds to avoid the possibility of dam failure. The conclusion was that the flood risk itself, might not prove an effective long-term protection. Although ACP board members acknowledged the key roles played by representatives of extra-community organizations, particularly Arizona DEM and the Army Corps of Engineers, interviews with citizens and ACP Board members revealed the staunch belief that the relocation decision was fundamentally made by the community. The subsequent success of the relocation is perhaps much more a function of this orientation on the part of the community than due to any other single factor. Early on, the relocation was conceptualized by relocatees as a community activity designed to preserve Allenville rather than simply a flood protection measure imposed from outside.

The Relocation

From the standpoint of the relocation authority, the first step in the process was to formalize the existence of a community agent to bargain and enter into contracts with extra-community organizations on behalf of Allenville residents. Since Allenville was not an incorporated town, a petition was circulated among community residents which assigned the Board of Directors of Allenville Community for Progress the right to represent the community. With the approval of the petition, the ACP both began an official role in negotiations and organized itself to deal with broader communications responsibilities.

From the standpoint of citizens relocated, this phase of activity involved negotiations for the sale of Allenville property and acquisition of Hopeville property, residing in temporary shelter while awaiting construction at the new site and making preparations for the actual move. Like most relocation efforts conducted in the United States, the movement of Allenville was a long process; a period of more than three years passed between leaving Allenville and occupying Hopeville. Four primary issues arose for community leaders and relocators that can be seen as key issues in the relocation process: keeping the community together during the wait for relocation; problems of communication and rumor control; maintaining commitment to relocation; and handling opposition to relocation by citizens of surrounding communities.

From the perspective of the ACP, relocation demanded intensive interaction with the Arizona DEM and the Army Corps. The Arizona DEM was to serve as the local sponsor of the relocation, while the Army Corps of Engineers conducted a cost study of various structural and non-structural mitigation measures. After the Corps study, ACP, in conjunction with the Arizona DEM, selected a site (from among
nearby state lands) upon which the relocated community would be constructed.

One of the major challenges associated with relocating a community or community segment intact involves keeping the community together between the time the old site is abandoned and the time the new site can be occupied. In the history of relocations, this is almost always a multi-year process (Pijawka, Cuthberson and Olson, 1987). During this time, most former Allenville residents lived in a mobile home park (interim housing) administered by the Arizona DEM. A few families were scattered in communities throughout the area, either renting or staying with friends and relatives. The location of most of the residents in the mobile home park had the advantage of centralizing the community.

It is during this interim period that one would expect community members to experience their first doubts regarding relocation (Hartman, 1971; Heller, 1982). Early in the process, citizens were occupied with removing possessions from the old site and negotiating sale and acquisition of new property. Thus, individuals could define themselves as engaging in positive actions on a daily basis that lead toward their personal goals of relocation. As time passed, the role for citizens changed to one of simply waiting. They were forced to place trust for progress not only in their community leaders (whom they knew well), but also in extra-community organizations not familiar to them. Furthermore, the new community was hypothetical; beyond a parcel of land, nothing tangible existed at the site for some years. Thus, instead of working personally to achieve the goal of relocation, citizens were now forced into the difficult position of depending upon the work of others — many of whom were outsiders — to achieve an as yet largely undefined reward. Interestingly, very few relocatees developed any serious opposition to the relocation plan. When interviewed regarding alternatives to relocation, 81.1 per cent of the respondents answered that their were no viable alternatives and re-affirmed that relocation was absolutely necessary. A minority of 12.6 per cent steadfastly supported the relocation, whereas another 6.3 per cent interpreted not as a reservation about the move, but as a general concern for the welfare of the group. There were, in effect, only two categories of concern over the relocation itself. The first of these related to costs and finances; 12.5 per cent of the respondents expressed uncertainty about how costs associated with the move would be met. Considering that so many of the relocatees were either poor or on fixed retirement benefits, it is surprising that so few voiced financial worries. The second category of reservations related to the problem of distance. A total of about one-third of the respondents worried that the new community was too distant from work places, shopping, churches and medical care.

In response to the expressions of uncertainty about relocation, the ACP Board initiated regular contacts with residents of temporary housing. The purpose was to minimize the spread of inaccurate information among relocatees by frequently apprising them of the status and conditions surrounding the move. A secondary, but equally important, objective was to maintain positive morale among community members. At the same time, pro-active communications were pursued, ACP board members began a concerted effort to obtain visible support from state and county political figures. These latter contacts were aimed at reassuring relocatees by demonstrating that politically influential outside forces were supportive of the efforts to move Allenville.

