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In the Eye of the Storm: The Social Construction of the Forces of Nature and the Climatic and Seismic Construction of God in the Philippines

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The social construction of hazard is a matter of considerable moment to those engaged in disaster preparedness, management and relief. All too often, insufficient recognition is accorded to the manner in which people's actions are influenced by their cultural interpretation of what they are experiencing. Behaviours that appear inappropriate or illogical to external agency or relief workers may be entirely consistent and rational actions when understood in the context of the operating schema of the individuals experiencing such phenomena.

> And I heard a great voice out of the temple saying to the seven angels: Go your ways, and pour out the vials of the wrath of God upon the earth. (*Revelation*, Chapter XVI, Verse 1)

The idea that the forces of Nature are at the service of divine command and that the disasters caused by natural hazards are the expression of a vengeful deity permeates Judeo-Christian perceptions of the universe.[1] Such is the appeal of this image that it has accompanied the spread of Christianity across the globe, merging with local belief systems in the Third World to create syncretic explanations of these natural phenomena. On the one hand, it gives rise to notions of fatalism and unworthiness among individuals and even entire communities who regard their frequent immiseration as somehow the deserved product of their own actions. On the other, it leads to a particular depiction of the Godhead as a stern and wrathful father. Sandwiched somewhere between the two come government agencies, little regarded by the majority of the population who associate their efforts with graft and corruption and whose trust lies mainly in horizontal societal relationships based on real or fictive kinship. Nowhere is this more the case than

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1 John Aberth, *From the brink of the apocalypse: Confronting famine, war, plague and death in the later Middle Ages* (London: Routledge, 2001) and Andrew Cunningham and Ole Peter Grell, *The four horsemen of the apocalypse: Religion, war, famine and death in Reformation Europe* (Cambridge: Cambridge University Press, 2001).

in the Philippines, the only Christian nation in Eastern Asia and subject to intense missionary proselytising since 1565 but also one of the most seismically and meteorologically active land masses on the planet, having experienced the highest number of recorded disasters during the twentieth century according to some international indices.[2]

The social construction of hazard in a society is not just of mere academic interest but should also be a matter of considerable moment for those engaged in disaster preparedness, management and relief. All too often, insufficient recognition is accorded to the manner in which people's actions before, during and after a disaster are influenced by their cultural interpretation of what they are experiencing, whether the event is perceived to be an unavoidable climatic or seismic extreme or a just form of retribution meted out for a community's transgressions. Behaviours that appear inappropriate or illogical to external agencies or relief workers may be entirely consistent and rational actions when understood in the context of the operating schema of the individuals experiencing such phenomena. Religion remains a potent force to consider when dealing with popular explanations of the sudden and unforeseen. Nor are national governments completely above such stratagems themselves, attributing their inaction and lack of political will to address pressing social and economic problems to the excuse of the almost godlike forces of an ungovernable Nature.

Representations of the forces of Nature

In a nation where 96 per cent of the population believes in God and where atheists and agnostics constitute less than 1 per cent of all citizens, there is a close relationship in the popular imagination between climatic and terrestrial vagaries, the potent forces of Nature and conceptualisations of the deity.[3] However, the image of a people faced with the 'wrath' of a vengeful God and with no other recourse but to passively accept a fate beyond their control (one, moreover, that they have incurred through their own transgressions) is somewhat tempered by anthropomorphic allusions that owe their origins to a colonial Spanish heritage. Natural phenomena are cast as stereotypical male perceptions of manifestations of femininity and are imbued with all the characteristic attributes thereof: temperament, unpredictability, irrationality, jealousy and tempestuousness. While these analogies certainly serve an important role in maintaining a degree of cultural resilience in a society subject to such frequent natural hazards, often there seems little else to do. Technology fails to provide a sense of security: the predictions of the state's meteorological and seismic agencies are generally portrayed as unreliable, while most engineering accomplishments are viewed as futile and of inconsequential purpose. In this scheme of things, the forces of Nature appear to reign supreme, largely beyond the compass of human endeavour.

According to this indigenously conceived outlook, the forces of Nature in the Philippines are out of control. Far from the mastery conferred by the Judeo-Christian tradition, humans are at the mercy of a disaster-prone country and victims of an

2 The Belgium-based Centre for Research on the Epidemiology of Disasters (CRED), which compiles one of the most comprehensive records on the occurrence of natural hazards in the world since 1900, credits the Philippines with more such events than any other country. CRED defines a disaster as an event requiring international assistance or causing ten deaths or affecting more than 100 persons.

3 A 1991 survey conducted by the Social Weather Stations reported that 86 per cent of Filipinos believed in God unreservedly, 8 per cent believed but expressed some doubts and another 2 per cent believed some of the time, while a further 3 per cent believed in some form of higher power; Mahar Mangahas, 'Belief in heaven and hell', *Social Weather Bulletin*, 96–15 (1996): 1.

undefined but somewhat reified Nature.[4] Reference is frequently made to the country being situated on the 'Rim of Fire', the string of volcanoes extending along a tectonic fault line that runs from Aceh in northern Sumatra to Japan; the 'Belt of Pain', an area of extreme seismic activity stretching from just below Hong Kong to north of Malaysia and Singapore; or 'Typhoon Alley', the path usually taken by storms generated in the western North Pacific, 1 of the 6 main spawning grounds for tropical cyclones.[5]

Within this disaster-prone region, the state is largely powerless to resist 'a vengeful Nature on the warpath' and former President Ramos was depicted – appropriately, given his military background – as having 'surrendered' whole towns to advancing lahar flows during the eruption of Mt. Pinatubo. In particular, Bacolor, the historic former provincial capital of Pampanga, was appraised as 'no longer defensible' after 19 of its 21 *barangays* (municipal units) were buried under lahar. (Eventually only one *barangay* was left standing.) Instead, experts advised further resettlement schemes to house the more than 60,000 displaced persons rather than building more of the dikes that had already proved so woefully ineffective in stemming these flows. According to the proponents of this scheme, however, the shift was 'not a total surrender but a practical step considering there is no stopping Pinatubo'.[6] Much the same sentiments are expressed about earthquakes or storms: 'when it rains, it floods; when it doesn't, there are droughts'.[7] Whatever the manifestation, the list of disasters in the Philippines often reads like a record of Biblical plagues, and like those plagues, they are equated with the vengeance of an angry deity.

When Typhoon Mameng struck 32 provinces in central-southern Luzon and the Visayas in October 1995, forcing over 68,000 families to seek shelter in evacuation centres, it was likened to a heavenly messenger, its killer winds howling a sorrowful warning from God to 'abide by my grace or bow to my wrath'.[8] To many Filipinos, these

4 On Judeo-Christian ideas about the human dominance of Nature, see Lynn White, 'The historical roots of our ecological crisis', *Science*, 155 (1967): 1203–7.

5 Denis Murphy, 'A belt of suffering', *Manila Chronicle*, 2 Nov. 1992; Gerardo Sandoval, 'Public response to PAGASA typhoon warnings', *Social Weather Bulletin*, 94–5 (1994) and Marcelo Tamayo, 'Can RP ever cope with disasters', *Manila Bulletin*, 17 Mar. 1993. The 'Rim of Fire' volcanoes are also called 'The Ring of Fire'; Severo Catura, 'The Pinatubo disaster; Palliative solutions', *Philippine Free Press*, 83, 29 (1991): 6–8 and Edward Kiunisala, 'A year of calamities–II; Of volcanoes and earthquakes', *Philippine Free Press*, 83, 35 (1991): 18–19.

6 Rendy Isip, 'Pampanga vanishes', *Manila Chronicle*, 17 Sept. 1995. On the 'surrender' of towns see Tamayo, 'Can RP ever cope' and Michael Dueñas, 'Season of calamities', *Philippine Free Press*, 83, 41 (1992): 16. Lahar is composed of pyroclastic materials and contains boulders, pebbles, sand, dust and gas in the form of a dense mud-like substance. Often heated to temperatures of 1000°C, such mudflows create a layer of expanding air in their advance that enable them to sweep along the ground at great speeds, sometimes in excess of 500 kilometres per hour. Objects in their path are either destroyed by direct impact or buried, with the encounter generally proving fatal to all living things.

7 'Stormy weather', *Asia Magazine*, 28, 16 (1990): 10.

