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The Arctic from a Hungarian Perspective

ABSTRACT

The history of Arctic exploration and the natural and social geographical characteristics of the region have been in the focus of Hungarian geographical research for 250 years. These studies are not exclusively geographical, but related to scientific fields (science, ethnography, and geopolitics), and include travel history. At the same time, no uniform work or knowledge base was created that would summarize domestic research in the Arctic region. The present study tries to fill this gap and summarize the role of Hungarian scientists in the research history of Arctic geography and related sciences and covers a geopolitical perspective. During the study, I applied a multidisciplinary approach, using domestic scientific works published in the fields of history, travel history, geography, ethnography, linguistics, as well as international relations, geopolitics, and international law. I concluded that the Arctic region has belonged to the field of interest of Hungarian scientists for centuries. I identified five major periods, during which different aspects and scientific fields played a central role (e.g., natural science, ethnography, geopolitics).

Keywords: Arctic, Hungary, geographic discovery, geopolitics, history of discovery

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INTRODUCTION

Among the Hungarians who once showed remarkable achievements in the Arctic region, the names of many have either been forgotten or are entirely unknown to the public, even though many scientists, researchers and travellers who represent a bridge between Hungary and the Arctic regions have visited the region. Recalling their memory and nurturing their intellectual legacy has gained new importance today.

The relevance of the paper is that as a result of climate change, the Arctic has become a geopolitical hot spot. It is not the first time that the Arctic region has aroused the interest of the international public, and it is not the first time that Hungarian foreign policy and science have dealt with the region. The environmental and international political changes taking place in the Arctic are processes affecting us on a global level. The literature published in Hungary is extremely diverse and has a long history, both in the fields of natural sciences, descriptive geography, and social sciences. In recent decades, the geopolitical, international political, security policy and international legal literature has also expanded, due to the rapid and significant changes of the region. Examining international political events in the Arctic, from the Hungarian perspective, we find several connections that are relevant for Hungarian foreign policy.

The aim of the study was to summarize Arctic research related to domestic geography and travel history, and to identify major periods. Furthermore, I also took into account the development of the region from a geopolitical perspective. In the past, no unified work or knowledge base was created that would summarize domestic research in the Arctic. The present study tries to fill this gap and to summarize the role that Arctic Hungary played in the research history of geography and its related sciences: what major periods can be observed, and what characteristics have arisen from them.

The Arctic is a geopolitical and geographical space at the same time (Figure 1). Great powers and states with significant economic and political weight are present in the region, such as the United States, Russia, and certain member states of the European Union (Denmark, Finland, and Sweden), alongside with Iceland, and Canada. The countries of the region cooperate, the most important forum of which is the Arctic Council, but the possibility of conflict is also present between them, primarily as a result of territorial disputes. At the same time, the region attracted the interest of several great powers centuries ago. From the age of geographical discoveries, the sea route from Europe to Asia was searched. Then, in the second half of the 19th century, a competition began between the researchers of different nations to map the last white spots on Earth. Most of the explorers belonged to nations that wanted to justify their regional or great power status, or Norway's independent statehood for some reason during the 19th century. Many of the nations competing for the exploration of the region still show a significant interest in the region and, in addition to the states directly affected by the area (the United States, Denmark, Norway, Sweden and Russia), participate as observers in the operation of the Arctic Council: the Netherlands, Great Britain, Germany and Italy.

Figure 1. The Arctic region and territorial claims



Source: IBRU, Durham University; Ministry of Foreign Affairs of Denmark, The Economist (<https://www.economist.com/international/2014/12/17/frozen-conflict>)

In recent decades, as a result of climate change, the Arctic has become a geopolitical hot spot. The change in climate brought many other transitions, including the discovery of the region's resource reserves and their appreciation. In this way, the Arctic could become a geopolitical space in addition to a geographical area, thus local events and discoveries can also be interpreted in a geopolitical context.

