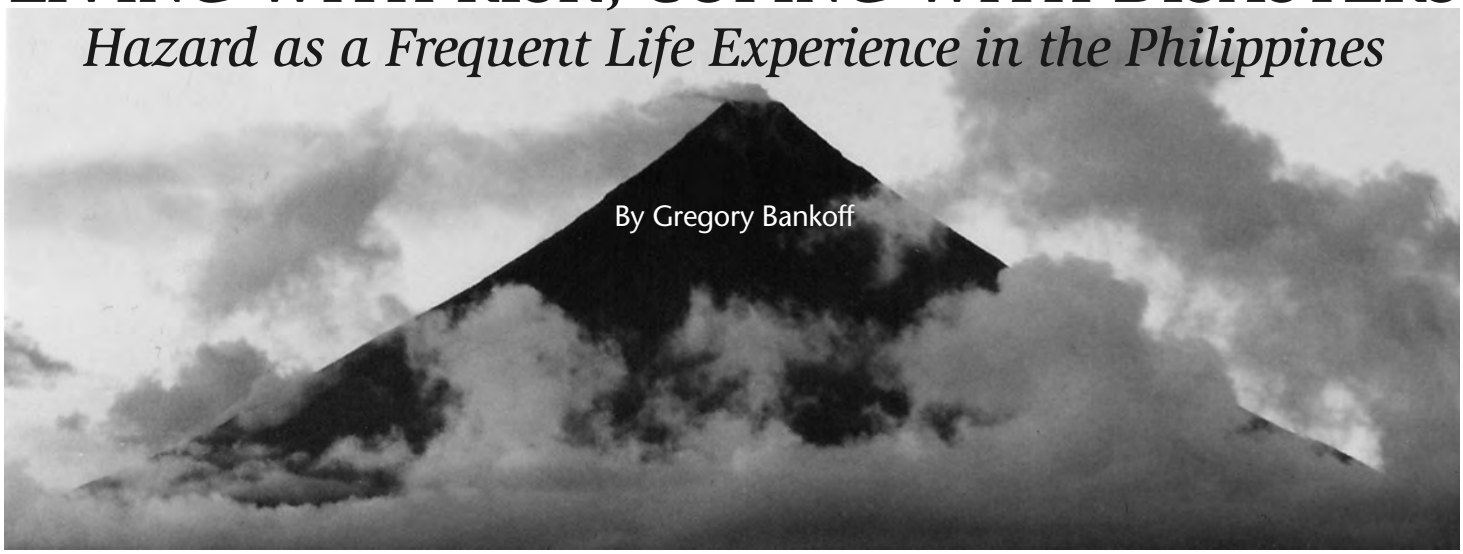
LIVING WITH RISK; COPING WITH DISASTERS

Hazard as a Frequent Life Experience in the Philippines



By Gregory Bankoff

A quiescent Mt. Mayon. All photos and map courtesy of Gregory Bankoff.

The interrelationship of human beings and the natural world, and the influence of the physical environment on a community's social and cultural development, are graphically demonstrated in societies that face the persistent threat (and reality) of disasters. A prime example is the Philippines, whose over seven thousand islands are located in an extremely hazard-prone area. The Philippines as a whole experiences more earthquakes, volcanic eruptions, and tsunamis than any other place on earth. Although Western social sciences typically depict "disasters" as abnormal occurrences, communities and individuals in the Philippines have come to accept hazard and disaster as a frequent life experience. Indeed, in a number of respects, Filipino cultures can be regarded as the products of community adaptation to these phenomena. As the following discussion suggests, a range of processes permit the possibility of disaster to be incorporated into daily life and allow for what might be called the "normalization of threat."

Cultures of Disaster; Cultures of Coping

The evidence that this normalization of threat may have been a significant factor influencing the development of Filipino cultures can be found in the historical record, in the design and construction of buildings, in the agricultural system, in the constant relocation of settlements, and in the frequency of migration. Filipino societies have evolved certain "coping mechanisms" to come to terms with the constancy of hazard and to mitigate the worst effects of disasters. Often, too, the way in which people deal with the emotional and psychological requirements of living with uncertainty may influence what are seen as "Filipino" beliefs and character traits. The extent to which these practices can be contrasted with "universal" and Western-scientific thought may be debated. However, what is suggested here is that they represent a distinctive pattern of activity and behavior among Filipinos, and therefore raise questions about the ways in which Western observers have usually interpreted such cultural forms.