8 James Saspa, 'It was like an airplane exploding', *Philippine Free Press*, 87, 42 (1995): 6. In 1995 the Philippines was battered by a series of particularly destructive typhoons coming in close succession: Typhoon Mameng on 30 September, which tracked north-northwesterly through the Visayas and Luzon before exiting into the South China Sea; Typhoon Pepang between 28–29 October, whose sudden change in direction caused massive flooding in the unprepared provinces of Iloilo and Negros Occidental; and Super Typhoon Rosing on 2 November, which ravaged the same Western Visayan provinces struck by Pepang barely five days previously before raging across Southern and Central Luzon. Typhoon damage in 1995 amounted to more than P13.9 billion or more than 3.5 per cent of the national budget; Sandra Aguinaldo *et al.*, 'When calamities blow away economic gains', *Business World*, 17 Nov. 1995 and Nati Nuguid, 'A new wave', *Philippine Free Press*, 87, 42 (1995): 2.

vicissitudes of Nature are the manifestation of divine punishment whose ominous messages are everywhere, plain to anyone who knows how to read the signs. More recently, there has been a renewed interest in indigenous lore as part of a 'rediscovery' of Filipinos' pre-Hispanic roots that is also very much associated with sustainable environmental practice. The result is that tribal peoples have found their views quoted at length in the national media, and taken more seriously for the first time. Thus Datu Macompas, a reputedly 103-year-old Manobo community leader from Agusan del Sur on Mindanao, apparently interpreted the successive calamities of 1990–1 as the punishment of Magbabaya (God) on humanity for 'no longer following the laws of Nature which [were] prepared by the creator since the beginning of the earth'.[9]

However, such views usually receive scant recognition in national fora and are only now proving more acceptable because they conform both to mainstream Christian discourses on the effect of human activity upon the physical environment and to the greater prominence currently accorded minority views. The Catholic Bishops Conference of the Philippines issued a pastoral letter in January 1988 decrying the irreversible damage being wrought upon the landscape and admonishing the faithful 'to remember that God, who created this beautiful land, will hold us responsible for plundering it and leaving it desolate'.[10] After the eruption of Mt. Pinatubo in June 1991, the churches in Zambales felt it expedient to organise prayer services to help the people understand the meaning of the event, apparently most having regarded it as punishment for their sins.[11] The continuing hazards associated with this eruption compounded by the heavy rains of Typhoons Miding and Norming in 1994, prompted Cesar Lacson, a former seminarian and then aide to Interior Secretary Rafael Alunan, to compare the fate of Pampanga with the floods and plagues reserved for those who had incurred the wrath of the Biblical God. 'Such extreme punishment', he mused, 'was for the damned and the cursed. But why would Bacolor be a target of God's wrath?'[12]

There seems to be no answer to this question in general. The then President Corazon Aquino, whose home province of Tarlac was devastated by both the Baguio earthquake of 1990 and the Pinatubo eruption in 1991, concluded that God was 'testing' the Philippines but that the two calamities, the one following so closely upon the other, had shattered the country's dream of becoming a newly industrialised nation by the year 2000. The media responded by simply branding her 'Calamity Cory'. A more secular but no less moral perspective was provided by Camelita Canila, a community-based physician in Leyte ministering to the victims of the Ormoc disaster: 'Even as we cure torn bodies and souls, we must also seek a cure for the festering wounds of a country being slowly destroyed by

9 Yawos-Silatan, 'Living witness of ecological destruction speaks', *National Midweek*, 7 Nov. (1991): 9. In one sense, the broader interest in pre-colonial society has its origins in the influential writings of José Rizal, particularly his 1890 publication of an annotated edition of Antonio Morgas's *Sucesos de las islas Filipinas*, first published in 1609. Indigeneity was a marked feature in the lead-up to and celebration of the centennial celebrations of the 1896–8 Philippine Revolution that officially commenced in 1994; Greg Bankoff and Kathleen Weekley, *Post-colonial national identity in the Philippines; Celebrating the centennial of independence* (Aldershot: Ashgate Publishing, 2002).

10 Ramiro Alvarez, 'Perils of changing climate', *Philippine Free Press*, 83, 2 (1992): 26.

11 Murphy, 'Belt of suffering', p. 5.

12 Marlen Ronquillo, 'Nature's wrath', *Philippine Free Press*, 85, 32 (1994): 9.

the greed of a few. That is of even greater urgency.'[13] The sense of retribution, of the forces of Nature taking revenge for some imbalance or lack of harmony between human activity and the physical environment is a recurring image. Once again, Datu Macompas reminds his audience that the earth was once bountiful, food was abundant and sickness was rare but now 'if only Nature could speak she would be crying out the pain she has experienced'.[14]

The flash flooding brought on by the torrential rains of Typhoon Puring that devastated parts of Mindoro Oriental on 27 December 1993 was attributed to the continuing deforestation of upland areas taking place with the connivance of government and military officials despite the ban imposed on all logging by Governor Rodolfo Valencia. Human greed provokes Nature's chastisement. 'The forest did speak', writes a journalist, 'with fury to remind us that whatever we've done to our environment, we, in fact, have done to ourselves.' A 59-year-old fisherman who lost 9 of his grandchildren, his oldest son and a nephew to the tsunamis that hit the Mindoro coast on 15 November 1994 told reporters that 'the sea that has given life to us has taken it all back'.[15] The idea that there is a compact between humanity and the environment that is breached by the scale and scope of present economic development ('even the narrowest road is a razor cut on the skin, a focus of infection') leads ineluctably to the notion of offence, of 'crimes committed against Nature'. According to an old man selling cigarettes interviewed in the midst of the devastation of Ormoc City, every opportunity ought to be taken to hang the illegal loggers responsible and any plans for rebuilding the town must be based on 'Nature's terms'.[16]

Human powerlessness and fatalism in the face of the divinely inspired wrath of Nature is somewhat tempered by another level of public discourse in Filipino society that attempts to familiarise hazards mainly, though not exclusively, through the feminisation of natural phenomena. Sometimes Nature is the bountiful mother, Mother Nature, and humans her wayward children. 'We lived happily and peacefully', relates Datu Macompas again. 'If we didn't have meat, we just went to the forest and brought back

13 Camelita Canila, 'Prescription for disaster', *National Midweek*, 7, 7 (1992): 44. The 'Calamity Cory' remark is in Kiunsala, 'Calamities–II', p. 18. The flash flood that overtook the small eastern Visayan city of Ormoc on 5 Nov. 1991 killed more people than died in the Baquio earthquake, Typhoon Ruping and the Mt. Pinatubo eruption combined. Torrential rainfall at the height of a weak tropical cyclone dumped nearly 150 millimetres of rain onto the denuded mountain slopes above the city in a matter of a few hours. With less than 10 per cent of the natural tree cover remaining, an estimated 4 million cubic metres of water raced down through the cane-fields and merged with the swollen Anilao River. In a matter of minutes, water levels rose to over 6 metres in some parts of the city, while an unusually high tide prevented the flood from running straight out to sea. The whole episode was over in less than 15 minutes but between 80–90 per cent of the city's buildings were destroyed, with 5,365 people killed and another 2,046 missing. Most of the victims were residents of illegal riverbank settlements; see Marites Vitug, *The politics of logging; Power from the forest* (Manila: Philippine Center For Investigative Journalism, 1993).

14 Yawos-Silatan, 'Living witness', p. 9.

15 Jose Raymond and Dg Panaligan, 'Fury of the forest', *Manila Chronicle*, 30 Jan. 1994; 'The sea disappeared, then the waves came', *Philippine Free Press*, 86, 48 (1994): 24, 25.

