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ORIGINAL PAPER

Social impacts of the "glocal" mining business: case studies from Northern Europe

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Abstract Mining is a global business with international networks of production and consumption, but mineral deposits are place specific and the impacts of mining projects are mostly experienced locally. Hence, mining is an example of a glocal phenomenon par excellence: global processes are realized in local communities and environments. This paper discusses the social impacts of mining in eight communities situated in Northern Europe. The data consist of 85 semi-structured interviews conducted in 2013 and 2014. Using a qualitative approach and starting from the bottom-up, the analyses identified three impact frames that combined individual experiences and meanings expressed in the interviews. The first impact frame focuses on environmental justice. Environmental impacts are corporeal, cognitive, and emotional, as they affect the real life of people living in the vicinity of the mine. The main finding is that environmental "bads" are experienced locally in the North, whereas the economic "goods" go to mining companies and consumers in the "South." The second impact frame looks at the loss of livelihoods and the cultural way of life. Mining is seen as a threat, especially to reindeer herding and nature-based practices. In the areas where mining is a new industry, the activity is seen as antithetical to those small-scale activities of a local economy. The third impact frame centers on experiences and concerns about the dependency of a community on a single industry. When the fortunes of local communities are dependent on international business and the fluctuations of global markets, the residents feel that they have no power to influence the developments and can thus only adapt.

Keywords Mining · Social impacts · Northern Europe · Glocal · Economic goods

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Introduction

As emerging economies create greater demand for resources, such as end-user metallic products, the impact on the extractive industries is felt worldwide—the European North is no exception. Furthermore, the northern parts of Norway, Sweden, Finland, and Murmansk region in Northwest Russia are areas of rich mineral deposits, which have raised also the interest of global mining companies and also, e.g., the European Union, for exploiting the riches of the northern soil

to increase domestic production of critical raw materials such as high-tech metals (COM 2008; COM 2013). Development of the mining industry is also in the interest of nation states in order to produce domestic raw materials and promote national and regional economy and wealth (see, e.g., Finland's Mineral Strategy 2010).

Mining is an example of a global business based on place-specific mineral deposits. The concept "glocal" (Robertson 1992, 1996) stresses the point that global phenomena such as mining as an international network of production and consumption use locally produced raw material. How this global industry is affecting localities, i.e., host communities of mining, is an empirical question that we strive to answer. Ulrich Beck (2000, 48-49) stressed that to study globalization is also to study what is local, because globalization "can be grasped in the small and concrete, in the spatially particular, in one's own life, in cultural symbols that all bear the signature of 'glocal'." This idea has advised the present research. The aims of the article are to discuss how mining is reorganizing the northern communities of Norway, Sweden, Finland, and Murmansk region in Northwest Russia and also to discuss what the social impacts of mining are in these localities.

The article is structured as follows: in the section hereafter, cases, data, and method are introduced. Results of our empirical study are then presented. We identify three general themes that are discussed in all mining communities. These are (1) experienced environmental impacts and environmental justice, (2) loss of other livelihoods and a cultural way of life, and (3) mining dependency as a risk for community development. Findings of the study from both academic and practical points of view are reflected in the discussion section, and the article finishes with our conclusions.

Cases, data, and method

The studied cases are located in the northernmost counties of Scandinavia and in Murmansk region in Northwest Russia. Two mining sites were chosen in every country: Sør-Varanger and Kvalsund in Norway, Kiruna and Pajala in Sweden; Kittilä and Kolari in Finland; and Apatity/Kirovsk and Revda in Russia (Fig. 1). We wanted to study mining projects in different phases of their lifecycles. Some of the cases share a common history as traditional mining sites (Apatity/Kirovsk, Kiruna, Sør-Varanger, Kolari), while mining is a more recent activity in others (Kittilä, Pajala), and in some, there are only plans for future mines (Kvalsund). In traditional mining communities, mining is an important employer and mining is strongly present in the community life as seen in the Russian neighboring municipalities of Apatity and Kirovsk, both industrialized areas with a considerable population of almost 89,000 combined.

The areas where mining projects were either in the early state of development or in planning or just starting operations at the time of this study include Kvalsund in Norway, Pajala in Sweden, and Kittilä and Kolari in Finland, which are all rural and sparsely populated areas. The smallest municipality among our case studies is Kvalsund with a population of less than 1100. The Finnish municipality of Kolari—our second smallest case study area—has a population of about 3800 inhabitants and depends heavily on tourism for local employment. Our other case study areas fall in the range between these (for more detail about these cases, see Suopajärvi et al. 2016).