Historical Adaptation

The historical record in the Philippines provides evidence of cultural adaptation to the constancy of environmental threat. Architecture, in particular, offers a unique means of examining the human-environment interchange. The design of homes and other buildings shows how indigenous society took notice of seismic and meteorological hazards. The simple *nipa* palm and bamboo hut offers a good example: it is easily rebuilt when damaged and less likely to injure people during storms or earthquakes. Another example is the traditional house style in the Batanes (the islands at the very northern extremity of the Philippines) that, though constructed from stone, had low ceilings as a precaution against the frequency of typhoons.

The Spanish, who began to colonize the Philippines in the late sixteenth century, also adapted to the environment. Initially, they built structures of wood, but because wood was so easily destroyed by fire, they decided to construct houses of masonry. They found, however, that these were more vulnerable to damage from earthquakes. Manila, built on the wealth of the trade bonanza across the Pacific during the early seventeenth century, was constructed in the same style as Hispanic cities everywhere, with considerable use of stone and tile. As a result, on November 30, 1645, much of the city was destroyed by a devastating earthquake estimated at 7.9 magnitude on the modified Mercalli intensity scale. Spaniards were not unaware of such seismic movements, but as Joseph Fayol, a royal chaplain in the city and an eyewitness to the events that took place, explained, they simply did not have "any pressing fear of earthquakes —which, although they usually occur here every year, have not [before] caused destruction."[1]

Unfortunately, this earthquake was of an entirely different order. The main shock totally destroyed 150 of the "finest buildings" and, together with aftershocks, caused so much damage to the remaining houses that most were considered too dangerous to reoccupy and were subsequently demolished.

Subsequent colonial architecture sacrificed much grace of line for load-bearing and more appropriate form. The extensive use of

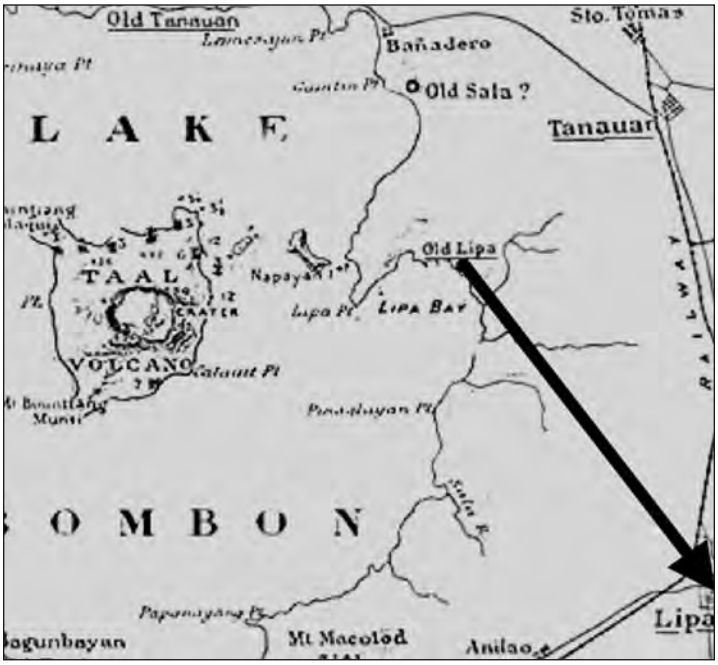
Contemporary bamboo and nipa palm house, foothills of Mt. Banahaw, Quezon Province.

"Earthquake baroque" architecture, Naga Church, Camarines Sur.

massive buttresses, low body structures, and squat bell towers that are so characteristic of remaining examples of colonial buildings, especially provincial churches, testify to a heightened awareness of the perils of masonry construction in a seismically active area. Rather suggestively, this style has even become known as "earthquake baroque." Domestic architecture, too, underwent a similar radical transformation with the incorporation of indigenous building practices into the internal framework of structures. In particular, the heavy timberwork of the roof beams was supported by a system of trusses that rested on a series of wooden struts planted deep into the ground to provide a measure of flexibility in the event of violent seismic movements. The number of stories was also generally reduced from three to two, with the upper one constructed from lighter materials such as wood and latticework panels. This approach was adapted from Japanese artisans who, as Christian refuges or traders, had settled in the city at the beginning of the seventeenth century. In fact, the style usually referred to as "Spanish," in reality, was more of a syncretic adaptation of Hispanic and indigenous building techniques.

