

Parallel Precedents for the Antarctic Treaty

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INTRODUCTION

Uninhabited and remote regions were claimed by a nation when their economic, political, or military values were realized. Examples from the Northern and Southern hemispheres show various approaches on how to treat claims among rivaling states. The archipelago of Svalbard in the High Arctic and Antarctica are very good examples for managing uninhabited spaces. Whereas the exploration of Svalbard comprises about 300 years of development, Antarctica was not entered before the end of the nineteenth century. Obviously, it took much more time to settle the ownership of the archipelago in the so-called Svalbard Treaty of 1920 than to find a solution for Antarctica and the existence of overlapping territorial claims by adopting the Antarctic Treaty of 1959. Why was the development at the southern continent so much faster? What is the essential difference between the situations obtaining in the two hemispheres? Was there a transposition of experiences from north to south? And did the Svalbard Treaty help to construct the Antarctic Treaty? Answers to these questions will be given by the analysis of single periods in the history of polar research, scientific networks, and special intergovernmental and nongovernmental organizations with concomitant scientific or economic interests that merged in the twentieth century to arrange exploration and exploitation of polar regions on an international basis.

EXPLORATION AND SCIENCE BEFORE WORLD WAR I

SVALBARD

After the era of whaling around the archipelago of Svalbard, the Norwegians were the only ones to exploit the area economically, including fishing, since the 1850s, whereas Swedish expeditions starting in the same decade were the first to explore the interior of the islands (Liljequist, 1993; Holland, 1994; Magnússon, 2000). Names were given to discoveries, therewith inscribing on maps the idea of occupation and claims (Wråkberg, 2002; Norwegian Polar

Institute, 2003). However, at the end of the nineteenth century, the archipelago of Svalbard still was a *terra nullius*, or “no-man’s land.” This situation changed when coal mining began on West Spitsbergen, the main island of the archipelago (hereafter called Spitsbergen) in 1898. The British were the first to open a coal mine in Advent Bay. From then on, the land around a mine was claimed by Americans, Norwegians, Swedes, and Russians or by companies from those countries. Coal from Svalbard tends to be purer and burns much more efficiently than coal from other mines, thus making it a desirable resource, especially for Norway and Russia.

When Norway separated from Sweden and became an independent kingdom in 1905, it led to a Norwegianization policy, especially relating to Svalbard with its important resources (Ericson, 2000; Barr, 2003). Thus, Svalbard should become Norwegian, a claim that led to serious disputes about ownership. A joint Norwegian, Swedish, and Russian administration could have been one of the options to solve the problem, and a lot of effort was spent to satisfy all needs, but all negotiations came to an end because of the outbreak of World War I (Wråkberg, 2002; Barr, 2003).

In 1910 Ferdinand Graf von Zeppelin of Germany led an expedition to the west coast of Spitsbergen to examine the feasibility of using his airships for exploration of the Arctic from the air (Lüdecke, 2008). The results of the expedition showed that there was far too little meteorological information available to realize safe zeppelin flights in the unknown Arctic. Consequently, in 1911, a German geophysical observatory was established on a private base for the investigation of the upper air (Dege, 1962; Lüdecke, 2008). It was the first permanent manned scientific station functioning in Spitsbergen until the outbreak of World War I. Then the station was closed permanently, but the published data became a valuable source for later climatological analysis.

The establishment of coal mines and the German meteorological station to support further exploration by aircraft both hinged on a geopolitical motive in their permanent maintenance as an underlying and tacit mode of effective occupation (Wråkberg, 2002; Hacquebord and Avango, 2009).

ANTARCTICA

Throughout the eighteenth century sealing only took place at peri-Antarctic islands (Riffenburgh, 2007; Headland, 2009). The scientific intermezzo of the “magnetic crusade” to discover the magnetic pole on the Southern

Hemisphere by competing British, French, and American expeditions around 1840 laid the foundation for later British and French claims in Antarctica on the basis of the principle of “discovery.” When whaling in the Arctic declined, new whaling grounds were found in Antarctic waters at the end of the nineteenth century, but at that time, there was no need to sail farther south for exploration of the terra incognita.