16 R. Kwan Laurel, 'The great flood of Ormoc', *National Midweek*, 27 Nov. 1991. The same commentator noted that before any steps could be taken to rebuild the town, it would first have to brace itself for the visit of Imelda Romualdez Marcos as 'according to the law of Nature, wherever there are deaths, predators are sure to follow'! On 'crimes', see, for example, Gemma Corotan, 'Washed-away dreams', *Manila Chronicle*, 25 July 1992.

wild pigs. If we wanted fish we just went to the rivers and lakes and got what we wanted. Our life was very simple but we were content.'[17] At other times, however, Nature is portrayed as capricious, exhibiting uncontrollable characteristics that while not necessarily feminine, are often popularly associated with female or childlike behaviour. Thus an article describing the provision of emergency medical services after the Baguio earthquake was entitled 'Conquering Nature's tantrum'. The weather, in particular, is often represented as being 'inconstant', 'contradictory' and 'unpredictable' and humans as having to learn 'to constantly adjust to the many idiosyncrasies of Mother Nature'.[18] An entire tropical weather phenomenon, the El Niño Southern Oscillation (ENSO), has been symbolically associated with the cult of the Holy Child as it usually reaches its greatest intensity around Christmas.[19]

The feminisation of natural phenomena is most readily apparent in the nomenclature attributed to the twenty or so typhoons that track across the Philippines every year. Since 1963, any tropical cyclone entering the Philippine Area of Responsibility, the PAR (the meteorological zone monitored by that nation's meteorological agency), is identified by assigning it a Filipino woman's nickname ending in *Ng* from one of four sets arranged from 'A' to 'Y' according to the nineteen letters of the Filipino alphabet by PAGASA, the Philippine Atmospheric, Geophysical and Astronomical Services Administration. One set of names is used each year, so that particular names repeat themselves every four years, and each set is accompanied by an auxiliary list from 'A' to 'G' in case the number of typhoons in any one season exceeds the alphabet.[20] A record 32 tropical storms and typhoons struck the archipelago in 1993, exhausting the alphabetical as well as the auxiliary lists. Cyclones that either cause damages in excess of one billion pesos or claim more than 300 lives are classified as destructive and their names decommissioned and removed from the list. According to Dr Bernie Soriano of PAGASA, naming cyclones after females simply reflects 'Filipinos' maternalistic Nature', the endearing affection felt towards their mothers, girlfriends and elder sisters. Popular belief, however, holds that tropical cyclones are given female names 'because of the tendency of women and typhoons to both change their minds in very short spans of time'.[21]

The device of investing hazard with personality, of anthropomorphising the event, can be seen as an important means of maintaining cultural resilience in a society that

17 Yawos-Silatan, 'Living witness', p. 9; see also Catura, 'Pinatubo disaster', p. 6 and P. Zapanata, 'A year of calamities and victories', *Philippine Graphic*, 2, 31 (1992): 11.

18 Francisco Barros *et al.*, 'Disaster preparedness plan: Conquering Nature's tantrum', *New Chronicle*, 26 Apr. 1991; Conrado Benitez, 'Predicting the weather through plants and fowls', *Woman's Home Companion*, 19, 36 (1991): 18 and Jose Bugarin, 'Inconstant sun causes contradictory weather', *Manila Bulletin*, 23 Feb. 1990.

19 'Editorial: The end of El Niño', *Philippine Star*, 29 June 1992. Not, of course, that the ENSO phenomenon is exclusive to the Philippines but the cult of the *Santo Niño* is very popular among the Christian population of the archipelago.

20 'Stormy weather', p. 13; Aguinaldo *et al.*, 'When calamities blow', p. 1. The practice of adopting female names was first begun by US aircraft and navy personnel assigned to detect and forecast cyclones in 1946. The foreign names used internationally to identify tropical cyclones are only employed as advisories to airlines and for navigation purposes in the Philippines.

21 Joan Dairo, 'Naming tropical cyclones: What romance and typhoons have in common ... Nothing sexist here', *Malaya*, 9 July 1995. The association between storms and the reputed capriciousness of women's minds is strongly denied by Dr Soriano: 'It is not the case that the unpredictability of typhoons, like women, is the reason for typhoons being given women's names' [*Hindi totoong dahil pabago-bago ang isip bagyo tulad ng isang babae kung bakit binigyan sila ng pangalang babae*].

experiences frequent disasters caused by natural hazards. It is a form of resilience because it represents an attempt by people to come to terms and deal with such phenomena by reducing 'the awesome and incomprehensible to something prosaic and simplistic' and so permits its incorporation within the structure of people's everyday cultural construction of reality.[22] Nor are Filipinos alone in this conceit; a similar incidence of a society that anthropomorphises Nature as an important psychological coping practice was recorded on Jamaica in the wake of Hurricane Gilbert. Not only did the island community acquire a new temporal and social reference point – 'BG' and 'AG' denoting 'Before and After Gilbert' – but the tropical cyclone was also made into a butt of humour, so that a subsequent hurricane known as Joan was transformed into Gilbert's wanton wife in search of her wayward husband.

Representations of the Godhead

Akin to this popular anthropomorphising of Nature is a religious mysticism that also pervades contemporary political life in the Philippines and that traces its origins to a long historical tradition of visionary and messianic figures.[23] Governments may not be credited with the ability to do much to mitigate the devastation wrought by the forces of Nature, so there is a need to call on heavenly assistance. The apocalyptic character of Mt. Pinatubo brought forth just such sentiments: the event was reputedly heralded by a white-robed visionary from Botolan visited with an ominous warning two nights prior to the eruption, while a medium in trance received a message from the Virgin Mary for Mayor Gordon of Olongapo that the city would be saved if he organised a religious procession to plead for divine intervention. Meanwhile, the ever-indomitable Imelda Marcos phoned from Hawaii to say over the radio that the eruption was punishment for the government's refusal to allow her to bring her husband's corpse home for burial. Such goings-on moved the Fil–American volcanologist Kelvin Rodolfo to observe that 'the Philippines may have the greatest numbers of professed miracles and saintly apparitions of any country in the world'.[24]

However, such quasi-religious apparitions can have much more serious political consequences when the originator of these prophetic messages is none other than the publicly acknowledged 'spiritual adviser' to the President of the Republic. In light of Brother Eddie Villanueva's relationship to ex-president Joseph Estrada, the former's understanding of Philippine history and the recent political situation suggest that his views may have had influence at the highest level of government. According to Villanueva, Filipinos have not learnt the hard-taught lessons of history, and therefore 'the nation is under the chastening of the Righteous Lord once again'. While the nation had earned the admiration and respect of people the world over for the Philippine Revolution of 1896–98 and for EDSA in 1986, the failure to correctly attribute these events to divine intervention and the erection of a statue to the 'Queen of Peace' (the Virgin Mary) had brought down God's wrath upon the people, 'shaking our nation with noisome pestilence': six coup attempts, drought in the rainy season, killer earthquakes

22 David Chapman, *Natural hazards* (Melbourne: Oxford University Press, 1994), p. 8.
23 Reynaldo Ileto, *Pasyon and revolution: Popular movements in the Philippines, 1840–1910* (Quezon City: Ateneo de Manila University Press, 1979).
24 Kelvin Rodolfo, *Pinatubo and the politics of lahar: Eruption and aftermath, 1991* (Quezon City: University of the Philippines Press, 1995), p. 39.

and the eruption of Mt. Pinatubo. However, the public witness and rededication of the nation to the Living God by various Christian churches, ministries and fellowships at the *Paghahandog ng Bayan sa Dios* (Offering of the Nation to God) held on 8 October 1994 had resulted in the economic turnaround of the country and the recommencement of peace negotiations with the Communist Party of the Philippines. But, once again, the future of the nation was jeopardised by the hospitality extended to the Pope during his visit to the country in the mid-1990s, which precipitated 'swarms of locusts and scores of rats, alternating storms and typhoons, rampaging flash floods', the Ipil massacre and stalled peace talks in the South. Mudflows and army coups, divine wrath and foreign investment, Nature and politics are evidently all one in the perception of Brother Villanueva. The devastation wrought by Typhoon Mameng in October 1995 was no coincidence: 'We must all know by now that all the disasters that happen in our nation are not incidental occurrences but consequential results of our stiff-neckedness and rebellion to the Truth of His Word.'[25]

While the influence of views that depict the forces of Nature at the command of a vengeful divinity should not be overstated, the ideas and values underlying such a cultural conception pervade the very fabric of national life. For it is in the 'mind' – or more precisely in the interpretative processes by which Filipinos attempt to make sense of the world about them – that a sense of the Christian Godhead is fashioned. The fickleness of a hazardous world, the unpredictability of possible disasters and the element of chance as to whom they might affect all give rise to what in Tagalog is referred to as *nasisiraan ng ulo*: the fear of losing control over one's life, one's destiny and perhaps even one's mind. Lourdes Ignacio depicts the psychological state of the disaster survivors she studied as exhibiting a 'sense of unstable instability'.[26]

Similar anxieties have been noted in other cultures where it has been described as a debilitating dependency syndrome or classified clinically as post-traumatic stress.[27] In the Philippines, however, this individual state of mind can take on both a public and a collective manifestation in outbreaks of apparent mass hysteria, in which a widespread feeling of anxiety over something that may be fact or may be pure fiction manifests itself in exhibitions of frantic behaviour by large numbers of people. Thus the residents of Libog were reported to have displayed more panic than any other town of Albay during the eruption of Mt. Mayon in 1928. The cause was finally traced to the vivid accounts of

25 Eddie Villanueva, 'RP's disasters not incidental occurrences', *Philippine Star*, 7 Oct. 1995. The reference is to the giant statue of Mother Mary erected to commemorate the site where crowds gathered and listened to speeches during the February Revolution of 1986; it later became the rallying spot for the EDSA 2 demonstrations that led to the overthrow of President Joseph Estrada's government in January 2001. Brother Eddie Villanueva is Spiritual Director and International President of the Jesus Is Lord (JIL) Church, one of the fastest growing Christian churches in the world; the JIL styles itself as Pentecostal and rejects the veneration of the cult of Mary that is so prevalent among Catholics in the Philippines.