Even today, adaptations to the threat of hazard can also be seen in local agricultural systems. Because of the likelihood of disaster, especially famine, these systems focus more on reduction of crop losses, rather than "normal" measures of efficiency and yield. Crop diversification is a common feature of traditional farming methods that provides access to a secure food source in times of climatic adversity. Again we can look at the Batanes islands, where the small size of farm plots is often attributed to the "unfortunate" consequence of equal inheritance among siblings. Western-trained agricultural experts see this division of land among all heirs as an almost "feudal" relic of an unreformed land system that restricts output, hinders economies of scale, and obstructs the efficient deployment of labor. This is a misguided view. Land fragmentation in the Batanes is an important mechanism for ensuring food security. Planting in widely scattered parcels minimizes the likelihood that an entire harvest may be lost. Moreover, farmers plant a wide variety of root crops such as yams (two species: *uvi* or *Dioscorea alata* and *dukay* or *Dioscorea esculenta*), sweet potato, taro, garlic, ginger, and onions—as they mature underground and are relatively unaffected by typhoons that lash the islands regularly and flatten cereal crops like rice. Cereal crops are primarily grown in naturally occurring depressions in the terrain in parcels no larger than 400 square meters that afford some protection from strong cyclonic winds. In societies exposed to the constant threat of hazards, such farming strategies make good sense from the perspective of local farmers who are mainly engaged in minimizing risk rather than maximizing surplus.

A third recourse to hazards when other adaptive strategies have failed has been for the survivors of such communities to relocate their settlements to safer locations removed from the perceived immediate source of danger. In this way, the people of the central Luzon town of Lipa abandoned their beachside site in 1756 and moved to a location further inland. Many houses had been destroyed under the weight of ashes and stones during the devastating eruption of Taal volcano in 1754 and still others had been affected by the accompanying severe flood when the waters of Laguna de Bay inundated the lower part of the town. Historical sources and ethnographic literature report numerous examples of whole villages migrating to new and safer sites. The same practices hold true in contemporary times, with migration overseas now another option. Following the eruption of Mount Pinatubo in 1991—the second largest volcanic event of the twentieth century,



Sites of past and present Lipa townships, Lake Taal, Batangas Province.
Author-modified version of a map downloaded from http://www.iml.rwth-aachen.de/Petrographie/ taal/map1911.jpg.

"They told all sorts of jokes and so instead of being sad while gathering the dead, they were all laughing. The pain in their hearts was great but the jokes were compared to water that extinguishes a fire."

seven cubic kilometres of pyroclastic material devastated surrounding areas, causing between 900 and 1,000 hazard-related deaths and displacing nearly 1.2 million people—many communities were forced to relocate, and tens of thousands of individuals made the decision to go abroad as overseas contractual workers.

The strategies or coping mechanisms adopted by communities to reduce the impact of hazards or avoid the occurrence of disasters are based on the assumption that what has happened in the past is likely to repeat itself following a familiar pattern. People's earlier actions, therefore, constitute a reasonable framework for guidance during similar events. In the Philippines, migration and relocation can be regarded as coping practices to prevent the same set of circumstances from reoccurring. Architectural syncretism and agricultural diversification, on the other hand, are impact-minimizing coping practices, since they seek to minimize loss and facilitate recovery.

Emotional and Psychological Adaptation

The sheer frequency and magnitude of hazards to which all Filipinos are exposed led anthropologist F. Landa Jocano to identify various cultural coping practices that have been developed to come to terms with living under the constancy of threat and that are shared by peoples of all ethnic origins in the archipelago. Principal among these are the characteristics often conveyed in the Tagalog expression of *bahala na* that is usually, if somewhat erroneously, translated as "fatalism." While the term contains an element of a "leave it to fate" sentiment, it also carries a sense of risk-taking. At the same time, notions of courage, daring, and a sense of finely calculated assessment of the odds are coupled with elements of faith in the efficacy of prayer and the intercession of divine protection. In the years following the eruption of Mount Pinatubo, many local people resorted to both Christian prayer and the shamanistic rituals of local *espiritistas* to strengthen their village's defenses and protect themselves from flows of *lahar* (the rapidly flowing mixture of rock debris and water that originates on the slopes of this volcano). However, in the final analysis, the concept of bahala na helps people to accept tragedy because disaster can occur despite the best efforts of human and divine intervention.

Nabua Church plaque noting its frequent history of natural hazards.