The issues discussed above raise the question of how ACP could maintain the commitment of community members to the relocation. Several very divergent forces combined to create and sustain citizen commitment. Inter-personal support and encouragement among relocatees was promoted to a certain extent simply because interaction was facilitated by the fact that most of the community was housed in the same place. Hence, customary lines of communication and contact were minimally disrupted.

In spite of many forces operating to hold the relocatees together, there were some who withdrew from the relocation effort and settled outside of the planned community. Compared to the number of people who actually relocated these were a very small group. Of the six interviewed in connection with this study, one family chose to locate outside the planned site because they wanted to be closer to church, two families wanted to live closer to work and two expressed the need to ‘start life going normally again’.

When the citizens who relocated were asked why they waited the more than three years necessary for the move, the answers fell into one of four categories. The reason most frequently cited for waiting was the desire to remain near family, friends and neighbors from Allenville (34.6 per cent). The desire to ‘preserve the community’ as a friendly place to live, free of
crime and other urban worries was cited as the reason for relocating by 30.8 per cent of the respondents. An equal percentage said that a financial incentive was very important in staying with the relocation plan. These citizens, who had been renters in Allenville and owned no property, pointed out that by relocating they were able to purchase mobile homes at a reasonable price and obtain a relocation cash benefit which enabled them to purchase property on which to park their mobile homes. For these people, the move to the new site not only preserved friendship networks but also offered an opportunity for property ownership.

The completion of the move to Hopeville represented a closing milestone in the relocation process. For the most part, both the relocatees and the agencies involved in the relocation characterized the move in positive, successful terms. In the years since the move was complete, there appears to have been little change in citizens positive perceptions. For the ACP and the citizens of Hopeville, moving in represented one more step in the continuation of their goals to enhance the lives of community members. Hopeville has flourished, slightly increasing population size over the years, although remaining a close-knit, racially and economically homogeneous community. Job opportunities have increased as a function of the construction of a nuclear power plant in the region, while the completion of an interstate highway to California improved access to the area and increased commerce. A cultural museum was constructed and operated by the community association. For the people who relocated to Hopeville, their existence as a community in the sociological sense never ceased, and the new site has proved to be a springboard to further community growth.

Management Implications

The Allenville relocation as a flood mitigation measure is managerially important because it constitutes a case of ‘positive’ relocation. That is, in spite of the fact that the time period involved was long and relocatees experienced some discomfort, virtually all citizens questioned expressed satisfaction with the move. This situation contrasts sharply with reports in the research literature on forced relocation; particularly in connection with urban renewal and development. Most such studies find relocatees characterize the experience as negative, expressing dissatisfaction with officials and relocation procedures, as well as general unhappiness with life in the place to which they have been relocated. The purpose of this section is to explore the reasons associated with the discrepancy between the Allenville experience and other relocations and to identify factors associated with successful citizen relocations in connection with natural hazards.

A critical distinction with relocation as a mitigation measure lies in the aim to reduce citizen exposure to an environmental threat. For relocations that stem from other causes (highways, dams, urban renewal) citizens have a tendency to be identified as part of a problem to be corrected, or as people who must be moved to facilitate progress. In these latter contexts, relocatees often feel that they are being made to suffer inconvenience and disruption for the benefit of others. Natural disaster motivated relocations can more easily be conceptualized as moves to protect and benefit relocatees; as situations where human technological capacity has failed in its ability to protect. Under such circumstances, blame and cost-benefit issues are less likely to surface. It is also desirable to distinguish natural hazard-related relocations by attending to at least two dimensions: the number and cohesiveness of the people being relocated – is a whole community moved, a community segment, or a few residents; and the manner of placing relocatees – will they go to the same place or be geographically dispersed. Within this framework, Allenville represents the specific case where an entire community is moved intact.

It is possible, based upon the Allenville case, to identify a number of managerial principles for the conduct of relocations which increase the probability of positive outcomes. The following discussion is derived from observations at Allenville and, therefore, emphasizes concerns associated with the intact movement of communities. Most of the principles are sufficiently general, however, that they apply well to virtually any relocation effort. The principles themselves should be seen as guidelines directed at emergency managers charged with primary oversight and coordination responsibilities for the conduct of relocation.

