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Natural Disasters and Legal Solutions in the History of State Power

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Legal response to disasters has long acted, subtly but forcefully, on politics and individual behavior. Building codes enacted in the aftermath of the 1666 Great Fire of London continue to resonate with planners even today.

When a society experiences a natural disaster, it is forced to consider a variety of responses that will both ameliorate the immediate crisis and put in place structures to enable it to prevent—or better cope with—future disasters. Whatever the concrete solutions may be, in modern states and legal systems, they will either have to operate within existing legal frameworks or require novel legal regulations. The latter are particularly interesting, because innovation sheds light on processes of adaptation that may instigate cultural change. In the following, I will use the term *legal solutions* to denote any normative regulation invented to manage disasters, prevent them, or protect against them.

Throughout the history of disasters, legal solutions of one sort or another have played a significant role in recovery and prevention, as well as in shaping politics and individual behavior. After the Great Fire of London, following an extreme summer drought in 1666, the city council passed new building laws preventing the use of timber and mandating stone or brick construction. Wood chimneys were prohibited after fires in Boston in 1631 and in New York in 1648. A list of similar legal changes in response to disasters would be endless. Through building codes, urban fire disasters have left visible traces in cityscapes almost everywhere around the world.

In fact, because the new norms impact planning and construction for generations, they continue to leave such traces long after the buildings erected in the wake of the disaster have disappeared.

Legal solutions operate at the intersection between government and the members of a political community by sanctioning certain types of individual behavior, either through coercion or incentives. In other words, legal solutions aim to achieve a degree of behavioral homogeneity and predictability that legislators consider desirable. The potential of natural hazards and disasters to trigger cultural transformations over the long term is most obvious in environmentally vulnerable regions, such as dense urban agglomerations, coastal settlements, or agricultural economies in precarious climatic conditions.

Dyke cultures around the North Sea offer some of the more striking examples of accumulative processes of adaptation resulting from long-term interactions with hazardous environments.¹ The involvement of law in such adaptations means that what may, at first glance, be regarded as merely an adaptation through technological innovation—such as the construction of dykes for flood protection—turns out to be a modification of collective behavior or social practice as well. It is therefore remarkable that cultural studies in the history or sociology of disasters and their management have cared relatively little about legal solutions. While natural disasters are often understood as catalysts of cultural change, processes operating at the intersection between nature and culture are very little understood. It seems as though we have figured out the geodynamics of earthquakes with greater ease than the social dynamics of cultural change. Furthermore, our academic tradition of separating natural sciences from social sciences and the humanities has become a serious obstacle to understanding the even more complex dynamics of socio-ecological systems.

Among the animistic traditions that characterized human societies for tens of thousands of years, no nature-culture divide needed to be overcome for normative regulations to be justified; natural calamity was considered a direct sign of moral failure, and restoring peace with the forces of nature required correcting immoral behavior and placating the spirits. Moral causation—the idea that the violation of religious norms provokes divine punishment in the form of natural disasters—has survived in all world religions to this day. In such worldviews, natural disasters of any type are like feedbacks within a closed system ruled by moral causation. In such a system, moral failure provokes the wrath of divine powers, thereby causing natural disasters that then require legal solutions to correct the immorality that caused the problem in the first place. With the rise of agrarian civilizations, legitimate rulers frequently justified their authority by claiming to have direct contact with the gods that controlled the forces of nature. In such societies, people's perceptions of who was to blame for natural disasters could vary widely, particularly when they occurred with unusual frequency. In Byzantium under Justinian (527–565), for example, two of the leading chroniclers came up with conflicting interpretations of natural disaster. In his *Secret History*, Procopius (circa 500–565) saw frequent and unpredictable disasters as a sign of divine discontent with Justinian. John Malalas (circa 481–578), on the other hand, interpreted the disasters as cathartic episodes that legitimated the emperor's continued rule.²



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Response to natural disaster can have explicitly political outcomes, as with the Elbe floods in 2002, which likely gave German Chancellor Gerhard Schröder a decisive advantage over his challenger. Pictured here are bikers alongside a swollen Elbe in Dresden.

The Mandate of Heaven in China established an even more precarious relationship between emperors and natural disasters. The Confucian recommendation to emperors was to rule by moral example and the strict observation of rituals. Natural disasters indicated that something was rotten, encouraging rebellion and political overthrow. Thus, disasters frequently precipitated the transition from one dynasty to another. Food crises were endemic in all agricultural civilizations and were a frequent cause of revolt in China as well as in Europe. Thus climatic conditions became a critical determinant of divine rule. For example, during the Ming and Qing periods, when China had grown to become the most productive of all agricultural economies, weather conditions became an extremely sensitive theme of enormous political relevance. Long periods of drought or floods, causing harvests to fail in many parts of the country, raised the suspicion that the ruler had lost the favor of divine powers and needed to be replaced.