The background of the research is that despite the distance, the arctic areas can be remarkable from the point of view of Hungarian geopolitics and foreign economic relations. Climate change and related natural and social phenomena, such as migration or agricultural impacts, connect distant points of the Earth. Energy dependence can also connect remote areas, which are poor in fossil energy, to the Arctic. Hungary's system of alliances is also linked to the high north in several ways, and the area is also extremely important for its political, economic, and military allies. (Some member states of NATO and the EU are Arctic countries). In addition, Hungary engaged in the scientific discovery of the Arctic in the second half of the 19th century, ahead of many other European states. Meanwhile, the history of Hungarian geographic discoveries and travellers forms a separate research field, as it was presented also in a thematic issue of *Modern Geográfia*, with a comprehensive overview of the 18th–19th-century Hungarian or Hungary-related travellers in South Asia and India (Bangha, 2022; Tésits & Wilhelm, 2022; Zagyai, 2022), and living effects of images of India, conveyed by Hungarian travellers (Wilhelm, 2022).

In the future, monitoring further Arctic events and participating in international scientific cooperation can be important for the Hungarian foreign policy for political, economic, security, scientific, and historical reasons. The area has become a focus of international policy-making, and participation

in local international scientific cooperation could also give prestige to countries who had less political power in previous centuries.

METHODS

The methodology of this paper is primarily based on literature studies and processing. I also carried out a content analysis of the *Hungarian Geographical Review (Földrajzi Közlemények)*, the journal of the 150-year-old Hungarian Geographical Society, and some accessible contemporary papers and books. An additional source was the analysis of publications on the processes of the Arctic in the last decade, based on the research of historical aspects. In addition, I used the results of my previous analysis (part of my dissertation), in which I periodised the eras of international discoveries in the Arctic. This chronology provided the basis for the results of my present research on domestic travellers and explorers.

International and domestic literature on the discovery of the Arctic is extremely extensive in scientific publications, study volumes, and monographs. Examining the history of exploration of the Arctic, I identified several defining processes, which I describe below.

The history of exploration of the Arctic region and the geopolitical processes of the region have been included in Hungarian geographical research for the past two hundred and fifty years. The expedition of Miksa Hell and János Sajnosics in 1768–69 directed the attention of the Hungarian scientific community to the Arctic region. After that, the region gradually became important to Hungarian scientists due to several aspects (ethnography, history of discovery, geography, and natural science), so I had to analyse a wide range of specialist literature and travel history reports dealing with the region. The *Hungarian Geographical Review* was among my most important sources, which is similar to Zoltán Wilhelm's (2022) publication in *Modern Geográfia*, about the "Living effects of India images conveyed by Hungarian travellers". He investigated *The Hungarian Geographical Reviews* between 1880–1945, which era was also relevant for this paper.

RESULTS

Hungarian explorers in the Arctic

Hungary did not play a central role in geographical discoveries for several reasons, because of the country's geographical position and because of its turbulent history. At the same time, there were a couple of unique explorers who managed to reach the farthest corners of the world (Kubassek, 2008). The majority of Hungarian travellers visited the most remote part of the Earth for some scientific purpose and, according to the country's capabilities, primarily participated in the mapping of land areas. In addition, Hungarian scientists and the interested public have monitored the mapping of the unknown area of the Earth, including the discoveries made in the high north. Typically, they investigated regions more easily accessible from Hungary, so most Hungarian travellers and explorers

visited Asia or Africa. The special reason for the frequency of Asian expeditions was the desire to explore Hungarian prehistory and the origins of the language. During the search for language relatives in Northern Europe or Siberia, several Hungarian scientists reached the northernmost parts of the Scandinavian Peninsula or Siberia. Others came to distant lands for natural science investigations. In addition to continental expeditions, a couple of maritime journeys, such as the Austro–Hungarian polar expedition took place. In the following, I briefly describe the northern routes of domestic explorers and their main objectives and characteristics.

In domestic geographical research, the region of the Arctic became especially important from the second half of the 1800s, during which time three Austro–Hungarian research expeditions were carried out. The so-called Arctic rush, i.e., increased international interest in the Arctic, persisted even after Robert Peary’s research trip, reaching the North Pole in 1909. It was one of Jenő Cholnoky’s priority areas of research, and within the framework of the Hungarian Geographical Society, he commissioned several researchers to investigate the region, and facilitated the publication of their books and publications about the Arctic. During the Cold War era, the Arctic gained ground in domestic scientific dissemination due to cooperation with the Soviet Union. In the 2000s, but primarily in the 2010s, domestic specialized research began to examine the region due to climate change and the transformation of geopolitical conditions. Due to this broad spectrum of research, I used a multidisciplinary approach during the critical source analysis.