The first principle for promoting positive resettlement is that the community to be relocated should be organized. The actions of the ACP were crucial to the success of the relocation. To a certain extent, the situation in Allenville was exceptional in that a highly motivated organization with a history of activity in the community interest already existed. The general point here is that the process of moving a community is greatly facilitated when a group mutually recognized by citizens and relocation authorities exists. Such an organization serves to reduce demands on relocators from households. It can also function as an interface between citizens and agencies involved in the relocation to interpret communications from agencies and
to serve as citizen advocates to explain community concerns to agencies. In some relocation programs, such organizations already exist and the job of relocators can be largely to identify and work with them. When relocating an entire community, the local community government can serve this purpose. Sometimes, when dealing with community segments in particular, there may be no readily visible organization or no organization in a formal (that is, sociological) sense at all. In these cases, the advantages of working through a community organization would seem to justify an attempt to locate or encourage the formation of such a group. Virtually every neighborhood is characterized by some form of informal organization in which there are identifiable influential elements and in many neighborhoods residents share membership in the same voluntary associations. All of these types of associations can serve as starting points, or focal points, around which citizens might be encouraged to organize themselves.

Also, it should be emphasized that the agency responsible for the relocation should establish a site office. From the perspective of citizens, to be relocated this allows for the development of a concrete image of the people responsible for helping orchestrate a major event in their lives. It serves as a focal place for exchange of information. Furthermore, a site office underscores in the eyes of potential relocatees that their relocation is important enough to merit such a visible resource investment on the part of authorities. The simple presence of a site office also, sometimes, serves as a unifying rallying point to promote a sense of community and stability among citizens to be relocated.

A second principle for positive relocation is that all potential relocatees should be involved in the relocation decision-making process as quickly as possible. To insure genuine opportunities for participation requires specific attention to the establishment of communication channels, as well as development of explicit means of incorporating citizen suggestions into the relocation plan. The emphasis in most relocation efforts has been to open channels to the potential relocatees. While such information dissemination is important, it should be accompanied by at least an equal emphasis upon gathering information from potential relocatees. At a minimum, this requires the creation of channels for communication from citizens to the agency charged with coordinating the relocation.

Evidence from Allenville and the research literature (King, 1979; Britton, 1981) suggest that citizen satisfaction with relocation is positively correlated with citizen opportunities to participate in the planning and decisionmaking process. That is, affected citizens should have a chance to: comment on a possible range of mitigation measures, including relocation; participate in the decision to relocate the residents as a group or to disperse; participate in selecting sites for relocation; and comment on the specific procedures to be following in implementing the move. It is acknowledged that the agency managing the relocation effort may not have full control over all four issues. In this case, the topics should be discussed with citizens anyway and constraints upon the agencies' power to make decisions should be adequately explained. It is not expected that a relocation could be implemented on a referendum basis. It is possible, however, to solicit citizen preferences on these major issues and proceed such that they may be accounted for within the structure of relocation planning. What seems to be important to most citizens is that authorities listen to citizen concerns, treat them seriously and, subsequently, explain why they can or cannot be incorporated into the relocation plan.

In relocating Allenville, the Army Corps of Engineers and State Division of Emergency Management sponsored a series of public meetings and workshops as a vehicle for soliciting and responding to citizen concerns. Aside from serving as a communication setting, another advantage of such meetings is that they serve as reinforcement for citizens to work with authorities and ultimately comply with provisions of the relocation plan. The objective of developing two-way communication systems and offering citizens the opportunity for constructive participation in decisions is to enhance citizen identification with the relocation effort as group priority and, thereby, increase citizen satisfaction with program outcomes.

The idea that citizens must understand the nature of the multi-organizational context in which the relocation is to be conducted is a third principle for successful relocation. To relocate a community requires that a variety of agencies and organizations, representing different political jurisdictions, work together (Rubin, Saperstein and Barbee, 1985). For Allenville, principal agencies include the FEMA; Department of Housing and Urban Development; Arizona DEM; the Army Corps of Engineers; a County Office of Community Development and a variety of private businesses. Faced with such a maze of organizational actors, citizens can easily become confused about the entire relocation process.

Arrangements should be made among participating governmental organizations to identify one agency to assume a coordination role. The coordinating agency should become both a point of contact for communications among all participating organizations and a
channel for contacts with potential relocatees. Specifically, the coordinator should assume responsibility for several major functions (Bates, 1982). First, this agency should explain exactly which organizations are to be involved in the relocation, what their respective roles are expected to be, and how potential relocatees should relate to these organizations. Indeed, the coordinator should also explain to other organizations the expectations that citizens will have for their performance. The purpose of such role training is to insure that all parties have at least generally consistent expectations regarding mutual responsibilities. Such mutual understanding can increase levels of cooperation and may minimize or eliminate conflicts during the process of implementing the relocation. Furthermore, relocation efforts almost inevitably involve delays and complications which can constitute discouraging experiences for affected citizens. When these circumstances arise, a coordinating agency should be able to anticipate them based on information from other agencies and/or sub-contractors and inform and prepare citizens, in advance, to understand the problems. Such an approach reduces the likelihood that these events will be defined as failures or broken promises.

