Melting the glacial curtain: the politics of Scandinavian–Soviet networks in the geophysical field sciences between two polar years, 1932/33–1957/58

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Abstract

While providing a brief background of the development of Scandinavian–Russian relations in the polar sciences in the early 20th century, this paper focuses on the period from the 1930s when the Swedish geographer Hans Ahlmann and Norwegian oceanographer Harald Ulrik Sverdrup developed a curiosity of the Soviet Union as a field for the practice of Arctic science. Visit of the Arctic Research Institute in Leningrad in 1934 further enhanced Ahlmann’s sympathy and in 1935 he co-founded the Society for the Promotion of Cultural and Scientific Relations between Sweden and the Soviet Union. After further wartime collaboration, Ahlmann returned to the Soviet Union in 1958 and 1960 as president of the International Union of Geographical Sciences. Using his longtime Soviet contacts to penetrate the Iron Curtain, Ahlmann became a key figure in maintaining the flow of scientific information between East and West. New materials from archives open perspectives for better understanding of the international connections and transfer of knowledge in geophysical and geographical science in its formative period. The key message from this paper is that while tensions did exist and presented scientists with differential loyalties, they still managed to find ways to undertake fruitful scientific collaborations even under political restraints and could sometimes play political roles.

Keywords: History of science; History of geophysical sciences; Scientific networks; Soviet Union; Scandinavia; International collaborations; Cold War science; History of climate change

In a radio broadcast shortly after the outbreak of World War II, Winston Churchill, then First Lord of the Admiralty, uttered his famous words about the Soviet Union and its role in the war that lay ahead: ‘I cannot forecast to you the action of Russia. It is a riddle, wrapped in a mystery, inside an enigma; but perhaps there is a key. That key is Russian national interest.’ 1 This image has become a common stereotype applied to many aspects of Soviet society in the interwar years, through World War II and into the Cold War. It has also been used to describe Soviet science. Depicted as participants in a complex enterprise held tight by the state and ideologically oppressed, Soviet scientists were often envisioned conducting research in secret laboratories and institutes located in remote ‘closed towns’.2 Similar notions were applied to Arctic science, which had developed rapidly in the Soviet Union. Arctic research was conducted in a research institute in Leningrad, in several university departments both in Leningrad and Moscow and on ice floes and field stations in or near the Arctic Sea.3 What could the secretive Russians be up to? Certainly nothing good…!

While this image is not altogether false, it is certainly far from complete. Contrary to common beliefs, the Soviet Arctic science

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community maintained important links with some of their Western counterparts during the 1930s, 1940s and 1950s. Scandinavian countries occupied a central position in Soviet Arctic science networks, in some respects replacing German networks that had become less useful in the 1930s after the Nazi Machterübernahme. Thus, the experience of Scandinavian Arctic scientists reveals how important field science knowledge about the Arctic was built and brokered with the Soviet Union. In reality Arctic science in the USSR was more accessible and better known than the stereotype implies. Professional networks and unique personal links with key groups and institutions of Soviet society permitted Scandinavian scientists to perform roles that often stretched beyond science in the strict sense and influenced diplomacy and politics. For all scientists involved, such collaborations provided access to important and hard to get data on changing geophysical conditions, not least those that indicated climate change. As the Iron Curtain tightened around the Soviet Arctic and official political relations reached freezing level in the Cold War, work on glaciers and sea ice paradoxically melted them and opened links.

**Circulating knowledge between Scandinavia and the Soviet Union**

This paper challenges the old cliché that Soviet science simply borrowed from the West, mostly Germany, in the 1920s, only to turn in the 1930s into more or less complete isolation. It provides new evidence of a more complicated system of knowledge circulation during the Stalinist period. Certainly the intensive connections of the 1920s were seriously reduced in the wake of hardening repression. Professionals in all fields who maintained contact with foreign specialists were increasingly questioned and often unreasonably accused of espionage. Traveling abroad was sharply curtailed and all international collaborations were fully controlled by the state. Still, connections continued although their locus shifted from one western country to another as the international political situation changed.

Recent scholarship has acknowledged that the exchange and borrowing of knowledge was extensive even during the 1930s. As Yves Cohen notes, the Bolshevik Revolution inaugurated an ‘area of circulation’, a global zone in which the USSR became simultaneously a receiver and sender. During the same period the Arctic began to be incorporated into the global circulation of ideas, practices and technologies, not least through the framework of the Second International Polar Year. Our case study considers the intersection of these two very different circulation patterns – noting that the first, being much more powerful, dominated and shaped the second.

Because it remained aloof from continental European politics and maintained aesthetic, cultural, and diplomatic connections with both the West and the East, Sweden played a distinctive role in trade and cultural exchanges. Stockholm was a geographically well positioned hub between Leningrad and Europe, where people could meet openly. There, feminist author and ambassador Alexandra Kollontai, who also had Norwegian connections from an earlier diplomatic posting, was the center of Soviet-friendly circles in cultural and political society.

During the 1920s and 1930s, when Stockholm geographer Hans W: son Ahlmann (Fig. 1) and his colleague, Norwegian oceanographer Harald Ulrik Sverdrup (Fig. 2), jointly developed an increasing curiosity about the Soviet Union, they did so in an open and tolerant social atmosphere. Their emerging collaboration, which lasted over four decades, was based on the realistic insight that the Soviet Union was a major power in Arctic science and that it was important to stay abreast with developments there. They also shared an interest in the Arctic as an arena of increased international political connections.

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7 Cohen, Circulation localities (note 6), 42–43.


9 The case we provide in this paper could be compared with the well-known move of Soviet–European connections in physics from Germany to Denmark in the same period, see K. Hall, *The schooling of Lev Landau: the European context of postrevolutionary Soviet theoretical physics*, Osiris 23 (2008) 230–259.
significance. The chief protagonist of this paper, Hans Ahlmann, was a pronounced ‘polar modernist,’ who wanted to get away from narrow nationalism and a sports and adventure oriented research style, and establish serious scientific work in the Arctic modeled on the laboratory sciences.\(^{10}\) He believed that polar fieldwork would only be relevant if pursued as specialized science that yielded universally valid knowledge. Ahlmann outlined his rigorous vision for polar science in a broad, programmatic article, timed for the Second IPY: ‘With the increased demands of precision and thoroughness that are nowadays raised on natural science,’ he insisted that polar expeditions should not aspire to comprehensive coverage of all possible subjects but focus on ‘a certain group of phenomena.’\(^{11}\)

Ahlmann’s peace-seeking internationalist outlook included the Soviet Union which was rapidly gaining recognition as one of the most significant powers in Arctic research. The USSR was a major player in organizing the Second IPY at the end of the 1920s when intensive international contacts flourished, especially with Germany. The First meeting of the International Commission for the Organization of the Second IPY took place in Leningrad in 1930.\(^{12}\) By the time of the Second IPY, however, the national interests of the USSR prevailed over international connections and the wide reach of earlier Soviet science began to atrophy.\(^{13}\) Nevertheless, Soviet scientists, with generous state support, became the leaders in organizing polar stations and expeditions for collecting geophysical data in the Arctic. Their impact was especially important in oceanography, including sea ice studies, where a strong national scientific community already existed.\(^{14}\)

There were trends towards isolation, but it was not as complete as is often perceived, and it differed among scientific fields and institutions. The rate at which Soviet scientists published in international journals began to decline in the late 1920s, long before political campaigns against ‘kowtowing to the West’ began.\(^{15}\) Until the mid-1930s, though, Soviet journals were keen to translate and publish the work of foreign scientists, they reviewed books from beyond the USSR and they carried annotated foreign bibliographies. An excellent example in the field of Arctic studies was the bulletin published by the Arctic Research Institute from its foundation in 1930. Individual visits to scientific meetings abroad were curtailed and international meetings held in the Soviet Union diminished sharply and several important scheduled meetings were cancelled.\(^{16}\) However, some of the meetings, such as the International Geological Congress of 1937, which included a good deal of Arctic geology among the presentations and excursions, were relatively successful.


\(^{11}\) H. Ahlmann, Polurforskningens vârde och berättigande, Ord och Bild 41 (1932) 195–207, on 198.

\(^{12}\) See Lüdecke and Lajus, The Second International Polar Year (note 8).


\(^{15}\) Alexandrov, Pochemu sovetskie uchenye perestali pechatat’sia za rubezhom (note 13).

