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Historical Disasters in Context

Science, Religion, and Politics

Edited by

Andrea Janku, Gerrit J. Schenk,
and Franz Mavelshagen



Historical Disasters in Context

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Andrea Janku, Franz Mauelshagen, and Gerrit Jasper Schenk
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NOTES

1. *Historical Disaster Research: Concepts, Methods and Case Studies*, ed. Gerrit Jasper Schenk and Jens Ivo Engels (*Historical Social Research*, Special Issue, No. 121=Vol. 32.3, 2007); *Coping with Natural Disasters in Pre-industrial Societies*, ed. Monica Juneja and Franz Mauelshagen (*The Medieval History Journal*, Special Issue, 10. 1+2, 2007); *Katastrophen: Vom Untergang Pompejis bis zum Klimawandel*, ed. Gerrit Jasper Schenk (Ostfildern: Thorbecke, 2009).
2. See <http://www.asia-europe.uni-heidelberg.de/en/research/a-governance-administration/a6.html> (last access 22.05.2011).

1 Introduction

Andrea Janku, Gerrit J. Schenk, Franz Mauelshagen

Four days after a deadly earthquake in Sichuan killed nearly 70,000 people, injured hundreds of thousands, and made millions homeless the English edition of the *People's Daily Online* published an opinion piece entitled “Much distress regenerates a nation,” praising the spirit of the Chinese people who were united in their struggle against the hardship the nation had to suffer in that extraordinary year 2008.¹ This was not the first and was not to be the last disaster to hit China in the year of the Beijing Olympics. It had started with extreme cold and snowstorms that severely disrupted the traffic nationwide during the peak travel season around the Chinese New Year festival. More news of disasters—natural, and also political and technological—was to follow, and when the earthquake struck on May 12 people started to make prognostications based on the five Olympic mascots renamed ‘*fuwas* of doom’—a contradiction in terms. Based on their names and appearances, they were respectively associated with the protests that accompanied the journey of the Olympic torch, a disastrous train crash in Shandong, the violent clashes in Tibet, and the earthquake in Sichuan. The final one that came in the shape of a Yangzi sturgeon was then seen as predicting a flood and, unsurprisingly, heavy rainstorms lasting from late May through the month of June caused disastrous flooding in large parts of the country, particularly in the southern provinces. While it does not take much to predict a flood somewhere in China in any given year, what is interesting about this is the ease with which such events lend themselves to all kinds of interpretations, in particular political interpretations, and the unease they cause, visible in official attempts to censor this kind of popular doomsaying.² The significance of any such event for human societies is largely the result of its historical context, the kind of religious, scientific, and political interpretations it evokes, and the ways these are communicated both through time and space.

Historical disasters pale in comparison to more recent catastrophic events. Moreover, we will have to get used to seeing disastrous flooding not only in China and Bangladesh, but also in the US and Australia, devastating earthquakes not only in Haiti and Kashmir, but also in New Zealand, and truly catastrophic tsunamis not only in Southeast Asia but also

in Japan. We are increasingly aware of our own responsibility for most of these ‘natural’ disasters, be it anthropogenic global warming, or the building of nuclear power stations in risky environments, such as the one that turned the Japanese tsunami into a major nuclear catastrophe, the outcome of which is still far from clear at the time of this writing. While these only too real events make it sound cynical to speak of disasters as purely ‘socially constructed,’ they have never been entirely ‘natural’ either.³ Moreover, in the decades to come the need to satisfy the material requirements of the earth’s still massively growing human population will enormously increase the number of serious clashes between human civilization and the physical environment it helped to create.

It is then no wonder that references to the increasing frequency of disasters have become common place in recent years,⁴ and there is indeed a constant flow of news about earthquakes, floods, landslides, droughts, and hurricanes, which are becoming ever more disastrous. Only three months into the year 2011, the *Guardian* reviewed the earthquake in Japan, the landslide in Brazil, the flood in Australia, the earthquake in New Zealand, the floods in Sri Lanka, the earthquake in Burma, more floods in the Philippines, and severe storms, lightning, and floods in South Africa. It asked: “Natural disasters? What we can learn from this year’s catastrophes.”⁵ This flow of news is accompanied not only by a flood of popular books capitalizing on the spectacular aspects of major catastrophes, but also by academic studies of disasters, mostly written by social scientists, geographers, and anthropologists who focus on recent and contemporary events and are mostly concerned with prevention and mitigation of future disasters.⁶ While these studies are very important and crucial for policy formulation, they do not necessarily help us to understand the role of disasters in the broader context of individual and collective life experiences and knowledge production. We believe that disasters have to be understood as major forces shaping historical processes and therefore need to be studied not as isolated events but in their historical context.

Despite the recent increase of relevant publications,⁷ historians have not given enough attention to the close and complex relationship between human civilization and the environment that supports it, and the subtle ways in which small and big ‘disasters’ have shaped human societies in the past. Unfortunately, the scenarios of growing social and political conflict reaching a global scale and threatening our future are rarely linked to the caprices of ‘nature’ or climatic fluctuations. The assumption that environmental and human history operate on incompatible timescales made it possible to some extent to ignore the complex ways in which the environment and human civilization interact, in particular on a global level. Generally speaking, only the most spectacular disasters have been deemed worthy of study so far—obvious examples are the Lisbon earthquake of 1755 or the eruption of Mount Tambora (Sumbawa, Indonesia) in 1815—or the nations or regions that are seen as most disaster-prone, such as the Philippines,

