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Changing Svalbard: Tracing interrelated socio-economic and environmental change in remote Arctic settlements

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Abstract

The archipelago of Svalbard is a good example of an Arctic locale undergoing rapid changes on multiple levels. This contribution is a joint effort of three anthropologists with up-to-date ethnographic data from Svalbard (mostly Longyearbyen and Barentsburg) to frame and interpret interconnected changes. The processes impacting Svalbard are related to issues such as geopolitical interests, and increasing pressure by the Norwegian government to exercise presence and control over the territory. Our interpretations are based on a bottom-up approach, drawing on experiences living in the field. We identify three great ruptures in recent years – the avalanche of 2015, the gradual phasing out of mining enterprises and the COVID-19 pandemic – and show how they further impact, accelerate or highlight preexisting vulnerabilities in terms of socio-economic development, and environmental and climate change. We discuss the shift from coal mining to the industries of tourism, education, and research and development, and the resulting changed social and demographic structure of the settlements. Another facet is the complexity of environmental drivers of change and how they relate to the socio-economic ones. This article serves as an introductory text to the collection of articles published in Polar Record in 2021/2022 with the overarching theme "changing Svalbard". Issues discussed range from socio-economic change and its implications for local populations including identity of place, through tourism (value creation, mediation, human–environment relations, environmental dilemmas, balancing contradictory trends), to security and risk perception, and environmental and climate change issues.

Introduction

The multilayered alterations in Svalbard recently can hardly remain unnoticed, and there are multiple reasons for putting "changing Svalbard" in the spotlight. The archipelago is considered a "hotspot of climate change" (Grünberg, Groenke, Jentzsch, Westermann, & Boike, 2021; Vidal, 2017), attracting attention from researchers, journalists and visitors eager to study environmental impacts. Simultaneously, its settlements are undergoing structural economic changes (Arlov, 2003; Hovelsrud, Kaltenborn, & Olsen, 2020; Norum, 2016; Reymert, 2013; Schennerlein, 2021) with coal mining being replaced by tourism (Viken, 2011), research and education (Misund, 2017; Misund, Aksnes, Christiansen, & Arlov, 2017; Pedersen, 2021) and development of innovative technologies, with a corresponding growth in the service sector. Such developments provide a unique opportunity for studying changes in Arctic communities (Paglia, 2019). The archipelago has no Indigenous population. It is remote, but at the same time hyper-connected. Its economy is increasingly post-industrial (Statistics Norway, 2020). And due to its geopolitical significance, it lies at the centre of the political interests of industrialised, affluent nations such as Norway, China, the Russian Federation, but also the USA or Member States of the EU (Avango et al., 2011; Grydehøj, 2014; Grydehøj, Grydehøj, & Ackrén, 2012).

Whereas Svalbard is often portrayed as a pristine and untouched wilderness, it is and has been very much a peopled place (Kruse, 2016). Study of the human dimensions of life in Svalbard used to be scarce compared to the large amount of natural science research, but this is changing. We also seek to challenge the usual distance from which issues related to people in Svalbard are studied. Its communities are often looked at from above and afar and conceptualised as geopolitical tools. Or, as people in Longyearbyen often say, "we are all here for a reason". This collection of articles mostly looks at Svalbard from below and seeks understanding from the various perspectives of people who live on and visit the archipelago.

Distance in time is also common. History, for example, in the work of Thor Bjørn Arlov (e.g. 2003), Per Kyrre Reymert (2013), Bjørg Evjen (1996) or Vadim Starkov (1998), archaeology and cultural heritage such as in the work of Susan Barr (e.g. 2019), Frigga Kruse (e.g. 2013), Louwrens Hacquebord and Dag Avango (e.g. 2009) and other disciplines have traditionally

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delivered important findings about the predecessors of current Svalbard inhabitants. Scholars in this collection of articles, with a few exceptions, aim at communicating knowledge relying on contemporary perspective from within.

In this article, we aim to outline changes the archipelago is undergoing. We first set the scene, acknowledging Svalbard's settlements exist for purposes of Russian and Norwegian presence, with deep implications for governance. We continue with a recent history of change in the most researched towns, Longyearbyen and Barentsburg, with some references to Pyramiden. We then elaborate on changes in three spheres: economy, social structure and environment, before combining these threads and discussing implications for life in Svalbard.

Methodologically, all authors are social anthropologists using qualitative methods such as in-depth interviews and long-term participant observation. Contrasting with the myth of "there is little social science research in Svalbard", the locale is currently widely researched and much of the existing literature is based on (at least partially) ethnographic data. Yet the main asset of ethnography – years-long stay in the communities – is rather unusual. The authors resided in Longyearbyen and Barentsburg in 2018–2021 and worked ethnographically in an independent manner, collecting data in different languages and with access to different segments of the settlements' populations. Analysis presented in this contribution is a result of joint discussions over our data, parts of which we interpret in our individual contributions in this collection. In this text, we provide a framework to the collection and also draft possible future avenues of Svalbard social science research.

Presence, control and geopolitics

Viewed from above and outside, Svalbard appears a geopolitically significant place, an Arctic focal point of economic and political interests (Grydehøj, 2020). The archipelago's geopolitical importance runs as a red thread through its history and has very much defined the establishment and development of its settlements. The main objective of Norway's Svalbard policies is maintaining Norwegian settlements to legitimise Norwegian sovereignty over the archipelago (Ministry of Justice and the Police, 1974–1975; Grydehøj, 2014; Grydehøj et al., 2012; Ministry of Justice and Public Security, 2015–2016; Pedersen, 2017). Svalbard's largest town and its administrative centre, Longyearbyen, can thus be understood as a "tool of diplomacy" (Hacquebord & Avango, 2009, p. 36), an upholder of Norwegian presence in the archipelago. Since the town's establishment, this political goal resulted in state support of coal mining. In recent years, the facilitation of tourism and heavy investments in research and higher education have served the same purpose (Avango et al., 2011; Misund, 2017; Pedersen, 2021; Roberts & Paglia, 2016). Compared to the "company town" mining years, the diversification and liberalisation of the economy in Longyearbyen in the 1980s (Arlov, 2003) resulted in decreased state control over Longyearbyen. Recent economic, social and environmental changes are challenging policy and governance on Svalbard (Kaltenborn, Østreng, & Hovelsrud, 2019). As noted in the following contributions, recent developments indicate Norway's attempts to tighten control over the archipelago.

Whereas Norway's geopolitical efforts on Svalbard have mainly been studied through the lenses of international relations and politics (Ulfstein, 1995; Qin, 2015; Øystein, 2020), Brode-Roger (2022) studies the impacts of the Svalbard Treaty on Longyearbyen residents from below. Drawing on rich qualitative data from focus groups with residents, she shows how the Treaty shapes community life and residents' lived experiences. By framing her analysis in an identity-of-place framework, she analyses how Svalbard's special territorial status structures life in Longyearbyen. She points to an inherent conflict between the Svalbard Treaty and a true local democracy, causing confusion and frustration among Longyearbyen residents.

