

Antarctic research - No longer a historic matter in the science community On the establishment of an new action group and its first workshop

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The 50th anniversary of the International Geophysical Year is in 2007-2008. On this occasion an Action Group on the “History of the institutionalisation of Antarctic Research within SCAR” was established under the Delegate Committee on Standing Committees and Outreach of the Scientific Committee of Antarctic Research (SCAR) during the SCAR XXXIII Delegates Meeting at Bremerhaven in October 2004. It is the first international and interdisciplinary group devoted to the history of polar research.

The aim of this working group is to obtain insight into the evolution of Antarctic research and the emergence and development of institutions to co-ordinate, what was first called the Special Committee, and then Scientific Committee on Antarctic Research. We plan to study to what degree research in the Antarctic has been driven by scientific criteria, and to what extent compromises were made in the light of political barriers, levels of technological development, logistical limitations, and physical hazards.

In historical perspective, a review will be made of essential background factors, both scientific and non-scientific, at work when nations were moved to participate in the International Geophysical Year (IGY, 1957-1958) at the time of the Cold War. Pertinent in this respect are the different roles played by non-governmental scientific organisations as distinct from intergovernmental organisations or modes of international organisation. Additional socio-cultural and political background factors will be considered with regard to major nations that chose not to contribute to the IGY.

Traditionally, field science practised in remote geographical regions was either a by-product of exploration or an activity exploited by economical interests or territorial claimants. An important aspect of the early international polar year initiatives in the past has been the requirement that expeditions and projects be driven by scientific research instead of exploration. This principle was reiterated in Belgium since 1905 by a number of internationally minded scientists (Henryk Arctowski, William Speirs Bruce, Jean Charcot, Georges Lecointe, Otto Nordenskjöld, and others). This was, when efforts were afoot to establish an international polar commission, a hybrid combination of inter-governmental and non-governmental scientific and other organizations. Although such a commission was actually founded, it had a very marginal influence on events and was soon eclipsed by the First World War.

In the course of the workshops we want to investigate the engagement in Antarctic research. What motivated an individual person or a given country to engage in Antarctic research? Did the motivation differ during different historical time periods? Is it possible to identify different types of role-figures? The next step refers to the realisation of Antarctic research. How were research agendas set up and implemented? What kind of arguments were used to promote Antarctic research? What sort of funding was available, and did different modes of funding affect the character of an expedition and the way it was conducted? Co-operation was also very important in the context. When did co-operation for research pertaining to Antarctica occur, and what was the general orientation and scope? What were some of the obstacles associated with multi-lateral or international co-operation? Finally there had been leading figures in the context of different national settings and perspectives. We want to know, who were the persons that came to be recognised as leading figures in Antarctic research, and for what reasons? To what extent did some scientists emerge as diplomats

within science, or beyond it in the international political arena? How were they regarded by their scientific colleagues, by politicians, media, etc?

To answer these questions the 1st SCAR workshop on history of Antarctic Research took place at the Bavarian Academy of Science and Humanities in Munich on 2 - 3 June, 2005. The Commission for Glaciology of the Bavarian Academy with its first scientific leader Dr. Oskar Reinwarth was involved in the preparatory phase of the construction of the Georg-von-Neumayer-Station and participated in many research projects funded by the Deutsche Forschungsgemeinschaft. On the occasion of the 25th anniversary of the establishment of this West German Antarctic station, a workshop on the history of Antarctic research was held under aegis of the SCAR Action Group and the Commission for Glaciology.

Participants came from Australia, Chile, England, Germany (of course), Holland, Sweden and USA. On Thursday morning, Prof. Horst Hagedorn, chairman of the Commission of Glaciology, welcomed the participants on behalf of the Academy and gave a short introduction to the history of the Academy and the various projects going on. The scientific leader of the same commission, Ludwig Braun, addressed the tradition of Antarctic research at the commission in his welcome speech. Cornelia Lüdecke, chairwoman of the Action Group, gave some technical advises, while Aant Elzinga (University of Göteborg) finally opened the workshop.

