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Heidelberg, Germany
Email: speleothem2013@uni-hd.de
Web: speleothem2013.uni-hd.de

Lecture Abstract:

Potentials, challenges and threads of climate reconstruction in archaeology

Thomas Meier[1]

Cultural change, the rise and more often the fall of societies and so called civilizations has fascinated archaeologists since the emergence of the discipline. Explanations have varied widely during the last century: Invasion and migration, economy and administration, resource availability and (over)exploitation and – since approx. the start of the new millennium – climate change have all been blamed to be triggers for the rise, change and breakdown of societies and civilizations. Each of these paradigms has offered convincing narratives with each of the explanations gaining their convincing power from the discursive contexts in their actual social settings. The current interest in climate reconstructions on the side of history and archaeology is no exception. It clearly mirrors debates in societies on possible threatening impacts of future climate change on our world. Connecting to an established public discourse and being based on general presuppositions of today's societies historic climate change actually has a high potential to explain cultural change in historic societies as well.

Such a preconceived perspective becomes apparent in the quite often allusive connection of any historical climate change models and arbitrary changes in culture. In such reasoning purely temporal coincidence is deemed to be enough to suppose a causal connection. Those who feel obliged to a more thorough argumentation usually point to the (deteriorating) economic impact of climate change and from there on freely infer on social collapse – obviously empowering capitalist (and Marxist) claims for economy to be at the heart of society. Certainly without excluding the possibility of climate change to have an impact on societies and cultures such a causal connection poses some poorly debated and hardly settled challenges: On the one hand archaeologists are hardly ever aware of the sometimes dubious or at least debatable interpretations of climate proxies and the reliability of any climate reconstruction: It's scientific, so it's proven truth … Also the plurality (usually a core feature of the humanities) of science's approaches to climate reconstruction is surprisingly neglected. On the other hand scientists usually are unaware of the highly complex interactions and models we call “society” or “culture” as well as of the wide variety of human possibilities of action and response far beyond the rational man of the enlightenment. So both parties are mostly lacking fundamental understandings of each other but unreflectedly integrate arbitrary

[1] PAGES International Project Office, Bern, Switzerland

– and often dubious and/or outdated – results from "the other side" into their interpretations. What we are missing at all are models to connect curves of temperature- and precipitation to changes in societies based on more than statistical correlation. What are convincing and valid arguments in both discursive orders of science and the humanities? Additionally both parties are working with very different sources providing information on very different scales in time and space. It is a hardly discussed challenge how to deal with greatly varying resolutions of different sources within science or the humanities and even more integrating the two. At least from a humanities' point of view it seems more than doubtful whether supra-regional climate curves have any meaning for historical research as humans did and mostly still do act locally.

The convincing power of the "climate change induces cultural/social change"-narrative includes veritable threads as well – as do all grand narratives. It is at the core of the problem that grand narratives go beyond doubt. They are so "obvious" (i.e. established) that their character as a temporary paradigm remains hidden and thus they block reflections on their discursive nature, questions on their validity and especially rule out other possible explanations of equal of higher plausibility. I do not go into the financial and organizational consequences such an established paradigm causes – although they are fundamental to keep up the discourse and therefore are a permanent thread to the regeneration and development of research. But I want to emphasize the unintended epistemological effects of the climate-paradigm: The usual statistical correlation of climatic and cultural change seem to foster the revival of deterministic simplifications. During the last decade there is a scary explosion of climate-culture-models, which – hopefully unconsciously – lend resurrection to climate determinism from Aristotle and Hippocrates to Montesquieu and Huntington, irrespective of proofs of the contrary by Herder and others already centuries ago. The simplicity of determinism is its charm and thread alike: A deterministic world view allows for simple and understandable explanations and thus enables clear decisions and actions. Simultaneously it is inadequate for the complexity of the world and its problems and thus leads into inappropriate decisions and actions. Deterministic perspectives are not only an epistemological problem of the academic ivory-tower, but a social and political threat: Especially German history shows that nature determinism can have the severest and most harmful political and human consequences.

It is our responsibility as academics not to cling to our data and scientific models only, but to be actively aware of their possible wider social and cultural consequences as well.

Further reading:

- Nico Stehr/Hans von Storch, An anatomy of climate determinsm. In: H. Kaupen-Haas (Hrsg.), Wissenschaftlicher Rassismus – Analysen einer Kontinuität in den Human- und Naturwissen-schaften (Frankfurt/New York 1999) 137-185.
- Thomas Meier, Der Archäologe als Wissenschaftler und Zeitgenosse (Darmstadt/Mainz 2012).