Periods of international discoveries

The Hungarian Arctic journeys are parallel with the international trends, which I have summarized in the following table (Table 1). The first and second periods at international level were exceptions to this, because in these periods Hungarian travellers showed restrained activity, so I did not divide the period into two in Hungarian periodization.

The six eras I have identified are: pre-1600s, 1600s to mid-1800s, mid-1800s to early 1900s, 1910-1945, and then cold war and finally the era starting from 1990. The main characteristics of each historical unit are as follows:

- Scandinavian and East Slavic peoples (Novgorodians) visited Circumpolar Europe and Siberia, as well as Greenland and Iceland. (Scandinavian peoples appeared in the land areas north of the Arctic Circle, in Greenland, Iceland and, according to some assumptions, in North America, Newfoundland. While the Novgorodians gradually conquered the Kola Peninsula and sailed in the seas north of the coast of the present-day Russian Federation. Their purpose was to extract resources, as primarily whaling, fur trade, and securing precious metal and salt reserves.
- From the 1600s to the middle of the 1800s, Europeans (British, Dutch, Scandinavians, and Russians) searched for maritime trade routes in the high north, in addition to Circumpolar Europe, Asia (Siberia) and the Americas and in between the conquest and conquest of the archipelago was also taking place.

- From the mid-1800s to 1910s, the exploration of the Arctic Ocean, the search for the Northeast and Northwest Passages, and that of the North Pole took place. In this era, the belief in the discovery of the commercial shipping route was already moderated, it was rather the desire to map the unknown territories that drove those who came to the region. Technological development played a key role in this competition and required high financial expenditures (this process can be compared to the era of the space race of the 20th century). Great powers and emerging nations at the end of the 19th century participated in the research: the United Kingdom, Sweden, Germany, the Austro-Hungarian Monarchy, Denmark, Norway, the United States of America, and Russia.
- The period between 1910 and 1945 is different from the previous one because in 1909 the American Robert Edwin Peary reached the North Pole. Therefore, in this period, the mapping of the Arctic Ocean and its tributaries took place, in which mainly the coastal states of the Arctic Ocean participated, and the competition between the United States of America and the Soviet Union, which would later extend to other areas, was already outlined.
- The Cold War extended to the region, as it is separated by the Arctic Ocean, and also connected the United States of America and the Soviet Union. In this period, military and security policy aspects came to the fore.
- After 1990, not only the end of the bipolar world order had an impact on the region, but also climate change, whose result was that several geostrategic resources have become available (natural resources: crude oil, natural gas, shipping routes, tourism), besides the states of the region, significant resources attracting the interest of extraterritorial states (including China, India, Japan, South Korea, the European Union and some European countries). In addition, environmental safety aspects have also come to the fore, both in the formation of international policy and in global public discourse.

First period: The first Hungarian explorers in the Arctic

The first period of the research in the Circumpolar region consisted of a few sporadic expeditions, which either served more scientific purposes or were not specifically created for the research of the Arctic. At the same time, the fact that Hungarian researchers reached the high north and made Nordic locations known to the Hungarian scientific public was also a significant achievement in the era.

The data on the first explorer to the north fades into the shadows of history. It can be assumed that there was a connection between the medieval Vikings and Hungarians. According to contemporary chronicles, during Leif Erikson's journey to America, a presumably Hungarian sailor named Tyrker participated. In the period, the name Tyrker mostly meant Hungarian. The uncertain position can be supported by an archaeological finding in a Norman settlement in North America because the silver money of Stephen I of Hungary was also found during excavations (Havas, 1985).

The first two travellers in the following did not visit areas beyond the Arctic Circle, but places that were among the northernmost points of the world known in their time.

