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History of Meteorology

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Climate in meteorology, meteorology in climate studies

Today, the term “climate” is associated with global warming and efforts to reduce man-made climate change, but the term can also be used to describe the meteorological characteristics of a place, average weather and lived experiences. Working with a project on the history of meteorology in Norway, we noticed how concepts of climate have varied over time, with emphasis shifting between geographical and temporal properties, empirical studies and competing theories, and iterating between optimism and fear for the future.

When the first systematic studies of weather in Norway began in the 1760s, the key to understanding and prediction was found in previous year’s weather. By 1866, when the Norwegian Meteorological Institute was established, climatology was what made meteorology sufficiently “scientific” to justify the Institute becoming part of the University in Christiania. Soon afterwards, attention shifted to looking at weather observations as snapshots that outline the anatomy of cyclones. Add another century, and we find postwar meteorologists seeking weather data in four dimensions in attempts to identify mechanisms governing tomorrow’s rhythm of the atmosphere, with climatologists reduced to bookkeepers. Today, climate is synonymous with multidisciplinary, business outcomes, global politics and deep concerns about our common future. Climate used to be something humans were exposed to, today climate is also exposed to humanity.

Against this backdrop of ever-changing understanding of climate, a group of historians gathered for a workshop in Bergen, Norway, in November 2014 under the heading “Climate in meteorology, meteorology in climate studies”. The goal was to discuss big questions: What meanings has the term climate had? In which contexts has climate been important, and to whom? Why do meteorologists sometimes play a peripheral role in climate studies; how, when and why did they enter or exit center stage? How has this influenced the interdisciplinary field of climate studies today?

In this special issue we present eight of the papers that were given at the workshop in November 2014. Together they span more than 200 years of history, from the early 1800s until today. Geographically they stretch from the United States in the west to Australia in the east. Thematically, the manuscripts demonstrate the multitude of ways that climate has been studied, the different roles meteorologists have had, and how the meanings of key concepts have changed over time.

As historians, we are trained in seeing beyond the complicated fabric of our own time and observe, describe and understand those of the past. Opening this issue, Jim Fleming describes climate as “inseparable from the temporality and specificity of the social world” and as “woven into the fabric of human past and future”, as well as the relations between climate and weather. This underlines the topic’s fundamental importance to what historians study: human life and societies through time.

The next two papers discuss how inquiries into climate were sparked by weather perceived to be out of the ordinary. Sean Munger shows how the uncommonly cold weather in the 1810s inspired searches for patterns among ‘weather watchers’ on both sides of the Atlantic. Claire Fenby examines how Europeans gathered knowledge and gave meaning to the climate they experienced in the newly established colony of New South Wales, Australia, around the same period.

Meteorologists have never been the only voices in the choir of expertise that have defined the scientific interests, agendas, understandings and approaches to climate, and a returning feature has been the contested question of whose expertise and what evidence to rely on for authoritative knowledge. Gunnar Ellingsen presents how a meteorologist and a

botanist at the University of Christiania studied climate using different methods and representing different scientific virtues in the 1870s. In Phillipp Lehmann's paper, the German meteorologist Eduard Brückner takes the lead as climatologists turned from glaciers and bodies of water to meteorological observations in the first decades of the 20th century.

In the postwar period, perceptions of climate were still influenced by questions of expertise and authority as several groups of actors were involved in gathering observations and giving meaning to changes in weather over time. Alexander Hall describes how both scientists and laymen influenced modern climatology in postwar Britain, taking cues from farmers, amateur-type natural historians and botanists. Magnus Vollset shows how meteorology was but one of several disciplines engaged in attempts at predicting climate variations in order to secure the supply of hydropower in postwar Norway.

Meteorologists were also lured or pushed into new roles emerging from new knowledge and experience about climate. Vladimir Jankovic argues that industrial growth, combined with increasing vulnerability to adverse weather, opened up new markets for meteorologists in the 1970s. Climate has created new types of weather, which in turn have created new roles for the meteorologists.

The multidisciplinary nature of present-day climate studies is both a solution to a problem and a problem unto itself. In order to examine or heal the "sick planet", disciplines have to communicate, cooperate and negotiate across borders between authorities, languages, and world-views.¹ This has not always been the case. Nor has increased global temperatures always been seen as a problem. Through spelling out how the concepts and collaborations have played out in the past, historians can stimulate a more reflected debate both among lay public and stakeholders from different backgrounds who today are expected to collaborate.

Gunnar Ellingsen and Magnus Vollset, guest editors

Acknowledgements

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¹ The sick planet metaphor is borrowed from Fleming, James R. and Vladimir Jankovic: «Revisiting *Klima*». *Osiris*. Vol 26, No. 1. 2011: 1-15.

History of Meteorology

CALL FOR PAPERS

Articles on the history of meteorology and related sciences are now being accepted on a rolling basis for consideration in *History of Meteorology*; so too are proposals to edit special issues. Manuscripts should be based on original research and present a novel thesis; they must be engaging, clearly written, and fully documented, following the style guide below. Authors are reminded that international and interdisciplinary perspectives are encouraged. All papers will be subject to peer review.

Because this is an electronic journal, it is possible to publish color illustrations and experiment with alternative media such as audio and video files and databases.

History of Meteorology has a stable URL at <http://meteohistory.org> and has been assigned ISSN 1555-5763 by the U.S. Library of Congress. It is currently being indexed by two leading services: *Isis Current Bibliography of the History of Science* and *Meteorological and Geostrophysical Abstracts*.

Queries or manuscripts should be directed to the editor-in-chief, Jim Fleming, e-mail: jfleming@colby.edu

STYLE GUIDE

Manuscripts for History of Meteorology are to be submitted electronically to the editor in MS Word format (please ask in advance about other formats). Before publication, authors must certify that their work is original and that all necessary permissions have been acquired.

Format

Paper size:	U.S. Letter.
Margins:	1.0 inch on all sides.
Headers and footers:	0.5 inch (left blank except for preliminary pagination).
Line spacing:	Double.
Font text:	12 point Times New Roman; captions: 11 point Times New Roman.
Section headers:	Use bold section headers.
Paper length:	Less than 10,000 words, including citations. Ask if your manuscript is longer than this.

Figures and Tables

Figures must be provided as separate image files (jpeg or tiff) with a resolution of at least 300 dpi. Both figures and tables must be mentioned in the text (e.g. Fig. 1) before their appearance in the paper. Figure captions appear below the figure in 11-point type with a hanging indent:

Fig. 1. Caption descriptive of the image but does not repeat what was said in the text of the paper.
Image courtesy of (or by permission of) XXX.

Tables must be carefully formatted in advance by the author. Titles appear above the table in 11-point type:

Table 1. Title of table (use hanging indent if it is a long title).

Citations

Citations may be either Endnotes, numbered sequentially, or References (Author date) listed alphabetically at the end of the paper. Any major style, consistently applied, is acceptable.

Each citation must provide name of author/editor, full title of the work, place, publisher, date, and page references.

Titles of books and journals are italicized, not underlined. Archival and manuscript material must contain a full description in the first citation.

Use of abbreviations (e.g. *Amer. J. Sci.*) is encouraged, as is the short reference format for subsequent citations of a text.

Endnotes are not meant to be discursive.