

From Beaufort to Bjerknes and beyond – Introductory remarks

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“From Beaufort to Bjerknes and beyond: Critical perspectives on observing, analyzing and predicting weather and climate”. The alliteration in the main title of the first conference which the International Commission on History of Meteorology (ICHM) organized in Europe takes steps of about a century: From the formulation of an empirical wind force scale (Beaufort, 1806), via the concept of weather forecasting on physical principles (Bjerknes, 1904) to the current era of daily communicated weather forecasts and much debated climate scenario calculations.

This volume in the established monograph series *Algorismus* comprises 19 short essays, which evolved from the nearly fifty lectures that were presented between 5 and 9 July 2004 to more than seventy scholars in the baroque library hall of Kloster Polling in the south of Munich, Germany. The essays give a good indication of breadth as well as depth of studies that are at present undertaken in the evolving field of history of meteorology by both historians of science and scientists with strong a interest in the development of their discipline. The selection reflects that meteorology is an intrinsically global field with a maturation period of at least two centuries. Besides the milestones referred to in its title the conference took place exactly 150 years after the establishment of the Meteorological Department of the Board of Trades in London (1854), the precursor of the current United Kingdom Meteorological Office, and just 50 years after the start of numerical weather prediction in an increasingly operational fashion both in Sweden (Europe) and the United States of America (1954).

Encouraged by the James Fleming, president of ICHM, the board of the specialist group *Geschichte der Meteorologie* of the *Deutsche Meteorologische Gesellschaft* looked for suitable venues in southern Germany. The baroque library hall of the former monastery in Polling provided in the end

a truly congenial atmosphere for a variety of reasons: (i) the carefully restored, spacious room spanned itself the two centuries in the title of the event, (ii) the building's close link to the Bavarian Academy of Science could be fittingly underlined by the opening address of its current president, Professor Heinrich Nöth (see pp. 5-8), (iii) the proximity to Hohenpeißenberg observatory of *Deutscher Wetterdienst* eased an afternoon excursion to this site of a station in the first international network run by the *Societas Meteorologica Palatina*, where original documents and the complete temperature series over some 222 years are still kept, and last but not least (iv) the simple, yet heartfelt hospitality of upper Bavaria much aided informal exchanges among all participants.



Figure 1: Detail of the highly ornamented ceiling of the Baroque Library Hall of Kloster Polling: the nine classical muses are augmented by *Scientia* holding a globe with her right arm and inspecting the constellation of *ursus major* with a long telescope in her left one.

A flavour of the conference venue and the prevailing atmosphere is present in the group photograph following the title page. The symmetric structure

of the decorative staircase between the library floor and the gallery encircling it as well as the shelves containing originals from the 17th and 18th century convey much of the spirit of Enlightenment that sparked off the development of science. The old books are but a small rest of the some 80,000 volumes in store when the library was dissolved during the secularization of the monasteries in 1803. The originally envisaged close link between the already established disciplines of arts and the new science (in Latin: *scientia*) is symbolized in a colourful painting at the high ceiling of the church-like library hall (Fig. 1).

After the selection of venue and conference period the event was announced by a poster carrying the optimism of a more recent period (Fig. 2). The echo was overwhelming: 75 scholars from 21 countries registered including 11 students. The majority of them can be seen in the mentioned group picture (including their names and countries of work). Full details of the conference programme with 14 sessions, a list of participants and the abstracts of the 49 oral and 4 poster presentations can be accessed through the archive section of the ICHM web-site:

(http://www.meteohistory.org/2004polling_preprints).

For the present volume 19 authors and co-authoring teams further elaborated their extended conference abstracts. Stefan Emeis untiringly supervised an anonymous review process, provided layout details and produced the final camera-ready print version including several informative appendices in the proven style of the *Algorismus* series. The contents of this collection make strides through a variety of dimensions spanning the space of meteorology through more than two centuries by applying quite different perspectives: *concepts* serve as foci in the contributions by Fleming (p. 9), Emeis (p. 17), Lüdecke (p. 51), Tsukahara (p. 89), and also Cushman (p. 155); *locations* are centre stage in the address by Nöth (p. 5) as well as in the articles by Wege & Winkler (p. 33) and de Ory & Palomares (p. 99); the *personalities* of individual scientists are used as starting points in the papers by Munzar (p. 25), Tammiksaar (p. 61), Fritscher (p. 69), Coen (p. 111), Barboza (p. 121), and Grimes (p. 149); *observational techniques* are stressed in the contributions by Winkler (p. 41) and Kington (p. 167) while different *applications* are considered in those by Lajus (p. 79) and Randalls (p. 175); finally the *tradition* of scientific insights through textbooks and lecture notes are dealt with in the articles by Seibert (p. 131) and Volkert et al. (p. 141). What may, at first glimpse, look like a rather randomized sam-

ple becomes after some deeper reading a rich bouquet full of new information, valuable cross-links and informative illustrations.