In contrast to private or national initiatives to explore Spitsbergen, the first exploration period of the Antarctic continent was organized on an international level by the VIth International Geographical Congress at London in 1895. The General Assembly recommended that scientific societies throughout the world should urge the exploration of the still unknown South Pole region (Lüdecke, 2003). The rival political great powers, Great Britain and Germany, were especially interested in this project. They established their own national commissions involving the most knowledgeable persons available to prepare an Antarctic expedition for exploration and discovery. However, it was the Belgian naval officer Adrien de Gerlache who most immediately followed and realized the *Belgica* expedition (1897–1899), which not only comprised an international crew of seamen and scientists but was also the first expedition ever to overwinter in Antarctic waters.

During the VIIth International Geographical Congress in Berlin in 1899, Clements Markham, president of the Royal Geographical Society in London, defined the fields of work of the planned German and British expeditions. He divided a map with the outline of Antarctica into four quadrants starting at the 0° Greenwich meridian. The Weddell and Enderby quadrants were designated as the working area of the German expedition, whereas the Ross and Victoria quadrants were designated as British owing to earlier British exploration and early scientific work in that region.

Additionally, an international cooperative effort around meteorological and magnetic measurements evolved in the period 1901–1904, largely designed along the lines of the program of the first International Polar Year (IPY, 1882–1883). The secretariat of the congress at Berlin functioned as coordinating agency. Thus, in spite of the political rivalry between Great Britain and Germany, a scientifically driven agreement was obtained with no governmental influence. After the return of the British (leader: Robert Falcon Scott), German (leader: Erich von Drygalski), Scotch (leader: William Speirs Bruce), and Swedish (leader: Otto Nordenskjöld) expeditions, all meteorological data of the participants were collected, analyzed, and published in Germany.

Although not mentioned explicitly, imperialistic interests were the backstage driving force of this period. The

political evaluation of the expedition brought shame to the German emperor Wilhelm II. He felt beaten because Scott had reached 82°S, while Drygalski's ship was trapped by ice at the polar circle. A side effect of this period was the foundation of an Argentine-Norwegian whaling company and the first whaling station in Grytviken on South Georgia by Nordenskjöld's expedition captain, Carl Anton Larsen, in 1904 (Fogg, 1992; Riffenburgh, 2007). His initiative triggered the onset of a very successful and lucrative whaling business in Antarctic waters.

Ten years later conditions had changed, and the South Pole became the object of political and personal interests. After his first expedition, it was well known that Scott planned to conquer the South Pole for the British empire. At the same time Wilhelm Filchner of Germany raised money for a private expedition to investigate whether west and east Antarctica were connected by land or separated by an inlet filled with ice (Filchner, 1994). His original plan was to perform a trans-Antarctic expedition in cooperation with the British expedition (Lüdecke, 1995). Instead, Antarctica obviously had become a place of imperialism, where scientific collaboration had lost its base. There was an uproar when Roald Amundsen, who had gained Antarctic experience as second mate during the *Belgica* expedition, headed south to win the race to the pole. This was regarded as an affront and an act of trespassing in the eyes of Scott's compatriots (Fogg, 1992; Headland, 2009). Additionally, a private Japanese expedition appeared at the Bay of Whales close to Amundsen's wintering station, but without appropriate equipment and lacking experience, it could only perform limited research.

INTERNATIONAL POLAR ORGANIZATION

When the first wave of Antarctic expeditions returned after the successful period of international cooperation in the beginning of the century, their achievements were discussed during the International Congress on World Economy in Mons (Belgium) in 1905 (Lüdecke, 2001). A resolution was passed that the Belgian government should be requested to organize an "International Congress for the Study of Polar Regions" in the following year. The initiative came from the director of the observatory at Uccle, Georges Lecoq, the former navigation officer of the *Belgica* expedition. He planned to establish an "International Association of Polar Research" with the following objectives (Lüdecke, 2001:162):

1. an international agreement on open questions of polar geography,

2. a general effort to reach the poles of the Earth,
3. expeditions to increase our knowledge of the polar regions, and
4. a specific program of scientific work to be carried out by different countries during their international expeditions.