Japan, or the US.⁸ The recent *Natural Disasters, Cultural Responses: Case Studies Toward a Global Environmental History* edited by Christof Mauch and Christian Pfister brought together a variety of studies looking at different cultural patterns of coping with disasters.⁹ The purpose of our project is to go a step further along these lines. It is a joint effort to gain deeper historical insight into the consequences of disaster experiences and their transformational powers. It will make an argument for their complexity, their multifaceted consequences, and, to some extent, even their inevitability. We have deliberately excluded technological disasters from the contents of this volume, although we appreciate that it is difficult to draw a clear line distinguishing ‘natural’ from ‘technological’ disasters. If we were to do so every major Yellow River flood, for example, would have to be excluded, as these involved the breaking of a dike; the same would be true for storm floods at the North-Sea coast since the thirteenth century. Boundaries between epistemological categories are becoming increasingly blurred. Natural hazards are being transformed into ever more disastrous events, not only because of the intensive use of hazardous environments by humans, but also because of the increasing technological risks that accompany the irrational belief in humankind’s command over the forces of nature. Both are of course closely related to each other, and the consequence of both is that we ourselves are increasingly becoming a “global meteorological force,”¹⁰ or, as Paul Crutzen and others have argued, we need to realize that we are living in a new geological era, the Anthropocene, in which humans have become the dominating force of global environmental change.¹¹

Natural scientists have long recognized the importance of environmental disasters as catalysts of regenerative processes, as “normal events that can benefit ecosystems.”¹² In a comparable vein, geographer Kenneth Hewitt argued that “disasters are the products of historical as well as natural processes and that they are in fact a part of normal life in a culture.”¹³ Disasters as triggers of cultural change have been studied by archaeologists,¹⁴ and also increasingly by historians.¹⁵ All find that disasters are much more common than one would expect, but still, while the most spectacular ones are well remembered, our knowledge about most of them tends to be poor. On the surface disasters have a huge but short-lived impact, mostly on a minor—and from the point of view of the global media often a marginal—part of the human population, and are therefore quickly forgotten by the mainstream of memory producers. This does not only apply to the historical dimension of disasters, which has been compared to bees—“they sting, and then they die,”¹⁶ but also to the contemporary dimension, where a ‘window of opportunity’ is open only for a limited period immediately after a disaster happened.¹⁷ In the past, in view of the often observed quick recovery of economies and populations, disasters have even been considered economically irrelevant.¹⁸ While this is no longer the majority opinion, it is still true that the attention disasters attract while they happen stands in strange contrast to the lack of acknowledgement of their long-term significance.

A—strongly contested—exception is perhaps Eric Lionel Jones who has argued that the ability of European societies to cope with disasters enabled the accumulation of capital, which again led to early forms of a capitalist economy—for him one of several factors in the explanation of the “European miracle.”¹⁹ Elsewhere it has been argued that in the European Middle Ages protecting communities from natural hazards by investing in infrastructure for disaster prevention served as a strategy of political legitimization.²⁰ This kind of more subtle and often cumulative impact disasters can have on human societies and the ways they develop in the long-term is more often than not neglected in favor of what are considered to be more important events of a more clear-cut social, economic, or political character. But rarely are distinctions so clear, and it is precisely the interactions between the natural environment and human societies as highlighted in disaster situations that are the subject of this book.

As should be clear by now, this book is not about ‘the top ten most deadly historical disasters’ and despite a chapter on doomsday science, it is not about ‘our final day.’ Perhaps with the exception of the earthquakes of Lisbon (1755) and San Francisco (1906), most readers will not have heard of any of the disasters studied here. They range from relatively minor landslides in southern Germany (Dix) to minor and major earthquakes in ancient Rome (Meier), Aleppo (Knost), Switzerland (Fulton), France (Quenet), and California (Rohland and Winder), from river floods (Schenk and Fulton) to coastal storm tides (Allemeyer), and from wide-spread drought in North China (Janku) to catastrophic climate change (Mauelshagen) and doomsday scenarios (Rupke). We also did not try to cover every major world region, preferring to focus on particular themes that seemed to be relevant in one way or the other for all case studies. We ended up with a rather heavy focus on ‘Western’ civilization, though the point is really to see this as an integral part of global history. ‘Western’ experiences are not intrinsically different from others, rather they show the historical contingency of all human experience. Moreover, in a sense disasters are not only global but also trans-cultural phenomena. Disasters confront people in different civilizations with largely similar tasks, such as ensuring people’s safety or providing relief for victims; responses are often surprisingly similar, and from the nineteenth century on disaster relief became an increasingly transnational enterprise. Recurrent, presumably universal themes pop up again and again in the study of disasters and the ways societies have coped with them. Among these are science, religion, and politics. As most of the studies assembled here touch on more than one of these aspects, we have arranged them in roughly chronological order, starting with ancient Rome and ending with future expectations of climate change, though the early modern period is certainly most strongly represented. Interestingly, the early modern period does indeed seem to be a historical exception in so far as the relationship between man and nature is concerned. This was a time when, in Western Christian tradition at least (though similar trends may also be observed in

other cultural formations), earth history finally became disentangled from human history (Rupke), a process that, as mentioned above, some see as having been reversed again. In a slightly different take on the same question Grégory Quenet sees the connection between geological and human time scales as a matter of political definition. Hopefully, some of the ideas explored here may serve as points of departure for future, more systematic, comparative study, thus leading to a truly global history of disasters.

One of the most intriguing aspects of disaster history is perhaps the manipulation of disaster experiences by those who were in a position to dominate the ways in which they were communicated, documented, and interpreted. These interpretive interventions could be crucial for the preservation of social stability and the maintenance of political order which otherwise might have faced a serious threat. Official proclamations and religious sermons were designed to give meaning to what happened and to channel people's behavior into the desired direction. They were meant to provide orientation in a situation of utter disruption and to re-establish order. Further consequences of these disaster politics were the development of laws and regulations stipulating how to deal with this kind of experiences; they would become defining features of the modern state as would the construction of new bodies of knowledge to feed into the formation of the modern sciences. Both of these provided the means to make disasters more manageable, or so it seemed. They helped to mitigate the disruptive effects of disasters, making them actually less disastrous, or even turning them into a constructive force, in so far as they could be instrumentalized and used by those in positions of power.

