

Call for Papers – Interdisciplinary Workshop

Towards a History of Paleoclimatology: Changing roles and shifting scales in climate sciences

Universität Hamburg, Hamburg 6-7 Sept 2017

Deadline for abstract submission: 15 July 2017

Organised by Dania Achermann and Simone Rödder

*in cooperation with the CliSAP Centre of Excellence “Integrated Climate System Analysis and Prediction”,
Universität Hamburg and the Centre for Environmental Humanities, Aarhus University*

The climate of the past is a fundamental part of today’s climate research. Paleoclimatological data from the archives of nature serve to calibrate climate models and inform current knowledge about future climate changes. Historian of science Matthias Dörries argues that paleoclimatology gained political relevance by writing a “history of the deep past” by which it also influences the interpretation of the present; it helped to fill the Earth’s history with concrete climate events (Dörries 2015: 25). But how did the study of this “deep past” become such a crucial pillar of modern climate science? How has it impacted the very notion of ‘climate’, and what were the consequences for both, paleoclimatological and climate science practices? It is the goal of this workshop to tackle these and related questions in an interdisciplinary setting.

In the 1960s and 70s, results from the study of ice cores, sea sediments and tree rings provided evidence that climate is prone to change not only over thousands of years but also during period of times that are within the reach of human imagination, like years or decades. At the same time, these studies extended the temporal scale of climate change beyond any human imagination, to millions of years, and helped to expand the spatial scale from regional data gathering to a global concept of climate. As Dörries points out: “the Earth’s past in the 1980s had become quite different from its past in the early 1960s” (27). The study of the climate’s past shifted from being a marginalised subject of historical climatology to being a pool of data indispensable for climate modelling. Consequently, and with this increasing relevance, new research questions, approaches and technologies were developed and led to an enormous growth of the field.

Paleoclimatological disciplines such as ice core research, tree rings and pollen analysis, ocean and lake sediment studies have emerged from a range of scientific fields such as physics, glaciology, oceanography, botany, ecology, chemistry or archaeology with differing research questions, cultures and methods of data interpretation. The integrative presentation of paleoclimatological data as a fundament of global climate change knowledge, as for example in IPCC reports, tends to hide conflicts between the different paleoclimatological fields as well as between paleoclimatology and climate modelling regarding type and complexity of data or scales of their validity, as well as the frictions in the process of making paleoclimatological data fit for computer models.

This workshop aims at exploring the changing roles of paleoclimatology as a part of climate science and its contribution to the understanding of climate on different temporal and spatial scales throughout the 20th century. “Paleoclimatological disciplines” in this context refers to the study of climate of the past, including proxy data from ice cores, tree rings, ocean and lake sediments, fossilised pollen, bones, and moraines.

Possible questions and topics for discussion include, but are not limited to, the following:

- How did different paleoclimatological fields inform climate science?
- What was the role and relevance of individual paleoclimatological fields in the development of climate models?

- How, in turn, were their research practices and approaches influenced by the rising epistemic authority of climate models?
- How did they (or did not) integrate into the hegemonic approach of model-based climate science?
- How did climate modelling influence data “gathering” (construction), research questions, and the epistemology of paleoclimatology?
- How did paleoclimatology contribute to a “loss of human scales” in global climate change science?
- How have the field’s scales of time and space developed and influenced our current understanding of climate?
- How has the relationship between different paleoclimatological fields changed? How have they influenced or competed with one another? What were the consequences of transfers of research technology and questions between the different fields?
- How were different approaches towards spatiality and complexity of data interpretation negotiated? I.e. how were different notions of locality/globality and simplification/differentiation of proxy information negotiated?
- How have different paleoclimatological disciplines gained – or lost – epistemic authority?
- What are the broader socio-political contexts of these developments?

The workshop is intended as an exploratory and interdisciplinary meeting to bring together researchers with an interest in the role and history of paleoclimatology. We therefore invite scholars from both the historical and the climatological communities: historians, archaeologists, anthropologists and other scholars from the humanities who have an interest in the development of paleoclimatology, as well as climate scientists and paleoclimatologists who reflect on the (changing) role of their discipline.

Confirmed speakers and panellists:

- Martin Claußen, Max Planck Institute for Meteorology, Hamburg
- Sarah Dry, Dept. of History, University of Oxford
- Meritxell Ramirez I-Olle, Dept. of Science and Technology Studies, University College London
- Felix Riede, Dept. of Archeology and Heritage Studies, Aarhus University
- Christoph Rosol, Max Planck Institute for the History of Science, Berlin
- Gerhard Schmiedl, Institute for Geology, Universität Hamburg
- Hans von Storch, Institute for Coastal Research, Helmholtz-Centre Geesthacht
- Eduardo Zorita, Institute for Coastal Research, Helmholtz-Centre Geesthacht

We invite contributions of individual papers to this workshop with abstracts of max. 300 words and a short CV. Travel funding is available for all selected speakers.

Abstracts: Please send abstract and CV, enquiries and queries to Dania Achermann (dania.achermann@css.au.dk). **Deadline for abstract submission:** 15 July 2017

Literature:

Dörries, Matthias 2015: "Politics, geological past, and the future of earth", *Historical Social Research* 40: 2. pp. 22-36.