It was quite obvious that governmental support was needed to institutionalize polar research in the participating countries, but this support was unlikely because serious questions of power already threatened to shake the political balance at that time. However, Lecoq's proposal was signed by most Antarctic expedition leaders present at Mons. After the congress, the Polish member of the *Belgica* expedition, Henryk Arctowski, published a proposal for the planned meeting in 1906, in which he suggested purely geographical research expeditions in Antarctica as a first step, to be followed by fixed circumpolar overwintering stations to facilitate systematic scientific investigation as the next step, supplemented by extended overland journeys for geological investigations of the continent (Arctowski, 1905). During the subsequent congress in Brussels in 1906, when the draft of the statutes of the planned polar organization was discussed (Beernaert, 1906), Nordenskjöld was the only acting delegate present who had participated in the first international cooperative effort of Antarctic expeditions (Lecoq, 1908a). The goals of the association were (Lüdecke, 2001:164):

1. systematization of polar research,
2. support and publishing of the results of polar research, and
3. support of enterprises with respect to the scientific investigation of polar regions through material and advisory support.

Some scientists supported the idea of setting up this kind of international polar commission, one that would only give advice to expeditions. However, polar research seemed not yet to be ripe for this type of organization without some national polar institute to back it up. Others criticized the planned composition of the commission favoring polar explorers above scientists as the main participants at a time when a combination of station observation and geographical exploration was still essential. Finally, a polar commission was established as an intergovernmental organization with official delegates representing participating states. In addition, persons without a mandate from governments were allowed to contribute to the polar conferences in their individual capacities. Participants

regretted that the original intention of an International Polar Association to firmly organize polar expeditions was not achieved.

When the next conference took place in 1908, only 12 countries participated. Notably missing were leading states in polar research, like the United Kingdom, Germany, and Norway, a gap that indicated the waning interest in this internationalist project. However, the statutes of the International Polar Commission contain nine significant articles that were approved. The objects of the commission were

1. establishment of closer scientific relation between polar explorers,
2. securing methods and coordination of scientific observation,
3. discussion of scientific results of expeditions, and
4. assistance to enterprises to study polar regions.

Nordenskjöld was elected vice president and Lecointe became secretary of the commission. During the conference Arctowski presented a plan for international cooperation, and Lecointe gave an outline of the establishment of an international polar institute and library (Arctowski, 1908; Lecointe, 1908b).

It took five years to organize the third polar congress, which was held in Rome during the Xth International Geographical Congress in 1913 (Lecointe, 1913). Both poles, one of the major goals of the commission, were reached twice in the meantime. In Rome, Nordenskjöld was re-elected vice president, and Robert Edwin Peary, who stood at the North Pole a year earlier, was made secretary general. The International Polar Commission was a farsighted attempt to organize bipolar research on an international basis, but polar research still was not institutionalized in any country. This failure, finally, contributed to the commission being dissolved during World War I.

INTERWAR PERIOD (1918–1939)

SVALBARD TREATY

World War I interrupted the negotiations about the fate of Svalbard and, luckily, also offered a solution in the course of the Versailles negotiations. Finally, the Treaty Concerning the Archipelago of Spitsbergen (later called Svalbard Treaty; available at <http://www.jus.uio.no/treaties/01/1-11/svalbard-treaty.xml>, accessed 29 October

2009) between Norway, the United States, Denmark, France, Italy, Japan, the Netherlands, Great Britain and Ireland and the British overseas dominions, and Sweden was signed on 9 February 1920. One hundred-twenty claims existed at that time (Sysselmannen, 2008). The treaty established Norway's full sovereignty over Svalbard, including the obligation to protect Svalbard's natural environment. Other important points were demilitarization, free communication, and equal rights regarding economic exploitation by citizens of other treaty nations for the development and peaceful utilization of the archipelago. It also made a commitment toward the management of research in Svalbard as well as regulation of the same. Above all, an international meteorological station was to be established, referring to the earlier permanent observatory that had been briefly maintained by Germany. A mining code was added in 1923, defining claims up to 120 km², which were to be based on "geological indications," primarily from aerial photographs (Barr, 2003).

It took more than five years to gather the most important signatures for the treaty. Among them, Germany, with its scientific work, and Russia, with its coal mining industry, were seen to be crucially important actors in view of claims that might be raised later. The treaty entered into force as Svalbard Act on 14 August 1925. When the claims were finally settled, interest turned toward international cooperation in research. Not only were grants for expeditions to Svalbard given by the Norwegian government, but also the Norwegian Polar Institute was founded in 1928, a way of achieving further Norwegian influence. The Svalbard Treaty, giving sovereignty to Norway and granting exploitation rights to all treaty nations, showed how claims of an originally uninhabited polar region could be handled.