In brief, the aim of this volume is to shed light on how past societies coped with a threatening environment, how societies changed in response to disaster experiences, and how disaster experiences were processed and communicated, both locally and globally. How did disaster experiences interact with the development of scientific thought in the early modern era? Why did religion play such an important role in disaster response, as it still does, despite the strong trend towards secularization in the modern world? What was and is the political role of disasters?

SCIENCE

In Europe, the collection of knowledge about disasters in the Renaissance was part of the project to gain control over nature. Already in the late Middle Ages astrometeorologists tried to discover connections between celestial phenomena (comets, constellations) and disasters (literally 'bad stars') and use this knowledge for their prognostications.²¹ Not later than in the fifteenth century can we find the systematic registration of historical earthquake events. In the fifteenth and sixteenth centuries weather diaries enjoyed increasing popularity.²² The eighteenth century saw the beginnings

of an institutionalized scientific study of earthquakes, landslides, and other extraordinary natural events (Quenet, Dix), a development which did not start with the ‘Lisbon moment,’ but received a decisive boost when it happened—in the same way as the earthquake in Aleppo did not initiate the changes Knost is describing, but greatly accelerated them. Quenet argues that during the early modern period the interpretation of earthquakes as singular curiosities imbued with religious or political significance declined in favor of their discovery as a *new object* of scientific investigation. The emergence of earthquakes as a scientific category amounted to its recognition as a ‘risk’—a social definition of natural hazard—that, to a certain extent, could be anticipated, managed, and controlled.²³ Disasters would cease to be catastrophes in the literal sense, but rather a calculable and thus eventually insurable part of everyday life. The technicalities of this process were not easily solved, but by the early twentieth century the process was in full swing (Rohland).

At the same time, this ever-increasing confidence in human ability to control the powers of nature created an ever-increasing vulnerability, as Allemeyer argues in her case study of the relationship between the North Frisian marshland dwellers and the sea in the eighteenth century. Perhaps this helps to explain why a religious worldview remained important even in the age of the Enlightenment, when an increasing predominance of physical explanations of storm floods can be observed not only in the writings of local historians, administrators, and hydraulic engineers, but even of priests. This would also help to explain the more recent renewed interest in ‘doomsday science.’ In his examination of theories of global catastrophes from the past two and a half centuries Nicolaas Rupke finds that the threat of major meteorite impacts, indications of climate change, global warming, and sea level rise have deepened anxiety about a possible end to civilization-as-we-know-it. While Victorian science dismissed catastrophic thinking as unscientific, in the course of the twentieth century, neo-catastrophism has given renewed scientific legitimacy to quasi-religious fears of ‘our final hour.’

This entanglement of scientific knowledge and religious doomsday scenarios is highly unfortunate. It only reinforces an already pervasive trend. If it is not in the best interest of the most powerful stakeholders, existing knowledge is often not disseminated and acted upon, in particular when this would require painful changes to current practices. The existence of knowledge does not always mean that it is put to appropriate use, as again the example of the nuclear industry exemplifies well. Indeed, as Dix states in his contribution, more often than not local knowledge, that once was meticulously collected, got lost, though admittedly not always on purpose. Studying comparatively unspectacular landslides and mudflows in European alpine and mountainous environments, he finds that knowledge about past events, crucial for risk assessment in specific areas today, is often very poor, even in the case of larger events, and that in a situation where the frequency

of rock falls, landslides, and mudflows—insignificant as they may seem—is increasing even in the moderate climate of temperate regions.

The shocking and all too often traumatizing effects of disasters have always invited scientific enquiries as well as religious explanations. In most cases the latter proved to be more powerful. This is even true for the Chinese case, where systematic records of extreme events exist that reach back more than 2,000 years and where—despite the prevalence of what Mark Elvin has called ‘moral meteorology’—skeptical voices and a ‘rational’ approach to disasters also can be found from very early on. But even though Elvin saw China from the seventeenth century on “on the edge of attempted science,” where the calculation of eclipses was evidence of ‘accidental’ rather than intentional disasters sent by a punishing Heaven, and emperors used disasters as a “religious technology,” “a weapon of psychological terror against both local populations and officials,” he concedes that “had there not been a stratum of real belief” it would not have worked. Certainly, there were clear differences in the nature of beliefs at different social levels, with the emperor’s moral superiority being superimposed on a popular tradition of fatalism, but the combination of moral explanations and responses to disasters and simultaneous concrete help was quite efficient.²⁴ Whether this pragmatic approach that combined a moral with a rational explanation of the world got in the way of both a more systematic approach to scientific thinking and religious dogmatism is a different question.

RELIGION

Religious and scientific explanations of and responses to disasters probably coexisted in some form most of the time in most places. Examples are the measures taken after floods in sixteenth-century Strasbourg, after the earthquake of Manosque in 1708, or after storm floods at the North-Sea coast in the eighteenth century described in the contributions of Schenk, Quenet, and Allemeyer, respectively. Despite the alleged decline of religious interpretations, people not only continued to take comfort in the idea of some metaphysical agent as the ultimate cause of seemingly inexplicable extreme events, but they were also aware of the psychosocial need for quasi-religious rituals in extreme situations. The eighteenth-century East Frisian historian Wiarda may have bemoaned religious responses to the flood because he felt people would spend valuable time praying rather than using it to repair the dikes (Allemeyer), but ultimately those who knew how to mobilize the spiritual power that could be gained through the use of ‘religious technologies’ prevailed. Quenet observes that religious interpretations of disasters could help to reduce people’s anxiety and thus contribute to a more rapid reconstruction effort. Or, as Quenet claims, is it perhaps this positive role of religious forces that gradually replaced the interpretation of disasters as wrath of God that was dominant in pre-Enlightenment

Europe, where the Church had created a ‘spiritual environment of fear,’ where disasters were a deserved punishment, and prayers, processions, and other austerity measures the only appropriate responses?