Each oral presentation had a time slot of 60 minutes, so it had mostly been enough time for detailed discussions. The posters were on display throughout the whole workshop. Altogether we had nine oral papers and three poster presentations.

Session I started with Jorge Berguño from the Chilean Antarctic Institute (Santiago, Chile) on the dawn of Antarctic scientific consciousness from the Chilean point of view. He described how a sort of elite developed in Chile in co-operation with Antarctic expeditions and with Punta Arenas as focal point for supplies. Due to a very strong earthquake in 1905, the Chilean government was prompted to establish a seismological network instead to realise the planned first Chilean Antarctic expedition. During the discussion, it was pointed out that the International Polar Years (IPY) always took place during fundamental scientific peaks: 1st IPY (1882/83): Observation of the transit of Venus, 2nd IPY (1932/33): Investigation of the upper air, and 3rd IPY (International Geophysical Year, 1957/58): Satellites. Comments on Chileans Antarctic claims in comparison with the Antarctic Treats System were also made.

The poster presentation of five minutes each followed right afterwards. Jason Davis, graduate student from the Department of Geography (Ohio State University, Columbus, OH, USA), explained the changes to Antarctic identity rhetoric as demonstrated by papers published in the National Geographic Magazine. David Michael Dodd from the Royal Society of Victoria / University of Melbourne (Melbourne, Australia) in absence had send a short poster addressing the Australian context of the history of Antarctic research referring to the input of European scientists like Georg von Neumayer. The 'Heroic Age' (until 1916) activities were centred on Australian Antarctic Territory and the Ross Dependency. It was followed by the Second Polar Year (1932/33, Mawson Years), the Third Polar Year (IGY, 1957/58, the Law Years) and Antarctic research in the modern era – the past 40 years. Finally Helmut Honik's (Filchner Archive, Munich, Germany) and Cornelia Lüdecke's poster focussed on the Bavarian officer Wilhelm Filchner (1877-1957) leader of the second German Antarctic expedition to the south eastern part of the Wedded Sea. He wanted to investigate the connection of the western and eastern part of Antarctica being land covered by snow or being frozen water. Filchner's estate is placed in the Filchner-Archive of the Bavarian Academy of

Sciences and Humanities. It holds diaries, correspondences, books, movies, pictures, and personal belongings.

After the coffee break, PhD student Adrian Howkins from the University of Texas at Austin (Abington, USA) discussed Argentine scientific interests in Antarctica from 1946 to 1959. He divided this period in three sections, which were closely connected with changes of government in Argentine: The military or navy period (1946-1951), Peron's period (1951-1956) with the foundation of the Instituto Antártico Argentino, and finally the time after 1956 with the impact of the International Geophysical Year (1957/58) and research in the so-called Argentine sector of the Antarctic Peninsula with respect of occupation. Howkins investigated the organisational structure of Argentine Antarctic science, the nature of Argentine scientific research and the use made of Antarctic science in Argentine political rhetoric. Due to the discovery of fossils on the Peninsula being the same as in the Argentine Andes, Argentine's claims in Antarctica were based on geographical continuity. In the discussion the peculiarity of the Falkland War down to 65 km north of the boundaries of the Antarctic Treaty System was highlighted. British and Argentine soldiers were fighting against each other, while scientists from both countries were sitting at the same table discussing matters of Antarctic research at the same time. Nevertheless a politicalisation of Antarctic history was stated according to Francis Bacon's "Knowledge is power".