ANTARCTIC CLAIMS

After World War I whaling in Antarctic waters increased again. The British income from whaling licenses and later from taxes on whale oil were used to purchase the *Discovery* and refit it for oceanographic research in 1923 (Savours, 1992). The American Antarctic policy at the time was inconsistent, with the United States, on the one hand, sometimes unofficially indicating that a claim was to be laid but, on the other hand, officially denying "discovery" as a valid principle for claims, replacing it with the principle of "effective occupation" entrenched in the Hughes Doctrine of 1924, which entailed a criterion more difficult to fulfill (Hall, 1989; Riffenburgh, 2007).

Toward the end of the 1920s, aerial flight reconnaissance was introduced in Antarctic research, strongly promoted and exemplified by the American polar researcher and navy officer Richard Evelyn Byrd, who flew to the South Pole on 29 November 1929 (Headland, 2009). In addition, many discoveries were made by whalers, namely, by the Norwegians, who charted the coast of Lars Christensen Land in the 1930–1931 season. Parallel to the growing whaling industry, scientific expeditions were funded for the preparation of national claims. Byrd's second expedition to the Bay of Whales (1933–1935) led to extensive geological survey and reconnaissance flights to the interior of the Antarctic continent. And the third German Antarctic Expedition 1938/1939 performed an extensive aerial mapping with the aim of occupation between 14°W and 20°E to secure German whaling interests (Lüdecke and Summerhayes, In press). Antarctic mineral resources like coal did not play any role until the mid 1970s (Fifield, 1987).

At the same time, neighboring states like Argentina and Chile, as part of their self-interest, developed the concept that parts of the Antarctic Peninsula belonged to their countries. In the course of the discoveries of the seventh continent as well as the fishing and whaling grounds in the adjacent Antarctic Ocean interested parties promoted their wish to foster their claims of the uninhabited area. Cutting the continent into big cakelike slices similar to what Markham had done was one option. But both South American countries had overlapping claims that interfered with British claims made in 1908 and 1917, including the Malvinas (Falkland Islands). These overlapping claims complicated the issues that had to be handled (Howkins, 2006). Then, in 1937 Argentine claimed a right to all British dependencies because that area was defined as included under the scope of the Treaty of Tordesillas of 1494 (Fuchs, 1983; Howkins, 2006). In 1940 Chile also put forward similar claims with the geological argument that the peninsula is a natural continuation of the Andes and thus part of the motherland. This dispute became the so-called "ABC Problem" between Argentina, Britain, and Chile. In 1943 the British reacted and started the naval expedition Operation Tabarin (1943–1945) to "preserve the country's existing rights by occupying and re-occupying various sites within the Falkland Island Dependencies" (Fuchs, 1983:31). The first two permanent bases were established on Deception Island and at Port Lockroy, both claimed by Argentina. Continuous meteorological and other scientific investigations, including biology, geology, and survey, were performed to strengthen the British claim (Headland, 2009).

INTERNATIONAL SOCIETY FOR THE EXPLORATION OF THE ARCTIC REGIONS BY MEANS OF AIRCRAFT (AEROARCTIC)

Rapid development of airships during World War I provided a new means of transport, with airships that could fly over great distances and carry heavy loads. In the future they would offer the first suitable means for trans-Arctic traffic routes from Europe to Tokyo or San Francisco, at least according to a much-discussed suggestion emerging in commercial circles in Germany in 1919.