26 Lourdes Ignacio, 'From victims to survivors: The basic psycho-social issue in disaster', in *Natural disaster mitigation in the Philippines: Proceedings of national conference on natural disaster mitigation 19–21 October 1994* (Quezon City: DOST-PHILVOLCS, 1994), pp. 263–6.

27 Anthony Oliver-Smith, *The martyred city: Death and rebirth in the Peruvian Andes* (Prospect Heights, IL: Waveland, 1992) (dependency) and Peter Hodgkinson and Michael Stewart, *Coping with catastrophe; A handbook of disaster management* (London and New York: Routledge, 1991), pp. 18–21 (post-traumatic stress). See also Paschalis Laksono, 'Perception of volcanic hazards: Villagers versus government officials in central Java', in *The real and imagined role of culture in developments*, ed. Michael Dove (Honolulu: University of Hawai'i Press, 1988), p. 192.

survivors from previous eruptions in 1888 and 1897, whose harrowing tales and scarred limbs caused 'consternation among the younger folks assembled in the public plaza' and proved 'a serious obstacle to the efforts of the Insular, Provincial, Municipal and Red Cross Officials to restore self-assertion and calmness among the masses of panic-stricken people'.[28]

Hysteria, however, is often spread by nothing more substantive than rumour. A letter warning of a catastrophe worse than the flash flood that befell Ormoc caused a frenzied reaction in Cebu City when read over a local radio station on the evening of 16 November 1991. It recounted how the author, a certain Edgar Zamora, had met a strange boy in a park that September who had foretold the disaster that overtook the city; the same boy had then reappeared after the tragedy and warned him of an even worse fate for Cebu City. Only if its residents had faith and placed posters in their homes and in public places calling on people to both love and fear God (*Higugmaa ang Diyos, kahadloki ang Diyos*) could this impending doom be averted. On the day following the radio broadcast, posters bearing this message were plastered all over the city, and taped copies of the broadcast circulated even to neighbouring towns. People congregated in churches while others began prayer vigils. Numerous reports of strange portents (*talimad-on*) were reported recounting paranormal sightings – 3 moons rising or a monster fish with only one eye. In fact, credence in the story only really began to diminish after both the archdiocesan and civic authorities took forceful measures to refute the prophecy, ban further public broadcasts of the letter and prohibit the dissemination of any more posters.[29]

Nor is the Cebu incident simply an isolated event in Philippine history. The late Fr Miguel Selga, who passed much of his long and distinguished career at the Manila Observatory collecting data on hazardous phenomena, published a curious paper towards the end of his life describing a mass state of fear engendered by tropical cyclones that he had observed on occasions and for which he coined the word *tifonitis*. He defined this condition as 'a pathological state owing to nervous over-stimulation produced by the frequency or extraordinary intensity of typhoons'. He then proceeded to describe in great detail the events of mass-induced hysteria that followed the passing of 5 strong typhoons in quick succession between 15 October and 10 December 1934. His account bears many similarities to those described in the Cebu incident, even including a letter written by an old man (this time in Mexico, Pampanga) at the beginning of November, predicting a worse typhoon than the devastating one that had hit Manila the month before. There were reports from all over central Luzon and the Bicol region of farmers abandoning their fields, operators neglecting their fish pens, parents not sending children to school and a general apathy, lack of concentration and sweeping religious mania based on the conviction that the end of the world was at hand. Mass panic broke out among the fishers and coastal dwellers around Manila at a rumour that two powerful

28 'Accounts of the eruption of various volcanoes', Archive of the Manila Observatory, Box-13, 8. The most notorious case of this type of mass hysteria actually occurred in the USA in 1938 when a radio serialisation of Herbert George Wells's *War of the worlds* led to the widespread belief that the Earth was under attack from Martians; Hadley Cantril, *The invasion from Mars: A study in the psychology of panic, with the complete script of the famous Orson Wells broadcast* (Princeton, NJ: Princeton University Press, Princeton, 1940).

29 J. Bersales and F. Nolasco, 'Higugmaa ang Diyos, kahadloki ang Diyos (Love God, fear God): Post-Ormoc disaster mass hysteria in an urban center', *Aghamtao*, 8 (1996): 45–50.

typhoons from opposing paths would strike one another over the bay, causing a devastating tidal surge. The dread of typhoons extended to fear of other natural phenomena, especially earthquakes, and was most pronounced in the larger cities and among those already most severely affected by the storms as rumour fed on panic that in turn gave rise to more rumours.[30]

Selga concludes with an account of an intriguing interview he had with 'one of the most typical cases of tifonitis' which had stretched his patience to the limits. A young man from Cavite had approached Malacañang (then the governor's residence) claiming to have important information on typhoons and had been referred to the Observatory. The intelligence he subsequently imparted to the incredulous priest, 'who would not have believed it if he had not seen it with his own eyes and heard it with his own ears' was the news that elders in the mountains of his province had consulted their old books charting the phases of the moon and the position of the planets, from which they could predict the height of the tides, the state of the harvest, the scarcity or abundance of fish and the severity of storms. The young man had come to tell the authorities that within five days a volcano would emerge from the depths of the sea near the Visayas and many local steamboats would be sunk, but that the Philippines would then be absolutely free of typhoons for the next five and a half years.[31]

These and similar accounts hint at an entirely different way of perceiving reality, whereby the workings of the natural world are regarded as the result not simply of physical forces, but also of unseen ones. A parallel spirit dimension exists alongside the human dimension that is no less real than the world of matter and draws its origins from an animist cosmology. The Christian God has been incorporated into this worldview as the chief among spirits, whom people relate to much as to a father. Like a parent, He has two facets to his character: He is the object of petition and gratitude when He grants favours but the object of anger and *tampo* when He withholds them.[32] In the Visayas, this is often represented in terms of *grasya*, the grace of the supernatural that abounds in the natural environment and that manifests itself in the bounty of Nature, and *gaba*, the curse or punishment of the same for unacceptable behaviour and that is often conceived of as a form of retribution for wrongdoings inflicted on others. In particular, natural hazards are typically depicted as forms of *gaba*, punishment for one's past actions or sins that fall on the innocent as well as the 'guilty' and that may cause a degree of suffering totally out of proportion to the transgression itself. Nor does *gaba* necessarily happen immediately; it may come gradually with time, as ultimately no one 'can escape the wrath of God'.[33]

Such is the recurring motif in most accounts of disasters: the feeling that hazard has been brought down upon the individual or the community as a result of one's own bad

30 Miguel Selga, (1935) 'Tifonitis', *Revista de la Sociedad Astronómica de España y América*, 25, 176–7 (1935): 54–8.

31 Ibid., p. 58.

32 Jaime C. Bulatao, *Phenomena and their interpretation: Landmark essays 1957–1989* (Quezon City: Ateneo de Manila Press, 1992), pp. 50–2. *Tampo* means letting people know you are annoyed at them by ignoring them, akin to giving someone the cold shoulder.