However, the institutionally increasingly well-organized attempts to control the rivers in Tuscany and the Upper-Rhine region show that even in the pre-Enlightenment period we have to presume a complex and complementary relationship between religious and scientific explanations of disaster causation—God as first cause did not exclude secondary and tertiary (e.g., scientific and sociocultural) causes. In fact, even the Enlightenment does not constitute a clear borderline between ‘premodern’ religious and ‘modern’ scientific explanations of disasters. Only the ‘moral economy of disasters’ changed, as Franz Mauelshagen put it recently, and with it the respective responses.²⁵

Today certainly this kind of simplistic, quasi-religious attempt to find a quick and easy explanation and to shift at least some of the responsibility for a major disaster on to those who have been most affected by it has become futile. That is shown by the example of Tokyo mayor Ishihara Shintaro who, according to one commentator, “may have nulled his chances for a fourth term as Tokyo mayor by telling Asahi Press Club journalists that the tsunami of March 11 was ‘tenbatsu’ or ‘punishment from heaven’ because the Japanese have become greedy and egotistical.”²⁶ Another remnant of the idea of natural powers beyond human control is the principle of the *force majeure*, which is still recognized by the insurance industry.

Indeed, as Elaine Fulton shows in her contribution, what might be described as ‘religious’ responses to disaster were, in the early modern period, also highly political in their intention, meaning, and impact. In her case study of the response of the Catholic Swiss city of Lucerne to an earthquake in 1601 she not only suggests that cooperation between ecclesiastical and secular authorities characterized the emerging European nation-state, but she also shows how religious practices were conspicuously performed in order to show political allegiance.

POLITICS

Studying the history of disasters is also an excellent way to explore the impact of both the natural and built environment on more mundane human affairs,²⁷ such as the formation of particular political institutions, social structures, and legal frameworks, or even the strengthening or weakening of political leaders. Politics play a crucial role in dealing with disasters, a role certainly no less important than that of religion and science. Often politics even takes center stage in the immediate aftermath of disasters. But political action is always linked to the historical and cultural context of disasters. The different religious or scientific ‘framing’ of a disastrous event that results from this specific context has a huge impact on coping

processes. The propagation of, for instance, a particular interpretive pattern for a disaster may well be the result of particular political interests. In the post-disaster blame game questions for the causes of destruction, suffering, and death arise—and most importantly for the guilt of those deemed responsible.²⁸ These discourses about guilt, responsibility, and lessons learned have the potential to question or strengthen existing power relationships. Communities are tested and need to prove whether they are able to cope with the situation, in both the short- and the long-term. The example of a single disaster may reveal typical structures of coping with disasters and specific cultural consequences of disaster experiences that by far transcend the timeframe of that singular event. In this sense, even anticipated and imagined disasters carry an important social potential for probation and development. Different political strategies, institutional and administrative defense measures against dangers, the inclusion of principles of mutual aid in codified and uncoded law, even the particular shaping of entire societies and their ideals are consequently topics addressed in the contributions to this volume.

Government performance in crisis situations has always been of great importance in centralized political systems. Mischa Meier's study shows how at the time of the Roman Principate disaster relief worked as a tool of political legitimacy. From the reign of Augustus, disaster relief was primarily the task of the emperor. Meeting the people's expectations meant successful disaster relief, and this in turn helped to stabilize political rule. Not only actual relief measures, but also conspicuous communication of official concern and relief policies can be an important device to bolster the legitimacy of any government and even to rescue a regime from imminent demise. Perhaps not every ruler would have gone so far as to yearn for military defeats, hunger, plague, fire disasters, and earthquakes, as Caligula apparently did (Meier), but it seems safe to say that at least in the case of government-organized disaster relief in imperial China 'humanitarian' concerns were easily outweighed by the political goal to appease the people and avoid unrest. Similarly, Quenet observes that after the establishment of the centralized state in France, after a major earthquake "the symbolic dimension of state activism was much more important than the handling of material damage and the suffering of people." Yet in order to pursue this course successfully in the long term, relief has to show a degree of efficiency.

These observations fit well with the fact that generally—even today—disaster relief takes priority over disaster prevention. Disturbing as it is, this was true for hurricane Katrina in the US as well as for the Wenchuan earthquake in China.²⁹ In both cases the political importance of effective government action was immediately clear, even if in strikingly different ways. In the US the exposure of government failures seriously damaged the Bush administration, whereas in China the public relations machine worked terrifically well, and the desperate attempt to cover up the corrupt practices that led to the deaths of so many young children unprotected in their unsafe

school buildings only confirms the political importance of portraying the government as the foremost and exemplary ‘savior’ of the people.

More often, however, the impact of disasters has been more gradual and less spectacular. The experience of recurrent disasters in specific environments has a formative impact on socio-political institutions as the study of river floods in Strasbourg and Florence in the Renaissance shows. Both communities were located in flood-prone areas and their efforts to balance the risks and benefits of their rivers were accompanied by a process of institutionalization and professionalization. But whereas in the mountainous environment of Florence this process went hand-in-hand with the strengthening of a centralized, top-down model of administration, in Strasbourg different environmental and political conditions encouraged a cooperative model across regions (Schenk). While river floods can be seen to some extent as everyday calamities, severe earthquakes are rare extreme events, even in earthquake-prone regions. Still, the tendency is towards reconstruction, back to the *status quo ante*, rather than to some kind of fundamental change. Even if we find different arrangements, they often are the result of an acceleration of developments that were already well on their way before the disaster, as Knost’s study of the 1822 earthquake in Aleppo suggests. Even though the foundation of a new extra-mural neighborhood and the transformation of the ownership structures and the architecture of the important caravanserais in Aleppo’s commercial center were clearly the consequences of the earthquake, these innovations are perhaps better understood in the context of long-term change and opportunities to realize existing aspirations opened up by the earthquake.