Table 1. Historic overview of Arctic resources and nations interested in the region

Period	Arctic zone	Nation	Geostrategic resource
Period before the 1600s	Circumpolar Europe, Siberia, Greenland and Iceland	Scandinavian and East Slavic peoples	Natural resources: whale, fur, noble metal, salt
From the 1600s to the mid-1800s	Circumpolar Europe, Asia and America, and archipelagos and seas located between them	British, Dutch, Scandinavians, Russians	Natural resources: whale, fur, noble metal, salt; sea trade routes
From the 1860s to 1910s	The Arctic Ocean and its tributary seas, the Northeast and Northwest Passages, and the search for the North Pole	The United Kingdom, Sweden, Germany, Austria-Hungary, Denmark, Norway, the United States of America, Russia	Shipping routes, geographical exploration competition
From the 1910s to 1945	The Arctic Ocean and its tributary seas	The United States of America, the Soviet Union, and coastal states	Security policy aspects
Cold War	The Arctic Ocean and its tributary seas	The United States of America and the Soviet Union	Security policy aspects
After 1990	The Arctic Ocean and its tributary seas and continental Circumpolar Arctic	Arctic states and extraterritorial powers including: China, India, Japan, South Korea, the European Union (and some European countries)	Natural resources: crude oil, natural gas Commercial shipping routes Tourism* Environmental security aspects

Source: own edition

* Tourism has become an important economic sector in the region.

The first recorded Hungarian explorer who reached America, namely its northern region, was Stephanus Parmenius in 1583. Sir Humphrey Gilbert invited the Hungarian, who was engaged in literary activities in Oxford, England, to be the chronicler of his Newfoundland expedition. He is the first known Hungarian who visited North America. In addition, he arrived at the region belonging to the northernmost areas of the then-known New World. During the expedition, his ship disappeared, was probably shipwrecked. At the same time, an account of the Hungarian traveller survived in the form of a letter about the locations he visited (Havas, 1985).

The next Hungarian explorer, Maurice Benyovszky, who travelled to areas north of 60° latitude, was the first known Hungarian in the Northern part of Asia, visiting Siberia. (Later he also reached North America. However, he did not reach such high latitudes as Stephanus Parmenius.) Benyovszky, as a part of his adventurous life, arrived at Kamchatka as a prisoner in 1769 and walked across Siberia on the way to the peninsula. The Hungarian count escaped from captivity, and originally planned to reach the shores of Alaska in America, but this venture was not successful. Thus, his ship made its way to Japan (Kubassek, 2008). It is notable that Vitus Bering sailed to the Aleutian Islands shortly before Benyovszky in 1741 and laid the foundation for navigation between the American and Asian continents. In that era, the regular crossing between Alaska and the Kamchatka Peninsula was yet to happen. The first permanent Russian settlements were established in Alaska only in the 1790s.

The first two Hungarians who are known to have visited areas beyond the Arctic Circle were two Jesuit scientists, Miksa Hell and János Sajnovics, who reached Vardø in Norway in 1768–69. During their journey, they made astronomical, geological, and meteorological observations, which were of great importance in the international scientific life of the time. This was the first Hungarian expedition to the high north that was organized and successfully carried out to achieve scientific goals. Maria Theresa also assured the scientists of her support with a diplomatic letter of recommendation, and the Danish royal court provided financial funding for the costs of the trip. The linguistic significance of the Lapland journey is that during his stay, János Sajnovics also began comparing the Hungarian and Lappish languages. Later, in 1888, Ottó Herman visited the site of the expedition of the two scientists' journey, which was considered a significant scientific journey in the era (Kubassek, 2008).

Due to the search for the Finno–Ugric kinship of the Hungarian language, several Hungarian explorers and scientists later went to the northern regions of Siberia, among them was Antal Reguly, who visited the region during 1843–45. He also reached the Urals beyond the Arctic Circle and the shores of the Arctic Ocean. In addition to studying the language and ethnographic characteristics of the Finno–Ugric people living in Russia, it was of great importance that he drew the first map of the Northern Urals on behalf of the Russian Geographical Society. He was also the first European traveller in some of the harsh northern areas of the mountain range. In honour of his work, in 1990, a mountain peak beyond the Arctic Circle of the Urals was named after him, this is the Mount Reguly (Kubassek, 2008).

The first period of the research, which can be characterised with a few sporadic expeditions, was followed by a more concentrated era, with significant scientific achievements and great efforts.