The other core Filipino value identified by Jocano as a culturally specific coping practice is *bayanihan,* or "toiling on another's behalf and assuming another's burdens." The meaning behind the concept is definitely more complex than mere "unity" or "togetherness"—it has the connotation of shared identity and common association. Though the emphasis is subtly different in each case, bayanihan resembles other terms such as *pakikipagkapwa* and *pakikisama* in expressing a sense of shared community. Often defined in operational terms as neighborhoods, this sense of community guarantees support for members, especially during times of personal travail or common hardship. There is ample evidence that forms of community endeavour were resorted to at these times. A 1911 report on local associations and networks observed how a special house was built "which might be occupied by anyone whose residence would be destroyed by a typhoon." Another account written in Ilocos Norte recounted how, following a typhoon in which nearly all the dwellings were levelled, "The destroyed houses were rebuilt quickly as soon as the storm was over because the owners could help each other by turn in spite of their lack of funds." The communal construction of dams to protect *barrios* (neighborhoods) from floods was also apparently common practice in Antique. In Batangas, community help might be organized by a popular or influential person as a charity measure to aid some person or family that had suffered loss through "flood, fire or some similar disaster."[2]

The final coping practice identified by Jocano was the particular sense of humor shared by many Filipinos and their ability to laugh even during the worst calamity or disaster. Jocano explains this characteristic as a means of spreading pain or embarrassment in society "so much so that when people laugh at a person who slips and falls, the victim usually laughs too." Storytelling and swapping jokes with friends was perceived as an important means of dealing with angst, relieving stress, and overcoming anguish. This practice has frequently been observed among survivors of disaster, even in Spanish accounts. After the terrible eruption of Mount Mayon in June 1897, that killed about 350 people and destroyed three settlements, survivors were heard telling jokes while collecting the grotesquely disfigured bodies of the dead, comparing the separation of body and soul to a "slow" husband being left by his "fast" wife, or the remains of a dead coconut farmer to the oil he used to make. In the words of a Spanish priest, "They told all sorts of jokes and so instead of being sad while gathering the dead, they were all laughing. The pain in their hearts was great but the jokes were compared to water that extinguishes a fire. The jokes kept them from getting weak and helped them to gather the dead without shedding too many tears."[3]

Community Mobilization

The extent of self-generated community action in times of disaster is especially evident in the Philippines, where people are less likely than in the United States to look to the government for assistance. In contrast to a scholarly literature that mainly regards the formation of

Ruins of Cagsawa Church destroyed by the 1814 eruption of Mt. Mayon, Albay Province.

non-government organizations (NGOs) as a modern phenomenon, there is a long history of formal and informal associations committed to individual and extra-familial welfare at the local level that dates back to the religious fraternities known as *cofradías* that have their origins in the late sixteenth century. These religious associations functioned alongside or overlapped village-based mutual aid organizations in which the notions of reciprocity and assistance were commonplace. In the late nineteenth and early twentieth centuries, there is even evidence that some developed into rural credit associations, farmers' organizations, and cooperative societies. These and other manifestations of civil society, like Parent Teacher Associations and even unions, share much in common with contemporary NGOs and people's organizations.

Communities in the Philippines are largely self-reliant, dependent on their own resources to deal with the hazards that confront them, as government is often incapable of addressing the consequences of disasters adequately, and there are only limited technological solutions to what are increasingly complex issues. The most vulnerable, of course, are the poor, who possess little in the way of resources apart from an ability to organize themselves and practice mutual reliance. Following a disaster like the earthquake in Baguio in 1990, households and neighborhoods immediately responded by sharing food, shelter, and transportation, by operating communal kitchens, providing shelter to the homeless, and pooling available vehicles. The degree of interdependence, the need for co-operation, and for constructing strong social support networks are important coping mechanisms in cultures faced by continual environmental uncertainty.

While none of the features are unique to Filipino cultures, their particular configuration may be indicative of a shared sense of character to be found among the various ethnic groups who inhabit the archipelago. Living with the constant threat of disaster, the loss of home and facilities, facing starvation and sickness, experiencing displacement and resettlement, and often even the destruction of one's social support system and cultural network, generates a continuous sense of anxiety, a fear of the unpredictable. However, Filipinos have learned to confront these apprehensions, to become psychologically ascendant, and to not be mastered by events, a trait that was recognized by the national hero, Jose Rizal (1861–96), when he compared the character of Filipinos to the nature of bamboo that bends in the wind and is able to bounce back.

Conclusion

Recognition of the specific ways in which disasters and people interrelate at the level of society and community as described here has important ramifications. Such recognition affects not only how disasters are perceived but also the manner in which they should be approached or "managed." Appreciating that there are both cultures of disaster and cultures of coping in all societies fosters an understanding of such events in terms of people's vulnerabilities and their resilience to withstand them through strengthening existing capacities. It places less emphasis on the importance of technology as providing the only or principal means of dealing with hazards, and gives more emphasis to enlisting people's participation as an essential element in disaster management through the formation and encouragement of grassroots organizations. Such an approach, moreover, contributes to better understanding the roots of people's vulnerabilities and the structures or conditions that generate them. Perhaps, even more significantly, it suggests that Western developed countries have as much to learn about disaster preparedness, management, and recovery from non-western developing countries as the latter do from the former. ■

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