Another type of change and institution-building is explored in the chapter on the history of the earthquake and fire of San Francisco in 1906 through the perspective of the (re)insurance industry—an industry at the heart of the modern redefinition of disasters as risks. Interestingly, the ‘earthquake denial’³⁰ that has been observed in this case is much better understood in this context of the conflicting interests of the three major stakeholders, the international group of reinsurers, the international fire insurance companies, and the San Franciscan policy holders. It is also better understood in the context of the further development of the city. Therefore it makes sense for the authorities to counter frightening media reports (Winder) by playing down the effects of the earthquake and giving subsidies to the (fire) insurers to bolster the local economy (Rohland). We can observe the formation of a peculiar US ‘culture of disasters’ in the early years of the twentieth century, of which this ‘culture of insurance’ is only one side.

If it is true that in terms of disaster relief as such, ultimately the effects of both private and government relief remained minimal (Rohland), then this also points to the important symbolic function of publicized fund-raising and relief activities. Disasters as mediatized rituals can assume very different functions, depending—at least in part—on the distance of the mediated event. It is thus no surprise that disasters took on an entirely new meaning

with the global rise of the mass press in the early twentieth century. Winder speaks of a ‘journalism of exception’ to describe a common practice of depicting the horrors of distant disasters in order to create a sense of excitement while, at the same time, emphasizing the peaceful conditions at home. But what is more interesting is how, according to Winder, at the same time the image of the US as the foremost agency of international aid was forged, a process that complements the notion of a peculiar US culture of disasters. Local disasters were played down, while distant disasters created opportunities to transform the US from a global and cultural backwater (though this may be more true for Los Angeles in 1881 than for New York in 1906) into the self-proclaimed richest nation and moral leader of the world.

Mediated disaster experiences, in particular the publicizing of collective fund-raising and relief activities, clearly had an identity-building function. This is not only true for the US example, but also, in different ways, for the Chinese famine of 1928–1930 studied here (Janku). In this case, too, we certainly can speak of the formation of a peculiar national ‘culture of disasters,’ a process in which the media played a crucial role. The difference in this case, however, is that the disaster that was so effectively mediated was not a foreign one, and therefore the dynamics of identity formation unfolded somewhat differently. The ambivalence created by this process of building a national identity on the basis of the experience of a nation’s own disasters is manifest in the reluctance to acknowledge the historical significance of drought and famine. Instead, the main explanation given for all the changes is internal political strife and external (Japanese) aggression. Here at least it can be shown that the experience of famine was mediated in a way that helped mobilize the nation to address not only the natural (drought) but also the national disaster (disunity). The huge political impact of this famine becomes evident not least through the involvement of international and in particular American relief agencies.

Is then the often-evoked increase of disasters a media creation—as when, after the Lisbon earthquake, people in Europe “were convinced that earthquakes were on the increase due to the social amplification of the risks and, in fact, news of earthquakes multiplied in the newspapers” (Quenet)? The nineteenth century saw the replacement of an earlier doomsday thought through the rise of a new Victorian self confidence (Rupke) and the transformation of the fateful disasters of the *Ancien Régime* into the liberating ‘accidents’ or ‘risks’ of the modern era (Quenet). There is no more than a rough coincidence of these changes with the end of the Little Ice Age, and another coincidence of the renewed rise of a doomsday discourse (Rupke) and the recent ‘climate catastrophism’ (Mauelshagen) with the current acceleration of anthropogenic climate change. These anthropogenic changes have a real basis in our physical environment as well as a new political dimension of a global scope. Given the many immediate social and political ‘disturbances’—which in the final analysis may be traced back to ‘natural’ ones, humanity may not be inclined to plan for “the changes of

broad amplitude [that] have been the norm” in the past and will most likely happen again in the future.³¹ But perhaps it should. Perhaps to recognize how our environments, societies, and cultures have been shaped by disasters, big and small, may be the first step.