There are some general patterns in the development of mining in northern Norway, Sweden, and Finland. In the first decade of the 2000s, all these areas have experienced a so-called "mining boom" because of the rising demand of metallic products and higher prices. Changes in legislation made mining possible for international companies, e.g., in Finland. Conversely, in the Murmansk region in Northwest Russia, mining is a strong traditional industry owned by private national companies.

There are also differences relating to, e.g., mining technology, interpreted in a broad sense, between our case studies. One example relates to the scale of the operations and their associated infrastructure. Consider, for example, the Kittilä gold mine in Finland. It is one of the largest gold mines in Europe producing around 5000 kg of gold bars per year. In comparison, the more bulky materials such as iron ore, which is mined and processed in, e.g., Sør-Varanger and Kiruna, are measured in million tons. These mining companies require a completely different level of infrastructure and transport capacity in place to deliver their products to the customers, and this widens the environmental footprint of their operations.

Data and method

When planning the present study, the starting point of the study was a definition of social impacts provided by the International Association for Impact Assessment (Vanclay 2003, 5) according to which social impacts are "intended or unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions." The definition is extensive and suggests that social impacts are experienced in various spheres of life: culture, community, political systems, environment, health, way of life, personal/property rights, and fears and aspirations (ibid., 8). We followed this broad definition and the idea that social impacts cannot be predicted as a desktop study since the range of impacts may be very broad. Hence, we employed a qualitative research approach. We made a total of 85 semi-structured, thematic interviews in fall 2013 and spring 2014, with both individuals and focus groups (see Davies 2013;

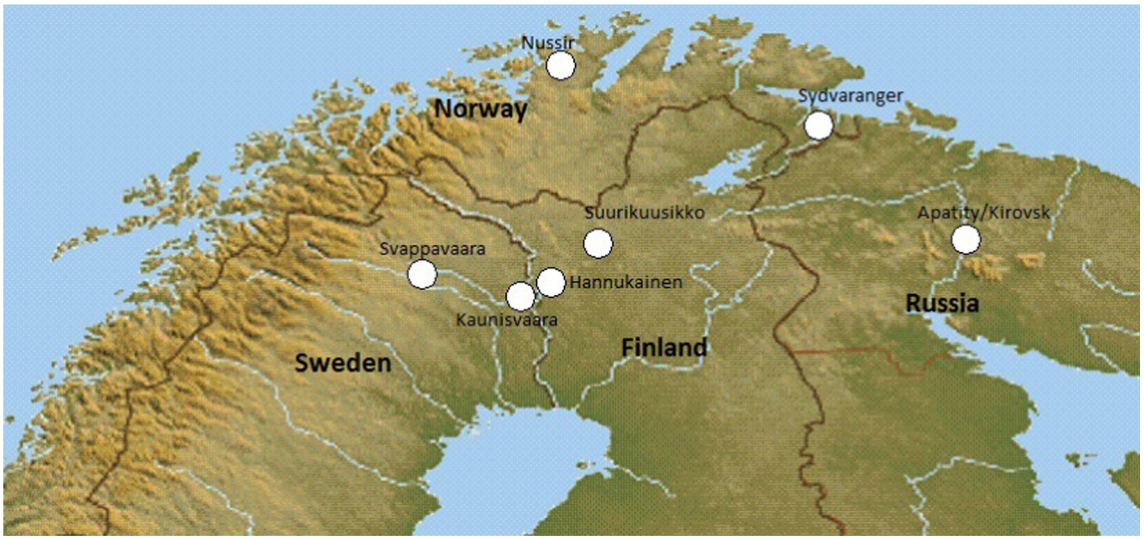

Fig. 1 Map of the studied cases

Gubrium and Holstein 2001). Our aim was to reach different kinds of groups because local communities are not homogeneous; we interviewed people living in the vicinity of the mines, municipal authorities, reindeer herders, tourism entrepreneurs, farmers, members of nature conservation associations, students, retirees, mineworkers, and so on. We subsequently asked local people to define the impacts of a mining project in their own lives, to different groups of the community and the community as a whole. Interviews were made in native languages, and some fragments from the interviews were translated in English to illustrate the cases.