The same underlying motives define Russian Svalbard strategies (Olsen, Vlakhov & Wigger, 2022): to uphold and maintain the Russian presence (President of Russia Decree, 2020). During most of the 20th century, the Soviet Union was the only state besides Norway to make active use of resource extraction rights provided under the Treaty, while some other states maintained minor research activities (Arlov, 2003). At times, Soviet citizens were the dominant population group, and Barentsburg and Pyramiden were a showcase of the Soviet lifestyle. After 1991, the Russian-speaking community declined significantly (with Ukrainian citizens becoming the most numerous nationality), but the full shutdown of the colony was never considered an option for political reasons: Russia views its Svalbard settlements as a strategically important outpost in the Western Arctic (Portsel, 2011, Nabok, 2013) pivotal for international relations with Norway and other Arctic states. Like the Norwegian case, state support has always been vital for the Russian communities, both in coal mining and post-industrial attempts undertaken during the past decade (Vlakhov, 2019). In the Russian case, the issue of property rights is also prominent as the state-owned company *Trust Arktikugol* (henceforth referenced as Arktikugol) is the sole owner of all Russian land plots and infrastructure, and therefore enjoys exclusive rights in the settlements, allowing no private businesses and keeping the Russian settlements effectively under state control.

From the perspective of Svalbard's inhabitants and visitors, however, the archipelago takes on an additional meaning. It is home, an emotionally significant place, where everyday life unfolds and experiences come about, a place people remember, imagine and co-inhabit. This friction created by the omnipresent awareness of local governance deficiencies deserves close attention. In the Russian community, the desire for more agency at the local level is growing, and the community is currently caught between the hammer of modernisation and the anvil of planned economy. Even though the local demand for change has a history dating back to the 1990s (when the company only had limited resources to sustain decent life in town), Arktikugol still aims at the traditional model of company town with top-down power relations and no plans for local self-governance.

Residents of Longyearbyen are well aware the town exists for (geo-)political reasons (Brode-Roger, 2022), and a common comment in the field is "everything here is big politics". The link between local and national politics is ambiguous; local politicians and authorities communicate on a regular basis with central politicians, which would be rather unusual in an equally small town on the Norwegian mainland. But at the same time the overarching strategy for Svalbard is being designed in Oslo, with local stakeholders welcome to offer input, but no direct say in political decisions made behind a closed door. Employees of the Governor's Office and other direct representatives of the state are often perceived by Svalbard residents as distant from local affairs. The high turnover among employees both at the Governor's Office and the Municipal Council contributes to the widespread feeling people in powerful positions fail to take local needs into account. Another deficiency in the governance of Longyearbyen

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is that large segments of the population are not politically represented. The 2021 decision of the Norwegian Ministry of Justice to take away voting rights from non-Norwegians who have not lived in Norway for at least three years will make the gap even wider.

Norwegian officials claim the strategy for Svalbard remains consistent, yet actual developments in Longyearbyen since the 1990s do not always match the state's strategy, and residents notice the state is claiming more control. This is the case with environmental regulations impacting tourism, avalanche protection, services or the reorganisation of housing management. Seen from below, the runaway development of Svalbard during recent decades is causing problems, but the firm grip of the state is not unequivocally supported either. Many express a wish for more local power in decision-making. As the leader of Visit Svalbard put it in a panel discussion about tourism organised by Artica Svalbard in summer 2020: "To the member of Parliament: please don't use the remote control from Oslo. Listen to the locals. Cooperate with the locals. Not only listen to advice, but let us be part of the solution. Don't just find some easy solution that looks fine from Stortinget".

The recent history of change in Svalbard settlements

There is no point in dwelling on a detailed historical overview as this has been done by others (Arlov, 2003; Evjen, 1996), but we shall attempt to outline the context of historical change in Longyearbyen and Barentsburg as the collection's backdrop. Most of the contributions are dedicated to current issues that relate directly to the historical developments marked out below.

While Svalbard was first documented by the end of the 16th century, Longyear City was founded in 1906 by the American Arctic Coal Company (Arlov, 2003). Only the first 10 of the 115 years of the settlement's existence are not related to Norwegian interests; in 1916, Store Norske Spitsbergen Kulkompani (SNSK; renamed Store Norske in 2020) took over. Since then, claiming Longyearbyen is a Norwegian settlement has never ceased and lately the urge to do so has intensified. A similar story can be told about Barentsburg. Founded in 1920 by the Dutch enterprise of NESPICO (Portsel, 2011), the town was sold in 1932 to the Soviet Union, which developed Barentsburg as a model Soviet settlement (together with Grumant and Pyramiden) and effectively erased any memory of the Dutch decade of its life. Arktikugol has been exclusively responsible for the development of coal mining and later other industries in all Russian-speaking settlements. Only secondary supporting functions were occasionally contracted to other operators (Borovoy, 2020).

Longyearbyen was a settlement with a clear purpose: mining coal (Hacquebord & Avango, 2009; Pedersen, 2017). The company ran the town and provided services such as transportation, work contracts, housing, boarding and health care (Evjen, 1996; Evjen, 2001). The level of Longyearbyen's connectedness in 2020 is incomparable to the early 1970s; when people tell stories about "the old days" they often refer to "the last boat" (in autumn) and "the first boat" (in spring). In 1975/1976, the new airport in Longyearbyen opened and the year-round accessible Svalbard came into being. In 2019, 185,218 people travelled through Svalbard Airport. The opening of the airport and improved telecommunications were not the only major shifts for Longyearbyen. The seventies was the period of modernisation and "normalisation" – the company town model was abandoned and Longyearbyen was transformed into a family society (Arlov, 2003; Ministry of Justice and the Police, 1974–1975). More family housing was offered and welfare improved. Longyearbyen in the 1980s is remembered as still a well-functioning company town with exciting signs of a new era to come. Tourism was an additional and marginal business, but small private enterprises appeared and signals from the government clearly pointed to the future economic backbone.

Barentsburg and other Russian-speaking settlements were largely developed as a showcase of the "progressive" Soviet lifestyle (Portsel, 2012), resulting in a strict selection process for those coming to Svalbard. People remembering this period of prosperity and abundance recall the free food, best equipment and substantial wages making people contend with each other to get to Barentsburg or Pyramiden (Vlakhov, 2020). The Soviet policy was to make life in the towns as similar to life on the mainland as possible, including a full range of social services (hospital, kindergarten, school, sports and culture hall, etc.) and means of self-sustenance (greenhouses, farms, etc.). Such policy also had an ideological implication of making the Soviet nationals feel they were still in the Soviet state and lifestyle, as they were technically on foreign soil, no less a "capitalistic" one. Re-creating the sense of being at home was therefore a tool of ideological control, deemed necessary even after extensive background checks. This resulted in the relatively high degree of being connected to the Soviet mainland and supply quality while remaining as independent from Norway as possible through regular supply chains and workers' mobility. Interestingly, the launch of Svalbard Airport weakened this position as its services became indispensable and allowed Norway to gain the high political ground (Arlov, 2003). This is still the case today as the bulk of Barentsburg's connections to the outside world go through Longyearbyen, including transportation and the fibre optic connection to the Telenor internet cable. In most cases, only mining-related, consular or emergency flights are allowed by the Norwegian authorities, much to Russia's displeasure as this halts their development prospects (Grydehøj, 2014).