NOTES

1. *People's Daily Online*, May 16, 2008, <http://english.peopledaily.com.cn/90001/90780/6412530.html> (accessed July 25, 2010).
2. 'Fuwa,' <http://en.wikipedia.org/wiki/Fuwa> (accessed February 19, 2011). 'Fuwa' literally means 'good-luck doll.'
3. See Anthony Oliver-Smith, "Theorizing Vulnerability in a Globalized World: A Political Ecological Perspective," in *Mapping Vulnerability: Disasters, Development, and People*, ed. Greg Bankoff, George Frerks, and Dorothea Hilhorst, 10–24 (London: Earthscan, 2004).
4. See, e.g., Charles Perrow, *The Next Catastrophe: Reducing Our Vulnerability to Natural, Industrial, and Terrorist Disasters* (Princeton: Princeton University Press, 2007), 1, 14ff.
5. *Guardian Weekend*, April 2, 2011.
6. See, e.g., Ben Wisner, Piers Blaikie, Terry Cannon, and Ian Davis, *At Risk: Natural Hazards, People's Vulnerability and Disasters*, second edition (New York: Routledge, 2004); David C. Alexander, *Natural Disasters* (London: UCL Press, 1993); Ernest Zebrowski, *Perils of a Restless Planet: Scientific Perspectives on Natural Disasters* (Cambridge: Cambridge University Press, 1997); Keith Smith and David N. Petley, *Environmental Hazards: Assessing Risk and Reducing Disaster*, 5th ed. (London: Routledge, 2009); Diacu Florin, *Megadisasters: Predicting the Next Catastrophe* (Oxford: Oxford University Press, 2009).
7. See, e.g., the contributions in *Environment and History* 17.1 (2011), special issue on "Uncertain Environments," in *The Medieval History Journal* 10.1–2 (2007), special issue on "Coping with Natural Disasters in Pre-Industrial Societies," and in *Historical Social Research* 32.3 (2007), special issue on "Historical Disaster Research: Concepts, Methods and Case Studies."
8. See, e.g., Luiz A. Mendes-Victor et al., eds., *The 1755 Lisbon Earthquake: Revisited* (Dordrecht: Springer, 2009); Clive Oppenheimer, "Climatic, Environmental and Human Consequences of the Largest Known Historic Eruption: Tambora Volcano (Indonesia) 1815," *Progress of Physical Geography* 27 (2003): 230–259; Greg Bankoff, *Cultures of Disaster: Society and Natural Hazards in the Philippines* (Richmond: RoutledgeCurzon, 2002); Gregory Clancey, *Earthquake Nation: The Cultural Politics of Japanese Seismicity, 1868–1930* (Berkeley: University of California Press, 2006); Theodore Steinberg, *Acts of God: The Unnatural History of Natural Disaster in America* (Oxford: Oxford University Press, 2006).
9. Christof Mauch and Christian Pfister, eds. *Natural Disasters, Cultural Responses: Case Studies Toward a Global Environmental History* (Lanham: Lexington, 2009).
10. Roger del Moral and Lawrence R. Walker, eds., *Environmental Disasters, Natural Recovery and Human Responses* (Cambridge: Cambridge University Press, 2007), 16.
11. The term 'Anthropocene' was first suggested by Paul J. Crutzen and Eugene F. Stoermer. "The 'Anthropocene,'" *Global Change Newsletter* 41 (2000): 17–18. A more recent and detailed discussion of the same idea is Will Steffen,

- Paul J. Crutzen, and John R. McNeill. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?" *AMBIO: A Journal of the Human Environment* 36, no. 8 (2007): 614–621. Dipesh Chakrabarty, "The Climate of History: Four Theses," *Critical Enquiry* 35 (Winter 2009): 197–222, is a pioneer study to discuss the implications of the idea of the Anthropocene for the study of history.
12. Del Moral and Walker, *Environmental Disasters*, 9.
 13. Kenneth Hewitt, *Interpretations of Calamity from the Point of View of Human Ecology* (London: Allen & Unwin, 1983), referred to in John C. Burnham, "A Neglected Field: The History of Natural Disasters," *Perspectives: The American Historical Association Newsletter* 26.4 (April 1988): 22–24. Accessed online: <http://www.historians.org/perspectives/issues/1988/8804/8804viel.cdm> (accessed October 4, 2010).
 14. John Grattan and Robin Torrence, "The Archaeology of Disasters: Past and Future Trends," in *Natural Disasters and Cultural Change*, ed. John Grattan and Robin Torrence, 1–18 (London and New York: Routledge, 2002).
 15. See, e.g., Mauch and Pfister, eds., *Natural Disasters, Cultural Responses*; and also importantly Patricia A. McAnany and Norman Yoffee, eds. *Questioning Collapse: Human Resilience, Ecological Vulnerability, and the Aftermath of Empire* (Cambridge: Cambridge University Press, 2010).
 16. Frank Uekötter, quoted in Uwe Lübken and Christof Mauch, "Uncertain Environments: Natural Hazards, Risk and Insurance in Historical Perspective," *Environment and History* 17.1 (Feb. 2011): 1–12.
 17. Wisner et al., *At Risk*, 37.
 18. Franz Mauelshagen, *Klimageschichte der Neuzeit, 1500–1900* (Darmstadt: Wissenschaftliche Buchgesellschaft, 2010), 115.
 19. See Eric Lionel Jones, *The European Miracle: Environments, Economies, and Geopolitics in the History of Europe and Asia*, 3rd edition (Cambridge: Cambridge University Press, 2003), first published 1981, [chapter 2](#): "Disaster and Capital Accumulation." For a diverging view see, e.g., Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy* (Princeton: Princeton University Press, 2000), 42–43.
 20. See Gerrit Jasper Schenk, "'Human Security' in the Renaissance? 'Securitas,' Infrastructure, Collective Goods and Natural Hazards in Tuscany and the Upper Rhine Valley," *Historical Social Research* 35.4 (2010): 209–233, here: 225f.
 21. See Gerrit Jasper Schenk, "'... prima ci fu la cagione de la mala provedenza de' Fiorentini ...' Disaster and 'Life World'—Reactions in the Commune of Florence to the Flood of November 1333," *The Medieval History Journal* 10.1–2 (2007): 355–386, here: 368 f.; Christian Rohr, *Extreme Naturereignisse im Ostalpenraum: Naturerfahrung im Spätmittelalter und am Beginn der Neuzeit* (Cologne, Weimar and Vienna: Böhlau, 2007), 538–545.
 22. For Giannozzo Manetti's earthquake catalogue (1456), see Gerrit Jasper Schenk, "Ein Unstern bedroht Europa: Das Erdbeben von Neapel im Dezember 1456," in *Katastrophen: Vom Untergang Pompejis bis zum Klimawandel* (Ostfildern: Thorbecke, 2009), ed. id., 67–80, 234–237.
 23. On the history of the concept of risk, see the contributions in *Pour une histoire culturelle du risque: Genèse, évolution, actualité du concept dans les sociétés occidentales*, ed. Emmanuelle Collas-Heddeland (Strasbourg: Editions Histoire et Anthropologie, 2004).
 24. Mark Elvin, "Who Was Responsible for the Weather? Moral Meteorology in Late Imperial China," *Osiris*, 2nd Series, Vol. 13 (1998): 213–237, 214, 220, 226–227.
 25. See Franz Mauelshagen, "Disaster and Political Culture in Germany since 1500," in Mauch and Pfister, eds., *Natural Disasters, Cultural Responses*, 58–67.