33 F. Landa Jocano, *Growing up in a Philippine barrio* (New York: Holt, Rinehart and Winston, 1969), p. 102. See also L. Garcia, 'Some observations of the gaba phenomenon', *Philippine Quarterly of Culture and Society*, 4 (1976).

actions. It is certainly a feature of historical accounts. Survivors of the 1897 eruption of Mayon felt that 'this was really the punishment of God to us' that would have to be 'accepted because we probably disobeyed you [God]' and that 'if you really want to take us, even if we run as fast as lightning and thunder, we will still die . . . but if you still want to give . . . life, even if I can't move from burns, pains anymore, I will not die'.[34] These ideas have not lost their currency with the passing of the years. The killer flood that devastated Central Luzon in the 1970s was explained as God's punishment for the disappearance of a venerated statute of the *Santo Niño*, blamed on the mayor of Manila. Surveys of the Ormoc flood survivors recorded that 47 per cent of all respondents attributed the event to supernatural causes such as God's will, just punishment for sinners, a trial to test one's faith or the work of the Devil. Again, fear of divine wrath was cited by many people in Cebu as the primary motivation behind their participation in the poster hysteria of 1991.[35]

Nor, at times, does belief in supernatural judgement appear to preclude more political considerations. The first recorded ascent of Mt. Mayon in 1592 by Fr Pedro Farrer to assuage the superstitions of the locals reportedly resulted in his untimely demise within the year as a consequence of the 'gases'. Similarly, European visitors to Taal volcano in the early nineteenth century were exhorted by their Tagalog guides 'to look round . . . in this Haunted place, but to keep silence, and not to irritate the spirit by an incautious, inconsiderate word. The volcano, they said, showed symptoms of displeasure whenever a Spaniard visited it, and was indifferent only to the natives.'[36]

In the eye of the storm

The realisation that Filipinos share distinctive cultural heritages that are somehow shaped by the threat of hazard is implicitly understood if not generally recognised. They are constantly being reminded that theirs is a country exposed to all types of calamity; that they have come to accept 'torrential downpours, typhoons and earthquakes as realities of life'; and that theirs 'is a life particularly prone to calamity', one where they 'have hardly had time to bury their dead and pick up the pieces before the destruction starts again'. Dr Roman Kintanar, a retired director of PAGASA, rated the Philippines a 'seven' or 'eight' in a hypothetical grading of vulnerability to hazard, adding almost jocularly that 'there aren't many countries that can beat us in the natural disaster category'.[37] The degree to which the experience of disaster has been incorporated into the society's collective consciousness is perhaps most poignantly expressed by Camelita Canila, again following the flash flood that devastated Ormoc City in 1991:

34 Mayong, 'News about Mayong, the volcano of Albay', PHIVOLCS Library, M036, 1897, p. 2.
35 Leonardo Mercado, *Applied Filipino philosophy* (Tacloban: Divine World University Press, 1976), p. 184 (Luzon); P. Alix, 'Ormoc revisited: Initial and long term stress reactions and coping responses of disaster victims', *Aghamtao*, 8 (1996): 29; Bersales and Nolasco, 'Higugmaa ang Diyos', p. 52 (Cebu).
36 Otto van Kotzebue, *Voyage of discovery in the South Sea, and to Behring's Straits, in search of a North-East passage undertaken in the years 1815, 16, 17, and 18 in the ship* Rurick (London: Sir Richard Phillips & Co., 1821), p. 45. The Mt. Mayon incident is in Félix de Huerta, *Estado geográfico, topográfico, estádistico, histórico-religioso de la santa y apostólica provincia de S. Gregorio Magno* (Binondo: Imprenta de M Sanchez y Co., 1863), pp. 256–7.
37 Rizal Ahmed, 'Weather update', *Manila Times*, 7 Nov. 1994 ('realities of life' and Kintanar grading) and Alan Robles, 'National trauma: Prone to calamity, Filipinos may have developed their own coping mechanisms', *Manila Chronicle*, 3 Aug. 1991.

> This has been a nagging daydream for me [she writes] especially when patients victimised by disaster, whether man-made or natural, consult me or just come around to talk to me. Each time I always pray that I won't get tired of listening because the stories of survival they tell, the ordeals they and their families have undergone, have become so common that there is always the danger that one can get so used to them as to be indifferent to them.[38]

The evidence that this common experience of disaster, what can be called a 'normalisation of threat', may have been a significant factor influencing the development of cultures in the Philippines is expressed in a number of disparate ways. It is there in the historical record, in the design and construction of buildings to accommodate climatic and seismic contingencies, in the agricultural system that emphasises minimising risk rather than maximising surplus, and in the constant relocation of settlements and migration to find safer locations and more sustainable livelihoods.[39] Many of these are themselves coping practices that have evolved in order to permit communities to come to terms with the constancy of hazard and to mitigate the worst effects of disaster. Others are practices to deal with the emotional and psychological requirements of living with uncertainty; they may influence generally accepted character traits, inform normative values, determine religious beliefs or even underlie mass psychoses. Whether such practices are sufficient to constitute a coherent body of local knowledge, separate from and in contrast to the notion of a body of 'universal' and Western-scientific thought, is a matter of considerable debate.[40] They do, however, represent a specific pattern of activity and behaviour among Filipinos (despite obvious cultural differences between specific ethnic communities) which is distinct to that premised upon the assumptions of avoidance loss so much favoured by Western social science, and they do raise important questions about how cultural forms and traits have been previously interpreted.

The strategies adopted by communities to reduce the impact of hazard or avoid the occurrence of disasters are known as coping practices and 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.[41] In the Philippines, migration and relocation can be regarded as preventative coping practices in that they are attempts to prevent the same set of circumstances from re-occurring; architectural syncretism and agricultural practice, on the other hand, are impact-minimising coping practices in that they seek to minimise losses and facilitate recovery. There are also other ways of defining coping practices as cognitive or behavioural responses designed to reduce or eliminate psychological distress or stressful situations.[42] The sheer frequency and magnitude of hazards to which Filipinos are exposed led the anthropologist F. Landa Jocano to identify various cultural coping practices that he considers 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.

38 Canila, 'Prescription for disaster', p. 16.
39 Bankoff, *Cultures of disaster*, pp. 162–6.
40 Kees Jansen, *Political ecology, mountain agriculture, and knowledge in Honduras* (Wageningen: Proefschrift ter Verkrijging van de Graad van Doctor, 1998), pp. 171–8.
41 Piers Blaikie *et al.*, *At risk: Natural hazards, people's vulnerability and disasters* (London and New York: Routledge, 1994), p. 64.
42 J. Fleishman, 'Personality characteristics and coping patterns', *Journal of Health and Social Behaviour*, 25 (1984): 229–44.

Principal among these coping practices are the characteristics often conveyed in the Tagalog expression of *bahala na* – usually, if somewhat erroneously, translated simply as 'fatalism'. As might be expected, the term does indeed express a sentiment of 'leaving it to fate'. For example, in what appears to be an act of supreme indifference to the risks by both owners and wayfarers alike, local people will take passage in much smaller and generally overloaded vessels when the larger ferries that provide the main means of transport between Luzon and the nearby islands are restricted to port by the raising of typhoon signals. Moreover, the Coast Guard and local government officials, though fully aware of the practice, will generally choose to ignore it.[43] What is missing from this 'fatalistic' interpretation of *bahala*, however, is any appreciation of the sense of risk-taking. It is also about courage and daring and a sense of finely calculated assessment of the odds; at its most extreme, it is a sense that life is essentially a game of chance or one colossal gamble.[44]

Cynthia Bautista observed this notion of calculated risk-taking at work among the residents of Concepcion (Tarlac) faced with the threat of lahar from Pinatubo during the typhoon season of 1992. Warned of the strong probability that their homes would be in the path of the advancing flows, they still maintained that they would be safe and that the unmonitored patterns of siltation in the river would deflect the volcanic debris elsewhere. This form of reasoning subsequently led Bautista to recast their behaviour in terms of the discourse of science and the calculation of probabilities.

> The lahar corridors we painstakingly identified may have been associated with a high probability of occurrence, say 80 per cent, but there was a 20 per cent chance of non-occurrence due, among others, to the unmonitored changes in the expected passageway of the rivers with each lahar episode. The residents of Concepcion had hoped for the miracle that our scientific predictions were wrong. In probabilistic terms, their hoped-for miracle was the outcome of falling in the error term. And by a lucky chance, it did![45]

In behavioural terms, then, *bahala na* is as much an active calculation of the odds as it is a passive sense of acceptance of one's fate. Nor is it without an element of faith, either – faith in the efficacy of prayer and in the intercession of divine protection. Christianity has also been syncretically incorporated into a cosmology that is not wholly indigenous nor wholly exotic but is a hybrid formation.[46] The importance of prayer and ritual as practices in propitiating and rendering safe an environment has been noted in many cultures. An anthropological study of communities located on the slopes of Merapi volcano in central Java recorded the use of invocation and purification ceremonies as

43 Ahmed, 'Weather update'; small boat owners, of course, have the added incentive of making some extra money.

44 F. Landa Jocano, *Working with Filipinos; A cross-cultural encounter* (Metro Manila: PUNLAD Research House, 1999), p. 70. This sense of life as a supreme game of chance is most fully developed in Filomeno Aguilar, *Clash of spirits: The history of power and sugar planter hegemony on a Visayan island* (Honolulu: University of Hawai'i Press, 1998).