For further planning, more meteorological information than already provided by the German observatory in Spitsbergen was needed. A German initiative promoted a feasibility study, i.e., an airship expedition (Lüdecke, 1995). This study led to the foundation of the International Society for the Exploration of the Arctic Regions by Means of Aircraft (Aeroarctic) under the presidency of Fridtjof Nansen and incorporated in Berlin in 1924 as a nongovernmental organization (Studiengesellschaft, 1924). It was the first international scientific organization with German and Russian members after World War I. At that time both countries were still excluded from the International Research Council (IRC) founded after the war by the scientific academies of the major Allied nations, with the rationale that excluding the former Central Powers was necessary to prevent a new rise of German scientific dominance (Cock, 1983). The inclusion of Russia in Aeroarctic was essential since cooperation in the Russian Arctic was crucial for the exploration of trans-Arctic air routes. In the end the society consisted of 21 national committees with 394 individual members and 42 bodies (Lüdecke, 1995, 1999). Aeroarctic was managed by the Council of the Society, the Exploration Council, and the Ordinary General Assembly of the members (Anonymous, 1931); see Figure 1. An editorial board for the journal *Arktis* was also installed (Nansen, 1928–1929; Berson et al., 1930–1931). The journal came out for four years and terminated in 1931 as a result of the economic crisis.

The president of the International Meteorological Organization (IMO) Ewoud van Everdingen concurrently became the Dutch member of the Council of Aeroarctic. He was the ideal person to promote the exploratory study expedition within the most appropriate organization (Cannegieter, 1963). In addition, the Danish Aeroarctic member, Dan LaCour, became president of the Commission for the Second International Polar Year (1932–1933) of the IMO. Six more scientists were members of both groups, four of them even on the council of Aeroarctic. This overlap underlines the successful international networking of

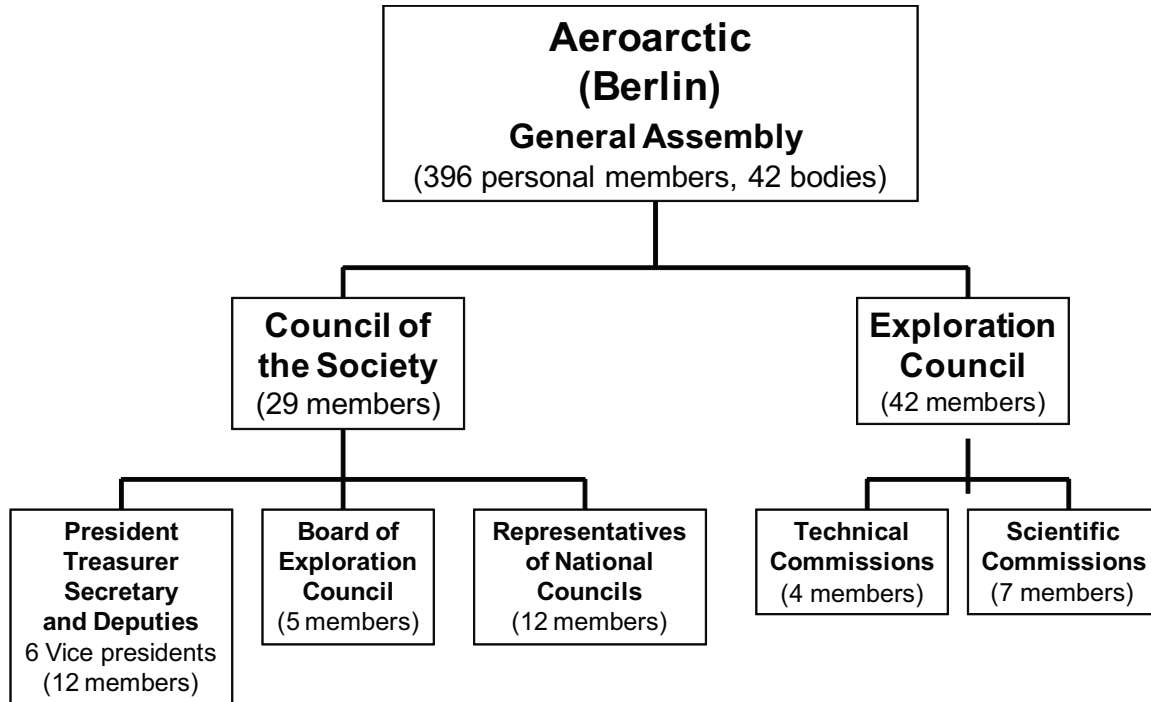


FIGURE 1. Organization chart of Aeroarctic in 1931 according to Berson et al. 1931.

Aeroarctic. Moreover, it is interesting to note that Everdingen and the Polish member Arctowski were also familiar with the early attempts of the International Polar Commission. Everdingen had been one of the Dutch deputies delegated, and Arctowski was a Belgian deputy delegate and, of course, one of the driving forces of the prewar International Polar Commission (Lecointe, 1908a).