Second Period: The 19th century Arctic rush in Hungary

The first real polar expeditions took place in the second period of the Hungarian Arctic discoveries. Before the so-called Austro–Hungarian North Pole expedition, a preparatory journey was organized in 1871. It was followed by the famous 1872–74 discovery trip. The explorers discovered Franz Josef Land, an archipelago in the Arctic Ocean, by the coast of Siberia. The northern research trip is considered the greatest international scientific success of the Austro–Hungarian Monarchy. Later, the naval officer of the Austro–Hungarian Monarchy, Karl Weyprecht inspired the first International Polar Year.

The Austro–Hungarian Monarchy joined the polar research in the early phase of the so-called North Pole rush. The monarchy could mobilize technical, scientific, and financial resources to implement the expedition. In the case of the expedition, the results were the first scientific works from the Franz Josef Land and the name of the area, which to this day bears the name given by the former Austro–Hungarian explorers.

In the last third of the 19th century, international scientific competition had geopolitical dimensions, as Daniel K. Benjamin (2001) points out, with a parallel to the 20th-century space race. The great powers tried to achieve results in a peaceful way as well, and to prove that they were able to create the

material and technological conditions, scientific background and use the resources to achieve results. The expedition cast a favourable light on the monarchy, both domestically and internationally. He was able to provide the material, technological and scientific background to carry out the very expensive and difficult-to-implement expedition. In the era, only a select group of states allowed or could afford this (for example: England, America, Denmark, Sweden, Germany, or Italy). The journey became a forerunner to the International Polar Year, the prominent forum for international Arctic research.

The Polar Year was organized between 1882–83, one year after the death of Karl Weyprecht, who developed the idea (Nagy, 2003). Austria–Hungary, along with the United States of America, Canada, Denmark, Germany, Sweden, Norway, Italy, and the Netherlands, participated in the alliance. Scientists of the monarchy established a measuring station on the Jan Mayen Islands and carried out tests (Nagy, 2003).

The third Arctic expedition differed from the previous two, as well as from what was previously customary in polar research. The researchers' aim was an island halfway between Iceland and Greenland in the Atlantic Ocean. Scientists have established an observation station there. Based on the description of the *Hungarian Geographical Review* (Hungarian Geographical Society, 1883), the island was very suitable for conducting observations, as its extent is so small that it does not influence weather conditions. According to the cited report, all the planned measurements were successfully tested (among others: meteorological, oceanographic, and sea currents), and despite the harsh weather conditions and difficulties, the participants were all able to return home after the research year. The observers were transported to and from the island by the monarchy's navy. Along the way, the scientists also had the opportunity to make small observations in the surrounding seas and in Iceland. The main value of the research was the comparison of the measurement data collected on Jan Mayen Island with data from other locations (Hungarian Geographical Society, 1883, 391–393).

In this period, which took place before the first American expedition (in 1909) to reach the North Pole, only one more Hungarian traveller reached the Circumpolar North. This journey can be categorised again as sporadic expedition. In 1901, a Hungarian ship mechanic, Lukács Vörös, participated in an American Arctic expedition, the Baldwin–Ziegler Polar Expedition. (A journey which tried to reach the North Pole from Franz Josef Land.) If his report can be considered authentic, the proof of his journey is a letter that Lukács Vörös sent home from Franz Josef Land (Lendvai, 2009). This journey was not the part of a series of large expeditions carried out with official state support. At the end of the era, the North Pole was reached a few years later, in 1909.

This age, the second period, and at the same time perhaps the most outstanding one, the period of international and domestic Arctic research was essentially closed.

Third period: The promotion of the Arctic in Hungarian geography

The next era was the period of the collection of scientific knowledge of the Arctic and the popularization of these researches, and the years from 1910 to the beginning of the Cold War can be classified here. It is largely linked to the work of a single prominent geographer, Jenő Cholnoky.

This way, the most prominent Hungarian researcher who travelled to the Circumpolar North during this period was Jenő Cholnoky. The famous Hungarian geographer conducted extensive research, as János Kubassek (2022) highlights in *Modern Geográfia*. Cholnoky's extreme interest in Arctic research is also reflected in his journey to Svalbard in 1910. Later, in 1914, his book about Arctic research, entitled *Ice World* was published, in addition to which the topic appears in several of his books, for example, *Discoverers and Conquerors of the Earth* (1930). Jenő Cholnoky wrote the foreword and edited Amundsen's books published in Hungarian. Cholnoky also selected an essay with the subject of the Arctic for the book series published by the Hungarian Geographical Society. Among them, there was Dezső Papp's (1914) writing: *All the way to the North Pole*. The great interest could be based on the fact that the race to reach the North Pole ended just a few years earlier, in 1909, with Peary's success.