In Europe, the scientific revolution claimed that there is no sin in the world that can make Mount Vesuvius erupt and bury Pompeii under the ashes—nor is there any act of God that interferes with the forces of nature. Considering the resistance modern science has faced from powerful religious lobbies almost everywhere, explaining the success of this revolution is by no means trivial. The most robust explanation is that scientific elites in Europe, beginning with humanists in the fifteenth century, became increasingly useful to those in power. The result of this alliance was the withering of agrarian empires and the rise of nation states in the nineteenth century. Following the implications of the scientific revolution for legal solutions and adaptive processes after natural disasters, interventions in the moral economy of divine punishment became utterly senseless. As a consequence, corrections in the religious behavior of community members or citizens were deleted from the repertoire of post-disaster measures under the rule of modern states. In the case of Europe this meant that the issuing of sumptuary laws, which once used to be a common reaction in the aftermath of disasters, disappeared. This development was probably reinforced by the fact that, in the industrial era, governments were faced with growing and ever more diverse populations and had little interest in fuelling religious conflict after a catastrophe. But only since the divorce of political rule from religion, which marks a

generally accepted caesura in the formation of nation states, have legal solutions ignored religious behavior, leaving it up to individuals and religious communities or institutions to draw their own conclusions on the moral state of affairs. As a result, religious concepts of morality or divine legitimation were no longer involved in the coevolution between state power and disasters.

So far, only a few historians have considered natural disasters as an element in the evolution of governance. The evidence that has been brought to light suggests that natural disasters probably deserve a place in the history of state power—along with war and state competition. Political response to the second Bubonic plague pandemic in Europe, beginning with the Black Death in 1348, evolved over several centuries and left permanent traces in legal and political systems. Robert C. Palmer diagnosed that, in medieval England, the Black Death transformed “the nature of English governance” towards centralization, a new understanding of governmental authority, and an enlargement of the sphere of legal matters.³ Such feedbacks of legal regulations in the realm of governance also explain how hospitals, originally invented to interrupt the chain of infection by separating the healthy from the sick, went from temporary to permanent institutions. The same holds true for medical councils, whose members initially had been appointed only in times of high emergency. In the eighteenth century, however, they became permanent, which made them precursors of departments of health in modern nation states.

Even today political power remains sensitive to the effects of large-scale natural disasters. While religious ideas about collective morality, divine punishment, or divine rule are no longer influential, it appears that political leaders are nonetheless expected to ensure that societies are able to regain control over nature in the wake of natural disasters. Thus, governments are under tremendous pressure to perform well in managing disasters, and when that control cannot be maintained or re-established, regimes are in danger of losing their legitimacy. Yet the role of media coverage and public attention may favor governments when elections coincide with the occurrence of a disaster: the Elbe floods in 2002 probably gave German Chancellor Gerhard Schröder a decisive advantage over his challenger, and there seems little doubt that President Obama’s efforts to manage Hurricane Sandy helped him win a second term by a much greater margin than many had expected.

This brief review of history shows that legal solutions have played a key role in transforming the experience of disasters into processes of adaptation to natural hazards. Since political legitimacy in nation states is connected to the state’s ability to cope with natural hazards and the experience of disasters, legal solutions have become powerful tools of political and social change. Beyond changing people’s behavior in areas such as housing construction, and agriculture, legal solutions also cause feedbacks in the realm of government and politics. Some of the most significant feedbacks were those involved in the complex evolutionary process that formed modern nation states. As a result, modern states are still involved in a co-evolutionary relationship with natural hazards, which simply means that nation states and their governments cannot ignore natural disasters without taking action—and that action will always require a legal base and new legal solutions.

Continuous population growth, urbanization, and the emergence of megacities have not made this world safer. These factors combined with the dangers of climate change, particularly higher frequencies of meteorological extreme events and resulting disasters, are trademarks of a period in which the coevolution between natural disasters and governmental power continues to accelerate. It is generally hard to predict whether this is going to lead to greater stability or, on the contrary, to greater instability of states, governments, and the political order. Obviously, short-term effects need to be distinguished from long-term perspectives. Moreover, destabilization of governments or even states is likely to depend on other circumstances, such as the balance of a state’s overall budget and debts and the prosperity of its citizens. Those who study disaster management and climate change—and how to cope with them in the future—need to recognize that legal solutions are

among the most common responses of governments to natural disasters everywhere in the world. Thus we need to examine, across a variety of timescales, how such legal solutions have shaped societies until the present day and how they are likely to impact them in the future.

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