Only 6% of Longyearbyen's current population (about 140 people) moved to the island more than 20 years ago. Thus, only a limited pool of people remember the 1990s when numerous crucial developments took place. In the geopolitical context, the disintegration of the Soviet Union was a major factor in the euphoria of a suddenly unipolar world. Norway felt confident about Svalbard. The company town model was finally dismantled as community-oriented services were separated from coal mining, and the State promoted business development and economic diversification. Tourism crystallised as a strategic business, both in terms of legislation and funding. The now foreign-owned company of Hurtigruten bought Hurtigruten Svalbard, the biggest tour operator, in 1992. Research established solid footing through the opening of The University Centre in Svalbard (UNIS) in 1993. Spirits were high even in the mining business. The Svea Nord project was launched, with the mine opening in 2001. Longyearbyen was thriving and developing fast, slowly losing some of the typical traces of a company town.

During the same period, the Russian settlements suffered severe decline. Barentsburg, peaking at more than 3,000 residents in the 1980s, fell under 300 as the state had much more urgent business to deal with in the 1990s. Many residents left in order to survive as state-paid wages suddenly became next to nothing. The "rise and fall" of Pyramiden is examined by Kavan and Halašková (2022) through the lens of the changing physical environment, based on field observations and illustrated by aerial photographs. Following population increase, infrastructure development in

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Pyramiden took place mainly in the 1970s and 1980s. With the end of the Soviet Union, the Kremlin could not afford to support both Barentsburg and Pyramiden. Sharp decline in state funding, together with a plane crash in 1996 near Longyearbyen which took the lives of 141 Arktikugol employees, led to the closure of Pyramiden in 1998 and minimisation of Barentsburg activities. Relating the development of the town to its broader geopolitical context, the collapse of the town, as well as recent ambitions to maintain activities through tourism and research, is geopolitically motivated and can be seen as indicators of Russian interests on Svalbard.

In the Norwegian settlement in the 2000s, what had started in the 1990s continued. A unique form of local democracy (Longyearbyen Lokalstyre), with numerous limitations (Brode-Roger, 2022) and without a univocal support of local inhabitants, came into being in 2002. As tourism grew more tourism workers were needed. Seasonal and part-time jobs in areas such as hotel/cleaning services, gastronomy and catering, or maritime and land-based tourist industry were – unsurprisingly – unattractive for Norwegian job applicants. Science and research, generally at unease when combined with nationalist interests, also attracted non-Norwegian scholars and students to the ever-more-cosmopolitan town. As described by Sokolíčková (2022), the texture of Longyearbyen's population changed profoundly. The level of cultural and language diversity of Longyearbyen has grown, in autumn 2021 home to about 2,400 people with passports from 58 different countries (personal communication with the local office of the Norwegian Tax Administration, 3 December 2021).

In Barentsburg, now the sole Russian representative in Svalbard, the gradual rise of the Russian economy revived local hopes for the future. With stable and even increasing state support, the company was re-established and stabilised the supply chain and employee rotation model, followed by the town modernisation process initiated in the late 2000s. Barentsburg has again become an attractive place to work and live for coal miners, especially Eastern Ukrainian ones where the economic situation continues to deteriorate.[1] The number of residents grew to almost 500, the revamping of the town outlook commenced and even Pyramiden was cautiously reactivated as a tourist destination. As Russia started to develop and modernise its Arctic strategies, Barentsburg has returned to its position of the strategically placed outpost in the western Arctic (President of Russia Decree, 2020). At the same time, research and tourism is developing. In 2014, the launch of the Russian Research Center in Svalbard was announced, putting all previously isolated Russian research projects under one umbrella and increasing state and industrial funding for "strategically placed" Arctic research in the archipelago. The development of tourism was even more impressive, with the semi-independent tourism branch of Arktikugol called Grumant effectively modernising the Soviet-style look of the town and creating dozens of service industry jobs which attracted many young, well-educated professionals. Barentsburg has ceased to be an exclusively coal-mining settlement and is moving towards the dream image of the profitable and viable (Olsen, Vlakhov & Wigger, 2022) "Modern Russian Arctic Town" (Vlakhov, 2020), though still a company one.

The deterioration of the Russia–West relations after the 2014 Crimea crisis and the Eastern Ukraine war (which affected Barentsburg considerably as most of the local miners and their families originate from the Donbass region), along with a general fall in coal prices, might lead one to the conclusion the situation in Barentsburg would once again become catastrophic. However, that was not the case. The Russian state continued to support the development of the "new Barentsburg", as the Arctic is the only international arena where Russia remained friendly with all its neighbours and continued the peaceful collaboration (Vlakhov, 2020). The Donbass miners viewed Svalbard as a safe haven during the 2014 Eastern Ukraine war – and after, too, as the mainland industries were destroyed or damaged while Arktikugol still provided competitive wages. Tours to Svalbard became increasingly popular, income from tourism (both from Russia and elsewhere) grew and the company was able to reduce coal production to an absolute minimum and focus on further tourism development. There have been some accidents briefly disrupting development (a helicopter crash in 2017 and others), plus political feuds such as the disputed visit of Dmitry Rogozin (a Russian government executive under Western sanctions) in 2015 (BBC, 2015), but the general line was unaffected – until 2022.

The Svalbard settlements are often portrayed as "communities in constant change" which is a rather accurate description of their state during the recent decades: numerous changes and initiatives were introduced and implemented both at the national and the local level, creating a unique picture of societal development in the remote Arctic territory.

The three great ruptures

In Longyearbyen, the decade of 2010s was the era of three "great ruptures". All had major impacts on life in Svalbard. In December 2015, an avalanche hit a neighbourhood, destroyed 11 houses, killed an adult and a small child. The avalanche is one of the most powerful "collective memories" related to climate change in Longyearbyen (Ylvisåker, 2020). It was a shocking and painful event, and it shook the shared feeling of being safe at home. It is still impacting safety and governance, local climate change discourse, community cohesion, visual identity of the place, focus of applied research, future urban planning and other levels (Meyer, 2022).

