

Drawing on many archives

Environmental history is an interdisciplinary discipline. As scholars we construct our histories from a variety of sources, supported by data of many different types. We can unearth the ‘archive of nature’ – tree rings, pollen analysis, soil layers, and ice cores, among other things – that help us to reconstruct weather patterns, vegetation, land use, and more. We also delve into the ‘archive of humans’ – chronicles, letters, economic transactions, artistic works, technological artefacts, etc. – that record the reactions to, understandings of, and interactions with that nature. Environmental historians must read and make use of both archives and the enormous variety of materials found in them, but they must do that with a critical eye. The ‘archive of nature’ must be subjected to the same kind of source criticism that we as historians are accustomed to doing with the documentary archive.

The workshop featured in this Notepad shows how mobilising both types of archives can lead to better understandings of famine as an environmental event. Society and nature are always entangled, so our sources must be as well.

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Famines During the ‘Little Ice Age’ (1300–1800). Socio-natural Entanglements in Premodern Societies

Famines occur at the interface of nature and culture. They involve both the biophysical as well as the social sphere. As ‘slow disasters’ they provide ample space for the interaction of climate and culture and allow detailed studies of the socio-ecological arrangements of historical societies. Famines, therefore, make an excellent field of study for environmental historians.

However, the study of these complex events frequently suffers from disciplinary constraints. Their broad socio-natural character extends beyond the reach of individual disciplines. The research group ‘Environment and Society’ at the Heidelberg Center for the Environment therefore convened a workshop on ‘Famines During the ‘Little Ice Age’ (1300–1800). Socio-natural Entanglements in Premodern Societies’. It focused on premodern agrarian societies, where famines constituted ‘normal exceptions’ to every-day life. The event was hosted by the Center for Interdisciplinary Research (ZiF) in Bielefeld. The two-day meeting brought together researchers from the natural sciences, social sciences, and humanities that study European as well as

non-European cases. They aimed at the integration of the ‘archives of nature’ (tree-rings, speleothems) as well as ‘archives of humans’ (chronicles, sup-plications) in order to challenge deterministic models of human-environment interaction. The participants discussed how the prevalent opposition of natural versus societal factors in famine research can be overcome with reference to recent interdisciplinary concepts (disaster studies, vulnerability studies, environmental history). As a first step, we have identified small-scale high-resolution research designs as a means to establish empirical studies on the socio-natural character of historical societies.

In the introductory methodological session Ulf Büntgen and Jürg Luterbacher discussed how the analysis of complementary ‘archives of nature’ enables paleoclimatic modelling and reconstructions that trace the impact of extreme weather events on harvests as well as the etiology of epidemics. Examining early modern Finland, Heli Huhtamaa discussed the potential of natural proxies such as dendrochronological records to study areas with a limited body of written sources. Kathrin Moeller used a case study of the city of Halle to showcase the potential of famine research for economic history. Integrating serial datasets on prices and demographic indicators with historical accounts she illustrated the catalytic impact these events had on the understanding of economic ‘crises’, detailing the way the citizens moved towards secular models of distributing limited food supplies around 1800.

A second session focused on European famines. The contributors explored the entanglement of weather impacts with political and economic stress by integrating various ‘archives’. Francis Ludlow discussed the remarkable, time-delayed connections between episodes of violent conflict and extreme weather events in medieval Ireland. His intriguing combination of early chronicles with tree-ring data challenges earlier deterministic linkages of weather anomalies and societal responses. Rudolf Brazdil and Guido Alfani focused on famines in the Czech lands and Italy. They highlighted the momentous confluence of acute biophysical stress with long-term changes in political and economic environments, while stressing the indispensable link of these events to specific socio-natural settings. Bruce Campell argued for a similar approach, tracing the disastrous coupling of extreme weather events in 14th century England with developments in the economic and political sphere. He attributed the harrowing consequences of the crisis of 1346/47 to the impact of these three stressors on an already vulnerable society. All contributions to this session highlighted the broad range of possible ‘archives’, drawing on chronicles, parish records, account books as well as tree-ring records and isotope analyses based on ice-cores. They stressed the need to address the differences in resolution and precision of these data sets and argued for their integration to capture the complex socio-natural character of famine events.