Membership in Aeroarctic was dominated by 32% Germans, 20% Russians, and 12% Americans. During the meteorological planning for the expedition with the airship LZ 127 *Graf Zeppelin* to the Russian Arctic, more meteorological data were needed. Such data, it was held, might be supplied by a new International Polar Year (Second IPY, 1932–1933), a notion originally suggested by a member of Aeroarctic: “The permanent monitoring of the [Russian] Arctic is, so to speak, thought to be a permanent repetition of the International Polar Year 1882/83, only with the difference that the airship as means of transport would be introduced” (Berson and Breitfuß, 1927:112, my translation).

In the first volume of the journal *Arktis*, Nansen described the proposed working program of the society, including a network of observing stations on islands in the Arctic Ocean and additional radio weather stations on the drift ice of the inner Arctic installed with the help of

airships or aircraft for monitoring of the geophysical conditions (Nansen, 1928). Later, drift stations became part of the Russian Second IPY program. After the return of the successful zeppelin expedition with LZ 127 *Graf Zeppelin* in 1931, data were analyzed and the results published. With the ill-fated crash of the airship LZ 129 *Hindenburg* on 6 May 1937, the futuristic vision of global airlines with airships had to be abandoned.

Aeroarctic had pooled members living in countries neighboring the Arctic and interested in polar research for a single purpose. It provides a fascinating example of how an international nongovernmental organization managed a joint scientific program during the interwar period. However, it failed to continue when political and economical conditions of the principal actor, Germany, changed and airships disappeared from the sky.

POST-WORLD WAR II

POLITICS AND SCIENCE IN SVALBARD

By November 1944, when Soviet troops were in northern Norway, the Soviet Union wanted to expand its influence on the archipelago of Svalbard and proposed

to repeal the Treaty of Spitsbergen and to replace it by a Soviet-Norwegian administration (Barr, 2003). A Norwegian counterproposal of April 1945 allowed for a Soviet-Norwegian defense system with military installations on Svalbard instead of joint possession. The election of a new Labour Party government in Norway changed the political situation after the war, resulting in a cessation of further discussions in early 1947. The Soviets realized that the “status quo in Svalbard was the best policy” (Barr, 2003:247). Strategic interest in the Arctic grew, and the cold war became the dominant feature of the period. Consequently, Norway was among the first states that became signatories to the North Atlantic Treaty Organization (NATO) in 1949 “to keep the Russians out, the Americans in, and the Germans down” (Reynolds, 1994:13).

In 1963 the Norwegian mine in Ny-Ålesund was closed due to an accident in which 21 miners were killed. Geopolitical considerations to inhabit the abandoned village again led to the establishment of the first scientific station by the Norwegian Polar Institute. Focus was on the investigation the ionosphere and Earth magnetism as well as cosmic physics. In addition, in 1967 a telemetry station was established by the European Space Research Organization (ESRO), in which the Soviet Union was not represented as member, connecting Svalbard with space. The gradual change from a mining village to an international science village was crucial for Norway; otherwise, the Soviet Union might have settled in Ny-Ålesund as an additional location for manifesting its presence.

POLITICS AND SCIENCE IN ANTARCTICA

After World War II management of the Antarctic stations of the Falkland Island Dependencies was turned over to the Falkland Island Dependencies Survey within the Colonial Office (1945–1961), and the number of Antarctic stations increased from five in 1946 to ten. When the survey was renamed the British Antarctic Survey in 1962, the number of stations was reduced to eight (Fuchs, 1983).

The United States embarked on a different strategy. The largest exploratory venture was organized primarily as a naval training exercise under the name United States Antarctic Development Project (Operation High Jump, 1946/1947) (Riffenburgh, 2007). Some 4,700 men were given polar experience, which would be useful in the event of a war with the Soviet Union in the far north. This operation was followed by Operation Windmill in 1947/1948, with objectives including “re-enforcing, through continuity in ‘occupation and use’ the validity of possibly

United States claims in the Antarctic regions.” (Headland, 2009:320). However, the United States did not put forward any such claim (Moore, 2004).