Cholnoky was not alone in his passion for the Arctic, Márton Vörös, writer, translator, geographer, cultural diplomat from Stockholm, translated Hans W. Ahlmann's (1934) account of the Swedish–Norwegian arctic expedition in 1931 into Hungarian. The title of the book published on the trip is *The Lucky Expedition: Hans W. Ahlmann's Journey to the Northern Ice World*. He also knew the leader of the expedition personally through the Swedish Geographical Society.

At the beginning of the 20th century, another Hungarian traveller visited the peripheral areas of the Arctic. The importance of their journeys is given by the fact that it was a live report from a landscape never seen by the Hungarian publicity. Besides Jenő Cholnoky, György Barcza, diplomat and world traveller, took part in a cruise from Norway on the Barents Sea, between Northern Norway and Svalbard. Cholnoky (1911) reports on the event in his book titled *Travel Notes on an Arctic Ocean Hunting Trip*.

At the end of the era, in 1931, another Hungarian traveller, Ferenc Rákos, went beyond 80° north latitude. Rákos was a Hungarian who emigrated to the Soviet Union after the fall of the Soviet Union. The purpose of the trip in 1931 was for a Soviet airship and an icebreaker Maligin to meet near Franz Josef Land in the Barents Sea. The journey served promotional purposes, tourists could travel on the board of a Soviet icebreaker for the first time, among them Umberto Nobile, an arctic explorer, and an American millionaire woman (Kulcsár, 1973).

As the closing chord of the era, in 1935 Zsigmond Széchenyi went on a hunting trip to Alaska. In addition to his hunting experiences, he reported on his observations in the northern region. His book, entitled *I hunted in Alaska: Hunter's Diary August–October 1935* was first published in 1937, and later went through several editions.

The latter work forms a transition to the next period when scientific information disseminating literature about the Arctic region became popular.

Fourth period: The emergence of the Arctic in scientific dissemination

The two most defining motifs of the following era were characterized by the widespread dissemination of knowledge about the Arctic and the friendly relations between the Soviet Union and Hungary.

During the bipolar world order, the Soviet Union paid special attention to the Arctic, and demonstrated its local presence in front of foreign and allied journalists. This way, in 1971 MTI's Moscow correspondent, István Kulcsár, also reached the North Pole-19 station – (which was then located at 81° 22' north latitude) – together with representatives of several Central European socialist countries. Additionally, according to Kulcsár's report, a Hungarian journalist, János Zsombor, had travelled beyond 80° north latitude before him (Kulcsár, 1973). Very little data is available about the mentioned journey. Kulcsár described his own journey in detail in his book titled *With a Microphone at the North Pole*, published in 1973.

In addition to István Kulcsár, Pál Rockenbauer, a popular Hungarian hiker and television editor, reached the arctic regions, both in the north and in the south. Rockenbauer (1979) reports on his experiences of the icy landscapes and his knowledge about the Arctic in his youth book *What the Ice World Tells*.

The Soviet Union tried to transfer its intense interest in the Arctic to the allied countries in other ways. The literature related to the Hungarian Arctic showed a significant increase in the period, and the topic also appeared in the media.

The trip of István Kulcsár and Elemér Csák to the Arctic can be considered the closing moment of the era. The expedition took place after the fall of the Iron Curtain, in 1990, and a summary book about it was also published. In their work titled *The Ice Curtain is Falling*, the two journalists present the living conditions of the Eskimos living on the two sides of the Bering Strait, in Kamchatka and Alaska.

Fifth period: the geopolitical significance of the Arctic from the perspective of Hungarian research

The phenomenon of the North Pole came to the fore in the 2000s in Hungarian research scope, but mainly after 2007, when two events of symbolic importance took place in the summer of that year: the Northwest Passage opened completely from under the ice sheet for the first time, and Russia raised its flag under the sea, which caused great international response in public and scientific public opinion. Hungarian researchers were primarily focused on the new international relations system emerging with the melting Arctic, including issues such as the international legal questions of the ownership of the undersea continental shelf, and the new challenges of security policy as environmental security.