45 Cynthia Bautista, 'Social constructions of the Mt. Pinatubo disaster: Preliminary insights into the culture and politics of disaster in the Philippines', paper presented at Wageningen University and Research Centre, 21 Nov. 2000.

46 Greg Bankoff, 'Devils, familiars and Spaniards: Spheres of power and the supernatural in the world of Seberina Candelaria and her village in early nineteenth century Philippines', *Journal of Social History*, 33, 1 (1999): 37–55.

important stress-reducing practices employed by local inhabitants. Informants also reported finding the charred remains of human shapes still kneeling with their foreheads on the ground in the ritual position of Muslim prayer following the eruption of 1930.[47]

Bautista certainly comments on the fervour with which local people around Concepcion resorted to both Christian prayer and the shamanistic rituals of local *espiritistas*, including a procession of holy statues along the dikes, to strengthen the village's defences and protect themselves from lahar. Later, faced with advancing mudflows from Mt. Pinatubo, some of the residents of *barangay* Santa Rita refused to leave their homes and placed religious statutes in their front yards 'hoping that the power of prayer and faith would divert the lahar's fury elsewhere'.[48] Similarly, prayer was the first thing many local people resorted to during the Baguio earthquake in 1990. However, in the final analysis of things, if it's one's fate, then *bahala na*, that's what's going to happen despite the best efforts of human and divine intervention. The majority of survivors from the Ormoc flood in 1991 attributed the tragedy to supernatural causes. All in all, concludes Jocano, the perception of destiny as expressed in the concept of *bahala na* provides a 'formidable armour against the suffering brought by disasters'.[49]

The other core Filipino value identified by Jocano as a culturally specific coping practice is what he refers to as *pakikipagkapwa* or 'being one with the other or with others' or 'being part of the group'. The meaning behind the concept is definitely more complex than mere 'unity' or 'togetherness' and has the connotation of shared identity and common association. In this sense, it shares many of the same connotations as other terms often used interchangeably as alternatives to describe this aspect of character such as *bayanihan* and *pakikisama*, though the emphasis is subtly different in each case. *Bayanihan* connotes toiling on another's behalf and assuming another's burdens, while *pakikisama* conveys the notion of sanction against breaking ranks with the group regardless of whether their action or activities merit personal approbation.[50]

All these are attempts to express a sense of shared community, often defined in operational terms as neighbourhoods, that will guarantee support for its members especially during times of personal travail or common hardship such as in an unfolding disaster situation.[51] Households and neighbourhoods in Northern Luzon responded to the Baguio earthquake of 1990 by sharing food, shelter and transportation resources through operating communal kitchens, providing shelter to the homeless and organising a transportation pool. The public response was also tremendous: volunteer and rescue teams converged from all over the nation to help in rescue and recovery operations and considerable amounts of food and other supplies were donated to help feed and shelter the survivors. Moreover, it was noted how Philippine military cadets and miners from

47 Laksono, 'Perception of volcanic hazards', pp. 189, 192–3; see also William Torry, 'Natural disasters, social structure and change in traditional societies', *Journal of Asian and African Studies*, 13, 3–4 (1978): 177–8.

48 Bautista, 'Social constructions'; Amor Lopez, 'Mt Pinatubo's aftermath; The new landscape: Desert?', *Philippine Panorama*, 20, 36 (1991): 20.

49 Alix, 'Ormoc revisited', pp. 29–30; Jocano is quoted in Robles, 'National trauma', p. 1, 6.

50 Jocano, *Working with Filipinos*, p. 66; I am indebted to Dr Jose Dalisay of the English Department at the University of the Philippines and Dr Noelle Rodriguez of the History Department at Ateneo de Manila for helping clarify these concepts.

51 Jocano, *Growing up*, pp. 96–8 and Jocano, *Slum as a way of life: A study of coping behaviour in an urban environment* (Quezon City: University of the Philippines Press, 1975), pp. 166–87.

Benguet persevered in their rescue efforts long after the foreign rescue teams had given up hope and moved on. Evidence of self-generated community action in the form of sandbagging and dike maintenance was also noted among the tenant farmers of some *barangays* menaced by lahar following the eruption of Mt. Pinatubo.[52] The degree of interdependence, the need for cooperation and constructing strong social support networks are important coping practices in cultures faced by continual environmental uncertainty.[53]

The final characteristic identified by Jocano in this respect was the particular sense of humour shared by many Filipinos and their ability to laugh in the face of even the worst calamity or disaster. Certainly, the opportunities for graft provided by the relief and rehabilitation works undertaken in the years following the eruption of Mt. Pinatubo in 1991 provided the basis for much merriment. Jokes were made based on the derivation of the volcano's name: wags made much of the root *tubo* meaning to profit, renaming the mountain *Pinagtubuan* or something from which profit has been derived. 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'.[54] Storytelling and swapping jokes with friends was perceived as an important means of dealing with angst, relieving stress and overcoming anguish among the survivors of the Ormoc flood. Reports of the aftermath of the Mayong eruption of 23 June 1897 describe how survivors would tell jokes while collecting the charred and 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. '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 were made to defend one from getting weak, and so to be able to go on gathering the dead without shedding too many tears.'[55]

There is also evidence that such strategies were adopted historically as a means of incorporating times of great loss into a community's collective memory in such a way that it was rendered more manageable on an individual human scale. Miguel Selga noted how disasters were often identified by the names of religious celebrations on or near the date of their occurrence. The earthquake that hit Manila on the night of 1–2 February 1791, for example, was popularly known as the *Terremoto de la Candelaria*, referring to the ceremony after the feast of the Purification of the Virgin in which candles are distributed throughout the congregation. The devastation of Manila in 1645 in which more than 600 people died was more widely known as *El Temblor de San Andrés I*, named for the saint whose feastday falls on 30 November.[56]

52 R. Cola, 'The needs of children following a disaster: The 1990 earthquake in the Philippines', *Disasters*, 17, 3 (1993): 250–3 (Baguio); Barros *et al.*, 'Disaster preparedness plan', p. 14 (public response); Robles, 'National trauma', pp. 1, 6 (Benguet); and Bautista, 'Social constructions' (Pinatubo).

53 Blaikie *et al.*, *At risk*, p. 67.

54 Robles, 'National trauma', p. 1, 6; the 'Pinagtubuan' joke is in Rodolfo, *Pinatubo*, p. 88.

55 Alix, 'Ormoc revisited', pp. 39–40; Mayong, 'News about Mayong', p. 8.

56 Miguel Selga, (1938) 'La cronología popular en la designación de temporales y terremotos', *Urania*, 28, 206 (1938): 66 and 28, 207 (1938): 74. Selga also notes how typhoons in the Philippines were normally named after the ships that were caught at sea by them or by the islands that suffered the most damages. Some of the most notorious typhoons were called after the ships *Gravina*, *Cantabria*, *Tarloc*, *Leyte*, *Quantico*, *Negros* and *Euzkadi*, and after the islands of Samar and Leyte, Cebu, Ilocos and the Batanes.

While none of these attributes are peculiar to Filipino cultures, their particular configuration is perhaps indicative of a shared sense of character to be found among the various ethnic groups who inhabit the archipelago. Certainly Alfredo Lagmay, Emeritus Professor of Psychology at the University of the Philippines, contends that the environment has been influential in shaping society. He argues that 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 has had a pathological effect on people. 'There is a primitivization of impulse', he writes, 'and children can feel the very severe stress. They have no vocabulary for this, but they have a continuous sense of anxiety, a fear of the unpredictable.' Filipinos, however, learn to confront these apprehensions, to become psychologically ascendant and not to be mastered by events – a trait recognised by the national hero, José Rizal, when he compared the character of a Filipino to the Nature of bamboo, bending with the wind but bouncing back.[57]

Others compare the harshness of life in the Philippines to burden-bearing (*pagdadala*); all have burdens to carry but for some the load is heavier. Filipinos have had to learn how to pack their burdens correctly so as to bear their weight lightly (*magaan tayong magdala*).[58] To still others, the very intensity of society's collective anxiety is itself a factor influencing the frequency and magnitude of hazard in the Philippines. Rubin Makalintal contends that the mass sense of helplessness and powerlessness of people living in economically depressed and government-neglected regions generates such strong negative thoughts and feelings that their release into the atmosphere attracts adverse consequences, unconsciously precipitating calamities. Nor can Makalintal and his ideas be completely relegated to the lunatic fringe of intellectual life, as his views were expounded in an eminently respectable conservative daily, the *Manila Bulletin*.[59] This sense of apprehension and unease manifests itself culturally in both public debates and private lives, at the level of belief and in the discourse of the political arena. Ultimately, it is often a question about whom to hold responsible, whom to blame.