In the same year, SNSK admitted low coal prices were economically unsustainable. It soon became clear the era of Norwegian coal mines in Svalbard was over despite the monstrous investment in Svea Nord and the brand new mine of Lunckefjell opened in 2014. The decision to terminate coal mining and the resulting population exchange (though not de-growth) meant another major rupture. In 2016, the last operating mine was Mine 7 close to Longyearbyen. The popularity of Svalbard among international visitors steadily grew, new companies and tour operators were mushrooming, summer months started to be unbearable in Longyearbyen in terms of volume and intensity (Saville, 2022), and increasing numbers of often non-Norwegian employees signing sometimes illegal contracts contributed to a severe housing crisis culminating in 2019. The language barrier, a result of a steady flow of non-Norwegian workers combined with abolishing the offer of a public language course, contributed to deeper segregation (Sokolíčková, 2022). While the business was doing well

[1]After this article had entered the review phase, the 2022 Russia-Ukraine military conflict broke out, drastically changing the global as well as Svalbard's political landscape. These events will likely have a profound impact on Svalbard communities and their relations. Due to the still unfolding state of the events at the time of publication, as well as lack of reliable data and in-person experiences, we designate the analysis of the 2022 situation as the most urgent task for future studies.

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in terms of profit, the added local value of tourism became ambiguous.

In February 2020, just before the COVID-19 pandemic outbreak, Visit Svalbard and AECO were expecting an increase in conventional and cruise ship passengers during the summer. On March 11, the third major rupture occurred when Norway announced strict measures to prevent further spreading of the coronavirus, hitting tourism in Svalbard hardest and, due to extreme infection control measures compared to the mainland, causing the worst overall economic suffering of any area in Norway (Brode-Roger, Zhang, Meyer & Sokolíčková, 2022).

Compared to Longyearbyen, the pandemic affected Barentsburg to a lesser extent as Arktikugol was able to install and uphold the quarantine and testing system for its employees in Moscow, so the habitual personnel rotation (via charter flights every two months) remained intact. The tourism department also remained afloat, accepting as many European visitors as possible under Norway's infection control measures. This was possible because the state support of the company remained in place for strategic reasons. Local residents on social media report life in the town hardly differed from 2019. The only heavily impacted sector was research as most Russian-based researchers were unable to get to the archipelago in 2020. The invasion of Ukraine in 2022 heavily influenced both tourism and research in Barentsburg, but conclusions about long-lasting impacts cannot be drawn yet.

In 2022, several major legal adjustments to the framework in Svalbard are being negotiated. Changes are suggested centrally to legislation regulating cruise tourism, certification of guides, movement around the archipelago, education services or participation in the local democracy system. These developments point towards tightened state control. The ruptures we outlined are not the triggers of the recent developments – but are not irrelevant either, as they speeded up processes already underway.

Changing economic bases in Svalbard settlements

Longyearbyen today is at the end of the profound restructuring from an industrial to a post-industrial economy that initiated at the end of the 1980s (Arlov, 2003). A "three-pillars" strategy was decided: Longyearbyen's economy would rely on coal mining, tourism, and research and higher education (Ministry of Industry, 1990–1991). When the government opted for continued coal mining in the Svea area in 2001 a period of "new-industrialisation" began (Arlov, 2003). At the peak, nearly 400 people were employed in Svea, a mining camp approx. 50 km south of Longyearbyen, which workers commuted to by airplane from Longyearbyen. After more than a decade of high production, operations were put on hold in 2015 and 2016 due to low coal prices. In 2017, the government announced a cease to all coal mining at Svea, and it was to be "rehabilitated" to its original state (Vindal Ødegaard, 2021). All infrastructure and waste shall be removed by 2025 (except for structures dating back to before 1946 and thus protected as cultural heritage). The project is financed with 1.8 billion NOK in the state budget and presented as "one of the most ambitious environmental projects in Norway" (Store Norske, 2020a).

Today, Mine 7 near Longyearbyen and the Barentsburg mine are the two last ones operating in Svalbard (there are none in mainland Norway). Mine 7 is operated by Store Norske and employed 48 persons in 2020 (Store Norske, 2020b). It produces coal on two shifts year-round. In 2020, approximately 40% of the coal was sold to the coal-driven power plant in Longyearbyen, and the rest exported to Europe as metallurgical coal (ibid.). In early 2021, the public was informed of the government's decision to close down within a few years. There is currently no new long-term energy solution for Longyearbyen, but many stakeholders – including Longyearbyen Lokalstyre and Store Norske – are investing in finding one soon. As a result of the elimination of coal mining, Store Norske itself is being restructured. The state-owned company has lost its original position as the defining institution in Longyearbyen but intends to remain a central player. It sees its future in the realms of property (see the purchase of large property owned by the biggest tour operator, Hurtigruten Svalbard, in 2021), logistics, energy and infrastructure, and cultural heritage/tourism.

The Russian case has largely followed the Norwegian path, though the change had not started before the fall of the Soviet Union. After the closure of Pyramiden in 1998, the Barentsburg mine, designed to operate at 350,000 tons of coal per year, has constantly decreased production and is currently operating at its minimum capacity of 120,000 tons (Government of Russia Decree, 2014). Most is used at the local power station and the rest sold to Russia. Current coal reserves will be enough to continue production until 2030 (Government of Russia Decree, 2014). But the company has no immediate plans of closing the mine as the Russian presence in Svalbard must be maintained and bringing fuel from the mainland is not considered an option. The company has been developing tourism and related industries and allowing more space for research activities, but preserving its key role for the town (Schennerlein, 2021). This is in contrast to Longyearbyen where private enterprises were allowed into the market. Arktikugol is not independent in its decisions and must follow the government strategy.

The closure of Svea Nord and Lunckefjell, as well as the announced closure of Mine 7, is strongly contested locally. There is a widespread feeling among Longyearbyen residents – especially among those who work or worked in the mining industry – it was a decision made from far away, on a too-thin knowledge base, and without a proper strategy for what was to come after. The closure of the mines is viewed as the end of a perceived "hjørnesteinsbedrift", a company of vital importance for the provision of jobs. Many believe sole dependence on non-industrial sectors creates a synthetic society and economic uncertainties, an argument that became louder during the pandemic when the vulnerability of tourism became visible. The closure is furthermore often perceived as failed symbolic politics. In 2017 and 2018, the government's main argument locally in Longyearbyen was that continued operation in Svea was not profitable. Today it is mainly presented and read as an environmentally motivated move: a state that presents itself as a "climate nation" cannot support coal mining in the high Arctic. The closure of the mines is also interpreted by some as a strategy for preventing other nations from developing coal mining in Svalbard. These criticisms are not undisputed. They reflect a local identity strongly rooted in mining, but an identity changing concurrently with the economic changes. Similarly, though not identically, in Barentsburg the old "mining elite" has been strongly opposing the latest turn towards tourism since 2013. However, as the role of tourism has grown and most social services were subordinated to the tourism department, greatly improving the quality of life in the town, the two "parties" grew more friendly and recognised each other's usefulness to the community.