The Hungarian researchers mostly take a comprehensive look at the issues raised by the following: which countries are interested, whose interests collide, and what resources the competition is about. There are even fewer articles on the topic that focus on one specific issue. Among the exceptions, Andrea Márton's work mainly examines the region through the armed security forces (military presence and the local operation of the coast guards). Dániel Berzsenyi deals with the new challenges of security policy (for example, energy security, environmental security, and the security of transport routes). Vivien Vigh studied the geopolitical processes and security policy challenges of the past in several publications, while Tamás Almási and Klára Siposné Kecskeméthy (2018) examined the

relationship between global warming and epidemics in their study. Erzsébet Csatlós and Tamás Lattmann approach the topic from the perspective of international law. And Mihály Miklós Nagy puts the events of the Arctic in a historical context. In domestic literature, the emphasis on the Russian relationship can be observed, since among the regional states, Russian activity is the most significant in the region, and Russian foreign policy has the greatest impact on Central European relations.

An overview of the trips of Hungarian ethnographers and linguists to the Arctic

A special group of Hungarian travellers should be mentioned in connection with the northern discoveries, among them the linguists and ethnographers who followed Antal Reguly to the Circumpolar North. (There were other Hungarian linguists and ethnographers in the Finno–Ugric region, here only the Arctic journeys are mentioned.) In many cases, the works of ethnographers and linguists also contained journey reports about the Arctic region, which were published several times in the Hungarian Geographical Review. Among the first, Károly Pápai conducted research in the field of the northernmost Finno–Ugric peoples and reached the areas inhabited by the Samoyeds living in the Circumpolar North at the end of the 1800s. Pápai (1889) wrote about his work entitled "Report on My North-Siberian Journey." Later Ferenc Báthori, linguist and ethnographic researcher visited Lapland several times, where he collected folk tales and folk songs at the beginning of the 20th century. He also published his travel report in a book in 1917: *My Travels in the Lapland*. János Kodolányi travelled to Finland several times in the 1930s, three books about his journeys were later published, *Suomi, the Land of Silence* (in 1937) and *Secrets of Suomi* (in 1939) and the edited book *Suomi* (in 1940). In the 1970s, the writer György Radó also travelled to the northern parts of Finland, and reported on the event in a travelogue, *Among Linguistic Relatives* (1975). In the same period, the music historian and folk music researcher György Szomjas–Schiffer (1976) collected folk music in Lapland and Finland, and two books from his collections were published, *In Search of the Ancient Music of Finno–Ugric Peoples* (1965) and *The Discussion of Finno–Ugric Music*. In 1980, writer and translator Endre Gombár's experiences and ethnographic observations on the Lapland journey were published in the book titled *In the Realm of the Midnight Sun*. After the era of ethnography and language, in recent decades, Hungarian scholars have been mostly concerned with the minority legal status of the Lapps and the indigenous peoples of Siberia.

Although linguistics and ethnography do not directly belong to the subject of geographical research, the work of the aforementioned authors is enriched by numerous travelogues and social geography features.

CONCLUSIONS

I examined the geographical discoveries in the Arctic, I focused on Hungarian geographical research and related research fields. At the turn of the 19th and 20th centuries, domestic scientists, among them geographers, involved the Arctic region in the scope of their research. During the study of

the Hungarian history of discovery and travel history, I identified several periods of studying and investigating the Arctic. It should also be noted that the Hungarian Arctic journeys are parallel with the international trends. The first period (the ages before the 1600s) and the second period (the era from 1600s to mid-1800s) at international level were exceptions to this, because in these periods Hungarian travellers showed restrained activity, so I did not divide the period into two in Hungarian periodization.

The first period of the research focused on the Circumpolar region with a few sporadic expeditions, which either served more scientific purposes or were not specifically created for the research of the Arctic. At the same time, the fact that Hungarian researchers visited the high north and made Nordic locations known to the Hungarian scientific public was also a significant achievement in the era.