Another principle of positive relocation can be found in the assertion that special attention should be given to the social and personal needs of relocatees. It is true that the technical, legal and political aspects of a relocation program are both intricate and complex. It often requires a special vigilance on the part of relocation authorities to escape being over-whelmed by technical details and to attend to pressing human needs of potential relocatees (Francaviglia, 1978). In particular, social research has identified four areas for attention: the structure of interim housing or shelter; relocatee financial needs and ability; relocatee personal needs; and preservation of social networks.

The question of interim housing refers to the issue of the placement of relocatees while awaiting new housing (Quarantelli, 1982). The plan to move citizens usually arises as a strategy to protect them from threats in the natural environment. Thus, it is sometimes not feasible, or appropriate, to allow citizens to remain in their homes – and subject to danger – while new residences are located or constructed. Provision of interim housing may be either arranged by authorities or handled by citizens themselves. In connection with disaster-devastated communities, there are usually legal provisions of disaster relief legislation that make resources available for temporary housing. It is known, however, that, whenever possible, citizens who are forced to leave their homes due to disasters prefer to seek temporary shelter in the homes of friends and/or relatives (Drabek, 1986). Hence, in connection with interim housing for relocation, it is desirable that the planning process allow for this pattern whenever possible. Relocation authorities should devise some provisions to insure communication and continued contacts with relocatees who are temporarily dispersed or separated.

When an entire community or large community segment is to be relocated, it becomes less likely that potential relocatees would be able to find nearby temporary housing with friends or relatives. This is a function of the sociology of neighborhood organization patterns which indicate that strong bonds other than kin relationships tend to be somewhat geographically localized (Key, 1967; Holland and Leinhardt, 1979). Under such circumstances, potential relocatees – particularly those whose financial resources and ability to rent space are limited – must look to relocation authorities to take a more active role in locating temporary housing. When it is at all feasible, relocatees should be housed as a group or in close general proximity to one another. This practice preserves pre-existing friendship and social support mechanisms, as well as reinforcing a sense of community among relocatees. The experience in Allenville suggests that these factors are positively correlated with, at least short-term, satisfaction.

Two additional factors to be considered in managing relocations are citizen financial needs and personal needs. These issues become especially salient when relocating populations which include minority, poor or elderly citizens (Davis, 1975; 1977; Cuny, 1983). Relocation authorities should consider at least four aspects of financial and personal needs when structuring a relocation program. First, attention should be given to citizen anxiety regarding moving costs and available help to defray them. Most forced relocations offer some type of government supplied relocation benefit payments. To allay short-term anxiety, such provisions should be carefully explained to relocatees. Secondly, relocation authorities need to be sensitive to citizen concerns about potential interruptions in support from government social programs such as social security, welfare payments or unemployment benefits. Usually these problems are most efficiently handled by referring citizens to an appropriate agency, but it is important for relocation authorities to be aware that such difficulties may arise so that citizens can be promptly referred. Thirdly, relocatees often express concerns about the extent to which the relocation will interfere with current job arrangements; for example, access to jobs via personal car or public transportation (Hogg, 1980). Citizen apprehension can be reduced by providing details on location of interim and final
housing and the availability of transportation. Fourthly, in choosing interim and final housing arrangements, it is important to consider citizen access to grocery, recreation and other facilities associated with sustaining life. Proximity to such facilities has been cited as being of great significance when relocating elderly citizens (Ahearn and Castellon, 1979) and was also cited by Allenville relocatees. While there are distinct limits on the extent to which relocation authorities can control these factors, one may provide maps or written information on access issues.