The research group used a structured template to elaborate the empirical findings. First, we identified the main themes of every interview; second, the negative and positive impacts as described by the informants; and third, how these impacts relate to their present needs and future development. After identification, we analyzed and evaluated empirical observations with research literature and discussions in joint meetings and via e-mail among the research group. When exchanging ideas about our fieldwork, we could identify three main impact frames that were present in all studied cases. By impact frames (Gamson 1995; Johnston 1995), we mean sets of beliefs and meanings that combine different individual experiences but create a larger frame for understanding the impacts of mining. All these impact frames could be named as glocal phenomena. With a qualitative approach, we identified not only similarities in our data from different localities but also differences that are discussed in the following pages.

Social impacts of glocal mining industry

Based on the study, we discovered that two features heavily influence the social impacts of mining operations. First is the current phase of the life cycle of the mine, whether in planning, production, or closing and reclamation. In the planning phase, experienced impacts are mostly expectations and affects, feelings, and emotions (Deleuze and Guattari 1987); e.g., fear for the possible changes in the environment or hope for viability of the local life supported by employment in mining and development of private and public services and economic activity. In the production and closing stages, the impacts become more tangible—increased population, employment, pollution, etc. The second factor affecting social impacts of the mining project is the history of mining in the locality, whether locals perceive mining as a traditional activity or a new industry. For example, Kiruna in Sweden, Sør-Varanger in Norway, and Apatity/Kirovsk in Russia share common backgrounds as the quintessential resource towns that emerged around a single industry. When, e.g., the mine in Sør-Varanger was reopened in 2009, the reopening brought back the mining identity, considered important for many in the local community. In the areas where mining is a new industry or in a state of planning, mining might be seen as an intruder to the northern nature and community or as a savior since there often are high hopes for the economic development of the municipality.

Experienced environmental impacts and environmental justice

Based on the interviews that we conducted, we observed that many respondents closely link social impacts to environmental impacts (see also Slootweg et al. 2003) with the main concern among local people being possible environmental contamination. Importantly for them, the environment is not "out there" but rather matters for daily practices as described by Tim Ingold (2000) with the concept of dwelling; for example, a villager living near Kittilä gold mine refers to nature as a home: "It is the same if I would come to smudge your living-room." Environmental impacts when they are corporeal,

cognitive, and/or emotional factors of real life are in fact social impacts, as Frank Vanclay defines (Vanclay 2002). Hence, the biophysical and social impacts of mining are different sides of the same coin as suggested also by Daniel Franks (2012) with referring to socio-environmental changes induced by mining.

Without using the concept, locals are actually referring to environmental justice, to socio-spatial distribution and recognition of environmental goods and bads within the human population. The question is who benefits from natural resources and who bears the environmental and social costs (Nygren 2014, 59). This distributional aspect of environmental justice was expressed in the local communities by referring to negative environmental impacts experienced in the localities. Concern, and sometimes even fear and anxiety, about negative environmental changes was typical in studied mining communities. People worried about water pollution, dust increase, and the loss of recreation areas. This concern was strongest in Russia, where people living in Apatity, Kirovsk, and Revda considered environmental disasters the main threat related to the activity of mining companies. For people who lived some distance from a mine, the use of chemicals as an environmental hazard and especially the risk for water systems were mostly mentioned (Nygren 2014, 61; vs., e.g., Badera and Kocon 2014; Tiainen et al. 2014).

The procedural aspect of environmental justice refers to participation and opportunities to influence decision making about environmental issues. Basically, it means that "those who are most affected by environmental decisions should have a particular right to have their voices heard" (Nygren 2014, 62). Those living close to the mine in particular felt that there was no procedural environmental justice; they felt ill informed about the potential impacts and also harbored a general distrust of the information provided by the mining company. Further, in the Finnish case of Kolari and in the Russian cases, the critical interviewees reported a sense of powerlessness, due to an inability to affect decisions made about their own environment—they felt that their concerns were not taken into account (see also Strauss 2012). In Kolari, after interviews were made in 2013, the opening of the mine was postponed because its owner, Northland Mines, declared bankruptcy in December 2014. In 2015, the Finnish company Tapojärvi Oy bought the mine and founded a new company, Hannukainen Mining Oy, with the purpose of opening the mine in 3–5 years. A new and unknown company with revised plans raised again rumors and uncertainty among residents in Kolari (Pohjolan Sanomat 2015).