Antarctic veteran John C. Behrendt from the Institute of Arctic and Alpine Research (University of Colorado, USA) presented his view of the U.S. Antarctic Overseas geophysical-glaciological research program of the IGY (1957-58). Being a graduate student of geophysics, he participated in the US program as assistant seismologist on the Filchner Ice Traverse, where many crevasses were encountered. At the end of his talk, Behrendt underlined the fact that the highly demanded U.S. air program had resulted in an averaged death toll of 3.8 deaths/year from 1955-1961. In the discussion the special circumstances of the Cold War were emphasised. Everything was made for later territorial claims of the U.S., which never were presented, because the UK forestalled the Antarctic Treaty. Since 1956 the US flag blows above the South Pole, where all claims except the Norwegian one's meet. But today the U.S. needs the help of the Russian icebreaking cruise ships to resupply Mc Murdo, because the US icebreakers and US coast guard ships had been too expensive to be refit in the last years.

It was a pity that the Russian colleagues had withdrawn their participation, because of the business with Antarctic Treaty Consultative Members in Sweden at the same time. Their comments to the discussions would have been very valuable.

In session II after lunch Reinhard Krause jumped in the time slot given to Lisbeth Lewander from the Department of Gender Studies (Göteborg, Sweden), who unfortunately had to cancel her participation on a very short notice this morning due to personal causes. Nevertheless her planned contribution on the political dimensions of the Norwegian-British-Swedish-Expedition (NBSX) to Antarctica 1949-52 will be included in the proceedings. Instead R. Krause gave a paper on Georg von Neumayer (1826-1909) as pioneer of Antarctic research. Neumayer's permanent agitation in favour of a German Antarctic expedition since the late 1850s finally led to the realisation of the first international Polar Year (1882/83), in which two German expeditions took part. One established a station in Cumberland Sound (Baffin Island) and one on the sub-Antarctic Island South Georgia to observe the transit on Venus at the same time.

To fill the time gap C: Lüdecke added a short paper on the Belgian attempt to institutionalize polar research (1905-1915) and the German point of view, which gave insight in the failed initiative of an early polar organisation, to which Berguño and Elzinga referred to several

times during their talks. Aant Elzinga from the Department of History of Ideas and Theory of Science (University of Göteborg, Sweden) continued with his paper on the Swedish non-participation in the Antarctic leg of the IGY. He focussed on the personalities involved. It was interesting to see that prominent participants of the NBSX became rather influential in Antarctic research. But Sweden was not politically motivated and had no champions who came forward to push for activities in Antarctica during the IGY. In the discussion it was noted that Canada was represented in Antarctic research through members of various expeditions since the Scott's Terra Nova expedition (1910-1913). In the middle of June 2005, Canada will finally become a consultative member of the Antarctic Treaty.

When session II was finished, most participants used the beautiful summer evening for a short historic walk through the old parts of Munich passing by the Hofbräuhaus to stop at a typical Bavarian restaurant, where we could sit outside in the beer garden of the backyard. Here, over a glass of beer from Munich, exciting stories from Antarctic expeditions mingled with new ideas of further workshops.

On Friday morning Peter Abbink, a PhD student from the Arctic Centre (University of Groningen, Holland) started session III with a presentation of Antarctica in the 1980s as subject of international politics. Obviously this period had been most dynamic and turbulent in the history of the Antarctic Treaty System (ATS). The debate about the mineral regime intensified and the 'Question of Antarctica' became an annual consideration in the United Nations General Assembly. The support for the ATS increased in the 1980s and the ATS expanded rapidly. Besides the concern for the conservation of the Antarctic natural environment grew considerably. In the discussions on the renewal of the ATS including the decisions about the minerals regime and the environment different types of legal systems had been involved: The German need for exact definitions and the Anglo-Saxon attitude of wait-and-see how things develop.

Johan van Bennekom, retired from Royal Netherlands Institute for Sea Research (Texel, The Netherlands), described the start of Dutch involvement in Antarctic research. In the mid-1960's, Dutch meteorologists were members of overwintering crews in three expeditions to the Belgian-Dutch Station "King Baudouin", situated on the Princess Ragnhild coast. After many years of lacking continuation the Dutch interest in Antarctic research grew again in the 1980s in context with the possible revision of the Antarctic Treaty. While governmental organisations were very much in favour of exploitation non governmental organisations in Holland played a major role focussing on the conservation of nature. Influential persons could help to reset Dutch Antarctic research through the hospitality of other countries to include Dutch scientists in their expeditions as it also happened with West German scientists after World War II. Instead, Holland will never raise money for a permanent station on the Antarctic continent. Therefore there is a move to try and establish a European station to be used by smaller countries like the Netherlands. This was keenly discussed by some Dutch scientists in Utrecht a few years ago, and it seems the French were also interested in such an endeavour.