Finally, a fifth concern associated with social and personal needs lies in preserving social networks. Much of the research conducted on urban renewal revealed considerable citizen dissatisfaction with life after relocation that was attributed to the breaking-up or interfering with established social networks. With regard to hazard relocations, the importance of preserving social networks does not necessarily lie in the idea that it reduces negative psychological consequences in either the short- or long-run. Instead the significance of preserving social networks lies in its relationship to increasing the relocatees’ ability to cope with the stress of movement. A considerable body of literature documents the stress-buffering effects of social support and the connection between integration in social networks and the development of effective coping skills (Dean and Lin, 1977; Pearlin and Schooler, 1978). Hence, to the extent that relocation authorities can preserve social networks, it can be argued that relocatee levels of social support, and consequently their ability to cope, will be higher. Since successful coping skills are correlated with citizens’ capability to adapt, one would expect that under these circumstances levels of dissatisfaction with relocation would be lower (Phillips, 1968).

Social networks can be preserved in a variety of ways. Planning relocation such that communities are relocated as a group is the most obvious technique. Where this is not possible, for example, when only a few families are to be moved, care should be given to attempting to locate residences as close to the same general neighborhood as permitted by the available resources. Still other options involve relocating citizens to neighborhoods as similar as possible to the old environment or attempting to gradually disconnect citizens from old social ties while introducing opportunities for them to develop new ties. In general, the objective is to avoid rapidly disconnecting relocatees from their sources of social support without making some provision for the development of new support networks.

The last principle for promoting positive relocation directs attention to special concerns with relocations which involve racial, cultural or economic minorities. In general, and particularly in the United States, relocation as a hazard mitigation measure is apt to involve moving minority citizens. For example, in the case of natural hazards in the urbanized US, the dollar cost of property is often lower in high threat areas. Among other things, these circumstances dictate that mitigation authorities charged with relocating populations become sensitive to the cultural and ethnic backgrounds of potential relocatees and incorporate such concerns into the relocation planning process. Relocation is an important tool for hazard mitigation and it is essential that it escape labels associated with prejudice and discrimination. The case of urban renewal serves as a good example of what can happen when a relocation program becomes identified with negative consequences for specific population segments — in this case minorities (Hartman, 1966: 369). For example, relocations connected with ‘urban renewal appeared to be an instrument for creating ghettoized public housing — a result feared by whites — and for eliminating integrated low-rent areas — a result feared by blacks — thereby making the program undesirable to both groups’ (Schorr, 1975:112). This resulted in numerous legal actions and an atmosphere in which relocations connected with urban renewal — whether well-intentioned or not — became complex and difficult to conduct. Unless this factor is taken into account, the already difficult task of relocating citizens from hazardous areas may become more difficult or perhaps even impossible.

Among minorities, there is probably as much between-group variation as there are differences from the majority group and, internationally, the definition of minority groups differs by country. Hence, it is unlikely that a single set of guidelines for dealing with minority groups could ever be devised. It is possible though, to identify four general areas of concern for all relocations, especially when minority citizens are affected. That is, relocation planners should be aware of: issues associated with prejudice and discrimination; potential language problems; difficulties posed by differences in household structure; and differences associated with community structure.

Prejudice and discrimination deserve careful attention in specific cases of relocation and generally in terms of the use of relocation as one hazard mitigation tool. It is important that affected citizens and the public-at-large be aware of the policy and practice of equal treatment. Similarly, successful resettlement depends upon the relocatees understanding why the move is necessary, what benefits will accrue to them, what procedures will be followed and how their
lives are apt to be affected by the relocation. Thus, in the interest of accurate communication, one must be sensitive to language barriers, as well as simply different styles of obtaining information among different minority groups. Relocation authorities should also be sensitive to differences in household structure which may characterize some minority citizen communities. In particular, it has been pointed out that some minority group households are built upon the extended family and representatives of two or three generations may be found living in the same dwelling. Often such apparent crowding is a cultural or ethnic preference rather than a symptom of poverty to be corrected as part of rehousing. Finally, relocation authorities should be sensitive to differences in community structure among different minority groups. This means that authorities should be cognizant of the existing pattern of social organization and community or neighborhood institutions. To a great extent, these intangible aspects of social structure will have a significant impact upon the ultimate success of relocation. Hence, it is appropriate for relocation planners to have some plan for identifying neighborhood leaders or influentials and attempting to work through such people in dealing with issues which affect the community or collective interests. Similarly, in the case of civic or religious institutions, explicit attention should be devoted to the question of relocating these institutions with the citizens, or at least to the idea of resettling citizens such that they have access to similar outlets.