Environmental justice is an issue especially in global business—or using the words of Ulrich Beck (2000) more precisely—in transnational or translocal businesses like mining. Headquarters of the company may be in a host country, and markets around the world in different countries or even continents, but the production of every mine is local, situated where the ore reserves are and where the environmental impacts are felt.

This global–local tension in mining is expressed in our data in the dichotomy of North and South, but opposite to that of the typical global discourse about the developed and strong North and colonialized Global South. The Scandinavian north and Murmansk region in Northwest Russia have been internal colonies of the state-led natural resource extraction. Politically, the dichotomy between the peripheral North and the central South is reproduced in national discourses, in discussions of, e.g., the Swedish parliament (Nilsson and Lundgren 2015) and the Soviet Union/Russian state (Bolotova 2014) and also in the state-led natural resources exploitation in Finnish Lapland after the Second World War (Massa 1994). Northern areas are still seen as troublesome areas with harsh climate, long distances, and remoteness where the only possible development is based on exploitation of natural resources such as minerals, forests, and hydropower.

As argued also in the Arctic Social Indicators Report (2010, 129): "Arctic residents are dependent on the resources of their homelands, the health of their ecosystems, and the right to use those ecosystems. Yet their power over the use and protection of these territories and resources has been compromised by outside forces." State-led or international mining companies are supported by the states for extracting the northern minerals in all studied countries. From the local point of view, there is a powerful front of "outsiders" or "southerners" that want to exploit local resources, and also, the production of the mine is used for "southern" needs—whoever they are—when looked at from the communities in the northern parts of Europe, from the Global North.

Loss of other livelihoods and a cultural way of life

Place-specific livelihoods and practices are based on traditions and are also a matter of identity and local culture (Howitt 2011, 87–90). In the studied areas, nature is a basis for so-called traditional livelihoods such as reindeer herding, small-scale farming (e.g., dairy farming or sheep farming), and fishing (mainly in Norway) and also for the nature-based tourism service, which is the largest sector of private services developing in the Northern Europe since the 1980s with indirect effects also to local commercial and traffic sectors. Also, nature-based practices such as hunting, gathering, and fishing for households' own consumption are important in the North. Traditional economy and nature-based tourism are local and decentralized ways of living, offering perhaps modest, but year after year continuing income (Arctic Social Indicators 2010; Megatrends 2011). Mining is, in many ways, the antithesis mode of production as it is part of the international resource economy, a global boom-bust business offering

industrial employment for hundreds or even thousands of people in mechanized mining sites with huge dumpers, excavators, and so on. This modern way of large-scale production with industrial employment is culturally and historically quite a new phenomenon in many parts of the Northern Europe.

In Sweden, the greatest source of apprehension towards the mine emanates from the Sami reindeer herding community. Because mining development brings with it significant new infrastructure and change to the landscape, herders and their reindeer must change their previous patterns. In both Kiruna and Pajala, the mining companies consulted with local herders before making planning decisions, helping ensure that land use remains possible for all actors. Nevertheless, this requires herders to make some adjustments and, as a result, claim compensation in the form of confidential legal agreements that lay out the terms of the relationship between the Sami community and the mining company. Notably, both parties emphasize the absence of direct financial compensation but instead point to joint efforts to mitigate negative impacts on herding and ensure that it can persist. Although the herders interviewed seemed content with these agreements and the on-going relationship, some reservations remained about the future and the effect on herding. As one reindeer herder said, "[W]hen we realized that there would be a mine we knew that it was no use to attempt to stop this, so we decided to try and work with them to find the best possible solutions." The respondent later added, "[T]here is a constant worry: did we make the right decision? Should we have tried to stop this mine?"

Reindeer herders are also strong opponents to the planned development of the Nussir copper deposits in Kvalsund, Norway, and are of the opinion that herding and mining cannot coexist in this area. The negative impacts with loss of grazing and calving land are well documented in the environmental impact assessment studies, but protests from the herders, also supported by the Sami parliament, were not given significant importance when the Ministry gave Nussir final approval of the zoning plan early in 2014. In Kittilä, Finland, reindeer herders have adapted to the gold mine and have negotiated with the mining company, but they are opposed to the current plans for the mine expansion.