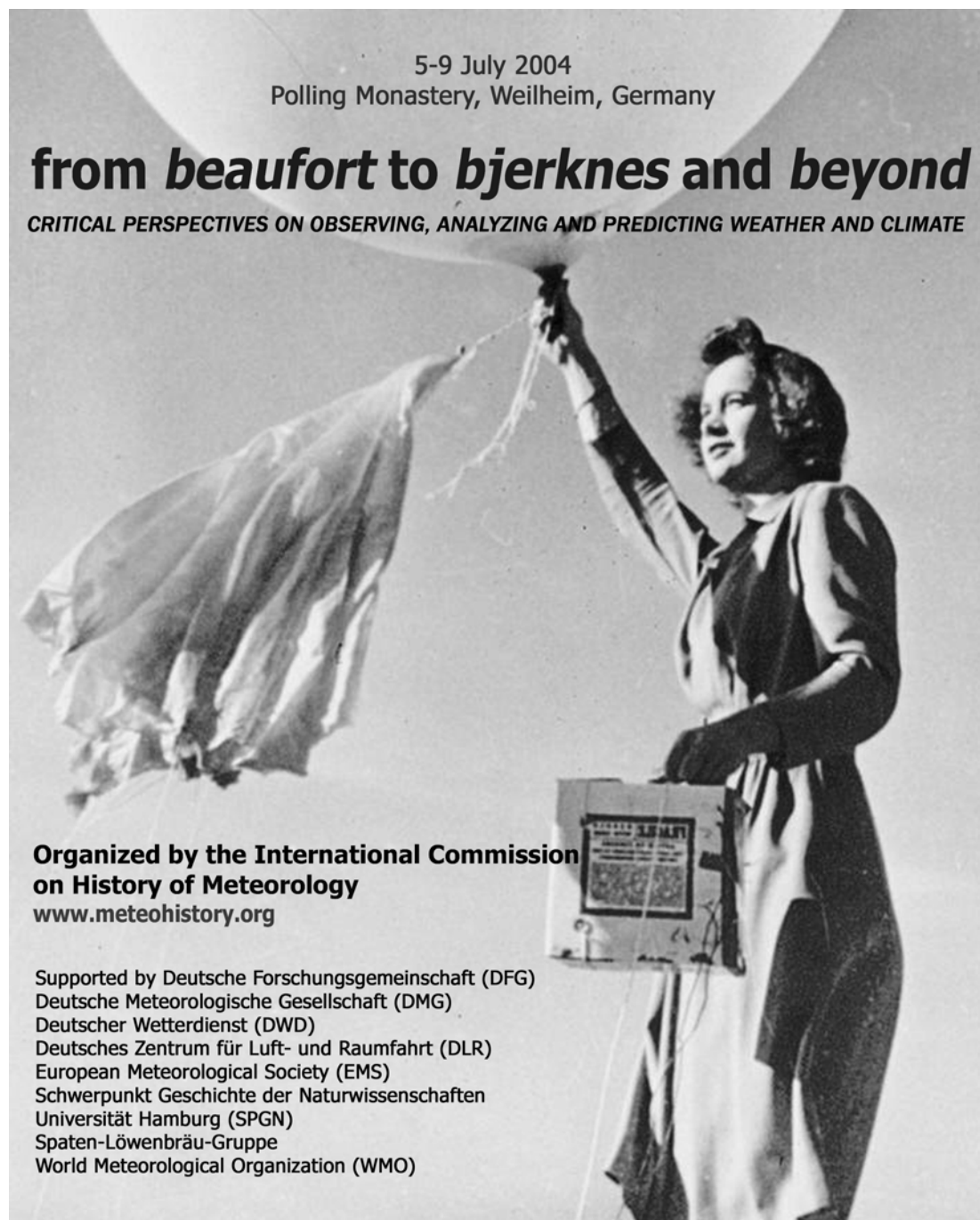


Figure 2: Conference poster in black and white print. The launch of a balloon-borne radio-sonde combined with the optimistic vision of the 1950ies offers a snapshot of the historic development of meteorological observations and nicely depicts the working spirit at which the International Commission on History of Meteorology is aiming at.

The staging of a conference and the following publication of a considerable part of its presentations in durable format constitute an experiment

just like many a scientific project. Success is much aided by trusting support. Therefore it is the authors' pleasure to acknowledge here the truly cooperative spirit by which Editor and Publisher of the serial *Algorismus* enabled us to preserve contents and spirit of "Beaufort to Bjerknes and beyond" to all those alike, who took part in the Polling conference and who could not.

Finally, it is hoped that this book will help to promote the interest in the historical development of meteorology and to provide a further stimulus also for students to consider the roots and foundations of their field of study. In this way it follows the opinion expressed by Adolf von Harnack (1851-1930), founding president of the *Kaiser-Wilhelm-Gesellschaft* (today: *Max-Planck-Gesellschaft* for the Advancement of Science), in a speech to professors and students: "Whatever you study, not do neglect history, history at large as well as the history of your discipline. You should not believe that you can collect pieces of factual knowledge without intimately touching the personalities to whom we owe them and without knowing the pathways how they were found. ... Who restricts himself to learn only results, resembles a gardener planting cut-off flowers."¹

¹ The German original reads: "Was Sie auch studieren mögen, vernachlässigen Sie die Geschichte nicht, die große Geschichte und die Geschichte Ihrer Wissenschaft. Glauben Sie nicht, dass Sie Kenntnisse einsammeln können, ohne sich mit den Persönlichkeiten innerlich zu berühren, denen man sie verdankt und ohne die Wege zu kennen auf denen sie gefunden wurden. ... Wer sich damit begnügt, nur die Resultate sich anzueignen, gleicht einem Gärtner, der seinen Garten mit abgeschnittenen Blumen bepflanzte."