Collaboration was almost unavoidable in those fields possessing the features that later were conceptualized as global commons: the atmosphere, ocean currents, sea ice, fish—all objects that ‘know no boundaries’.17 Yet the First and Second IPYs showed quite clearly that studies of the Arctic environment demanded cooperation. On the other hand, in the 1930s the Soviet government had already begun to view the Arctic as a zone of particular importance for national security. Because of this ambiguity, the Arctic Research Institute in Leningrad developed first a sophisticated policy trying to remain visible on the international scene, only to become more and more secretive around the data it obtained and kept towards the end of the decade. However, after a period of autarky, especially with the beginning of the Cold War during the late 1940s and early in the 1950s, the ARI, the Academy of Sciences Institute of Oceanology and the Institute of Geography were instrumental in reviving international cooperation in the late 1950s, which included Soviet participation in the International Geophysical Year. The story we tell resembles attempts to write Soviet intellectual history as transnational history.18 At first glance our story may seem like just another account of ‘fellow travelers’, the voyages of western intellectuals to the Soviet Union and their involvement in ‘friendship’ organizations at home. However, the political context, the collaboration, and the chronological framework of our case study are quite different from those associated with public intellectuals such as George Bernhard Shaw and André Gide. Whatever their political sympathies, the transnational collaborations of the scientists at the center of our concern were driven primarily by their enduring scientific interests. Hans Ahlmann’s first journey to the Soviet Union took place in 1934, and his connections continued untroubled through the decades into his emeritus years as ambassador to Norway and president of the International Geographical Union in the 1950s and early 1960s; he died in 1974. One issue that encouraged and sustained the transnational circulation of knowledge during these years was ‘the warming of the Arctic’. As is well known, meteorologists and then climatologists were the first natural scientists to openly share data because accurate forecasts required aggregating information gathered from many locations.19 This was also an especially true for understanding climate fluctuations, a phenomenon that Ahlmann played a key role in documenting for the first time between the World Wars. Shaking the assumption that climate could not change significantly over a few decades required broad international collaboration, and Ahlmann pursued this agenda intensely.20 Ahlmann’s own interest was in glaciers, but scientists from different countries paid attention to different indicators of the warming process, for example, sea ice, tundra melting, and vegetational changes. Such different observational techniques only made sharing observations more crucial.

It is extremely difficult to document the circulation knowledge in detail. Here we use correspondence, diaries, and scientific publications in an effort to do so. Correspondence and diaries reflect the personal and organizational side of connections more than their scientific contents; scientific publications are very important for understanding content and give hints of connections through footnotes and references. However, especially in the Soviet case, publications were often very much delayed and publication dates may be poor indicators of the actual production of new knowledge. It is evident that much knowledge was exchanged through personal communications that we cannot fully detect. However, this paper is based on new archival materials that open new perspectives for better understanding international connections and the transfer of knowledge during a formative period of geophysical science. These materials also shed light on security related issues, and provide a more complex and realistic image of the tensions between Arctic science communities on both sides of the Iron Curtain.

The story is valuable in its own right as an example of international collaboration in Arctic and early climate science, and as evidence that scientific connections between the Soviet Union and Scandinavia were richer than has been previously thought, even in the troubled times before, during and after World War II. Perhaps more interesting, it also contextualizes how science functions under political constraints and in the shadow of geopolitics. These scientists had to navigate challenges and opportunities, and balance interests that reached far beyond immediate research-related issues.

**Russian—Scandinavian connections in polar science before the 1930s**

Connections between Scandinavian and Russian geophysical scientists were well-developed and stable during the late 19th and early 20th centuries. Adolf Erik Nordenskjöld’s North–East passage (1878–1880), Fridtjof Nansen’s Fram drift across the Polar Sea (1893–1896), and Roald Amundsen’s South Pole expedition (1910–1911) put Scandinavians on the first rank of polar and maritime exploration and inspired scientists of other nations, including Russia, to follow. These examples were especially formative for Russia because both Nordenskjöld and Nansen had established close scientific and personal relations with Russian scientists and public figures. In addition, on the eve of the new century Swedish and Russian scientists conducted a geopolitically motivated, but scientifically rigorous joint Meridian expedition to Spitsbergen.21 The foundation of the International Council for the Exploration of the Sea (ICES) in 1902, in which leading roles were played by Swedish oceanographer Otto Pettersson and Norwegians Fridtjof Nansen and Johan Hjort, made interest in Scandinavian studies of the North even stronger.22 On the Russian side the closest


22 Rozwadowsky, The Sea Knows No Boundaries (note 17).
The neutrality of the Scandinavian countries during World War I permitted Russian scientists to keep some of those professional connections, and after the revolution of 1917, Norway and Sweden were among the first countries to establish ties with Russia. Trade conferences were organized as early as 1920–1921 and diplomatic recognition from both countries came in February–March 1924.26 A few months later, in May 1924, the first of several Swedish–Soviet friendship societies was established.27 Later that year, prominent geologist Alexandre É. Fersman (1883–1945), vice-president of the Academy of Sciences of the USSR in 1926–1929, visited Swedish scientific institutions during his long trip to Europe. In his published report he compared the flourishing state of Scandinavian science with the miserable conditions in post-war continental Europe, especially in Germany.28 Like his contemporaries among leading Soviet polar geoscientists, Rudolf L. Samoilowitsch29 and Pavel V. Wittenburg, Fersman had very good connections within the German scientific community, as he had spent several years at the University of Heidelberg working on his doctoral thesis. Despite long-standing German connections and inspired by his 1924 visit, Fersman called for closer scientific collaboration with Scandinavian countries, naming scientific institutions there as ‘new centers of a new scientific thought’.30 Swedish explorer of Central Asia and China, Sven Hedin, also argued for closer cooperation between scientists of the two countries,31 although he soon turned out to be both vehemently anti-Bolshevik and a warm supporter of the Third Reich.32

Soon after and in accordance with the general rapprochement between the two countries, Soviet–German scientific relations began to revive and had their heyday in 1926–1928.33 In field sciences those years were marked by the successful joint Soviet–German Pamir expedition and joint oceanographic research in the Barents Sea. Soviet scientists were very active in the International Society for the Exploration of the Arctic Regions by Means of Aircraft (Aerarctic), which was led by Fridtjof Nansen but based in Germany, the home of most of the members.34 Connections with German scientists were one of the most important reasons for the early Soviet involvement in preparations for the Second International Polar Year.35 During the Second IPY German scientists were the only foreign experts who worked on Soviet polar stations.36 Soviet connections with Swedish scientists were not as intensive as with German scientists and continued mainly through individual visits rather than major, long-term collaborations. Thus, a group of six Swedish scientists took part in the 200-year jubilee of the Academy of Sciences in 1925,37 and in the first international congress of limnology organized that same year in the Soviet Union.38

The Arctic was among the more significant topics for which Soviet science gained recognition in the West. When the Italian dirigible aviator Umberto Nobile, who had led the first expedition to overfly the North Pole in 1926 crashed during a second tragic northern flight in the summer of 1928, Soviet scientific and technological mastery of Arctic conditions became evident during the rescue operations.39 The rescue expeditions developed a strong


28 A. Fersman, Novye kontury novoi nauki (Iz zagranichnykh vpechatlenii), Leningrad, 1925.

29 We use here the more conventional English spelling of the name; however, he himself used German spelling for his non-Russian publications and in Correspondence — Rudolf Samoilowitsch.

30 Fersman, Novye kontury novoi nauki (note 28), 31.

31 Informationen und Nachrichten (1925) 7, (1926) 24.


34 Lidecke and Lajus, The Second International Polar Year (note 8), 139–140.


37 M.Yu. Sorokina. Dvukhsetletnie jubilei Akademii nauk, in: E.I. kolchinsky, M.B. konashew (Eds), Na perelome. Ocheretvinnauka v kontse XX — XX veke, vyp. 3: Istochinki, isledovaniya, istoriograpfia (Nester 23A), St. Petersburg, 2005, 206–235, esp. 232. Sorokina doesn’t mention names. From other sources it is known that among six Swedish scientists he was known to Eli F. Hecksher and the chemist Hans von Euler; both reported about the event in Swedish and Soviet media.