Conclusions

Permanent relocation of endangered households can be an important emergency management tool. It is especially useful for correcting established human settlement patterns (for example, in floodplains, earthquake-prone areas, landslide areas and places subject to endemic wildfires) that enhance residents' hazard vulnerability. As a hazard mitigation measure, relocation works equally well with natural or technological threats. Relocation can also reduce the long-term costs of government hazard insurance claims, in that once moved, the spectre of repeated devastation by the same (perhaps seasonal) threat is removed. Relocations constitute, however, a very serious intervention in the lives of citizens. Historically, they have not often been associated with high levels of positive outcomes for either citizens or relocators. Furthermore, elected government officials often are reticent to endorse plans that require such intimate intrusion upon constituents. Thus, to retain relocation as a hazard mitigation tool, emergency managers must adopt and implement policies that ensure effective and positive outcomes.

The relative success of permanent relocation efforts also can be expected to differ somewhat internationally. The principles for positive relocation elaborated here are drawn in large part from experiences in Australia, England and the United States. All of these countries represent economically viable Western democracies with active programs for hazard management. Thus, the principles assume that government resources are available and that the perceptions, and quality of, life among citizens are important considerations. Hence, the principles foster an emphasis upon citizen participation, understanding and equality of treatment. One would anticipate that the use of the principles in similar democracies, or in governments with similar concerns, would enhance the perceived success of relocation efforts conducted in conjunction with environmental hazards.

In countries that are less economically advantaged, perhaps lacking democratic government or with a tradition of highly centralized decision-making and authority, even the idea of principles for positive relocation would probably be met with skepticism. In such environments, relocation would tend to be seen as a mechanical process — a task to be accomplished with more focus on actual movement and less upon the apparent well-being of those moved. Indeed, in Mexico of the late 1950s, citizen compliance with flood evacuation orders was sometimes insured with military force (Clifford, 1956). This practice did tend to enhance compliance and spared local governments some of the burdens associated with hazard planning, and development of citizen awareness or creating incentives for evacuation compliance (Perry, Lindell and Greene, 1980). There were, of course, consequences that would not necessarily be seen as advantageous: evacuees returned when the military left; many personnel were needed to conduct evacuations; and the practice fermented considerable citizen discontent. The point, however, is that in some countries, in some time periods, the need for using citizen-centered principles for relocation, or any other activity, would appear (at least to some authorities) unnecessary.

Some countries, usually called 'developing', with few resources for hazard management may find the use of positive relocation principles appealing for democratic reasons, or find that using them in a plan might enhance the probability of outside funding from world sources. Those governments with serious threats or real democratic concern can seek, and sometimes obtain, funding from the outside. In
general, one would expect the principles to transfer reasonably well to such contexts, but with considerable adaptation for local context and values. To the extent that the citizen-centred principles are actually only guidelines for taking into account the psychological and physical well-being of people, one would anticipate that the outcomes they produce would be met with positive responses. Certainly, all the principles would not directly apply to all situations. In places where citizen education and literacy are limited, the task of involving people in the decision process, and providing information in general, would be complicated. Also, the discussions of financial concerns assume some sort of developed market economy; a form of exchange that may not prevail in some developing countries. But the concern with sustenance would prevail and would need to be addressed – albeit in different form. Similarly, in places where kinship dominates societal organization rather than government in a Western sense, the ‘type’ of organization important for relocation authorities to work within may change. Perhaps the most problematic issue in some places would relate to the ‘land exchanges’ involved in relocating. In some cases, the prevalent ‘world view’ may define land as something that is not ‘owned’ or bought or sold; as is the case among some Native American groups. In this context, land and movement upon it may be governed or influenced by metaphysical considerations and would need to be approached cautiously by relocation authorities. In other cases, land ownership and occupancy is enmeshed in political concerns; the conceptualization of relocation as an agent of ‘land redistribution’ might engender serious problems in some countries.

Certainly, the most straightforward applications of the principles for positive relocation are to be found in the types of countries where they were generated – developed democracies. On the other hand, assuming that a government perceives such citizen-centered principles as important, there is applicability in a range of other national contexts with appropriate modification and adaptation. This is true both inter-nationally and intra-nationally for all kinds of measures for disaster mitigation, preparedness, response and recovery. As Quarantelli (1981) long ago indicated, every community possesses some unique aspects and actors; this demands that disaster measures of all types be produced by a local process and account for the local context. Ideas regarding disaster management export well between communities; simply attempting to adopt a technique unchanged from another place rarely produces a desirable outcome.

The guidelines suggested above are general and based on case study work. As a beginning of the policy process, they require replication and extension by further research. Thus, at best, they serve as a starting point for exploring policy or issues to be debated and scrutinized by local emergency authorities. However, the principles serve in the short-run to provide constructive identification of citizen-related issues in relocation practice.

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