To study how these socio-economic transitions are embodied and perceived by local residents remains a major task for social science research on Svalbard. Olsen, Vlakhov and Wigger (2022)

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explore Barentsburg and Longyearbyen residents' perceptions of socio-economic transition, framing their analysis in the concept of community viability. The article is the first in the field to compare the perspectives of the inhabitants of these very different settlements going through similar transitions. They find that the transition is being perceived as happening at a much faster pace in Longyearbyen, and that tourism development is a controversial topic in both settlements. Drawing on rich qualitative material they describe and analyse how socio-economic transitions impact economy and community, highlighting environmental and social dilemmas emerging through the transitions. Through the eyes of the locals they show how the socio-economic transition alters community dynamics, restructures social relationships and changes the sense of being local.

Tourism has existed in Svalbard since the archipelago was documented (Viken & Jørgensen, 1998), but the current scale of tourism would not be thinkable without government support. As the industry that employs most people (Ministry of Trade, Industry and Fisheries, 2019), it constitutes a major agent of the current transformations (Olsen, Hovelsrud & Kaltenborn, 2020). Dependence on global mobility is key not only for businesses such as hotels or tour operators but also for services such as bars, restaurants and shops. Most other economic activities such as research and education, local governance, coal mining and some segments of the building industry need support from public finance. Tourism, on the contrary, is not viable without economic revenues. As analysed by Saville (2022), Longyearbyen has transitioned from a mining town to a tourist destination. Saville traces both changes and continuities in this transition and narrates the experienced changes from the perspectives of involved actors. Applying a values-based analysis, asking what is perceived as important, she shows how tourism is perceived to offer both opportunities and services, contributing to a vibrant, cosmopolitan society, and at the same time challenges sovereignty agendas, community relations and comes with environmental dilemmas. As a response to perceived negative impacts and indicators of overtourism in the years before the pandemic, the Norwegian state and local tourist actors are now making efforts to increasingly manage tourism (ibid.). As the pandemic has moved into its third year, increasing environmental regulations is being put into place and governmental support is directed towards other economic activities. One could argue that Longyearbyen today is not a fully-fledged "tourist town" any longer. The dilemmas this industry presents to tourist actors and Svalbard inhabitants, however, remain.

As shown by Hovelsrud, Veland, Kaltenborn, Olsen & Dannevig (2021), a major challenge facing the tourist industry on Svalbard is to navigate between economic growth and environmental governance. Local tourist actors must play a "balancing act" among diverse and often competing demands of climate change mitigation, environmental management policy and demands for increased tourism. In their commentary, they introduce a methodology and theoretical framework for studying this dilemma and argue for co-creation between industry and academia to foster business sustainability.

Andersen (2022) approaches the same dilemma between mass tourism and environmental concerns, from the viewpoint of Svalbard guides. Drawing on ethnographic fieldwork she describes how they deal with the paradox of working in an industry that threatens the environment they care for so deeply. By engaging the theoretical concepts of negotiation of everyday practices and reciprocity she applies a fruitful approach to the anthropological study of human–environment relations and shows how the guides balance caring for the environment against the dilemma of working in tourism.

As argued by Kotašková (2022), Svalbard's transition from coal mining to a (nature-based) tourism destination also manifests materially, as mining remnants become cultural heritage and part of the environment that tourists seek to experience. Drawing on rich ethnographic material from guided tours and applying a relational approach where both humans and non-humans are seen as constituting reality, Kotašková shows how mining remnants both act as materialisations and agents of the socio-economic changes Svalbard is currently undergoing. Through their status as cultural heritage, on guided tours, and through the agency of the objects themselves, the mining objects become "naturalised" and thus an integral part and constituent of the wilderness imaginary of Svalbard.

Research and education were presented early in tandem as the third pillar of Svalbard's economy, but recently have become separate pillars (Hovelsrud et al., 2020). The Norwegian state invests heavily in this sector, which it considers an important "tool" for its Svalbard policy (Misund, 2017). The development of UNIS as a "Norwegian pillar in Svalbard" (Misund et al., 2017) is telling in this regard. As shown by Pedersen (2021), the same motive can be identified behind some other states' research presence on Svalbard, who employ "national posturing" to signal their foothold in the Arctic region.

Locally a society based mainly on research and education is not seen as a sustainable foundation for the future, even though scientific and educational activities play a major role in the present and likely in the future of Svalbard. Coal mining is doomed to cease within about three years, research and education is dependent on public funding and it will take several years before tourism is back on the pre-pandemic level (in the light of the newly suggested regulations and the 2022 events, it may never reach the previous intensity). While research and education employment has been stable or slightly increased since 2020, employment in mining decreased further, and employment in tourism and services decreased significantly (from about 600 full-time equivalents (FTE) to 370 FTEs within two years, Statistics Norway, 2021). It is also the sectors of public administration (both local and governmental) and satellite communication that employ large segments in the population, and the number of jobs available in public administration has surpassed jobs in mining.

Even if public administration keeps hypertrophying, other types of economic activity are desirable and the near future will show which of the potential or recently initiated projects will succeed. Planned investments into green energy solutions might be a hint the Norwegian state would like to turn Svalbard into a "testination", a showcase of innovative sustainable technologies saleable worldwide. Shipping, climate change adaptation technology or satellite technology might also belong to fast-developing businesses.

Changing demographics and social structures in Svalbard settlements

As several of the contributions show, the described economic changes are accompanied by profound social changes in Svalbard settlements. Olsen, Vlakhov and Wigger explore Barentsburg and Longyearbyen residents' perceptions of economic transition. They highlight environmental and social dilemmas emerging through the transition and show how the

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community dynamics and the sense of being local have changed as a result. Sokolíčková shows how increased transience, lack of continuity and weakened social cohesion further impact Longyearbyen's potential for "communitification". Middleton examines the availability of demographic and socio-economic data indicating socio-economic changes in Norwegian and Russian settlements in the archipelago. She finds that whereas there exist detailed data on demographics and economy for the Norwegian settlements, little data are available for Barentsburg and Pyramiden, creating a knowledge gap concerning current socio-economic processes and transformations in the Russian settlements.

To understand the scale and depth of change in Svalbard, we include a rather detailed overview of demographic and social trends in both settlements. Statistical data are a prerequisite for adequately assessing the impacts of the socio-economic transitions on Svalbard. In Longyearbyen, the population has constantly increased despite the governmental wish to flatten the curve, repeated for several decades in the White Papers on Svalbard. Pedersen (2017) frames the tendency – especially when it comes to increased migration from other countries than Norway – as a security threat for Norway's absolute sovereignty over Svalbard. Our collection includes a different perspective, from within through an ethnographic insight (Brode-Roger, 2022; Sokolíčková, 2022). On 31 August 2020, 2,354 residents were in the Norwegian Tax Administration register. These numbers only have a limited information value as there are strong incentives for registering at the tax office when moving to Svalbard, but not for de-registering when leaving or moving internally. A total of 1,495, or 63.5%, were citizens of Norway. The three biggest national minorities are Thai (137 people, 9%), Swedes (108 people, 7%) and Filipinxs (100 people, 7%). Over 50% of households consist of one person, 74% have one or two members. The turnover is high; 43% of the residents stay less than two years and 64% less than five. Since 2009, three quarters of the newcomers are women. The gender ratio is about 53% men and 47% women. The population is very young, with about half of the people aged 20–44, almost 400 children and only few elderly (Statistics Norway, 2021). The changing social structure in Longyearbyen is best characterised as a highly international, heterogeneous and liquid community consisting of many living on their own, some couples and some families.