38 The Societas Internationalis Limnologiae, which organized the congress, was founded in 1922 by German and Swedish hydrobiologists: August Tinnemann from the University of Kiel and Einar Naumann from the University of Lund.

political focus and were presented to both international and domestic audiences as demonstrations of unprecedented heroism. Swedish meteorologist Finn Malmgren who died on the ice shortly before a Soviet pilot saved two other members of his team, became a particularly popular figure. A statue of the young, tragic scientist-hero was erected in his hometown of Uppsala in 1931,40 the year after corpses from the equally tragic and lionized 1897 balloon expedition led by engineer S.A. Andrée were returned to Stockholm.41 Malmgren and Roald Amundsen, who was also killed in the Nobile rescue operations, were lamented in the Soviet Union.42 However, the successful rescue made the expedition leader, Rudolf Samoilovich, and pilot, Boris Chukhlovskiy, popular heroes at home and abroad. In 1929 they lectured all over Europe and visited Stockholm.43

In, 1930 Stockholm hosted the Fourth meeting of the International Geodetic and Geophysical Union, where the main actors who prepared the Second IPY met. From Stockholm, members of the International Commission for the Preparation for the Second IPY went to Leningrad for the First Commission meeting.44 This was to facilitate the involvement of Soviet scientists, many of whom might not have otherwise been able to attend the meeting. Swedish scientists did not take part, but Sverdrup represented Norway and received first hand impressions of Soviet efforts in the Arctic at the very moment when he was drawn into closer contact with Ahlmann.

**Soviet contacts of Ahlmann and Sverdrup before the war**

Anyone interested in the Arctic around 1930 was bound to be aware of the Polish Union, which since several decades had marked her position in Arctic science and technology. Already in 1899 the icebreaker *Vernadsky* reached 81°5′ North on her virgin voyage and in 1914 army pilot Ivan Nagurski had led the way into the high Arctic in his search for Georgy Sedov’s ill-fated effort to reach the North Pole. By mid-1930s the Soviet government turned Arctic aviation into a heroic communist specialty.45 In the 1930s Soviet scientists stood out as exceptionally active and skilled, they played a key role in this general context that their Soviet contacts are presented.

51 Ahlmann’s appointment was far from coincidental. With basic training in geochronology under Stockholm geologist Gerard De Geer, Ahlmann’s core research interests were glaciers as climate indicators. He had already worked on defining the mass balance of glaciers in southern Norway and in Swedish Lapland. As an ice expert with well-known links to Norway, close connections to the geoscience environment in Bergen,42 and a documented sense of diplomacy, Ahlmann was entrusted with leadership of the high level commission charged with investigating and, if possible, explaining the tragedy.

In that context he made use of his established acquaintance with Sverdrup, a notable presence in the Bergen earth science community.43 Early in the year Ahlmann had played a key role in awarding Sverdrup the 1930 Vega medal from the Swedish
meeting of the Second International Polar Year 1932/33.60 Sverdrup soon became a central name in Soviet Arctic science and several books by Sverdrup, including materials from the Maud years and a description of the Nautilus submarine expedition with George Hubert Wilkins (1931), were translated into Russian in 1930 and 1932. The prominent Soviet polar scientist, chair of the Commission of the Academy of Sciences on Studies of Yakutskia Republic, Pavel Wittenburg, and Vladimir Wiese wrote prefaces to the translations.61 For the fourth (!) Russian edition of the Nautilus book published in 1935, Sverdrup wrote an introduction praising the new technology that enabled scientists to go further into the Arctic geographically, as well as into Arctic skies and deep oceans. He applauded Soviet experience using the new Arctic technology, especially the airplanes that rescued people from the destroyed Cheliusskin vessel in 1934. At the end he exclaimed: ‘Why should not the next submarine that makes an attempt to dive under the polar ice be a Soviet submarine?’62 The book was so popular that in 1946 it was published once more by a military publisher and again during the ICY by a large geographical publisher.

Ahlmann’s first visit to the Soviet Union took place at the end of 1934, just after his second expedition to Spitsbergen. Organizing the visit began in April when Rudolf Samoilovich, then director of the All-Union Arctic Institute, visited Stockholm on his way to a scientific congress in Paris.63 The institute had been organized in 1930 as a successor to the Institute for the Study of the North, which Samoilovich had formed in turn from the Northern Scientific-Commercial Expedition that he had organized and led from 1920 through 1925. By 1934 the Arctic Institute had become the leading scientific institution in the USSR fully devoted to the study of the Arctic and especially to the scientific service of the newly established Northern Sea Route. At the end of 1932, after the ice-ship Sibirjakov successfully completed this route in one season, the Main Administration of the Northern Sea Route (Glavsevmorput) was organized in Moscow64 and the Arctic Institute in Leningrad was put under its authority. Just as he had done in 1929 after the Noble rescue expedition, Samoilovich used his 1934 stay in Stockholm to inform Swedish intellectuals about recent successes in Soviet polar exploration. This certainly included the rescue of the crew and passengers of the ship Cheliusskin. Aircraft removed over a hundred people from an ice camp where they had lived for weeks after the Cheliusskin was destroyed by ice in the Chukotka Sea. Soviet Ambassador to Sweden

Antropological and Geographical Society.65 Ahlmann asked Sverdrup to contribute a chapter to the commission report on the notes about sea-ice in Andrée’s diary.55 Sverdrup responded admirably and quickly wrote (within a week!) far more than the original remit, then patiently cut and edited.56 The process strengthened their friendship and later underlay extensive collaborative projects, such as the long glacier measurements in Spitsbergen in 1934; it also incorporated their common interest in the Soviet Union and its science. Their common mission lasted until Sverdrup’s premature death in 1957.57

In all respects this was a turning point in Scandinavian Arctic research, but more so in Sweden than in Norway. In light of dramatic national sentiments released by the repatriation of the remnants of the 1897 expedition and taking advantage of his growing network of Arctic colleagues (including the experienced Sverdrup), Ahlmann seized the opportunity to expand his glaciological research program northwards, to the Arctic. The moment and its particular geopolitical contexts, including the upcoming Second Polar Year 1932–1933, also help explain the link to the Soviet Union. The belated return of the balloon expedition symbolically marked the end of the old glory days of Swedish polar science, with their mining experiments and hopes of resource exploitation, fueled by economic and geopolitical ambitions. This era had ended with the closing of Swedish coal mining in Spitsbergen in the 1920s and Sweden’s ratification of the 1925 Svalbard Treaty.58 Retreat from a geopolitically informed and interest-driven scientific agenda with roots going back to the 1860s had left Sweden’s Arctic science in a void. This void was now filled by Ahlmann and his program.

In Norway Sverdrup took on a similar role. After a rapidly rising career as a versatile oceanographer and an expert on ocean currents and sea-ice, and with his field and leadership experience on Roald Amundsen’s Maud expedition (1918–1925), he was the obvious choice when the University of Bergen sought a replacement for Vilhelm Bjerknes as the Chair of Meteorology in 1926. From this position he moved on to the Christian Michelsen Institute, also in Bergen, where he continued essentially the same research. Sverdrup already had personal contacts with Soviet scientists. For example, he had shared an interest in Arctic sea-ice with the influential oceanographer Vladimir Wiese since at least the middle of the 1920s.59 He made acquaintance with other Soviet scientists when he visited Leningrad in August 1930 for a preparatory

54 It was a problem for Sverdrup to pick up the medal on the ‘Vega day’ 24 April because of a research stint in the United States in the spring of 1930; Sverdrup to Ahlmann 21 February and 17 March 1930. Harald Ulrik Sverdrup collection, National Library, Oslo (Brevsamling 634 A).
55 Med Ornen mot polen (1930); E. Adams-Ray, transl., The Andrée Diaries. Being the Diaries and Records of S.A. Andrée, Nils Strindberg and Knut Fraenkel, London, 1931. It was almost certain that Ahlmann and Sverdrup met before 1930, likely in Bergen, where Ahlmann often paid visits to the home of his wife’s parents. In his letter to Ahlmann 21 February 1930, thanking for the telegram that informed him of the Vega medal, Sverdrup referred to having observed Ahlmann pondering on something [the medal?] at Christmas, which indicates that they had met at least then, and references to geophysical colleagues like Håkon Mosby and Bjørn Helland-Hansen in their Correspondence supports the view that Bergen was a place where they both had moved simultaneously for several years and should have made some acquaintance.
56 Sverdrup to Ahlmann 18 September, 7 October (accepting to write), 15 October (sending his 3800 word manuscript); 1 November 1930 (accepting cuts). Harald Ulrik Sverdrup collection, National Library, Oslo (Brevsamling 634A).
57 The Sverdrup-Ahlmann Correspondence continued for the entire period 1930 to 1957, and especially frequent before and after their common Spitsbergen expedition in 1934. See: National Library, Oslo, Brevsamling 634 A, and the Ahlmann Collection, Royal Swedish Academy of Sciences, Stockholm KVA, Stockholm (multiple volumes).
59 We use here the German spelling of his name which he used himself, however the English spelling Vize is also used in scientific literature. A Wise-Sverdrup Correspondence dates from at least 1927 and a letter from Wise that year indicates an already ongoing Correspondence. Harald Ulrik Sverdrup collection, National Library, Oslo (Brevsamling 634 N). One letter from Sverdrup (18/1 1928) is found in Wise personal collection in Russian State Archives of Economics in Moscow (RGAE), coll. 539, inv. 1, f. 18 (in English). In this letter Sverdrup thanked Wise for sending him his paper on hydrography of Siberian seas, part of which Sverdrup translated to Norwegian.
60 Lidecké and Lajus, The Second International Polar Year (note 8).
63 Stockholm often was a city which Russians visited en route to Europe, this became especially true after 1933 when the number of visits to Germany rapidly decreased.
Alexandra Kollontai organized a lecture for Samoilovich.\(^{65}\) At that time she was searching for positive opinions from Swedish and Norwegian polar scientists about the *Cheliuskin* epic because the Soviet government consciously used ideological propaganda featuring Soviet heroism in conquering the Arctic.\(^{66}\) In her diary Kollontai emphasized that the saga of saving the *Cheliuskin*’s passengers was received enthusiastically in Sweden: articles about the expedition were published and the scientific achievements of the Soviet Union acknowledged. After Samoilovich’s lecture Kollontai reported that everybody was impressed by the *Cheliuskin* team’s heroism and that Samoilovich was received exceptionally warmly.\(^{67}\)

