



Eine Nordpolsfahrt der Zukunft.
Originalzeichnung von H.

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Imparting of Polar Research to the 1880's Public

The International Polar Year 1881/1882 marks a significant change in writing about the Arctic to the middle classes of central Europe. Up to that time many of these reports had been thrilling, dramatizing, and had glorified the own nation. Following the Polar Year, writing gradually became less emotional, more sober, induced by scientific standards. The present paper will call attention to that change.

The study is limited to quotations from two contributions printed in "Die Gartenlaube", a German family-magazine edited in the years 1853 through 1944. With its six million readers in the 1880's, this magazine may be considered to mirror the tastes and interests of the broad German public. – The general shift in imparting Arctic topics to the public following the Polar Year could be shown on the 10 per cent significance level: That means the change in the attitude to report more matter-of-fact is significant with the probability of 10 per cent of accidentalness.

Towards the Polar Year

In the second half of the 19th century the term "Polar research" covered both meteorological and physical studies. "Physical" then meant electric currents, magnetic storms and the aurora. The key to understand global geophysical processes, including weather linked to vortices in middle and higher latitudes, was presumed to be found in the polar region.

Until the 1870's, most polar expeditions had economic concerns, e.g. northern sailing routes between the Atlantic and the Pacific, or hunting. Geographers were eager to map the globe towards the North Pole. Scientific observations by different expeditions and even by hunters from Northern Norway in the

1860's were not coordinated and lacked comparability (Mook, 1996).

Georg Neumayer, navigator and the first Director of "Seewarte" at Hamburg (an institution for maritime sciences), emphasized in the late 1860's the need for concerted observations at high latitudes of both hemispheres if regularities could be derived. Later, in 1875, strategically well communicated to the Assembly of German natural scientists and physicians at Graz, Karl Weyprecht claimed his famous five principles for research in the Arctic:

Arctic research is important for life on earth.

Discovering Arctic territories is significant only, when useful for science.

The details of geography are of minor interest.

The North Pole had to be put on an equal footing with any other place at higher latitudes.

The intensity of phenomena studied, not the latitude decides the value of sites for observation.

Weyprecht, naval officer in the Austro-Hungarian fleet, analyzing his observations carried out 1872 to 1874 in detecting Franz-Joseph-Land, felt the urgent need of comparative data. Neumayer and Weyprecht together proposed at the Second international meteorological Congress at Rome in 1879 that coordinated systematic readings be conducted at sites operated as networks in both the polar area. Their suggestion led to the Polar Year (Mook, 1982).

"A Future Travel to the North Pole"

... was the title of an article published by "F" (Anonymous, 1883). The Arctic was described as "an icy hell on earth". The article discussed strategies about how to reach the Pole. The Pole itself was still considered to be a special point on the globe. – Actually, this was the case even for Amundsen, Scott and many other explorers, though not justified from the scientific point of view.

Nowadays the Pole still appeals to people and has become a destination for tourism.

Based on knowledge about the Arctic environment and anticipated technology, a futurological outlook was given: "Several bold researchers to come will wane in the fields of snow and ice of the polar territories and seas before one may succeed to unfold the banner of science at the very ending of the earth's axis, the North Pole."

The reader learns about three gates to the Polar Sea: West off Greenland where a British expedition in 1875 had reached for the first time the northernmost position 83 degrees 20 minutes N, the European sector, and the Bering Strait. The Arctic environment was considered to be the enemy. But, in agreement with the spirit of the late 19th century, the reader was told man never should surrender. Achieving the Pole would require the establishment of basic stations at the utmost points reached by sea, and farther transport "independent from water, ice or land."

Concerning these two items, it was stated: "Proudly we can highlight that Germany is represented in the international circle of stations established as bases for later to explore the Poles by all civilized peoples of the earth, even if at present established as scientific observatories only. Similarly the second means is already taken account for as some British-American Society intends to use balloons and dynamic airships at a North Pole expedition." – Author "F" expects that the Poles were of overriding importance to the public. Though international cooperation had been demonstrated by the Polar Year, the national role is emphasized. Acclimatization, comfortable housing, depots, optical telegraphy, an aerostat as carrier would be the tools to cover the ultimate leg to the Pole.

"F" writes: "It seems to us that first of all completely acclimatizing to those rough regions filled by ice and moved by gales would be necessary and that those researchers who have chosen the North Pole as their goal should have to stay for a long time at more southern Arctic sites, and to proceed with longer stays in between towards the North."

Comfort indoors was rated high as "F" proves by the "shining example" of the American Charles Francis Hall. Though he had lived with Inuits for seven years and adapted himself to the Arctic environment, deprived of any comfort in 1871 in northernmost Greenland, he was defeated by "the impact of near permanently numbness breathing climate." However, the core of the crews at German observatories through the Polar Year would in due time "represent an army winning the decisive battle about the North Pole." Nationalistic and military ideas shine here and augment the German Nation's splendour.