During the company town times, the community mainly consisted of Norwegian young males (Evjen, 1996). The normalisation politics of the 1970s and 1980s were successful, with Longyearbyen having a fair share of women and children in the 1990s (Arlov, 2003). While the newly installed "family community" mostly consisted of Norwegian citizens, of which 41% were from northern Norway in 2009, the share of international residents in Longyearbyen grew rapidly in the 2010s, reached 37% in 2020 and went down to 35% in 2021 (Statistics Norway, 2021). The current changing social structure is an outcome of the fundamental economic restructuring in combination with structural factors related to the Svalbard Treaty, as well as globalisation processes. Coal mining employed mostly Norwegians; tourism, research and education are international arenas. The Svalbard Treaty grants citizens of the signatory countries equal access to the island and right to engage in commercial activities outlined by the Treaty. Furthermore, Svalbard is not part of the Schengen Area and regular visa requirements do not apply. Combined with a booming tourism and service industry, Longyearbyen is an attractive destination for international migrants.

Several tensions arise alongside changing demographics. The main objective of the State is to maintain a "robust, Norwegian family society" (Ministry of Trade, Industry and Fisheries, 2019, p. 18). The numbers presented above and some of the collection's contributions show these traits are not what actually characterises the town. Another official strategy is not to turn Longyearbyen into a lifespan society for economic and political reasons. There is limited access to health care, social services and education, and the legal landscape (e.g. properly regulating work contracts) does not cover the needs of a diverse community. Legislation affecting Svalbard is complex, there is a perceived lack of information about the rules and pitfalls and most of the information is only accessible in Norwegian. The pandemic has exacerbated existing vulnerabilities and there is an increased focus on Norwegianness. Simultaneously, central and local governments are making attempts at clarifying responsibilities and demarcating terrain through new regulations and laws.

In Barentsburg, after the drastic depopulation in the 1990s, the current number of residents is more or less what the current minimal levels of coal extraction require. It is often quoted (e.g. reported by Portsel (2011) and numerous Arktikugol officials; however, no credible and open statistical reports seem to have been preserved) that more than 2,000 people used to live in each Russian-speaking settlement – Barentsburg and Pyramiden – at the peak of the Soviet Svalbard era, namely in the mid-1980s before Perestroika started. The latest 2021 data (Statistics Norway, 2021) list 378 residents in Barentsburg and Pyramiden, but the numbers fluctuate semi-annually by several dozen due to seasonal workers' inflow in the summer (tourism- and research-related) and the annual leave roster peaking during winter. There are no detailed statistics publicly available through Norwegian Statistical Bureau or Arktikugol (Middleton, 2022), but our unofficial inquiries in Barentsburg suggest such estimates are accurate – though some groups residing in Barentsburg for a considerable amount of time are not registered and therefore not covered by official statistics, such as trainee students in research labs and seasonal construction workers of Tajik nationality. This means the actual pre-pandemic number of Barentsburg residents is somewhat higher – roughly 500 during off-peak season and 550 during summer.

It should also be noted several Arktikugol employees live in Pyramiden, often – and incorrectly – called a ghost town. Pyramiden is an increasingly popular tourist destination, a "sanctuary of the Soviet 1970s where the time has stopped" (Grumant, 2020), and personnel are stationed to keep the abandoned town habitable and provide tourism services. During the peak weeks of the summer season, about 30 staff members reside in Pyramiden, while the winter numbers are five to seven. In this article, all residents of two Russian towns are counted as a whole. Most Barentsburg residents are employed by Artikugol. However, the number of people working in the underground mine is low, totalling around 100 and constantly decreasing as operations function at a minimum. The rest of the Arktikugol staff work at mine support and town facilities, management, service industries and the tourism department. In sharp contrast to Longyearbyen, the town remains a company one to a high degree: only the Russian consulate (around 10 people) and the research stations (around 20 permanent residents, plus seasonal visitors) are alternative employers. However, Trust Arktikugol strives to preserve the full range of social services inherited from the Soviet "showcase" model (school, canteen, stores, hospital, sports hall, etc., plus a range of tourism attractions such as two restaurants with a brewery, museums and kennels). The diverse employment range for a small

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company town puts it into a separate category rarely found elsewhere (Vlakhov, 2020).

The social structure of the community is typologically similar to Longyearbyen. The official policy of Arktikugol is – and has been since the Soviet times – to employ staff on a short-term basis, usually between one and three years. To secure constant rotation of the staff, an intricate wage payment system is used which makes it financially impractical to stay in Barentsburg after several years. This "come at will, but go away before long" system has been heavily criticised as many residents grow fond of the place, developing an articulated form of local identity (Olsen, Vlakhov & Wigger, 2022). As a result, some jobs requiring a strong sense of place, first of all tourism-related positions, as well as top management positions, are now specifically encouraged to last longer in order for employees to develop this looked-for local identity.

The national composition of Barentsburg does not reflect its "Russian" status as the majority (about three quarters) of the local residents hold Ukrainian passports, other groups being Russians, Armenians, Tajiks and sporadic representatives of other post-Soviet nations. However, the town is still universally perceived as Russian both because the company is run by the Russian government and headquartered in Moscow and because the top positions in mine management and tourism development are filled by Russian nationals. In addition, eastern Ukraine, particularly the Donbass region where most Barentsburg residents originate (being a traditional point of origin due to technical similarity of mines), has been strongly pro-Russian since the fall of the Soviet Union. Nearly everyone in the town speaks Russian and identifies as Russian, which effectively prevents ethnic conflict,[2] binds the community together and counterposes it to Longyearbyen, which is consequently perceived as a foreign land and not a true neighbour (Vlakhov, 2019).

As for gender and age composition, the Barentsburg community is by no means a natural one. The majority of local residents are male, totalling up to 80% of the local population (compared to 54% in Longyearbyen and Ny-Ålesund, where gender balance is recently being achieved); this stems from Russian federal regulations which, until very recently, prohibited female work in "dangerous sectors" such as mining. Traditionally, most women living in the town used to work in the service sector (cooking, cleaning, etc.) and accompany their husbands. In recent years, changes have come as tourism and research development has brought more female professionals to the town, but Barentsburg remains a heavily male-dominated place.