The notion that the social construction of Nature and the natural construction of Godhead may have implications for the political life of the Philippines deserves further consideration. The concept of *bahala na* has its political parallel in the degree to which the Filipino public lacks confidence in the ability of government agencies to protect their citizens. Several surveys were commissioned by PAGASA in the 1990s to explore public attitudes towards its role as the national weather bureau responsible for meteorological warnings and one of the two principal state-funded agencies involved with pre-hazard monitoring and prediction. The other agency is PHIVOLCS, the Philippine Institute of Vulcanology and Seismology, that gained considerable public praise for its expert monitoring of Mt. Pinatubo. Early notice of an impending eruption was credited with considerably reducing the death toll among local residents, many of whom evacuated the immediate area of the volcano well in advance of the main events.[60]

57 Robles, 'National trauma', p. 1, 6.

58 Edwin Decenteceo, *Rehab: Psychosocial rehabilitation for social transformation; some programs and concepts* (Quezon City: Bukal, 1997), pp. 83–101.

59 Rubin Makalintal, 'Not an act of God; Natural calamities are brought about by Man', *Manila Bulletin*, 21 Nov. 1991.

60 Michael Dueñas, 'Coping with the Pinatubo disaster', *Philippine Free Press*, 83, 28 (1991): 12–5.

The first meteorological service in the Philippines dates back to 1865 when the Jesuit fathers at Ateneo de Manila University established an observatory on Loyola Heights outside of the city. Becoming a national meteorological service during the US colonial period, its effectiveness in more recent decades, however, has been hampered by limited budgets and antiquated equipment. Partly as a result of this undercapitalisation of meteorological services, public confidence in PAGASA has been undermined. Its weather forecasts have a popular reputation for being notoriously inaccurate and undependable: 'If PAGASA says that the sun will shine, expect a rainy or stormy day . . . If it says the tide will be high, then we expect it to be low.'[61] Until recently many people simply ignored its broadcasts: residents threatened by Typhoon Nitang (Ike) in 1984 paid little heed to meteorological warnings and were caught unprepared when the cyclone hit, causing 1,028 deaths. In post-disaster interviews, it became clear that people had problems comprehending the weather bulletins or appreciating their urgency. A survey commissioned by PAGASA in 1990 of 300 households situated along the eastern corridor most exposed to typhoons revealed that nearly 50 per cent of the respondents had never heard the actual text of a warning, and of those who had, many complained that the bulletins were too lengthy, technical-sounding, and 'riddled with numbers'; these problems caused difficulties in comprehending the location, speed and direction of storms. The League of Governors called on PAGASA to 'continually concern itself with the human reaction element, specifically with the workings of Filipino culture, and tailor its public messages accordingly'. Such concerns prompted PAGASA to modify its weather warning systems, simplify the language used in its bulletins, and create a new three-tier format, to which a supplementary Signal 4 was added in the wake of Typhoon Ruping in 1991 to denote super typhoons with very destructive winds.[62] Despite more favourable findings in a subsequent survey conducted in 1992, trust in the efficacy of PAGASA remains low.[63]

61 The archipelago had 63 synoptic stations in 1995 but operations in two, Sulu and Cotabato, were suspended because of the precarious law and order situation in those provinces and the equipment in the others was outdated and slow. There were too few telemetering stations to measure rainfall levels and forecast floods effectively, some provinces having only one and Mindanao without any. ('All we can do is guess whether or not there will be floods in the area depending on the strength of rains that hit them.') Of even greater concern was the inoperativeness of half the ten radar stations used in the location and tracking of tropical storms and that only two of the four radiosondes used for measuring humidity at different levels of the atmosphere had the necessary balloons to permit them to carry out this function. Joan Dairo, 'Forecasting the weather; How accurate is PAGASA', *Malaya*, 9 July 1995.

62 Eddee Castro, 'More accurate weather info system bared', *Manila Bulletin*, 9 June 1990. PAGASA now uses a four-level warning system based on the wind speed of storms expected within 12–18 hours: Signal Number 1 for 30–60kph (kilometres per hour) winds, Signal Number 2 for 60–100kph, Signal Number 3 for 100–185kph and Signal 4 for over 185kph, the latter being first raised on 27 Oct. 1991 when Typhoon Trining hit Northern Luzon. Emelina Almario, ed. *Disasters: The Philippine experience* (Quezon City: Citizens Disaster Response Center, 1992), p. 41. An ASEAN Meteorological Center has also been established in Singapore to better predict weather disturbances in the region but the provision of accurate advanced information remains difficult due to rapidly changing weather conditions. The Governors' statement is in Sandoval, 'Public response to PAGASA', p. 1.

63 In the 1992 survey, 79 per cent of respondents found a sample PAGASA public warning easy to comprehend and 73 per cent admitted that they would base their decision to evacuate their homes on such a bulletin. An example of the warning used was that issued for Typhoon Trining at 11a.m. on 27 Oct. 1991: 'Typhoon Trining has slightly weakened and has changed direction. It is now moving towards Cagayan. Typhoon Trining is expected to move west-southwest at a speed of 19km/hr and is also expected to hit the Cagayan area this afternoon. The center is expected to be a distance of 280km west northwest of Aparri, Cagayan or to be at a distance of 180 km west northwest of Laoag City tomorrow morning at 8.00AM. It is expected to move west-northwest starting tonight and will slow down in the next 12 hours' (ibid., p. 3).

More tellingly, though, responses revealed that 49 per cent of people considered government agencies could do little to reduce the damage caused by natural forces. Moreover, these perceptions were highest in Mindanao and the Visayas (70 and 64 per cent respectively), in rural areas (57 per cent) and especially among the lower socio-economic groups (E 58 per cent, D 52 per cent, ABC 24 per cent) – precisely those areas and sectors hardest hit by disaster.[64]

Similarly, following the Pinatubo eruption in 1991, Filipinos witnessed massive public investment in the construction of dams, dikes, sinks and revetments in what proved to be a largely futile attempt to halt or save areas lying in the path of lahar flows. A special P10 billion (equivalent to US$400 million at the time) Aid and Rehabilitation Fund was established to finance a whole series of projects over a four-year period including the dredging and desilting of river systems and the erection of protective engineering works.[65] However, in many areas the decision ultimately had to be made 'to let Nature run its course' as, according to Raymundo Punongbayan, Director of PHIVOLCS, these areas proved beyond salvation and could not be 'saved at all no matter what engineering intervention may be done'. Many projects, too, were subsequently destroyed by new lahar flows, raising questions as to whether some firms had actually completed all the undertakings contracted and paid for in so short a time period, some purportedly in only three weeks.[66] The proven inability of such engineering works to save the high-risk towns of Bacolor, Mabalacat, Magalang and Guagua in Pampanga; Concepcion and Bamban in Tarlac; and San Marcelino in Zambales – combined with the taint of corruption – only further serves to erode any faith still placed in the operation of such agencies.

Alfredo Lagmay maintains that the impotence of government services in this respect is responsible for the disregard with which people hold national politics and for a growing sentiment that people are able to dispense entirely with the machinery of public bureaucracy and administration.[67] The sense of government failure and neglect stands in marked contrast to individual and community coping practices in dealing with the trauma of disaster. 'It is this contrast between cultural coping mechanisms, and government coping mechanisms – one copes, the other doesn't – that could be the salient lesson of these disasters', observes Jocano, who identifies the problem as a system of government alien to Filipino values and traditions. People are unable to relate to a political model imported from the USA in which indigenous cultural values have been transmuted by the bureaucracy so that 'family loyalty becomes nepotism, generosity becomes bribery, *utang na loob* becomes corruption'.[68] The result is a population inured and apathetic to disaster and a political system that lacks the will to make long-term plans: 'In

64 Ibid. p. 6. The socio-economic classification of ABCDE equates A with owners of capital or land, company chairpersons and other elite groups; B with professionals and other high-salaried groups; C with white-collar and specialised tradespersons; D with blue-collar labour; E with under-employed or unemployed, students, disabled, retired persons etc. Sometimes a distinction is made between educated C1s with the same tastes and buying preferences as ABs and C2s with distinctive buying patterns but often higher disposal incomes than C1s.