In contrast to this military operation the Norwegian-British-Swedish Expedition (NBSX, 1949–1952) to the Norwegian Dronning Maud Land and overlapping German discovery of Neuschwabenland proved that a small international project under the auspices of Norwegian scientists and organized as a tripartite consortium could be very successful, and it delivered interesting results in meteorology, geophysics, and air photography (Lewander, 2007). International cooperation seemed fruitful for future investigations. Although foreign policy and security were the prime concerns, the NBSX served the “emerging need for increased knowledge of weather systems by defense organizations worldwide,” i.e., the western alliance (Lewander, 2007:137).

ANTARCTIC COMMISSION

After 1945, various nations sent out expeditions and established permanent scientific stations to explore the interior of Antarctica preparatory to advancing territorial claims. Also, further steps were taken to solve the unsettled status of the continent. At first, Argentina and Chile agreed upon their position against the United Kingdom in a declaration “on the rights of both countries over parts in Antarctica and . . . their desire to arrive as soon as possible at the conclusion of a Treaty” signed on 12 July 1947 (Headland, 2009:314). Parallel to this attempt the United States was searching for a solution to unite the claimant states with the main aim of excluding Soviet influence on Antarctica. A secret American aide-memoire and draft agreement on Antarctica was handed to the embassies of Argentina, Chile, the United Kingdom, Australia, New Zealand, France, and Norway on 9 August 1948 (Department of State, 1948). The United States had come to the conclusion that “an international status for the Antarctic area is the most practicable and preferable method of solving the problem of conflicting and potentially conflicting claims” (Department of State, 1948:36). The foreseeable values of the South Pole region were held to be “predominantly scientific rather than strategic or economic.” However, internationalization would help to preserve control of the possible strategic use and economic value in the hands of nations interested. This is different from the approach of the Svalbard Treaty in which Norway, the United Kingdom, and the United States were involved. An international administration would take care of

1. systematic exploration and investigation of Antarctic phenomena,
2. meteorological observation important to long-range weather forecasting (as in Svalbard),
3. removal from present or future conflict,
4. preserving control over any actual or potential values, and
5. widening the sphere of friendly, cooperative international endeavor to all islands of 60°S except the South Shetland Islands and South Orkney Islands.

The plan for an international administration was summed up in eight articles. The main aspect was to freeze all territorial claims and to create an Antarctic Commission involving one representative from each participating state, which, in turn, would constitute the actual government. The commission would work together with the United Nations and international scientific bodies. Article V described the formation of a scientific board, which would “draw up plans for exploration, investigation and scientific and technical development . . . The Commission shall prescribe appropriate procedures and conditions under which states, and privately sponsored expeditions, may conduct scientific investigations, [and] develop resources” (Department of State, 1948:40). The “establishment of facilities and the conduct of scientific investigation” were to be fostered as well as “free access to, and freedom of transit through or over the area.” The signatory states were asked to take all measures necessary to maintain international peace and security. This was, on the whole, the background to the American suggestion, predicated on consensus around the conviction that the Soviet Union should *not* be allowed to step onto the white continent, which should be under the influence of the Western Hemisphere only. The idea was revisited and modified a decade later in the context of the International Geophysical Year (IGY), planning for which started in 1950 (see Berkman, this volume).

In the wake of the IGY, naming of Antarctic features was addressed in German newspapers (Lüdecke, 2009). When the German *Schwabenland* expedition (1938/39) had discovered and investigated Neuschwabenland by extensive aerial survey, one of the prerequisites of “effective” occupation had been achieved (Wråkberg, 2002). As German claims were never made, German names, the newspapers maintained, should at least be highlighted on the map. Visible signs of German footprints were important to underline geopolitical desires at a time when the fate of Antarctica was still unknown.