The next talk after the coffee break dealt with a special case study. Balthasar Indermuehle from the School of History and Philosophy of Science (University of New South Wales, Glebe, NSW, Australia), gave a fascinating Introduction on the history of astrophysics in Antarctica. He identified three steps of development. The astrogeological era from the first discovery of a meteorite during the Mawson expedition (1911-1914) to the large scale meteorites finds in the 1960s, the high energy era with the dawn of high energy and solar astronomy in the 1970's, and the photon era since 1979 with the first optical research program and recent projects in high energy and sub millimetre astronomy. The Antarctic Plateau

turned out to be an ideal place for astronomical observations due to its high altitude and the transparency of several atmospheric windows. This led to the largest single scientific and most international programme at the South Pole. AMANDA (Antarctic Muon and Neutrino Detector Array) is a collaboration of scientists from 20 institutions of six nations. Indermuehle described the special demands of such a project, in which a lot of logistics is involved limiting many other research projects.

The workshop finished with the last paper presented by Cornelia Lüdecke from the Centre for the History of Science, Mathematics and Technology (University of Hamburg, Germany) about the failed initiative of Karl Maria Herrligkoffer's private "German South Pole Expedition" 1957/58. The paper was mainly based on newspaper clippings and pamphlets of the expedition. It is well known that West Germany had decided not send an official expedition to Antarctica during the IGY. Instead in 1955, the physician (specialist in anatomy) and mountaineer K.M. Herrligkoffer (1916-1991) had started a campaign to realise a private expedition the Neuschwabenland, which had been discovered by the 3rd German Antarctic Expedition (1938/39). In 1953, Herrligkoffer had been subject of headlines because of his successful expedition to the top of Nanga Parbat as well as his style of leadership. Due to a lack of his (scientific) competence, the German Geographers Day at Hamburg recommended not to support his expedition. Besides, Wilhelm Filchner (1877-1957) was engaged by the scientific community to demand an agreement from Herrligkoffer about not including his expedition in the official frame of the IGY. Finally Herrligkoffer's plan was not realised, because he was not the right man at the right place.

At the end of the workshop plans were made for a new meeting either in Argentine or in Chile at the end of May 2006. Besides a session will be also organised at the Open Science Conference of SCAR at Hobart (Tasmania) in July 2006, because we want to address colleagues from Asia as well.

The proceedings of the first SCAR workshop on the history of Antarctic research shall be published in the Reports of Polar and Marine Research of the Alfred Wegener Institute in Bremerhaven (Germany) prior to the SCAR Conference in 2006.

The German journalist, Wolfgang Karg from Berlin, also participated at the workshop. Afterwards he made some interviews with the speakers on their personal experience in Antarctic research as well as the significance of the history of Antarctic research for the future.

Summing up the workshop it can be said that the mixture of PhD and graduate students, historians, Antarctic veterans, and historians of science, as well as profound experts of the Antarctic Treaty led to very lively and interesting discussions. Between single sessions nice coffee breaks right next to the conference room facilitated continuation of the discussions. During lunch breaks typical Bavarian dishes like "Leberkäs" with potato salad or "Weißwürstel" with pretzels were served at the same place.

The workshop had been sponsored by the Scientific Committee on Antarctic Research, Deutsches Zentrum für Luft und Raumfahrt (Oberpfaffenhofen), Deutsche Gesellschaft für Polarforschung, und Schwerpunkt Geschichte der Naturwissenschaften, Mathematik und Technik (University of Hamburg) and Spaten-Löwenbräu Gruppe.

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