26. Philip J Cunningham, "Japan Quake Shakes TV: The Media Response to Catastrophe," *The Asia-Pacific Journal*, Vol.9, Issue 13, No. 6 (March 28, 2011), http://japanfocus.org/-Philip_J_-Cunningham/3506 (accessed March 29, 2011).
27. Christian Pfister recently emphasized that this is different from the study of "man's encroachment on and transformation of the natural environment," which is a more common approach in environmental history. "Learning from Nature-Induced Disasters: Theoretical Considerations and Case Studies from Western Europe," in *Natural Disasters, Cultural Responses*, ed. Mauch and Pfister, 17–40, 17.
28. See Schenk, " . . . prima ci fu la cagione," 367–376, and the majority of the contributions in *Natural Disasters, Cultural Responses*, ed. Mauch and Pfister.
29. Terry Cannon, "China & the Wenchuan Earthquake: Being Ready for Disasters: What is the Role of Government," in *China's Ability to Cope with Natural Disasters: a Global Challenge?*, ed. Pierre Defraigne and Neil Dillon, 27–39 (Madariaga: College of Europe Foundation, 2009).
30. Steinberg, *Acts of God*.
31. Del Moral and Walker, *Environmental Disasters*, 33.

2 Roman Emperors and ‘Natural Disasters’ in the First Century A.D.

Mischa Meier

One of the most pressing tasks for a Roman *princeps* was to provide rapid, unbureaucratic, and effective help in times of urgent need.¹ When a large earthquake, flood, or other sudden disaster occurred in any part of the Roman Empire, the emperor would swiftly intervene, using spectacular measures to alleviate the suffering of the victims and bring about the restoration of the affected city or region. In addition to voluntary initiatives taken by local leaders who assumed similar responsibilities in imperial systems, where ‘state’-organized disaster relief was unknown,² the emperor came to play a central role in dealing with and clearing up after what today is commonly known as a ‘natural disaster.’³

This new situation, however, also indicates that in the pre-monarchic period (i.e., before 31 B.C.), there was not yet, for the most part, any disaster relief coordinated centrally from Rome.⁴ Historical research has explained that by analyzing the structure of the aristocratic elite (*nobilitas*) in Rome. It has been suggested that in order to survive and succeed this elite needed a high degree of inner coherence and could thus not allow individual members of its circle to put themselves in the limelight by ostentatiously providing aid in disaster situations, which might have caused the fragile nobility class to shatter.⁵ However, as it was precisely the permanent departure of certain prominent figures from the collective of aristocratic peers that represented a fundamental structural characteristic of Roman history in the final century of the Republic, this explanation cannot be followed unreservedly. The lack of commitment of distinguished members of the nobility in disaster situations (there are only few exceptions)⁶ should therefore be traced back to other causes, and these in turn are closely linked to the Romans’ general interpretation of ‘natural disasters’: they were considered temporary disturbances in the amicable relationship between people and gods (*pax deum*)—crucial to the survival of the Republic—and called for appropriate acts of atonement. These would normally be decided on by the Senate and would be carried out in the form of a strictly regulated procedure (*procuratio prodigiorum*). The most important aspect of this *procuratio*, which consisted of food offerings to the gods (*lectisternia*) and supplication processions (*supplicationes*), was the collective involvement of

the entire *populus Romanus*—ideally, at least. The disaster was seen as an episode which concerned the *entire* community and the response to it had to reflect this.⁷ In this context, there remained, at best, very limited space for any additional steps taken by individuals. Moreover, the influence and prestige of the Roman aristocrats in the Republic were as yet far from reaching the all-encompassing dimensions of that of the later emperors. Above all, Rome and Italy were at the center of their actions because it was only from there that their political ambitions could be effectively served. Generous disaster relief, particularly in regions outside Italy, hardly brought them enough prestige to be able to turn it into political capital.

In the imperial period (from 31 B.C. on), a fundamental change occurred in that now the *princeps*, as the highest representative of the *populus Romanus*, began to monopolize a multitude of formerly collective responsibilities. In this process the relationship between the Romans and the gods turned to one between the gods and the ruler. Natural disasters, which were read as signs sent by the gods (*prodigia*), were closely associated with the *princeps* himself. The historian Tacitus (ca. 55–120 A.D.) indirectly linked some earthquakes in Rome and other calamitous *prodigia* to Nero's adoption of the *toga virilis* in 51 A.D.⁸ Ultimately, this meant that an emperor could be held personally responsible for a disaster because *his* relationship to the gods seemed to be disturbed.⁹

Even more important than this is the fact that the Roman *principes* followed in the footsteps of the Hellenistic kings (this was particularly so if seen from the perspective of the Greek-speaking East) and, at the same time, took on the role of the ruling aristocracy in Rome. Ostentatious largesse, notably in disaster situations, was one of the central virtues of a Hellenistic ruler.¹⁰ When in 227 B.C. the island of Rhodes was struck by a devastating earthquake, the competing monarchs virtually outbid each other in terms of disaster relief, so that the island republic soon presented itself in unprecedented splendor.¹¹ Similarly, it has been reported that the Roman *princeps* Vespasian (69–79 A.D.) “restored to greater glory numerous towns across the Empire, which had suffered damage as a result of earthquakes and fires.”¹² Then again, an element of Roman tradition is indicated by the fact that in establishing the monarchy, the emperor moved to the pinnacle of the patronage relationship, which had hitherto constituted a central structural element of the hierarchical Roman society.¹³