After his visit, Samoilovich asked Ahlmann to pass his friendly greetings to Sverdrup and Helland-Hansen. Thus it is evident that he perceived Ahlmann as a member of a scientific network centered in Bergen, but also that the Norwegian links were established earlier.\(^{68}\) On 24 April 1934 Ahlmann wrote to vice-director of the Arctic Institute Vladimir Wiese (Samoilovich had gone from Stockholm to Paris and left Wiese to organize Ahlmann’s visit to the USSR) that he received with honor an invitation to give a lecture at the institute, that he had met with Kollontai and Samoilovich and that he would be happy to come. However, he needed to postpone his visit to the fall because of the opening of his new Institute of Geography and then the beginning of the new Spitsbergen expedition with Sverdrup, but this would allow him to present not only the results of his Spitsbergen expedition in 1931 but also the new ones.\(^{69}\)

In late autumn of 1934 Ahlmann traveled to Leningrad. He gave two lectures on glaciology there. ‘Works of the Swedish—Norwegian expedition on Spitsbergen in 1931 and 1934’ was a popular, but prestigious lecture given at the Assembly of the Geographic Society of the USSR on 27 November 1934.\(^{70}\) Another lecture, ‘The Life of Glaciers’, was addressed to a professional audience. Both were accompanied ‘by demonstration of numerous and excellently prepared slides’.\(^{71}\) He also visited the Arctic Institute for informal conversations with its staff. Ahlmann’s name even appeared in the leading Soviet newspaper *Pravda* under the title ‘Failure of anti-Soviet insinuations’. In a short column he was asked to reflect on the situation in Leningrad after the murder of the city’s Communist party leader, Sergei Kirov. According to *Pravda*, Ahlmann assured his interviewer that Soviet power remained strong and solid.\(^{72}\)

Importantly, this visit, with its lectures and informal network-building, resulted in the publication of Ahlmann’s paper in the *Proceedings of the Arctic Institute* in English with an extended abstract in Russian.\(^{73}\) Here Ahlmann summarized the results of the 1931 and 1934 expeditions, particularly the notion of significant glacier retrogression on Spitsbergen. On the basis of measurements in the summer 1934 which ‘was unusually warm’, he stated that the ‘lack of balance between accumulation and ablation is so large that it cannot but prove disastrous to the maintenance of the glacier at its present size’.\(^{74}\) Significantly, he connected this phenomenon with the intensity of atmospheric circulation and referred to studies by Norwegian geophysicist Bjørn Helland-Hansen on variations of the heat content of the Gulf Stream, noting that ‘they are of sufficient magnitude fully to account for the differences in the ablation of the glacier’.\(^{75}\)

In the same year Samoilovich published ‘Exploration of the polar part of the U.S.S.R. and the Sedov-expedition’, with detailed maps of newly researched northern parts of the Kara Sea, in the Swedish journal *Geografiska Annaler*, in the supplement devoted to Sven Hedin.\(^{76}\) Ahlmann at that time was secretary of the Swedish Society for Anthropology and Geography, which published the journal. The paper had been submitted to the journal in December 1934 just after Ahlmann’s visit to Leningrad. It presented to a Western audience a broad picture of Soviet achievements in Arctic studies during and immediately after the Second IPY. It reported not only on scientific results but also on the rapid growth of infrastructure: already in 1934 the number of Soviet polar-sea stations had reached 37, almost double the number at work during IPY, and a staggering growth compared to the four stations of the pre-IPY period.\(^{77}\) Correspondence between Ahlmann and Samoilovich lasted as late as the winter of 1937.\(^{78}\) Ahlmann also corresponded with leading Soviet Arctic officials such as Otto Yu. Schmidt, the head of Glavsevmorput, and he tried to help Norwegian explorer and writer Helge Ingstad, governor of Svalbard in the 1930s, obtain permission to go to the Soviet Arctic.\(^{79}\) In spite of formal positive replies from Schmidt and Samoilovich, Ingstad’s trip never happened.

**Ahlmann’s 1934 visit to the Soviet Union in light of Swedish–Soviet relations**

After September 1932, when the Social–Democratic Party came to power in Sweden, connections with the Soviet Union improved. These relations not only factored in regional, Baltic politics but had significant influence on European politics in general. Increasing numbers of players in the Baltic region after World War One, when Finland and Poland became independent states, meant that the balance between large powers changed and both Germany and Russia lost previously dominating positions.\(^{80}\) With the Nazi turn in Germany and increasing war preparations in the Soviet Union, concerns about possible Soviet influence on Swedish politics became more pronounced. Cultural and scientific relations were

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68. Letter Samoilovich to Ahlmann, 19 December 1934, KVA, Ahlmann coll., Vol. 11.
69. St. Petersburg Branch of the Archives of Russian Academy of Sciences (PFA RAN), coll. 1010 (Wiese personal collection), inv. 1, f. 100, ll. 1–2.
72. Proval antisovetskikh izmysleniy, Pravda, 9 December 1934, 5.
74. Ahlmann, Investigations into the life of glaciers (note 73), 38.
75. Ahlmann, Investigations into the life of glaciers (note 73), 39.
77. Samoilovich, Exploration of the polar part of the U.S.S.R. (note 76), 664.
78. Samoilovich did not escape the repressions during the Great Purges of 1937–1938: he was arrested in May 1938 and then was killed in prison in spring 1939. For his biography see V.S. Koriakin, *Rudolf Lazarev Samoilovich*, Moscow, 2007.
79. Letter Schmidt to Ahlmann, 20/1 1937, KVA, Ahlmann coll., Vol. 12 (in Russian with German translation) and Letter Samoilovich to Ahlmann, 25/2 1937, KVA, Ahlmann coll., Vol. 11 (in English).
less important than diplomacy and trade, but they formed an important part of the bigger picture.

Kollontai was a skillful mediator between Soviet officials and politically left-leaning Swedish intellectuals. Born into a noble family, she was a well-educated activist who embraced the Revolution early. In 1908 she left Russia and became one of the most active participants in the international socialist movement, traveling across Europe, including the Nordic countries, where she lived during World War I. She spoke several European languages, including the Nordic ones, fluently. Her appointment to Stockholm in 1930 after serving for almost seven years as a Soviet representative in Norway made her the first female diplomat in modern history. Yet her appointment as an ambassador was a sort of political exile: it ended the heyday of her revolutionary career. In 1921 when she was the most visible woman in the new Soviet government she led an opposition movement which was heavily criticized by Lenin. Left wing circles in the Nordic countries had strong respect for her. On a wave of broad public interest and support for the Soviet Union in 1945, the Norwegian Storting nominated her for the Noble Peace prize, but the nomination was rejected by the Nobel Committee.82

One of Kollontai’s main diplomatic tasks in the 1930s was to prevent Sweden from deepening ties with Nazi Germany. Her diary entries in 1934 reflected the growth of Swedish interest in the Soviet Union connected with Soviet government attempts to organize financial credit in Sweden for buying industrial and food products, especially meat. She noted that Germany was losing its position in Sweden after Hitler came to power and this presented a number of possibilities to strengthen Soviet–Swedish connections.83

Summing up the results of 1934 in terms of Soviet–Swedish connections, Kollontai mentioned that scientists who visited the USSR were commenting positively about their experiences and beginning to ask for books about the country. This led at last ‘to the active desire of the group of intelligentsia to form the society for cultural connections’.84 Did she refer here to Ahlmann, among others? At least we know that he was among this ‘initiative group of respectable names’85 who in 1935 organized the Society for the Promotion of Cultural and Economic Links between Sweden and the Soviet Union, which was founded on the 4th of May.86

According to the memoirs of Eva Palmæa, daughter of the first president of the Society, Wilhelm Palmæa, a group of Stockholm intellectuals known in the city as the ‘Madame Kollontai circle’, who gathered around the Ambassador and visited her apartment at Villagatan, were primarily driven in their sympathy for the Soviet Union by antifascist feelings.87 By 1934 Ahlmann had already been seen among Kollontai’s circle, along with other left-leaning academics such as the economist, Gunnar Myrdal.