An illustration designed by "F" shows how contemporary and future expeditions were imagined. A map over the Arctic north of latitude 73 visualizes the vast areas more or less unknown. Map and compartments of the figure are bordered by trunks of birch trees, a romantic frame taken from the latitudes of northern woods and in contrast to the barren characteristics of the high Arctic shown.

The upper two compartments show above bizarre icebergs, boats and cottages, a captive balloon and an aerostat (piloted balloon). On the left side one can see rocks of basalt emerge from the sea, with an observatory at the rock's top. The polar night is indicated by a crescent moon. On the right side, beneath the rays of aurora, a caravan of sledges travelling between icebergs is visible. - The two lowest compartments illustrate a comfortable observatory with all the necessary attributes, including dog kennel.

Referring to the three gateways towards the Pole, "F" states: "In all these areas German men have already worked and suffered, German tongues have sounded (...) and bear the discovered territories the names "König-Wilhelm-Land" and "Franz-Joseph-Land." There, German words should be heard again, and at the North Pole the flags of Germany and Austria become combined to the advantage of science, just as they already wave together in mutual national interest and loyal friendship."

Likely the latter was an allusion to the Berlin-Congress in 1878 which supported the Austro-Hungarian occupation of Bosnia and Herzegovina. Because of the Weyprecht-Payer-expedition, Austria had to be considered as an ally of Germany even in the

Arctic. – Longing for the Pole is legitimized by pretended scientific interest, in contrast to the thesis by Weyprecht and approved by science. Requesting German-speaking explorers to areas of their earlier activities seems to be considered more important than to avoid the outlets of ice from the Polar Sea.

With reference to the fate of Charles Francis Hall "F" deals with the necessities of life in the Arctic: "Housing in any case must protect from the biting cold exceeding the freezing point of mercury by far, from blowing snow burrowing into the core, and from the gales force. Water from melted snow and canned food will surely be the only one permanently available to those dammed to the ice," a description catching the reader emotionally.

"F" claims that clothing, food and other supplies in the past always had been adequate, except housing. The reader and viewer of the heavy block cabin drawn at this point begin to feel comfortable on behalf of the explorer. But the reader's imagination is quickly steered back to the burdens and dangers of polar exploration: "Steeply rise the rocks above the sea that borders to the vast surface of the pack ice nearby. Valleys are not accessible at any site because of the ice flowing as glacier from the land's interior towards the sea."

When the topographic obstacles can be overcome, the real grind to establish the station at an elevated site starts: "With difficulty must even the smallest needed object be carried aloft. Finally the housing of the station is completed, all supplies taken care of, especially the remaining of the ship's timber and the coal. The tower for observations, safeguarded by wires and provided with an optical telegraph, wait for use. The dogs, intended for the sledges, are happy on the solid ground of the kennel equipped with small cottages."

The reader, at that point breathing freely, is rapidly reminded of restrictions: "As long as the short winter-like summer does permit, one tries by hunting to augment the provisions. All the nature in itself is an unlimited ice cellar preserving even the most excessive bag. Every produced skin makes the block cabin more comfortable, every ton of fat or train oil contributes to light and heating."

"F" expounds the strategy of secondary stations in order to ensure safe retreat, before the "struggle for the North Pole" begins. Then "the lasting daylight will for long have given way for the terrible and for every traveller to the North Pole just eternal night", and the crew has to withstand "the raving mad stormy atmosphere".

Visionary for his time, "F" tells that the ultimate insurmountable obstacles on the path to the Pole will be overcome by a navigable balloon (aerostat) "grooving through the icy air". When the Pole was reached, one would have to wait for the wind back to the south. For safety a small boat, a sledge and food for thirty days should be onboard. Because of the weight, only one or two persons might travel. Rhetorically the reader is asked: "Who will be the first to entrust oneself to an aerostat in those zones? Kind reader, ask your own heart!"

The first balloon destined for the Pole has been "Örnen" (= "Eagle") commanded by the Swedish Salomon August Andrée. In 1896 the wind blow in wrong directions. The balloon started from Western Spitsbergen July 11th 1897, on board four people, equipped with food for 6 months. The balloon force-landed July 14th due to severe icing. The Swedish meteorologist Malmgren was missed. The others tried to escape to Franz-Joseph-Land, changed then towards Spitsbergen and were found there 33 years later.