Tourism is of great importance in Kolari, Finland, where Hannukainen mine is seen as a threat to Ylläs ski resort, situated about 10 km from the planned mine. Initially, attitudes towards Hannukainen mine were positive in the municipality, because the Rautuvaara mine had been operating until the end of the 1980s and those mining days were remembered in the community as days of prosperity. During preparation of the environmental impact assessment (EIA) for the Hannukainen mine around 2010/2011, when stakeholder meetings were organized and studies provided information about impacts, the attitudes changed and became more negative. The municipality's economic structure is currently based on tourism (Satokangas 2013), and in particular, the entrepreneurs in Ylläs ski resort have strengthened their opposition against the mine. As argued by one of the informants, "if a foreign tourist comes here in search of peaceful nature and Europe's purest breathing air and then has to experience how window glasses jangle because of a blast and there is dust on snowfield… Then the experience for that one person is spoiled."

Mining dependency as a risk for community development

Further, because the fortunes of some communities remain so closely tied to the mine, the possibility of success and failure rests on the feasibility of the mine. This is experienced also in mining towns Apatity/Kirovsk and Revda in Russia as well as in Kiruna, Sweden. A decrease in apatite concentrate production in Apatity and Kirovsk from 20 million tons (1989) to 8 million tons (2013) due to market conditions resulted in a corresponding decrease in population of about 40% (from 150,000 to 89,000) over the same time period. During this period (1989–2013), also the population of Revda decreased 42% due to closure of the mine Umbozero and reduced production of the mine Karnasurt. Similarly, Swedish Luossavaara-Kiirunavaara Aktiebolag (LKAB) faced poor market conditions in the second half of the 1970s and took measures that would have a palpable social impact on Kiruna. Just after the company had notified Kiruna municipality in 1975 that the company anticipated a need for 1800–2000 new apartments in the next 5 years, demand instead faltered and the company reportedly operated at a loss from 1976 to 1982 (Hägg 1993). During this period, the number of employees was reduced to less than half (from 5055 to 2374) until LKAB became profitable again in 1983. This caused a rapid increase in out-migration, and the population of Kiruna decreased from around 31,200 (1977) to around 27,700 (1983) (ibid). The population decrease has since continued, although at a slower rate, until mining once again became a booming sector in the mid-2000s.

Other places in our study also experienced downturns in mining. In Norway, the population in Sør-Varanger decreased after the mine reduced activity and finally closed down in 1996, but the decrease was not as dramatic due to strong state support for the development of new alternative workplaces. Instead, in Svappavaara Sweden, the closure of the Leveäniemi mine in 1983 reduced the population by two thirds. In Kolari Finland, the closing of Rautuvaara mine and Partek cement factory, employing one fifth of the workforce in the municipality in the end of 1980s, caused serious economic and social problems. These experiences were leaving a bleak outlook for the future. Apartments built during the mining era sat empty for decades due to the previous out flux and are unusable today because of neglect, underscoring the risk in investing in communities highly dependent on a boom-and-bust resource (Järviluoma 1993).

These experiences from our case studies illuminate how detrimental the dependence on a single industry can be for a community, as commodity prices fall. Mining companies may be able to cope with poor market conditions through productivity-enhancing measures (Tilton 2001), but sometimes extraction at individual mine is no longer viable, which leads to closure. In northern communities that are characterized by resource dependency, such closures often lead to rapid depopulation (see also Bone 1998). For example, in Kvalsund municipality in Norway, with a short-lived mining history in the 1970s, this is used as an argument to not support the opening of a new copper mine. One informant said: "Young people came to work, built their own houses, but lost everything when the company closed down and had to move to find other work." Also, Kirovsk interviewees indicated that they would leave if the mining companies experienced financial problems or finished operations.

Despite the past hardship due to external forces, Kiruna and Apatity/Kirovsk exemplify how mining can serve as a long-term economic activity, forming the economic base of the community. Thanks to large deposits, these communities planned their development on the assumption that the mining company will operate for decades; therefore, the municipalities also developed strategies for economic diversification to protect against downturns. However, these mining companies still remain the main economic driver. "OAO Apatit is all for us," said one respondent from Kirovsk.