Ahlmann was an internationalist and an ardent voice for Nordic cooperation—his father came from Denmark, his wife was from Bergen, Norway, and his glaciological research networks included colleagues from Iceland.88 Ahlmann’s modernism included links with the young Social Democratic political and scientific elites that rose to power in the 1932 elections and remained in office throughout the rest of his career. His foremost political contact became Östen Undén, a law professor at Uppsala, who became Minister of Foreign Affairs in 1945 and who kept a line of ‘peaceful co-existence’ and hopeful trust vis-à-vis the Soviet Union; too trusting, argued his critics, as the binary demarcations of the Cold War cemented.89

Cultural and friendship societies were integral to Soviet foreign policy and considered important in building positive relations abroad.90 The 1935 Society for the Promotion of Cultural and Economic Links opened at an auspicious time, after Mme Kollontai closed an earlier Swedish—Soviet society not as loyal to the Soviet policy as she would have liked.91 The former Society was connected with archeologist Ture Arne and geographer and explorer Sven Hedin. Hedin’s rightist bent in the 1930s made him useless as a representative of educated Swedish society for the Soviet Union. Another friendship organization in Sweden, the branch ‘Sovjet-Unionens vänner’, was founded in 1930. Five years later, a Social Democrat from Mölndal, Edvin Trettondal, became chairman of that organization. His subsequent expulsion from the Social Democratic Party exposed its sensitive relations with communism, and Trettondal later joined the Communist Party. By the late 1930s the Soviet-Unionens vänner had disintegrated, but a section of members, including Trettondal, formed another association, the ‘Sovjet-Nytt’, with which Ahlmann had some contact.92

81 Kollontai knew from her childhood French, English and Finnish and then learned German, Norwegian and Swedish.
83 Kollontai, Diplomatscheske dnevniky (note 56), 272.
84 Kollontai, Diplomatscheske dnevniky (note 56), 273.
85 Kollontai, Diplomatscheske dnevniky (note 56), 273.
86 Kollontai, Diplomatscheske dnevniky (note 56), 285.
91 Kollontai, Diplomatscheske dnevniky (note 56), 285.
92 http://www.regeringen.se/content/1/c4/04/47/6150fee.pdf versioning av “SKP-komplekset”; http://bibliotek.molndal.se/gemensam/bibliotekshistoria/historik3.htm Mölndals stadsbibliotek – Mölndals tredje bibliotek; A similar FSU branch was founded in Norway in 1928; http://www.stortinget.no/lund/84-85.htm
93 Diplomaticheskie dnevniki (note 65), 273.
94 Diplomaticheskie dnevniki (note 65), 273.
95 Diplomaticheskie dnevniki (note 65), 273.
96 Diplomaticheskie dnevniki (note 65), 273.
97 http://www.regeringen.se/content/1/c4/04/47/6150fee.pdf vervakningen av “SKP-komplekset”; http://bibliotek.molndal.se/gemensam/bibliotekshistoria/historik3.htm Mölndals stadsbibliotek – Mölndals tredje bibliotek; A similar FSU branch was founded in Norway in 1928; http://www.stortinget.no/lund/84-85.htm
98 Diplomaticheskie dnevniki (note 65), 273.
99 Diplomaticheskie dnevniki (note 65), 273.
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106 Diplomaticheskie dnevniki (note 65), 273.
107 Diplomaticheskie dnevniki (note 65), 273.
108 Diplomaticheskie dnevniki (note 65), 273.
According to her diary, Kollontai began to organize the Society for the Promotion of Cultural and Economic Links in late 1934. The work of organizing the new society took a lot of her energy. She chose Stockholm University chemistry professor Wilhelm Palmaer as chair after he visited Leningrad for the international chemistry conference celebrating the centennial of Mendeleev’s birth earlier in the fall.\(^{93}\) The Society statutes stated that its primary goals were to distribute information about Soviet science, culture, public and economic life, and to develop economic and cultural connections between the two countries.\(^ {54}\) The Society ran extensive exchange programs with films, lectures, and exhibitions in cooperation with VOKS (All-Union Society for Cultural Relations with Foreign Countries), the cultural organization of the Soviet state.\(^{52}\) But developing connections in the scientific community was on top of the agenda, and Arctic studies increasingly recognized as crucial not only to advancing science but also political goals, provided a good platform for making connections.

It was in this exciting geopolitical context that Ahlmann forged his emerging Arctic enterprise as a cross border collaborative one, open to the radical and liberal ideas current in Sweden. He embraced the new ideas and values of rationalism, efficiency, and science that were ascendant in Swedish social discourse at the time, and translated them into an entirely new vision of Soviet polar research. He articulated this vision in 1932, in a publication that built on the fresh experiences of his first glaciological expedition to Spitsbergen the preceding summer.\(^ {30}\) His scientific enterprise was not overtly political; he had no open political affiliations. Unlike Sverdrup representing an ambitious Norway, Ahlmann’s activities could not lean on strong national geopolitical interests. However, given the general political situation in the Arctic and the North Atlantic, where national interests were so markedly expressed through military means, Ahlmann’s work carried a de facto, albeit indirect, political dimension by maintaining Swedish presence in an area where the country would otherwise have been virtually invisible. One lifelong conviction that clearly in Ahlmann’s work might be construed as ‘political’ in the wider sense. Ahlmann argued for Nordic collaboration and peaceful relations with the Soviet Union in a geopolitical climate where tension and conflict of interest were always present.\(^ {57}\)

### Ahlmann’s Soviet contacts mature

Ahlmann’s research was ripe with results when the war started. Although constrained by wartime conditions, he continued to work tirelessly on his theory of polar warming, developed in the 1930s from his observations of shrinking glaciers.\(^ {58}\) Part of his scientific diplomacy aimed at uniting Nordic efforts and instigating wider international cooperation with planned expeditions to Greenland. But the Danes were uncooperative because the Americans had already instituted a new scientific hegemony during the war.\(^ {32}\) A new direction for Ahlmann’s diplomacy was Antarctica. There he managed to secure support for a Norwegian–British–Swedish expedition that finally took place in 1949–1952.\(^ {100}\) By then NATO had been formed. Norway and Denmark were members, but Sweden remained unaligned.

In this increasingly complex political atmosphere Ahlmann maintained scientific contacts with the Soviet Union that he had established in 1934. He remained well aware of the important geophysical work taking place there, particularly in the wide Soviet Arctic. A perfect chance for an update came shortly after the war ended when he received an invitation for an official visit. Ahlmann was so eager to go that he cancelled all commitments, including his ‘Silver Wedding Anniversary’ with his wife Erica and their family in Bergen.\(^ {101}\) The three-week trip took place from June 12–July 2, 1945, when he visited Moscow and Leningrad as a member of a delegation of five Swedish scientists, one of whom was the Nobel laureate. The Svedberg, like Ahlmann, a founding member of the friendship society a decade earlier. The official reason for this trip was to participate in celebrating the 220-year jubilee of the Academy of Sciences in Moscow, which had been organized at the highest possible state level. This lavish program just after the war ended was an important propaganda event staged with great pomp; Stalin himself attended the final banquet.\(^ {102}\) Ahlmann also was invited to attend the Victory military parade at the Red Square (Fig. 3).