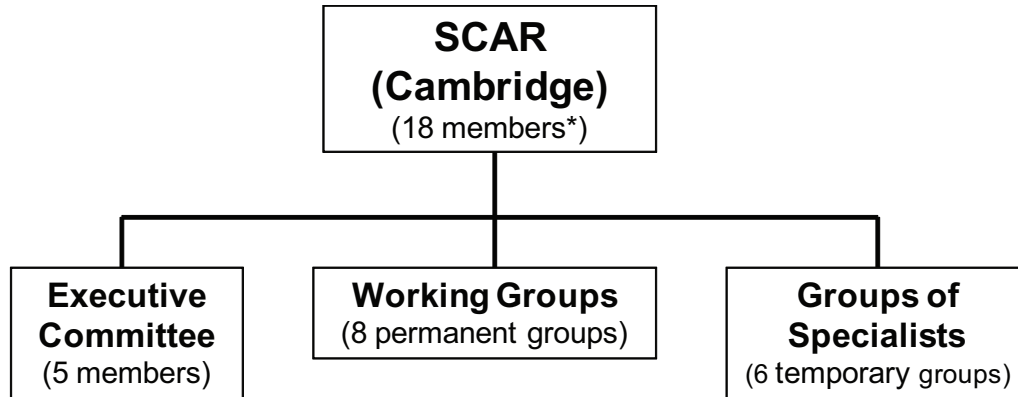
OUTLOOK

The extensive IGY program initiated during a dinner conversation in Silver Spring (Maryland) in 1950 was the biggest scientific experiment ever (Korsmo, 2007). It was carried through in parallel in both polar regions from 1 July 1957 until 31 December 1958. A dense network of stations was set up along the Antarctic coast and at points on the continent, including the American Amundsen-Scott South Pole Station; the name of this station indicated that no national preference was given for this special location, in which all longitudes defining Antarctic sectors come together. Peaceful cooperation, especially of American and Soviet scientists during the cold war, finally prompted the Antarctic Treaty in 1959 (Belanger, 2006), which incorporated some salient ideas of the Svalbard Treaty like demilitarization, free communications, and equal rights of all members.

Besides the treaty a Scientific Committee of Antarctic Research (SCAR) emerged from the Comité Spéciale de l'Année Géophysique Internationale (CSAGI) and was established within the International Council of Scientific Unions (ICSU) to guide coordination in research and provide scientific advice to the Antarctic Treaty Parties. (Fifield, 1987; Fogg, 1992; Jabour and Haward, 2009). It resembled the organizational structure of Aeroarctic (see Figure 2).

The function of SCAR, which consists of one representative from each member country, is similar to the function of the General Assembly of Aeroarctic, with personal members representing their countries; the SCAR Executive Committee corresponds to the Council of Aeroarctic, and the SCAR Working Groups correspond to the Aeroarctic Exploration Council.

It is amazing to realize that it took about three centuries from the discovery of Svalbard until the Svalbard Treaty, whereas in Antarctica the process of arriving at a treaty, historically speaking, went much faster. After the decline of living resources in Arctic waters, interest shifted to Antarctic waters, where sealing and whaling became highly profitable. However, the first scientists entered the southern continent in 1899. They set the scene for geopolitical discussions, occupation, and claims. However, there were no aspirations to gain a permanent settlement at that stage, and Antarctica continued to be a no-man's land until a greater appetite for matters of sovereignty came up, essentially starting in the 1930s. During the cold war the IGY provided the first possibility for all participating countries as equal partners to establish a permanent presence on the southern continent. This was achieved as a first step by the continuation of scientific work for another



* Members are nations with national Antarctic committees

FIGURE 2. Organization chart of SCAR in 1987 according to Fifield (1987).

year. Logically, the parties involved at that time became the exclusive 12 nations to sign the Antarctic Treaty and become members of SCAR; they were the only ones to do so until Poland and the Federal Republic of Germany joined in 1978 (Headland, 2009).

Although the IGY also had an Arctic program, questions of sovereignty made it difficult for scientific cooperation, especially in respect to the Soviet Arctic, which was more or less closed to foreigners (Magnússon, 2000). In consequence, no organization similar to SCAR developed after the IGY for the North Pole region. In 1987, SCAR initiated a first meeting of representatives of the so-called Arctic countries (Canada, Denmark/Greenland, Finland, Iceland, Norway, Soviet Union, Sweden, and United States) that finally led in 1990 to the foundation of the International Arctic Science Committee (IASC) in Resolute (Canada), a body that is associated with ICSU.

Currently, we are facing negotiations about the economic use of the northwest and northeast passages in the Arctic and the political implications attending this prospect. It will be interesting to see if experiences gathered in the south will be transposed back to the north and how the Antarctic Treaty can offer guidance to establish a possible Arctic Treaty.

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