The age groups are also distributed unevenly. About 50 children live in the town, provided with day care and school services, but the 18–25 age group is virtually nonexistent as school graduates go to the mainland to continue their education. By contrast, people aged 25–35 are numerous in mining, tourism and research as the company strives to decrease the median age of the town residents for pragmatic reasons (lower wages and higher productivity). The older cohorts are represented in management and high-responsibility positions, with people over 65 also virtually absent from population structure ("forced retirement" as it is called locally).

As for Barentsburg, the community's search for agency and development into a stable, permanent settlement is crucial on this stage, with Longyearbyen-like issues likely to follow. It should also be noted that, very similar to Longyearbyen's "Svalbardbasillen" (Heiene, 2009), a "Polar Virus" phenomenon is well known in Barentsburg, when a person comes to town, then leaves it – seemingly for good – and returns later for another round "unable to live away from this place". In some cases, many years can pass before they return (e.g. there are people in Barentsburg who were originally based in Pyramiden in early 1990s), and most illustrious veterans (10–20 years spent in Svalbard) usually follow this path.

Many of the problems and frictions mentioned above were widely known before the coronavirus pandemic, but some of the vulnerabilities became even more apparent and urgent after the lockdown of Norway, paralysing Svalbard in March 2020. Addressing the unresolved flaws of how Svalbard communities are currently sustaining themselves economically, how they are governed and how social impacts of environmental and economic change are being handled belongs to the ambitious goals of our collection of articles.

Changing climate and human–environment relations

In addition to the described economic and social transitions, the natural environment on Svalbard is changing, affecting its communities (Hovelsrud et al., 2020; Norsk Klimaservicesenter, 2019). As emphasised by several articles in this collection, human settlements and activities on Svalbard present several environmental paradoxes (Andersen, 2022; Hovelsrud et al., 2021; Saville, 2022). For one, human life in Svalbard can per se be seen as environmentally unsustainable. Due to several factors – such as remoteness, which demands all resources and people to be flown in, harsh climate, coal-fired energy plants and ships running on heavy fuel oil – residents and tourists have an extremely high carbon footprint. Furthermore, coal mining in a region at the forefront of climate change is a (seeming) paradox and Longyearbyen is often represented as a contradictory town in this regard (Deiller, 2016). However, locally, this interpretation is contested since coal is a local resource and predominantly used in industry. Lastly, the decision to foster tourism in a vulnerable environment that is supposed to be protected is a challenging "balancing act", as described by Hovelsrud et al. (2021). People in Svalbard are thus well aware of these dilemmas, but they are perceived in a variety of ways and people have diverse ways of dealing with them.

The same goes for climate change, which is particularly pronounced in the archipelago. Svalbard has experienced a remarkable rise in annual mean temperatures: from 1971 to 2017 a warming of 3–5°C was observed (Hanssen-Bauer et al., 2019). There is an increase in precipitation and extreme weather events, and scientists project a warmer and wetter climate in the future (ibid.). While an abundant amount of research related to the Svalbard climate and environment documents the far-reaching environmental impacts of these changes – including the reduction of glaciers, flooding, thawing permafrost, landslides, coastal erosion and reduced sea ice – research on its societal impacts is scarce. As elaborated by Ezau and Miles (2022), Longyearbyen is already affected by environmental changes triggered by climate change, which poses both challenges and opportunities. The authors provide a detailed description of local climate change impacts on Longyearbyen and link them to current economic changes in the settlement. Discussing the implications of climate change for potential economic pathways and sustainable development, they argue that climate change influences economic diversification and ultimately impacts Longyearbyen's transition towards a more sustainable and resilient development.

For local inhabitants, the changing climate creates a sense of uncertainty, unpredictability and risk. People report knowledge

[2]Tracing attitude dynamics in light of the 2022 events is one of the most pressing research tasks as no clear future development scenarios can be suggested at this stage.

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that was once considered sound has become unreliable, and areas once considered safe are risky now. However, though many are concerned about the environment and how it changes, we do not find climate change substantially challenges peoples' day-to-day lives. Other social and economic issues are often perceived as more pressing locally. As described by Meyer (2022), climate change adaptation has been high on the local agenda in Longyearbyen, especially after the avalanches in 2015 and 2017. According to Meyer, climate change adaptation in Longyearbyen is approached as a technical solution to physical problems, considered a responsibility of the local authorities and the state, and adaptation measures are seen as a task for experts.

Climate change and the Anthropocene more broadly also urge us to rethink modern conceptions of human–environment relations, and several authors in this collection of articles contribute exciting perspectives from Svalbard to these debates. The Arctic is often portrayed as vulnerable human-less wilderness and climate change victim (Brode-Roger, 2021), and Svalbard is no exception. By applying a geo-aesthetical approach, La Cour (2023) shows how different representational discourses produce certain imaginaries and landscapes. Shifting the focus from representation to mediation, however, she argues that Svalbard also can contribute to new imaginaries of the Arctic as multifaceted, historised, cultured and peopled, and that the Svalbard guide plays a crucial role as mediating figure of changing versions of the archipelago.

As a response to an elevated pressure on the Svalbard environment, the frameworks for managing it (Saville, 2019) are currently being revised and tightened (Kaltenborn et al., 2019). The Svalbard Treaty obliges Norway to preserve the natural environment of the archipelago. The "conservation and protection of Svalbard's natural environment" is one of the main goals of Norway's Svalbard policies (Ministry of Justice and Public Security, 2015–2016), which furthermore state Svalbard shall be "one of the world's best-managed wilderness areas" (Ministry of Justice and Public Security, 2015–2016). During the past two years, the government has announced the development of several management and protection plans for different parts of Spitsbergen, potential limitations of the size of vessels in certain areas, extending the heavy-fuel ban and evaluating requirements for certification of guides. The government also announced in 2020 environmental regulations for the archipelago as well as regulations relating to tourism were to be revised, a process with far-reaching consequences in terms of access to certain areas and motorised traffic. While the government stresses the rationale is increased pressure on Svalbard's nature and cultural heritage due to climate change and increasing traffic (Regjeringen.no, 2020), these are also signs of strengthening state control over Svalbard. Locally these developments stir concern, not only for tourist operators who depend on access to wilderness areas but also for residents whose mobility by motorised vehicles (snowmobiles and boat) is a prerequisite for outdoor life, which for many constitutes an important factor for well-being and motivation to live in Svalbard.