Ahlmann used his trip to gain deeper insights into the status of Soviet Arctic research at that time, and to revive collaborative networks that had been somewhat dormant during the war years. As he had done in 1934 he visited the Arctic Institute in Leningrad. He saw clear signs that the Russians had stepped up polar research substantially during the war, a move that he interpreted as having

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93 Kollontai, Diplomatscheskies dnevnikii (note 65), 285. Ada Nilson, medical doctor and editor of the radical feminist journal Tidevarvet, became vice-chair. Palmaer’s daughter, Eva Palmaer, teacher and wife of the editor of the Swedish Communist party newspaper Ny Dag, served as secretary. See also Sovaetunioens vänner [Friends of the Soviet Union] to Ahlmann, 21 December 1934, KVA, Ahlmann coll., Vol. 11; other letters in the archives suggest that Ahlmann was already in touch with the German society Gesellschaft für Kulturelle Verbindung der Sowjetunion mit dem Auslande in 1929. Further information on Swedish–Soviet intellectual relations can be found in Statens Offentliga Utredningar [Sweden’s Official Public Inquiries], Övervakningen av “SKP-komplexet”, Vol. 93, Stockholm, 2002, 60–61.


95 See M. David-Fox, From Illusory ‘Society’ to Intellectual ‘Public’: VOKS, international travel and party elitism in the interwar period, Contemporary European History 11, 1 (Special Issue: Patronage, Personal Networks and the Party-State: Everyday Life in the Cultural Sphere in Communist Russia and East Central Europe) (2002) 7–32.

96 Ahlmann, Polarkrafnsnings värde (note 11), 195–207.


98 Sörlin, The anxieties of a science diplomat (note 10).


101 The invitation was issued by J. Tchernychev, Chargé d’affaires of the Soviet Union in Stockholm, in a letter to Ahlmann 17/5 1945, KVA, Ahlmann coll., Vol. 18. Ahlmann responded in the positive 22 and 23/5, see also the following Correspondence in May and June. KVA, Ahlmann coll., Vol. 8.

102 The members of the delegation were The Svedberg, Eric Hultén, Arne Westgren och Helge Backlund. See Till Sovjetryslanden, Dagens Nyheter, 13/6 (1945); Våra vetenskapsmän imp毛nderade i Ryssland: Sovjets plan h毛mtade alla gaster, Dagens Nyheter, 3 July (1945); Galabankett och segerparad hos Stalin topppunkten vid professorvisiten, Stockholms-Tidningen, 3 July (1945), see also Archives of Russian Academy of Sciences coll. 519, inv 1, f. 39, ll. 39–41.

103 Lajus, J. Lajus, S. Sörlin / Journal of Historical Geography xxx (2014) 1–16

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geopolitical and strategic motives. He told the Helsinki office of the Swedish daily Dagens Nyheter:

As far as the excellent Arctic research is concerned, it is organised under ‘Centraflövtflutningen för den norra sjövägen’ [i.e. Glavesteam]. Its scientific branch is the Arctic Institute in Leningrad. During the war it has been in permanent operation with 77 meteorological-hydrographic stations, each with a minimum crew of five.

This was more than any other country could boast, especially during wartime – what could this giant country achieve under peaceful conditions?

Without the slightest doubt, the Soviet Union was the real Arctic super power. The best Soviet scientific institutions were on the same level as the American ones. Soviet scientists, claimed Ahlmann, had excellent resources and new facilities for geophysical research to be constructed near Leningrad. Another delegation member, botanist Eric Hultén, an expert on circumpolar plants and author of the four volume Flora of Kamchatka and the adjacent islands (1927–1930), added that in Soviet scientific institutions, ‘everybody looks happy’. These enthusiastic statements by Swedish scientists reflected the generally favourable view of the Soviet Union prevalent in Sweden after the war. But Ahlmann went further than most scientists and in the following years he frequently spoke and published on political, economic and scientific development in the Soviet Union in a generally positive way.

The image Ahlmann gave reflected a widespread respect for the Soviet Union in both Europe and Sweden, a view expressed in the interwar years mostly by left-leaning intellectuals, authors, and artists. In this case, however, the impressions belonged to an official delegation of scientists. How should we interpret this admiration? Was Ahlmann only impressed, or was he also concerned? Inspired? Even attracted? His feelings might have been mixed, based on seeing several perspectives in parallel. In the communist daily Ny Dag he wrote, understandably with sympathy: in the Soviet Union there was ‘an idea-ism, which is missing or appears in lesser degrees in other peoples’. He dwelt on enthusiasm and performance and did not react strongly to poverty and rationing, perhaps because they seemed quite rational given the recent sacrifices of war. ‘As scientific worker, 1 kg bread per day, no milk, which is cheap for children but for older [costs] 25 R[uble] pr l[litre].’

On the other hand he was quite eager to convey this new image to Western countries, and made sure that his detailed description of the state of Geography in the USSR and the strategic implications of the Soviet Arctic science build-up was published in the British Geographical Journal. His conclusion was that there was a dire need for Western countries to collaborate with the Russians. Less than two years later, in May 1947, he appeared at the Pentagon, the Cold War enemy of the country he had praised so highly slightly more than a year earlier, advising the US military on Arctic climate change.

The background to this double play with both super powers might indicate that there was always a hidden agenda behind Ahlmann’s Soviet interests. We have not found any evidence of this, however. What is more plausible is that the rapid political change in the immediate post-war years led him to reconsider his views of both the Soviet Union and the United States. As a culturally educated European he had been skeptical of US popular culture and commercialism, but in the 1940s he seems to have realized that the United States was an important ally of Europe. He had in 1944 through 1946 also been active in bringing meteorologist Carl-Gustaf Rossby back to Sweden from the United States and clearly became aware that the kind of geophysical knowledge possessed by people like himself and Rossby was becoming of strategic importance.

The long sojourn in the summer of 1945 solidified Ahlmann’s Soviet contacts, and they only improved in the coming years. From his notebook of this visit, a small collection of business cards and the report of his guide in the Soviet Union we know that he met with most of the leading Soviet polar scientists and geographers: Ivan Papanin and Evgenii Fedorov (both part of a team of four known as the ‘Papaninty’), oceanographer Nikolai Zubov...
geographers Andrei Grigoriev, Stanislav Kalesnik and Lev Berg, glaciologist Grigorii Avsiuk, and others. In the Arctic Institute in Leningrad he met with the new director Vladimir Buiunitsky and his old friend Vladimir Wiese. Ahlmann’s relationship with Wiese remained especially close. Wiese had survived the period of repressions, which had hardly affected the Arctic Institute in Leningrad, and still had a position as its deputy director. Through Ahlmann, Wiese got an invitation from the Swedish Society for Anthropology and Geography to give a lecture in Stockholm. Whether he actually went to Stockholm is unknown, as he informed Ahlmann he needed permission to leave the Institute from Ivan Papanin, head of Glavsevmorput to which the Arctic Institute was subordinated. Ahlmann sent Wiese ‘the results of his expeditions’ in 1934, 1936–1938 and 1939–1940, informing him also that ‘Professor H.U. Sverdrup who visited the Arctic Institute before the war from 1936 is living in California where he published a large scientific work Oceans, which I got recently.’

After Ahlmann’s visit the exchange of literature between the University of Stockholm and the Arctic Institute was reestablished: the Institute sent 117 volumes in exchange for volumes of the journal Geografiska Annaler edited by Ahlmann. Literature exchanges took place with other institutions as well. Immediately after Ahlmann’s visit, A.M. Tchekatillo, the deputy director of the V.A. Obruchev Institute for Permafrost Research of the Academy of Sciences of the USSR in Moscow, sent Ahlmann the major works on permafrost, writing in his letter that he was fulfilling a promise given when they met at the Academy of Sciences jubilee. In a letter from early 1946 Tchekatillo mentioned a proposal from Ahlmann for a regular exchange of literature. He replied that he and academician Andrey A. Grigoriev, a head of the Institute of Geography, would happily send proceedings of their institutes in exchange for Geografiska Annaler. Literature exchanges were also discussed with a head of the All-Union Geographic Society, Stanislav V. Kalesnik. Ahlmann received the same request from the Dean of the Department of Geography, Moscow State University, Konstantin K. Markov. He wrote: ‘Your research in glaciology is well-known for us, but we do not have your publications in our library’.

