**“Modernizing climate in the environmental, atmospheric and geosciences: Nordic contributions and the international context”**

**Place**: Division of History of Science, Technology and Environment, KTH Royal Institute of Technology, Stockholm
**Time**: 14-15 March 2016
**Workshop report by** Daniel Svensson (KTH Stockholm)

In mid-March, some of the leading scholars and scientists working with climate issues gathered at KTH for a workshop on the topic “modernizing climate”. The purpose of the workshop was to investigate the significant changes in the understanding of climate during the 20th century and particularly in the postwar period. The “modernizing of climate” refers to a range of intertwined developments such as the following. 1) Research and discourse about climate changed to one about environmental concern and future risk to humankind. 2) The term “climate” was conceived of as constant in human timescales and only recently the idea of climate change within decades emerged and became predominant. 3) Climate originally was a geographical concept, but became physical concept. 4) A strong empirical tradition of investigating climate was superseded by a predominance of computer-based modeling and simulation. The workshop was interdisciplinary and included selected contemporary witnesses of and participants in climate research.

The workshop was organized in the framework of the project “Shaping Cultures of Prediction: Knowledge, Authority and the Construction of Climate Change”, based at Aarhus University, and linked to ongoing work on the historical science politics of climate change in the Division of History of Science, Technology and Environment at KTH in Stockholm. The organizing committee was Professor Sverker Sörlin and PhD student Daniel Svensson from KTH, and Professor Matthias Heymann from Aarhus.

On March 14th, the workshop started at lunchtime with an introduction by SVERKER SÖRLIN (KTH Stockholm) and MATTHIAS HEYMANN (Aarhus University). It was followed by a number of very interesting presentations and discussions of paper drafts on different topics relating to the bigger issue of “modernized” climate.

PHILIPP LEHMANN (Max Planck Institute for the History of Science, Berlin) provided insights into the history of German climatology in his paper “Sensing Weather, Creating Climate: German Colonial Meteorology and the Dawn of Global Climatology”. He was followed by VLADIMIR JANKOVIC (University of Manchester) who has studied the role of climate in architecture in the paper “Climate in Architectural Modernism: From Gropius and Le Corbusier to Egli and Olgyay Brothers (1928-1963)”.

Bergen has played a massive role in the formation of scientific meteorology and that role was analyzed in detail in GUNNAR ELLINGSEN’s (University of Bergen) paper “The Bergen School: rethinking how scientific meteorology began”. He was followed by ANNIKA E. NIELSSON’s (Stockholm Environment Institute/KTH) paper “Climate Change Research Goes Local”, which lifted the role of the local context.

After a short break, GABRIELE GRAMELSBERGER (University of Lüneburg) presented her work on Karl Hinkelmann, "’It's because I'm lazy’ - Karl Hinkelmann's favor for primitive equation models in the early 1950s”. After her, meteorologist HENNING RODHE (University of Stockholm) presented some insights into the Nordic contribution to climate science in his talk “Understanding the global biogeochemical cycles of C, S and N; Contributions by scientists in the Nordic countries during the 20th century”. The first day’s last speaker was GREGOR LAX (Max Planck Institute for the History

of Science, Berlin). His talk “Sources, sinks and cycles: On the formation process of the atmospheric sciences in the Federal Republic of Germany” further deepened our understanding of Germany and the developments there. After a final discussion, we continued our conversation over dinner.

Next day, March 15th, the team from Aarhus University opened the session with two papers. First DANIA ACHERMANN and MATTHIAS HEYMANN (Aarhus University) presented their work “Changing directions, traditions and paradigms: Hermann Flohn and the shifts in German climatology”. Then JANET MARTIN-NIELSEN, GABRIEL HENDERSON, and MATTHIAS HEYMANN (Aarhus University) presented ”Towards climate prediction: Environmentalism, climatic concerns and the magic of prediction”.

After the lunch break, glaciologist PER HOLMLUND (University of Stockholm) highlighted the contributions of Hans W:son Ahlmann for the fields of glaciology and climatology, with the talk “Glacier Variations and Climate Fluctuations (with focus on Hans W:son Ahlmann)”. After that, another talk further deepened and contextualized the Swedish contribution in these fields, as SVERKER SÖRLIN (KTH Stockholm) gave a talk called “Climate Change in Stockholm: Environmental transformations ca 1970 with a focus on the Rossby-Bolin legacy and the Academy of Sciences”.

After lunch, we turned to Iceland. ÁSDÍS JONSDOTTIR (University of Oslo) presented her paper “Lay glaciology and nationalism: the emergence of glaciological field research in Iceland 1930-1960”. Finally the last presentation of the workshop was MATTHIAS DÖRRIES (University of Strasbourg) with “Icelandic volcanoes and the risk of the disruption of North Atlantic air transport”, which nicely knit together the global and the local, Iceland and the rest of Europe.

We ended with a final discussion and a brief summary by organizers Heymann and Sörlin. We concluded that these two days had been very fruitful, and that there are vast possibilities of further cooperation around meetings and publications in the coming years.

**Program:**

**Sverker Sörlin and Matthias Heymann**: Introduction

**Philipp Lehmann** (Max Planck Institute for the History of Science, Berlin, Germany): ”Sensing Weather, Creating Climate: German Colonial Meteorology and the Dawn of Global Climatology”

**Vladimir Janković** (University of Manchester, UK): „Climate in Architectural Modernism: From Gropius and Le Corbusier to Egli and Olgyay Brothers (1928-1963)”

**Gunnar Ellingsen** (University of Bergen, Norway): ”The Bergen School: rethinking how scientific meteorology began”
Discussant: **Robert Marc Friedman** (University of Oslo, Norway)

**Annika E. Nilsson** (Stockholm Environment Institute): ”Climate Change Research Goes Local”
Discussant: **Eva Lövbrand** (Linköping University, Sweden)

**Gabriele Gramelsberger** (University of Lüneburg, Germany): ”’It's because I'm lazy’ - Karl Hinkelmann's favor for primitive equation models in the early 1950s”

**Henning Rodhe** (University of Stockholm, Sweden): ”Understanding the global biogeochemical cycles of C, S and N; Contributions by scientists in the Nordic countries during the 20th century”

**Gregor Lax** (Max Planck Institute for the History of Science, Berlin, Germany): ”Sources, sinks and cycles. On the formation process of the atmospheric sciences in the Federal Republic of Germany”

**Dania Achermann and Matthias Heymann** (Aarhus University, Denmark): ”Changing directions, traditions and paradigms: Hermann Flohn and the shifts in German climatology”
Discussant: **Philipp Lehmann** (Max Planck Institute for the History of Science, Berlin, Germany)

**Janet Martin-Nielsen, Gabriel Henderson and Matthias Heymann** (Aarhus University, Dennmark): “Towards climate prediction: Environmentalism, climatic concerns and the magic of prediction”
Discussant: **Vladimir Janković** (University of Manchester, UK)

**Per Holmlund** (University of Stockholm, Sweden): ”Glacier Variations and Climate Fluctuations (with focus on Hans W:son Ahlmann)”

**Sverker Sörlin** (KTH Stockholm, Sweden): ”Climate Change in Stockholm: Environmental transformations ca 1970 with a focus on the Rossby-Bolin legacy and the Academy of Sciences”

**Ásdís Jonsdottir** (University of Oslo, Norway): ”Lay glaciology and nationalism: the emergence of glaciological field research in Iceland 1930-1960”

**Matthias Dörries** (University of Strasbourg, France): ”Icelandic volcanoes and the risk of the disruption of North Atlantic air transport”