Hence, although mining dependency is seen as a risk, it also offers possibilities to regions like the European North, which are mainly rural, sparsely populated areas that have suffered from unemployment, the out-migration of young people, and municipalities coping with economic problems (see Duhaime 2004; Megatrends 2011). Hence, the continued viability of the local way of life, supported by employment in the mining sector and the spillover effects of newly added private services and further economic activity, emerged as one of the most positive social impacts of the mine, according to the responses from the studied communities. A critical point for community benefits is that mining employees become permanent residents of the community. In Apatity-Kirovsk, where the mining companies, Apatit JSC and SZFK, attract employees from other regions of Russia or within the Commonwealth of Independent States to work in a rotation system, there was concern using a fly-in-fly-out (FIFO) model with one individual commenting, "They do not use local people!" In Norway, a FIFO work organization dominated in the first years after the reopening of the Sydvaranger mine, but non-locals gradually decreased to about 30% of the workforce after strong municipal pressure. One informant from the municipality said, "We want the workers to settle permanently and contribute to the municipal economy as we now lose tax incomes from migrant workers." Another informant stressed the gender imbalance in the local community as the mainly male migrant workers have their families elsewhere. Also in Pajala, Kiruna, and Svappavaara in Sweden and Kittilä in Finland, there was a general consensus that the ideal outcome was a local workforce with permanent housing and that FIFO-type work arrangement was not desirable from the local perspective.

Discussion

There are no separate global or local processes or spheres—instead global processes always take place in specific local contexts: "[S]ociology of globalization becomes empirically possible and necessary only as a 'glocal' cultural investigation of industry, inequality, technology and politics" (Beck 2000, 49). Our study identifies important similarities among our cases. This confirms that many of the social impacts of mining across the region share common elements and the applicability of these findings potentially extends to many other mining communities across the world. In this section, we discuss some of the research literature on mining and point to specific features of the industry, drawing attention to common issues that offer the grounds for future research. The features compared with our findings are dependency on global markets, dependency on foreign companies, and the nature of a strong booming industry, which can displace other sources of livelihoods and traditional culture.

As described earlier in the article, changes in the global mineral and economic markets directly influence the lives of the local mining communities, which can only adapt as they have little possibility to influence the actual developments. In the extreme cases of a mine closing as was the situation in Kolari, Finland, in the 1980s and in Sør-Varanger, Norway, in the 1990s, the only possibility for municipalities was to ask help from nation states that in those days also provided financial support for development of other industries. Previous social scientific research on mining towns has pointed to the relatively short life cycle of most such communities (e.g., Bone 1998). Indeed, mining-dependent communities must eventually face the fact that every mine is finite and will ultimately run out of reserves (Tilton 2001).

Few of the mines included in our case studies have estimated mine lives longer than 20 years, but this does not necessarily mean that the mine will be depleted after this period. Such estimates rest on the expected costs and prices and on the amount of available information about the mineral resource, which is accumulated through costly exploration. These variables may change substantially during the life of a mining project. For example, Nussir completed an environmental impact assessment (EIA) in 2010 in Kvalsund based on the known resources but has subsequently found bigger deposits outside the planning area. Utilizing these resources will require a new EIA. In Kittilä, an EIA for a proposed extension

to the existing mine was started 1 year before the actual production of gold started. This supports the observation by Crowson (2002) that most projects are based on conservative estimates of ore reserves. The possibility of the comprehensive utilization of mineral resources, along with the integration of scientific and technological progress in the use of modern resource-saving technologies, may lead to a more complete extraction of subsurface ore.

But even in larger resource towns such as Kiruna, Apatity, and Kirovsk, which have persisted together with "their" mining companies for generations, the cyclical nature of the mining industry can clearly pose disruptions. Previous literature tends to emphasize economic diversification as a means of reducing vulnerability to individual markets and enhancing long-term sustainability (e.g., Beckley 2000; Teitelbaum et al. 2003), but according to our study, this is not an easy task. A booming mining industry may disrupt other sectors of the local economy (see also Eggert 2001). In Apatity and Kirovsk, many respondents said that they will leave these towns if mining companies have economic problems or finish their operations. In Kiruna, poor market conditions for mining in the past had resulted in local efforts to enhance economic diversification, but the commodity price boom that emerged in the mid-2000s and the expansion of mining that followed in its wake appear to consume much of the local resources, at the expense of continued diversification.