The Russian-speaking community is in sharp contrast to the Norwegian one on environment-related issues. Environmental discourse in Russia and many other post-Soviet societies is virtually nonexistent (Kaltenborn et al., 2019), meaning climate change, ocean pollution and other issues are neither discussed nor even conceptualised by Barentsburg residents, most of them coming from places far from the Arctic and its environmental problems. This makes it hard to compare Longyearbyen and Barentsburg as most of the latter's residents "do not think that way", as put by some of them. Only the most practical issues with visible effects are perceived and discussed there, such as waste separation (copied from Longyearbyen) and clean-ups of Soviet-era waste deposits attempted since 2018. The Russian community, receiving Norwegian policies in form of final legislation and obliged to adhere to it (e.g. limited use of helicopters, fishing licences, heritage infrastructure protection, etc.), is often displeased with this lack of agency and therefore criticises the "fuss about environment", even if agreeing with the core idea of resisting climate change and protecting Arctic nature. However, practical environmental regulations (such as waste separation) are strictly followed in order not to cause an international conflict. This situation is nevertheless slowly changing and environmental issues are gaining wider recognition in the Russian public discourse. It should be noted Barentsburg is located much more conveniently than Longyearbyen with regard to dangers such as avalanches and there are really no urgent environment-related issues there, but the next line of problems (such as water security and coal dust management) can become urgent rather quickly.

Disasters, and how they are handled, are crucial for understanding human–environment relations in the Anthropocene. Duda et al. (2022) show that studying how communities deal with disasters also provides insights into cooperation between Russian and Norwegian settlements. They examine Barentsburg residents' disaster risk perceptions and find they generally consider the settlement safe and have a high trust in existing multinational (Norwegian and Russian) disaster risk reduction and response (DRR/R). The authors conclude that informal actors and relationships play a key role in DRR/R on Svalbard, indicating a potential for international cooperation. Their findings confirm some of the conclusions by Tiller, Ross and Nyman (2022) but are novel in their focus on informality and comparison between the two settlements.

Looking beyond physical climate change as an idea and a discourse (Hulme, 2009; Rudiak-Gould, 2011) is a phenomenon worth studying in Svalbard. The archipelago is a centre of attention in global climate change discourse, attracting journalists, scientists and visitors who wish to witness and document these changes. We argue this also influences the perception and salience of the issue locally. Comparing Longyearbyen and Barentsburg, it is striking that climate change receives such different attention in two locations experiencing the same physical processes. Certainly, this can to some extent be explained by varying physical conditions (location of the towns, building traditions, etc.), but we argue the climate change discourse very much shapes peoples' perceptions of these changes and their impacts. Especially, in Longyearbyen, the discourse of societal impacts of climate change – and declared environmental consciousness combined with ambitious plans regarding reduction of emissions and readiness to invest into infrastructure mitigating climate change impacts – is prominent. In signals sent from the central government, strategies developed by local authorities and in the media it is not rare climate change dominates where our participants hardly ever believe it is the true cause or driver of the developments. Environmental concern, seemingly apolitical, seems to be an easy pick when further measures designed to tighten control over what is happening in Svalbard need to be introduced, for example, when it comes to housing (be it demolition or ceased use of existing houses, avalanche protection or building new residences). Environmental changes and related discourses and policies are likely to be a main driver of future developments in the archipelago, developments

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triggered by global changes and supralocal discourses impacting on the local level.

Conclusion

Our collection of articles covering a wide range of issues discusses a changing Svalbard from different perspectives. In this introductory article, we commented on multilayered changes, including on a global and supralocal scale, impacting life in the archipelago. All these processes are of anthropogenic nature, but their scope, scale and speed differ. Even though their local impacts and responses are particular, the changes we observe in Svalbard reflect changes and related challenges observed elsewhere in the Arctic and beyond. Svalbard is a "small place" where the "large issues" (Eriksen, 2015) of globalisation and climate change are particularly pronounced (and co-produced).

Climate change impacts locally in terms of lower level of predictability and higher level of risk. The range of environmental dilemmas spans from striving for sustainable tourism through responsible use of nature to low-carbon energy production. The pandemic has altered an already fast-changing economy and population in Longyearbyen, and although locally things seem to be slowly returning to normal, the long-term effects remain to be seen. The potential for population growth and diversification in Svalbard settlements clashes with the instrumental value they have for nations interested in exercising power in the Arctic, resulting in what is locally felt as a tightening grip of the Norwegian government. State attempts to regain partially lost control over economic, social and environmental developments and changes include efforts to limit access to nature, set strict rules for economic activities, safeguard the dominance of the Norwegian population, foster mechanisms encouraging regular turnover and minimise local decision-making. These developments in Longyearbyen noticeable since 2020 indicate a shift from a previously company town through a "tourist town" (Saville, 2022) to a "state town" (Haugli, 2021). Similar developments can be observed in the Russian community recently, such as changes in tourism management and plans for further natural resource exploitation instead of post-industrial transition. In this respect, Svalbard is a locale where the move towards a post-industrial future entails also increasing importance of state and public sector and ultimately defines the transition(s), with local populations rather disempowered to be part of shaping the desired future(s).

The aim of the collection of articles was to map the territory of a rapidly changing Svalbard and its intertwined layers. Contributions included in the collection cover different areas unevenly. Most attention is paid to the socio-economic change and its implications for local populations (in the contributions of Olsen et al., Sokolíčková and Middleton), including changing perception of identity of place (Brode-Roger). Access to reliable and accurate statistical data about trends underway in all Svalbard settlements is a clear need. Most researched are processes and challenges related to tourism, with a wide range of issues including value creation, human–environment relations, environmental dilemmas and balancing sometimes contradictory trends, with tourism stakeholders and guides as the most present voices (in the contributions of Saville, Kotašková, Andersen, Hovelsrud et al. and La Cour). Environmental issues and their perception evolving in time are analysed by Kavan and Halašková, Ezau et al. and Meyer. One contribution looks into the issue of security and risk perception (Duda et al.). More insights into how risk and security are lived from within are necessary, especially in the light of both growing geopolitical tensions (in the Arctic and in Norway–Russia relations), and further impacting climate change. Although this collection does include valuable perspectives from the Russian settlements on Svalbard (in the contributions of Olsen et al., Duda et al. and Kavan & Halašková), there is still a bias in Svalbard social science to focus on Longyearbyen. Our collection is also missing a contribution unpacking knowledge production in Svalbard. Building on existing knowledge (Hacquebord & Avango, 2009; Misund, 2017; Roberts & Paglia, 2016; Pedersen, 2021; Viken, 2011), we encourage our colleagues to pay closer attention to the realm of science and make the contribution of social science for the understanding of scientific endeavours in Svalbard more visible. The concluding commentary by Albert traces common threads and explores the thematic and epistemological landscapes of current social science, humanities and arts research focusing on Svalbard.

Understanding better the future path of Svalbard has a deeper value than knowledge about one particular locale. Climate change solutions and adaptation, greener business models, politics of power, state control and national interests will remain high on the agenda. Changes and transitions also hold potential for transformation. In Svalbard settlements, the ongoing changes are accompanied by a variety of visions and actions aimed at transforming into more environmentally, socially and economically sustainable communities. Our collection unpacks tensions, clashes and dilemmas accompanying these transformations stretching in time, which is necessary if the trends are to be understood and shaped further in desirable directions.

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