That Ahlmann’s work was well-known is also evident from the fact that Soviet scientists cited his observations as important evidence among others of the warming. Thus Nikolai Zubov, in his paper of 1932 where he was discussing favourable ice conditions around Spitsbergen that year, referred to results from Ahlmann’s Swedish–Norwegian expedition. Zubov’s research on this problem, which he began to publish in 1924, confirmed temperature changes observed since 1921 in the Barents Sea. He based his conclusions on temperature data collected along the Kola meridian, oceanographic observations by Fridtjof Nansen and Bjørn Helland-Hansen, and materials on diminishing ice-cover published by the Danish Meteorological Institute. Thus Soviet scientists were already aware of warming before they started to cite Ahlmann. However, in the second half of the 1930s both Zubov and Wiese referred to the rapid retreat of glaciers on Spitsbergen (along with increasing air and water temperatures, diminishing ice-cover, and changes in migration patterns of commercial fish species and other marine organisms) as evidence for the ‘warming of the Arctic.’ Sometimes Soviet scientists mentioned Ahlmann, sometimes they did not. For instance, in the first edition of his most important book Morskie vody i Tdy [Marine waters and ice] published in 1938, Zubov referred to the retreat of glaciers, but did not cite Ahlmann. However in the extended edition of the book published as L’dy Arktiki [Arctic Ice] he wrote:

‘as reported by Wiese, Ahlmann who studied in 1934 glaciers on Spitsbergen proved that they are melting now faster that growing due to accumulation of snow. The rapid retreat of Spitsbergen glaciers Ahlmann called ’catastrophic’.’

We do not know when Ahlmann became aware of Soviet glaciological and oceanographical work related to Arctic warming, or whether this was a driving force behind his interest in establishing links with colleagues there. Ahlmann’s publications in the 1930s — the major Svalbard, Icelandand, and Greenland expeditions and their numerous reports — contain no reference to work by Soviet scientists. Yet he was surely aware through Sverdrup and others that important work was underway in the USSR and he sometimes complained that he could not read material in the original Russian. His visit to Leningrad in 1934, alerted him to the major ‘Glacial expeditions’ to several non-Arctic Soviet regions — the Pamir, Tianshan, Zeravshan, Ural, Caucasus, and Altai — that had been undertaken under the auspices of the Second IPY. When the six expedition volumes were published in 1935–1936 (in Russian with English summaries) he wrote an enthusiastic four page review (in English) for the Geografiska Annaler and described the work as essential for ‘a more thorough knowledge of the general nature and life of the glaciers’ before observing that — ‘the USSR is now undoubtedly in the front rank of Arctic exploration’ and regretting the lack of interest from Soviet institutions in providing translations, or at least ‘sufficiently full summaries’ in major European languages.

During his visit in 1945 Ahlmann also met with one of the most prominent Soviet geographers, Lev Berg, who was interested in Arctic warming. In the 1930s Berg published several papers on changes in the migration routes of fish and other marine organisms caused by warming. Another person pivotal to Ahlmann’s attempts to exchange knowledge on Arctic warming was climatologist Evgenia S. Rubinstein. Ahlmann met her at the Central Hydrometeorological Observatory in Moscow and then sent her ‘papers which might have interest for the understanding of contemporary improving of climate, their meteorological reasons

110 KVA Archives, Ahlmann coll., Vol. 68, 71, 29; Archives of Russian Academy of Sciences coll. 519, inv. 1, f. 39, l. 33.
111 See Letter from Ahlmann to Wiese, 9/10 1945, KVA, Ahlmann coll., Vol. 21, where Ahlmann informed Wiese about the condition of his relative M-m Evgenia who lived in Stockholm. The language of Correspondence in that period was Russian, so letters which arrived from Russia were translated for Ahlmann as well as his replies.
112 Letter from Wiese to Ahlmann, 28/11 1945, KVA, Ahlmann coll., Vol. 25.
114 Letter from Wiese to Ahlmann, 30/7 1945, KVA, Ahlmann coll., Vol. 25.
115 Letter from Tchekatillo (Tjekkotilo) to Ahlmann, 16/7 1945, KVA, Ahlmann coll., Vol. 25.
116 Letter from Tchekatillo (Tjekkotilo) to Ahlmann, 17/1 1946, KVA, Ahlmann coll., Vol. 25.
118 N.N. Zubov, L’Arctic Arktiski, Moscow, 1945, 346. This book was later translated into English by the U.S. Navy Oceanographic Office and the American Meteorological Society, Arctic Ice, San Diego, 1963.
and significance which it has, especially for glaciers'.

Soviet colleagues not only asked Ahlmann about literature but for advice on other scientific matters. The director of the Arctic Institute, Vladimir Buinitskii, sought help in procuring a new Petterson sampler (a tube for collecting samples of sea floor sediments), and Ahlmann, although unable to provide the instrument, sent a description. One of Ahlmann's letters shows that he was already interested in returning to the Soviet Union in 1946: 'I would be most happy to see you again already this year in connection with the jubilee of the Geographic Society of the Soviet Union.' However, this trip did not take place. In the same letter he made another unsuccessful attempt to help Helge Ingstad visit the Soviet Arctic.

Perhaps the most concrete effect of the visit was that Ahlmann became aware that Norwegians had to care for their own Arctic interests, or the Soviet Union would gradually take command, an interest which it has, especially for glaciers.

Perhaps the most concrete effect of the visit was that Ahlmann became aware that Norwegians had to care for their own Arctic interests, or the Soviet Union would gradually take command, an interest which it has, especially for glaciers.

Exchange of knowledge between Ahlmann and Soviet scientists also took place during meetings in countries other than the USSR and Sweden. When Ahlmann gave an overview of his research on 'snow and ice' at the Royal Geographical Society in London in November 1945, the leading Soviet geophysicist, Evgenii Fedorov, head of the Soviet Hydrometeorological Service and one of the four team members of Papanin's ice-floe expedition of 1937–1938, was in the audience. In addition to presenting results of his research on glaciers, Ahlmann argued more generally for 'climatic improvement' in this lecture and mentioned Soviet research results that proved the loss of ice-cover in the Arctic ocean and increased temperature of Atlantic waters coming into the Arctic. Speaking briefly in the discussion, Fedorov agreed with Ahlmann's conclusions.

Ahlmann traveled to the Soviet Union for a third time and visited both Moscow and Leningrad between August 8 and 21, 1958. The Soviet Union had become much more open to international cooperation and Soviet scientists took active part in the IGU, including intensive Antarctic studies that paved the way towards negotiations of the Antarctic Treaty the next year. At that time Ahlmann was president of the International Geographical Union (IGU), which the Soviet Union had joined in 1956. The main aim of his visit was to attend the plenum of the IGUS Commission on National Atlases in Moscow State University (fig. 4) but as ever Ahlmann was very interested in meeting with scientists and participating in excursions (fig. 5).

In 1960, Ahlmann received the Great Golden Medal of the Council of the Geographic Society of the USSR for his scientific work in diverse fields of geography and his studies of polar regions in particular. He received the medal from the head of the Soviet delegation ofographers, academician Innokenti P. Gerasimov, at the Soviet Embassy in Sweden before an audience of 100 foreign geographers immediately prior to the XIXth International Geographical Congress in Stockholm. The Swedish organizers were particularly happy with the strong Soviet participation in this congress (the delegation consisted of 60 members) but Ahlmann had become increasingly skeptical of political conditions in the Soviet Union and made his last visit there after that year.

Ahlmann and his wife went to Moscow and Leningrad at the invitation of the Academy of Sciences. On 18 October they attended a reception at the Academy Presidium organized by academician Dmitry I. Shcherbakov. He was a geologist and geochemist, and a disciple of Vladimir I. Vernadsky and Alexandr E. Fersman, who headed the Pamir expedition before the war and led the Division for Geology and Geography at the Academy responsible for most of Soviet polar research through much of the

121 Letter Ahlmann to Rubinstein, 1/10 1945, KVA, Ahlmann coll., Vol. 21. He mentions her work with admiration also in his 1945 article in Geographical Journal (“a woman”, 221).
122 Letter Buinitskii (Buinitsji) to Ahlmann, 14 September 1945, KVA, Ahlmann coll., Vol. 22 (in Russian) and Ahlmann to Buinitskii (Buinitsji), 2/11 1945, KVA, Ahlmann coll., Vol. 22. A vacuum core-sampler was invented by Börje Kullenberg but was tested in the field in several expeditions under the leadership of Hans Pettersson, see H. Pettersson and R. Kullenberg, A vacuum core-sampler for deep-sea sediments, Nature 145 (1940) 306.
128 Izvestia AN SSSR serie geograficheskaya 6 (1958) 145–148.
129 O.A. Konstantinov, Prisuzhdenie medalei i premii GO SSSR za 1958, Izvestia VGO SSSR, seria geografi, 6 (1958) 544–549; Geograficheskoe obshchestvo za 125 let, 367.
Khrushchev period (1953–1963). At a meeting of the Scientific Council of the Institute of Geography, Russian Academy of Science thereafter, Ahlmann discussed the impact of the XIX International Geographical Congress and the possibility of extending the international connections of Soviet geographers. Ahlmann gave two lectures: one at Moscow State University and another at the Academy of Sciences. The audience included geomorphologists Gerasimov and Alexandr V. Zhivago; glaciologist, Leonid D. Dolgushin; specialist in permafrost Nikolai A. Grave; climatologist B.L. Dzerdzeevsky and others. During the discussion Ahlmann stressed that studies of climate change were of exceptional significance for Sweden. Finally Ahlmann visited the Arctic and Antarctic Research Institute in Leningrad and, as in 1934, lectured at the Geographic Society. After this visit Ahlmann’s research was better known in the USSR: in addition to his lectures which appeared in print, two of his most important original papers were published in translation. References to these works became obligatory in Russian scientific publications on glaciology. When Soviet glaciologists began to work on Spitsbergen in 1965 they compared their data with what they knew from Ahlmann, whose work they discussed at length and sometimes criticized. Some disagreement took place on the question of the causes of warming of the Arctic, including the discussion after Ahlmann’s lecture at the Royal Society in 1946, in which one of the most prominent Soviet geophysicists Evgenii Fedorov participated.