65 Michael Dueñas, 'No end in sight', *Philippine Free Press*, 83, 42 (1992): 14.

66 Dueñas, 'Season of calamities', pp. 16–17.

67 Robles, 'National trauma', pp. 1, 6.

68 Jocano, *Working with Filipinos*, p. 71. *Utang na loob* involves a sense of reciprocity and is often considered a cornerstone of the social fabric of Filipino society; it does, however, also entail a sense of obligation in return.

a country beset by calamities most of the time, any planning is hard to do, and so (the argument goes) it might as well be forsaken. The culture becomes a reactive one, prodded along by events and not mastering its future'. While Jocano's treatment of culture in purely reactive terms requires some serious qualification, the disjuncture he refers to between indigenous cultural modes and imported political structures often manifests itself at the Local Government Unit level in parallel systems of disaster management: an official one that may exist in name only and an informal sector that actually carries out much of the operational activities necessitated by events.[69]

Moreover, government agencies have not been slow to see in natural phenomena a useful means to excuse situations that might otherwise be attributed to their own action or inaction. Dry periods, impaired water supply and even toxic red tides are increasingly blamed on the El Niño Southern Oscillation (ENSO) when other more localised factors such as deforestation, squandered water resources, siltation and pollution are arguably just as significant.[70] In recent years, a dramatic rise in the price of chickens and vegetables was attributed to ENSO; the Bureau of Animal Husbandry blamed a 30 per cent drop in the number of birds offered for sale at market to stress caused by the hot weather. Poultry raisers complained that the terrible heat was responsible for lowering fertility and hampering the growth rate of broilers. The average 45-day-old chicken no longer attained its usual weight, and once over the 1.4 kilo mark 'it drops dead from heat stroke'. Consequently the average price of dressed chickens rose in a month from P78 to P95 and to as much as P150 a kilo in Metro Manila. The Bureau of Agricultural Statistics similarly imputed a diminishing supply of fresh vegetables to the heat, causing average prices to rise between 33–66 per cent over previous weeks. Other explanations, however, imputed the shortages to national elections and their pork-barrel style of politics that had simply depleted local supplies.[71] While attributing misfortunes to the weather is by no means unique to Filipinos, representing the forces of Nature in this way does conform to a cultural pattern that includes the normalisation of threat and its incorporation into daily life. Nor is PAGASA completely above such machinations itself: unable to satisfactorily explain the freak weather conditions the nation was experiencing in September 1998,

69 See Robles, 'National trauma', pp. 1, 6; I am presently engaged in research on this topic, the results of which will appear shortly in a series of forthcoming publications.

70 Albert Lee, 'Global warming: Its impact on the country', *Panorama*, 20, 7 (1991): 14. An El Niño event occurs when normal atmospheric pressures over the Pacific shift and the easterly winds (blowing westward) slacken and even reverse. Sea levels in the western Pacific begin to fall and warm water slips back towards South America, depressing the thermocline (the buffer zone between the upper layer of water and the frigid ocean abyss) and disrupting upwelling along the continent's west coast. Warmer sea surface temperature over much of equatorial eastern and central Pacific (sometimes 2–3°C higher) heats the air above it, causing convection, clouds and rain. As this warmer air has moved east of its usual position, colder drier air that usually descends over the oceans also shifts further eastward, descending instead over Australia/Southeast Asia and Africa, lowering rainfall levels and triggering drought. At the same time, sea-surface temperatures in the eastern Pacific rise and are often accompanied by unusually heavy rainfall activity along the western seaboard of the Americas. M. Dilley and B. Heyman, 'ENSO and disaster: Droughts, floods and El Niño/Southern Oscillation warm events', *Disasters*, 19, 30 (1995): 181–2; PAGASA *Primer on El Niño/Southern Oscillation (ENSO)* (Quezon City: PAGASA, Department of Science and Technology, Climatology and Agrometeorology Branch, 1997), p. 2; and UNEP, *The El Niño phenomenon* (Nairobi: UNEP/GEM Environment Library No. 8, 1992), pp. 14–15.

71 Dona Pazzibugan, 'El Niño effect: Prices of chicken soar', *Philippine Daily Inquirer*, 17 June 1998 <www.inquirer.net/issues/may98/may20/news/news_4.htm>.

it announced that the 120 per cent rise in rainfall over Mindanao indicated the arrival of La Niña, while the abnormally low levels of precipitation over northwestern and eastern central Luzon were still due to the 'tail-end of El Niño'.[72]

Conclusion

The manner in which disasters caused by natural or human-induced hazards are conceptualised in the literature has matured considerably since the technocratic and physical explanations that were so ably criticised by Kenneth Hewitt and others in the early 1980s.[73] In particular, the analysis of a community's exposure to risk and their ability to deal with it has revolutionised the understanding of how and why such events occur. However, there is still a tendency to underestimate the extent to which disasters are also perceptual phenomena, occurrences that take place and shape in people's minds. The focus on people's physical, social, economic and political vulnerabilities and their comparable capacities or coping practices obscures just how much these are likewise cerebral events that influence behaviour. Much of a people's resilience to withstand hazard lies in the intangible qualities generated by shared cultural attitudes and community spirit. This is very much the case in the Philippines where concepts such as *pakikipagkapwa*, *pakikisama* and especially *bayanihan* are essential elements in Filipinos' abilities to cope with the risks they experience on a daily basis and for whom hazard is a frequent life experience.[74] Equally, of course, such attitudes can also be sources of vulnerability, accentuating people's sense of helplessness in the face of what is considered a merited fate and undermining their confidence in their own capacities. In both instances, however, it is important to realise that perceptual ideas about how and why hazards occur affect people's behaviour and so ultimately govern their actions. Any disaster preparedness, management or relief programme needs to be fully cognisant of such cultural concerns, capitalising on them where they are strengths and attempting to moderate them where they may be obstacles.

Moreover, a fuller appreciation of the cultural perception of disaster may prove to be important in explaining both the Nature of the difficulties encountered and the frequency of failure that regularly greets even the most well-meaning agencies engaged in disaster preparedness and mitigation projects. The general lack of trust in government services, for whatever reason and whether deserved or not, has significant bearing on their disaster-related management capabilities and can severely hamper their effectiveness.[75] Venality and politicking are so ingrained into the popular perception of government officials – not without some justification – that to re-establish or, in many cases, to establish public confidence in the motives behind provincial and municipal civil defence operations requires concerted effort over a considerable period of time.[76] The National

72 Jowel Canuday, 'La Niña here, says PAGASA', *Philippine Daily Inquirer*, 13 Sept. 1998 <www.inquirer.net/issues/sep98/sep07/news/news_11.htm>.

73 Kenneth Hewitt, ed., *Interpretations of calamity from the viewpoint of human ecology* (Boston: Allen and Unwin, 1983).

74 Bankoff, *Cultures of disaster*, pp. 179–83.

75 Interview with Isaias Panganiban Jr, Deputized Civil Defense Officer, Municipality of Guagua, Pampanga', 11 Oct. 2002.

76 Greg Bankoff, 'A history of poverty: The politics of natural disasters in the Philippines, 1985–1995', *The Pacific Review*, 12, 3 (1999): 381–420.

Disaster Coordinating Council of the Office of Civil Defense is not unaware of this state of affairs and is in the process of officially adopting community-based disaster management with its consequent devolution of responsibility and empowerment of local communities into the revised regulations governing the structure and policy of disaster management in the Philippines. However, the previous legislation still in force (Presidential Decree No. 1566 of 1978) also mandated establishing 'a community disaster preparedness program nationwide', but little has ever been done to ensure its implementation. Disasters, then, are not simply geophysical or meteorological events but are psychological matters as well. In some societies, natural hazards occur with such historical frequency that the constant threat of them has been integrated into the schema of both daily life and attitude to form what can be called 'cultures of disaster'.