Since the adoption of the title of *pater patriae* by Augustus in the year 2 B.C., the *princeps* not only acted as the supreme master of the patronage system but even as the ‘father’ of the entire population of the empire—and henceforth he had corresponding expectations to meet,¹⁴ one of them being the provision of exemplary assistance in disaster situations. When he took such action, the emperor operated within communicative relationships with different segments of the populace, and it was precisely this aspect of communication that proved crucially significant for the stability and external legitimacy of monarchical authority, particularly in the early years of the

principate (31 B.C.–68 A.D.). Since the new political order, which, according to the words of Augustus, was based on *potestas* and *auctoritas*, i.e., on institutional foundations and personal charisma,¹⁵ was no longer easy to understand formally, and also, with the slogan *res publica restituta* ("a restored Republic"), pretended to be something different from what it actually was, it had to be grounded in a permanent communicative process in order to obtain any sort of a long-term perspective.¹⁶ Thus, imperial disaster relief did not only come as a result of the *princeps*' fiduciary duty to those living in the provinces,¹⁷ nor was it simply a display of imperial sovereignty, but, as a result of its communicative aspects, it also fulfilled a legitimizing and stabilizing function. From the perspective of political sociology, therefore, a *princeps* carrying out disaster relief measures stood at the center, while the affected cities and people were only of secondary significance. Disaster relief that was centrally coordinated, rather than merely initiated by individual local dignitaries, was hence an epiphenomenon of the monarchy in Rome. The disaster itself provided a means of consolidating the emperor's authority—unless the emperor himself came under criticism for having caused the disaster (see above). With respect to 'disasters' in the first century A.D. it is therefore important to clarify the perspective in each case.

The reactions of the first two *principes*, Augustus (31 B.C.–14 A.D.) and Tiberius (14–37), to serious incidents in the Roman Empire already led to the establishment of a catalogue of measures, which—*cum grano salis*—remained remarkably stable during the following centuries. It essentially consisted of the following basic elements, which are already documented for the time of Augustus:¹⁸

- Financial support for affected towns.¹⁹ Augustus supported the towns of Tralles und Laodicea, which had been badly struck by earthquakes in 26–25 B.C.²⁰ He also granted Cypriot Paphos financial aid after an earthquake (15 B.C.), whereupon the inhabitants renamed their town 'Sebasté Néa Páphos.'²¹ The appendix to his *Res Gestae* explicitly points out that Augustus' expenditures, including those for towns which had been devastated by earthquakes or fire, reached incalculable dimensions.²²
- Tax relief for towns and regions struck by disasters with the aim of providing a short-term improvement in their financial situation and creating resources which would facilitate reconstruction.²³ According to the historian Cassius Dio (early third century), Augustus waived the taxes of the province of Asia, which had been hit by an earthquake, and transferred money from his own assets to the 'state treasury' in the year 12 B.C.²⁴
- The supply and deployment of manpower and, in particular, experts, who could help in organizing and implementing the rebuilding

measures.²⁵ Here again Augustus is reported to have adopted such measures, when he sent a commission of seven consuls to the destroyed town of Tralles in 27 B.C. in order to coordinate the relevant measures there.²⁶ This occasionally led to interesting developments. John Malalas reports that Caligula (37–41) not only contributed generous sums of money himself to Antioch (Syria), which was badly damaged in an earthquake, but also dispatched wealthy senators to the town with the order to initiate the rebuilding there with *their own* means.²⁷

- Conspicuous communication between the victims of a disaster and the *princeps*.²⁸ In numerous cases, help from the emperor came only after a ‘request mission’ from the stricken towns. For instance, a certain Chaeremon was said to have followed Augustus to Spain from the Lydian Tralles in order to obtain support for his native city. His successful petition in turn notably increased his renown there: as late as during the sixth century A.D., Chaeremon was honored in a well-known epigram as the re-creator (*ktistes*) of his city.²⁹ Such ways of establishing contact were indeed ritualistic in nature and served to demonstrate a sound communicative relationship between the emperor and the population. In the early third century, Philostratus clearly got to the heart of the matter when he said about Marcus Aurelius, who, prompted by intervention from the rhetor Aelius Aristides, had just decided on a large amount of disaster relief for Smyrna, which had been destroyed by an earthquake: “And I do not want to suggest that the emperor would not have rebuilt the city, for which he expressed his admiration, while it still existed; but royal and noble characters excel all the more when stimulated by good advice and encouragement and are guided to good deeds through zeal.”³⁰

The first major opportunity to apply Augustus’ support strategies in the form of a catalogue of relief measures presented itself to his immediate successor Tiberius in the year 17 A.D., when a devastating overnight earthquake—the Twelve City Quake—laid waste to several cities in Asia Minor, from Philadelphia to the Aegean.³¹ The epicenter of this event may have been west of the town of Sardes (which suffered the most severe damage, as can still be verified by archaeological finds today). It must have been a particularly serious quake, which was unusual even for this region of intense seismic activity and caused enormous damage. The polymath Pliny the Elder, who himself lost his life when Vesuvius erupted in the year 79,³² spoke of the “most powerful earthquake in living memory” (*maximus terrae memoria mortalium* [. . .] *motus*).³³ Hieronymus considered the event to be significant enough as to mention it in his *Chronicle*,³⁴ and the Christian historian Orosius (first half of the fifth century) interpreted it as the earthquake that was supposed to have happened at the time of Christ’s crucifixion.³⁵ The most detailed report, however, was provided by Tacitus in his *Annals* (2, 47):