Ahlmann and Sverdrup act behind the scene

Ahlmann’s disciple, Valter Schytt participated in a Soviet Arctic expedition on the vessel Ob’ in August–September 1956. After oceanographic sampling between Spitsbergen and Greenland, he arrived at the Vestfonna ice cap on North East Land as a member of a Soviet–Scandinavian team doing preparatory research for the International Geophysical Year on Spitsbergen. Five members of this team – Schytt, Erik Eriksson, an atmospheric scientist at Uppsala, Norwegian meteorologist Niels Schumacher and two Russians – were stranded and rescued after two weeks on a glacier by a Soviet rescue mission. As reported in the Scandinavian press,

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this included sorties from Nagurskaya Air Base on Alexandra Island off Franz Josef Land and was yet another sign of the multiple capacities of the Arctic giant to the East.143

Schytt was invited to participate in the Ob’ enterprise by the glaciologist admiral Vassily F. Burkhanov during an IGY preparatory meeting in May, 1956. Both Sverdrup, Director of the Norwegian Polar Institute, and Ahlmann, now Sweden’s ambassador in Oslo, immediately sought to make the trip happen. Among those involved in securing confirmation from the Swedish and Norwegian Foreign Offices, were Carl-Gustaf Rossby, President of the Swedish IGY-committee; Nicolai Herlofson of the Royal Institute of Technology in Stockholm and secretary of the IGY-committee; meteorologist Bert Bolin member and eventual chair (after Rossby’s death) of the Swedish IGY-committee; Sverker Åström, career diplomat in the Swedish Foreign Office; Swedish Foreign Minister Östen Undén.; the Norwegian meteorologist Leiv Harang and several diplomats in Norway; and the Soviet Ambassador in Stockholm, Rodionov.144

The Ob’ expedition signaled a general Soviet trend towards more openness in Arctic issues — in May, 1956, the USSR even invited Pan American Airlines to fly across the North Pole to Murmansk, supported by Soviet logistics and maintenance (the offer was declined). But the fact that the Scandinavians could respond with alacrity to the new Soviet openness must also be seen as fruit of pro-Soviet seeds planted in the 1920s and 1930s by bridge-building scientists of Sverdrup’s and Ahlmann’s caliber. However, foreign policy that encouraged constructive Scandinavian science did not mean that Cold War realities were set aside altogether. Cooperation was tempered by pragmatism. When the Soviets asked (through Sverdrup), to place two scientists on the Swedish–Finnish–Swiss station during IGY both Rossby and Ahlmann advised against it arguing that a Soviet presence would mean that two Americans would have to be invited and that hosting five nations in a polar research station was unwise. In the end neither the USSR nor the US was invited.145 In 1960 Schytt and Gunnar Hoppe, another disciple of Ahlmann, organized an expedition to Spitsbergen with Soviet scientist participation, and in 1965 Schytt visited the Arctic and Antarctic Research Institute in Leningrad. Invited by the Academy of Sciences he lectured in there and in Moscow, Alma-Ata and Tashkent in 1968, following on a Soviet visit to the Swedish Tarfala glaciology station the year before.146

Conclusion

In the work of Hans Ahlmann in Sweden and, to a lesser extent, his counterpart Harald Sverdrup in Norway we have found relations between Scandinavian and Soviet earth scientists to have been an amalgam of scientific, personal, institutional, and political interests that permitted multifaceted links to grow over time. Because these links were embedded in a history that encompassed Norway and Sweden, Ahlmann was the ideal protagonist for strengthening connections. Emerging Scandinavian–Soviet networks had their roots in key geophysical centers, first of all Bergen, well established in oceanography and geophysical research in the 1910’s and 1920’s. Here Ahlmann began his long career in glaciology and Sverdrup assumed his first major position as head of the Christian Michelsen Institute. Nikolai Zubov, the most important Soviet advocate for a dynamic understanding of the atmosphere and the ocean was a student of Helland-Hansen’s in Bergen in 1913.

Fragmented information and slightly different views contributed to the challenges that Ahlmann and also Sverdrup met as they approached Soviet scientists and their institutions, but the larger political framework was always more consequential. Ahlmann sought balance but, political realities generally triumphed. Changes in relative scientific capacity influenced Ahlmann’s collaborative networks. Before the war and as late as 1945 he was interested in the USSR because of its capacity and innovative Arctic research. With the Cold War and drastically increased Arctic research in the US, his patterns of collaboration grew westwards. One of his driving motives in lobbying for a Norwegian Polar Institute was to preempt Soviet ambitions to build a grand hegemony and squeeze Norwegian territorial interests, for Ahlmann implicitly united Norwegian

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144 Ahlmann’s letter to Lange including Schyt’s report 5 June, Herlofson’s letter to the two IGY-committees 2 June, and several other documents pertaining to this issue are in the Foreign Office archives 1950/59, box 2186, 36.1 Ishawinteresser.

145 The entire paragraph builds on the previously cited Foreign Office archives materials in Oslo.

and Swedish concerns. With that Sverdrup, like most Norwegians, would concur. Sverdrup’s interest in Soviet science was similar to Ahlmann’s in that he earnestly wanted to share knowledge. Politically he had more constraints than Ahlmann, although he had more resources in his Polar Institute. In reality his work in the US for more than a decade and his official role in a key public institution under Norway’s new NATO membership drew him, even more than Ahlmann, to the western sphere.147

Paradoxically Ahlmann’s legwork on behalf of Norway can also be interpreted as evidence of how well positioned he was in relation to the Soviet Union. He was close enough to its Arctic activities to grasp both their climate science and their geopolitics and contextualize them in relation to Norwegian and wider Scandinavian interests. He also maintained and reinforced a Soviet connection during the Cold War, which sustains the hypothesis that it was not primarily political or ideological inclinations that directed Ahlmann in his bridge-building and collaborative efforts. Ultimately, the scope and extent of Ahlmann’s comprehensive Arctic activities, his long-standing connections with the Soviet Union, and the trusting relations he built within the large country, were predicated on the fact that Sweden was politically weak vis-à-vis the Arctic. Ahlmann performed his ‘soft’ politics of science in a foreign policy vacuum that developed as Sweden abandoned high Arctic politics. After the Svalbard Treaty Sweden reduced its geopolitical ambitions in the north to almost zero. This created an opportunity for the skillful scientific entrepreneur who could combine his own scientific agenda with idealistic internationalism and diplomatic bridge building. Ahlmann’s attempt, as a self-professed diplomat of science, to melt the glacial curtain should therefore be interpreted as a political effort grown out of Sweden’s political weakness as much as a demonstration of the strength of Sweden’s and Ahlmann’s geophysical science.148

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147 His activities in the preparation for IGY were markedly oriented towards the United States which is evident by abundant materials in the Foreign Office archives in Oslo; see e.g. 1950/59, box 2186, 36.2 Ishavsiinteresser (‘Polar Interests’), box 2187 36.2.4, Vols. II, III, and IV. One could also note that Ahlmann’s student Valter Schytt worked with the Americans at their newly established Thule Base in Greenland in 1954; Ahlmann to Sverdrup 21 July 1954; Sverdrup collection, National Library, Oslo (Brevisamling 634 A). V. Schytt, Glaciological investigations in the Thule Ramp area, Wilmette, Illinois, 1955; SIPRE [Snow, ice and permafrost research establishment] report 28.