The second is the era of so-called Arctic rush, in the last third of the 19th century, during which general and international attention surrounded the discovery of the Arctic. This atmosphere also reached Hungary, and thus the domestic public opinion and the scientific community turned with interest towards the distant landscape. Among other things, the Hungarian Geographical Review, which summarizes the annual work of the Hungarian Geographical Society, regularly reported on the process of discovering the Arctic, as well as the research journeys made by Hungarian explorers, including linguists and ethnographers, in the Arctic (Hungarian Geographical Society, 1883; 1885; Halász, 1882; Halász, 1890; Havass, 1909). From a domestic point of view, the joint Austrian–Hungarian expedition that discovered the archipelago called Franz Josef Land in 1873 (Hunfalvy, 1873) was an important milestone.

As the third major period, I identified the era from reaching the North Pole (1909) to the Second World War, the middle of 20th century. Jenő Cholnoky was an outstanding personality of this era of Hungarian research history. The geographer himself visited the far north, and reached Svalbard in 1910 (Cholnoky, 1911). He also supported other Hungarian geographers to investigate the region and publish informationally about it.

I identified the second half of the 20th century, the Cold War era as the fourth period. During this age, the so-called Arctic rush, the desire and competition to discover the North Pole and the northern sea passages calmed down as explorers reached these prominent geographical points. This epochal boundary was reflected in the case of domestic scientific interest in addition to the international one. Specialized research in Hungary lost momentum from the mid-1900s. The most important trend regarding the Arctic came to the fore in the second half of the 20th century in educational literature. Reports on the Arctic reflected closer ties with the Soviet Union. During the socialist era, Hungarian scientists and journalists reported from time to time on scientific research in the Arctic region.

During my studies on the Arctic, I could not ignore the fact that the Arctic region was a prominent location for Hungarian linguists and ethnographers. This line of research developed differently from the geographical studies. However, it is an integral part of the history of domestic discovery. In several cases, the Geographical Society itself reported on the journeys of ethnographers and linguists, and on the recent results of these scientific fields. This scientific field also influenced the beginning of Hungarian scientific interest. The Hungarian scientist Miksa Hell and János Sajnovics turned to the high north following their journey to northern Norway in 1769 (Sajnovics, 1769) and János Sajnovics's

book *Demonstratio (Demonstratio Idioma Ungarorum et Lapponum idem esse)* was published in 1770. Hungarian scientists researched the culture of the Sámi (Lapp) and other Finno–Ugric peoples and Finno–Ugric languages in distant lands (Kubassek, 2008). During the whole of the 20th century, research on the Finno–Ugric theory continued in the northern regions. In connection with this line of research, I consider it important that there is a long tradition of research into the Arctic and the northern indigenous peoples in Hungary. Thus, the study of the peoples of the European Arctic – even if it belongs to a discipline other than ethnography and applies within the framework of the present Arctic geographical research – it fits well into the history of domestic research.

I consider the most recent period to be a specific, new era in terms of domestic scientific interest in the Arctic. At the turn of the 2000s and 2010s, the research on the Arctic region was given new impetus by the geopolitical processes of the region and the related international legal issues (the intention to divide the international territories of the Arctic region). The Hungarian authors also investigated the process of climate change in the Arctic and the natural resources which became available, furthermore, related border disputes were analysed as well. Accordingly, the experts of international relations and international law have begun to study the case of the Arctic.

Based on the above, I came to the conclusion that the investigation of Arctic issues fits into a series with a long historical and geopolitical continuity. In our country, many fields of science have dealt with the Arctic region. The investigation of the region from a geopolitical perspective began at the beginning of the 2010s, but the analysis of the processes taking place in the region was rather limited to one separate study, and thus writings analysing general phenomena were made (mainly territorial disputes and the presentation of newly available resources). In addition, research into the culture, lifestyle, language, and customs of the Finno–Ugric peoples, among them the indigenous peoples of Northern Europe and Siberia, has significant traditions in our country, and in some cases, this is complemented by the study of their legal and political situation. However, the literature connecting the two lines of research, that is the ethnographic study of the Arctic peoples and the discipline of international relations (the geopolitical processes of the Arctic), was completely lacking. This study can fill a gap by summarising Hungarian geographical research history with an outlook to connected study fields.

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