To broaden the perspective beyond the European arena the third session discussed famines in Asia and Africa. It explored famines in societies with

a supposedly greater exposure to environmental stress. Despite substantial differences in their (proto-colonial) socio-natural settings, European and non-European events exhibited striking similarities in respect to their causation, perception and societal appropriation. In early modern India the impact of periodical monsoon failures was aggravated by the inaction of the Mogul rulers coupled with the reckless economic policy of the East India Company. As Vinita Damodaran argued, the EIC promoted vulnerable cash crops while raising the level of revenue extraction, using the societal and meteorological dynamics to their own end. Steven Serels traced the impact of weather patterns on the pastoral societies of the East African coastal regions during the late 18th and 19th centuries, illustrating the broad range of societal responses, adaptations, and appropriations. Next to a flexible and strategic migration regime, the rise of Sufi communities provided spiritual and physical relief, challenging the established political elites as well as initiating the conversion of parts of the pagan East African population. As a result the session highlighted cross-cultural commonalities as well as the plurality of human responses that included new forms of political and religious organisation.

The last session focused on historical strategies and practices of 'facing famine'. Andreas R  ther discussed migration as a possible coping mechanism. Drawing on the interpretation of the German eastwards expansion as a response to deteriorating subsistence levels, he highlighted the paucity of the historical record on the motivation of migrants and explored the multitude of possible stimuli. All presentations argued for a micro-historical approach to studying famines that reduces the scope without ignoring the complexity of the events. Andrea de Vincenti presented her analysis of the interaction of secular and spiritual authorities in Zurich during the famine of 1771/72, with both sides agreeing to a moral interpretation of the famine in spite of diverging world-views. As a result, the crises became a catalyst for educational and agricultural reform, without reassessing the role of the victims. Kathrin Pindl and Jessica Dijkman offered a close reading of the detailed records of charitable institutions in the city of Regensburg and the Dutch village of Berkel, which allowed the researchers to trace the range of diverging interpretations, strategies and adaptations to famine on the local level and sketch the diffusion of urban coping strategies to rural areas.

Famines also produced a rich material culture. Their study was at the heart of an evening lecture by Andreas Fadani, the director of the Museum for Bread Culture (Ulm). Drawing on the museum's broad collections Fadani made the extensive cultures of remembering famine tangible, and unlocked objects as another significant historical archive.

The intense and constructive debates during the meeting highlighted the need for a trans-disciplinary approach to famine research. All the events discussed in the forum were attributed to the interplay of multiple factors rather than one dominant cause. In order to overcome the prevalent opposition of

natural and cultural factors new, integrative approaches need to be pursued. In this sense famines can act as a 'boundary object' that allows for trans-disciplinary dialogue and 'borrowing'. Only this exchange of research designs, methodologies, and perspectives of inquiry allows re-capturing the complex socio-natural settings of historical famines. Due to the pressure of modern climate change on food systems most relevant disciplines are open for such encounters – the integration of the medical history remains a priority for future research. However, such a disciplinary transgression that integrates different 'archives' requires a carefully limited field of study. It works best in high-resolution small-scale case-studies. Such an approach can provide much needed empirical studies about the effects of extreme events on past societies. It would substantiate a debate that tacitly informs our understanding of the current climate change, but has often been based on conjectures rather than in-depth studies.

The meeting has demonstrated that such an integrative approach can now draw and expand on a range of recent cross-disciplinary research designs, such as disaster studies, food history, vulnerability studies and last not least environmental history. It has also confirmed that there is a growing body of researchers capable and interested to put these designs into practice. An English language publication of the revised contributions is in preparation.

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