"Changes in the Polar Research Goals"

...is the title of an article by Loewenberg (1886), published three years later than the description by "F". Loewenberg pointed out that most of the attempts to explore the hardly accessible Arctic had been sacrifices of little value. Scientific polar expeditions might be useful to mankind, but they did not need to reach the Pole, according to Loewenberg. He also claims respect for the inaccessibility of the Arctic. Loewenberg published his article on the occasion of the centenary of John Franklin's birth in 1786. Franklin had lost his life in the American Arctic. His expedition's fate was not revealed until 1879, thirty-four years after its departure for the Arctic. Similar fatal experiences in the past should have been a lesson to refrain from trying the impossible. As

early as 1776, Charles Clerke having attempted the route along the North of America from the Bering Strait, had concluded: "All the futile efforts to reach the utmost polar areas have cured the world for ever from the mania of such exploring expeditions." – Actually, the second half of the 18th and first half of the 19th centuries were exponents of the "Little Ice Age" (Luterbacher, 2001).

Loewenberg reminds the reader of all trials in vain to find a navigable route north off America. Except localizing the northern geomagnetic pole in 1830 by John Ross, none of any expedition's objects were attained. "However, the demand for reaching the Pole was not dampened. At least all the strains of the English and the Northern Americans grew into a chase like a sporting event to approach the Pole and to find out whether it was surrounded by ice, open sea or land (...) reaching beyond latitude 82." The text avoids exciting attributes.

Science in the 19th century was interested in geophysical processes in the wide areas of lower Arctic latitudes, not at the pole-point. Oceanic expeditions covering the sea east off Greenland, rather than still higher latitudes, were encouraged by the German geographer August Petermann. The Norwegian Henrik Mohn, the world's first professor in meteorology, conducted scientific voyages in 1877 to 1878 in what he, in order to put Norway on the map of a nation, called "Norskehavet" (Norwegian Sea), at that time called "Nordmeer" or synonyms without reference to Norway. Ahead of his time, Mohn focussed on feedback between the sea and the atmosphere off the Norwegian coast. The Polar Year had shown the value of circumpolar observations as demanded by Weyprecht's 5th thesis cited above.

Loewenberg widened the nationalistic limits of that time. He states it would make no difference whether explorers "use caps or helmets, wear blue or grey trousers, whether recently discovered land was called "Franz Joseph" or "Wilhelm", or that foothills with a rampart of ice are named "Andrassy" or "Bismarck"". However, a concession to the nationalistic expectations by the readership is made: "What does it matter when the enterprise was initiated by German spirit and carried out by Germans? Even the

Swedish explorer Nordenskjöld, who sailed successfully along the Siberian shore and reached the Bering Strait “belongs to the Germanic tribe.”

Loewenberg emphasizes the International Polar Year’s cooperation. Thus, the article draws the reader’s attention towards fruitful polar research instead of national competition with small scientific outcome.

To Loewenberg the case of Franklin, a “polar martyr” and victim of materialist interests, “shows a warning mirror against human mistakes, but also shows the illuminating torch of ideally and scientific efforts in the near and farther future.”

Polar exploring as tool to rebuild the Norwegian nation

North-Norwegian hunters in the adjacent Arctic during the second half of the 19th century were well acquainted with sea ice and the topography of those regions. The polar expeditions carried out by foreign European countries, often sponsored by outstanding personalities, served besides other objects the country’s glory. Experienced arctic hunters from Northern Norway were often hired of those expeditions as experts on sea ice and Arctic environment. Should the occasion arise, could the advice by these experts decide a life-and-death struggle. Thus, Norwegian expertise contributed to the honour of foreign explorers and nations. However, Norway itself needed in the 19th century to rebuild the idea of a nation (Salvesen, 2008). For centuries had Norway been under the rule and cultural alienation by Denmark, and since 1814 (until 1905) in union with Sweden.

The dilemma for Norwegian experts on foreign expeditions can be understood from the example of Elling Carlsen who had participated in the Weyprecht-Payer-expedition. Carlsen, born in 1819, was the first to hunt in the east of Spitsbergen in 1859. He had sailed around the whole archipelago in 1863 and in 1871 discovered the winter camp of Barentz in the north of Novaja Zemlja. Later Carlsen acted as an advisor in planning the Polar Year. Carlsen (1875) published extracts from the diary kept on the expedition mentioned. He wished to tell the Norwegian public about his own experiences and assessments that in several cases

did not concur with the expedition's leadership (Weyprecht at sea, Payer at land).

One for Carlsen important concern was to ensure that Norway should share in the honour derived from expeditions and share in the names and flags introduced by foreign nations to the Arctic, regions visited by Norwegian hunters since long ago (Mook, 1983). In the preface to his book, Carlsen wrote: "I would appreciate very much in case these few pages might contribute to see to it that the interest in these polar areas, where there still is to be done a great deal of research, will be maintained among our compatriots. Action is now taken by different foreign sides to investigate those zones with supreme effort. Might our own country in this respect not totally restrain but contribute, as capable, to the definite solution of all the tasks."

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