Also, mining is a business led from the outside, when looked from the northern host communities of the mines. For mining companies, the optimal scenario is to extract as much of the resource as possible at the lowest possible cost in the shortest possible time when world market prices are high. An underlying trend is the increasing size of typical mines and processing plants during the last decades, which allow mining companies to exploit economies of scale and to justify the extraction of lower-grade ores (Crowson 2008). The strategy does not necessarily benefit the local communities that are affected. This concern is strong among opponents of mining in the North; they argue that benefits are going to foreign companies, whereas locals are receiving only environmental damages. Also, based on the Russian experiences, one of the main factors threatening the provision of positive mining impacts to the local communities is the dependence of the company on the policy of the holding company, typically located outside the region and often neglectful of social interests, abusive of labor rights, and creating environmental damage. This has been illustrated also by the planned Nussir case in Kvalsund, Norway. A land deposit is not economically sustainable for the company as it will cost substantially more to develop compared to the planned sea deposit. The ecological sustainability of the project is of great concern among our respondents as the waste from the copper extraction together with considerable amounts of chemicals will be deposited in the fjord, which has the status of a "national salmon fjord."

And finally, mining is an example of a boom-and-bust industry. Starting and developing production of a new mine not only demands a vast monetary investment but also causes a rapid spike in the number of employees (also, e.g., Lockie et al. 2009), which in turn typically creates a need for new or expanded infrastructure. Initially, a large temporary workforce is required to build the mine, but as the project transitions into production, the employment opportunities become more long term in nature. The people with the required competence might not live in the local community and would therefore need to be recruited from outside. The early phases of the mine often precipitate a local housing shortage, which necessitates commuting, work camps, and temporary housing solutions. While this may mean rental income for locals, if the community fails to bring in new permanent residents, this will result in a loss of potential municipal tax revenues (see also Rolfe et al. 2007) and the development of a community with services that could attract future families. The increasing practice of long-distance commuting increasingly replaced the "new town" model over the past decades, particularly in Canada and Australia (Storey 2010). Our study suggests that the first years of production are critical for attracting permanent residents to mining communities. If the economic base of the mine is not on a solid ground, investors and municipalities are not willing or able to invest in housing, as was discussed earlier in the paper.

In our cases, despite these doubts, mines were still seen as promoters of economic development in the Northern Europe. They provide employment opportunities, prosperity for individual households as well as to local municipalities, in-migration, better services and infrastructure, and, in general, hope for the future. Especially representatives of the municipalities—be they politicians or authorities—stressed the importance of mining. This idea was partly contested only in the areas where other nature-based industries such as reindeer herding and tourism were strong. For the reindeer herders, the most important concern is related to the ability to continue herding. However, the reindeer herders also recognize the importance of the employment possibilities created by mining. A shrinking local population seriously jeopardizes the viability of northern communities, creating a dilemma for herders and, hence, their perspective on the mine.

Conclusions

Mining is an example of a glocal phenomenon par excellence: it is operating in the global markets of consumption, but the production of the raw material is place based, situated in the locality where the ore is found. Global consumption of local production, international companies operating locally, and the nature of mining being a boom-bust industry with clear economic fluctuations are all universal phenomena in the

industry—whether the mining operations are in the European North or, e.g., Namibia in Africa (see Conde and Kallis 2012). Nevertheless, there is also the particular side of the mining, namely how the global industry reorganizes different localities.

Mining has created industrial towns to the North such as Kiruna in Sweden and neighboring towns Apatity and Kirovsk in Russia. Although mining is already a traditional industry in these localities, there are concerns about dependency on a single industry especially because alternative livelihoods are not available on such a large scale and attempts to diversify their economies have not succeeded. Hence, localities can only adapt to the downswings and upswings of the industry.

In the studied localities where mining is a new industry or in a planning phase, the concern is for other industries, such as reindeer herding and nature-based tourism, which are locally based livelihoods. Also, nature-based practices such as hunting, fishing, and gathering are still vital and important for the northern way of life, which is challenged by the modern, industrial mode of large-scale production.

The "global–local" tension in mining is also expressed in our data in the dichotomy of the peripheral North and developed and central South. The northern parts of Scandinavia and Murmansk region in Northwest Russia have been resource regions for state-led natural resource extraction and later on for international companies. Environmental justice is crystallized in the concern about possible environmental contamination and risks experienced by local people and in the sense that decisions about mining are in the hands of southerners when looked at from the perspective of the Northern Europe, from the Global North.

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