Living with socialism: Toward an archaeology of a post-soviet industrial town

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Abstract

While the Soviet Union collapsed in 1991, it left a heavy legacy in the form of industrial towns, residential buildings, infrastructure networks, and ecological damage that extends the Soviet Union's effective history into the present day. This paper explores this legacy through the perspective of contemporary archaeology to better understand how material culture from the Soviet period is being reused in the present concerning the resource extractive industry. Research focuses on the nickel, copper, and cobalt-processing town of Monchegorsk, Murmansk Oblast in northwest Russia. By employing a combination of historical sources and fieldwork, the paper demonstrates how things from the Soviet past are being repurposed in the post-Soviet present. This in turn limits possibilities for imagined possible futures by its residents. The paper concludes by highlighting the need to pay attention to the material culture of the resource extraction industry itself when studying its persistent legacies.

Key words: Monotown; Path dependence; Habit memory; Materiality; Heritage

1.0 Introduction

While the Soviet Union dissolved as a political entity in 1991, the material transformations brought about by over seventy years of Soviet ideology endure in the present as lasting legacies over its large territory. As Bjørnar Olsen points out, in the former Soviet Union there is "effective historical memory [which] ranges from the gauge of railways, Stalin and Khrushchev era apartment houses to power grids and city planning" (Olsen, 2013a, p. 215). Thus, a Soviet legacy remains firmly rooted in the heritage of its built environment while a similar environmental heritage pervades in the accumulation of industrial deserts, overfished waters, dammed rivers, and impoverished fields (Bruno, 2016; Josephson, 2014; Josephson et al., 2013).

Political dissolution and economic reorientation also created an excess of material culture that proved unwieldy in a new capitalist system leading to abandonment or rearrangement of Soviet things to fit this reality. Abandonment and rearrangement can be seen in things like abandoned industrial towns (Andreassen et al., 2010), depopulated fishing villages (Olsen and Vinogradova, 2019), decommissioned military bases (Boldāne-Zeļenkova, 2017), and symbols of the Soviet empire (Martinez, 2018). Meanwhile, Thomas Lahusen has argued that Soviet socialism was built as a ruin from the start given the fact that the best materials and the best workers were used to construct industrial buildings and machinery, leaving the worst quality materials for housing (2006, p. 744). Meant originally as temporary solutions, these buildings have become permanent due to economic collapse of the Soviet Union that hindered their repair and replacement. The point of departure for this article is to explore what happens to accumulations of Soviet material legacies when being drawn into a capitalist extractive economy. What possible new perspectives can arise through an

archaeology of the repurposed Soviet heritage within single industry mining towns and how can archaeology contribute to the neo-materialist turn when studying the past and its impacts in the present?

To explore this question, I use the town of Monchegorsk, a single-industry nickel, copper, and cobalt-processing town in Murmansk Oblast in northwest Russia (Fig. 1). Located in the centre of the Murmansk Oblast, Monchegorsk represents one of hundreds of single-industry towns founded in the far-flung corners of the Soviet Union that still endure in modern Russia as a present-day community serving much of its original purpose.

Town of Monchegorsk in northwestern Russia (map by the author).

The fieldwork for this study consisted of two site surveys to the town Monchegorsk in April and July 2019. Field methods were straightforward, repeatable, and similar to other recent contemporary archaeology field projects (Andreassen et al., 2010, pp. 23–24; Farstadvoll, 2019, pp. 31–34; Harrison and Schofield, 2010, p. 69; Olsen and Vinogradova, 2019, p. 5). Archaeology in this case did not consist of subsurface excavation but rather was an archaeology of the surface – in and of the present (Harrison, 2011). In conducting this fieldwork, I explored Monchegorsk on foot and by car to get a sense of presence of the place (for examples of this approach see Clark, 1997; Olsen et al., 2012, pp. 58–78; Pétursdóttir and Olsen, 2014a, pp. 24–25). The work was limited to buildings that I could enter – public spaces, commercial buildings, or abandoned structures – and avoided fenced-in private properties or locked doors. As demonstrated in Fig. 2, the ongoing fieldwork has so far focused in exploring the northern part of the town along with a brief visit to one of the former outlying villages, Rizh-Guba (Риж-Губа).

Fieldwork in Monchegorsk, spring and summer 2019 (map by the author).

I employed photography extensively to document how things are in town and the surroundings. Extensive use of photo documentation proved useful in documenting the materiality of how landscapes are structured, shaped, and change within and outside human-bounded desires (Andreassen et al., 2010; Farstadvoll, 2019; Pétursdóttir, 2014; Pétursdóttir and Olsen, 2014b). I avoided or blurred out people and other identifying characteristics, thus limiting the amount of

images taken in busy or crowded locations. Instead, the fieldwork produced a large database of pictures of architecture, abandoned buildings, industrial enterprises, and the local ecology. This fell in line with the desire to document the affect, presence, and material reuse in Monchegorsk.

I supplemented this by visits to the local city library and archives of Monchegorsk and the regional library and archives in Murmansk to conduct historical research. The second round of fieldwork took place while Monchegorsk celebrated Metallurgist's Day, an old Soviet holiday, on July 20. This allowed me to conduct participant observation as the town held one its largest annual celebrations (Fig. 3).

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FigureFig. 3
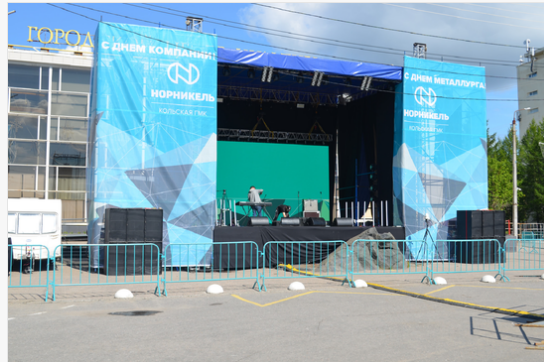
Setting up the musical stage during Metallurgist's Day in Monchegorsk. The sign on the right reads "Happy Metallurgist Day" and on the right "Happy Company Day." Below that is the Norilsk Nickel logo, the name of the company, and its local subsidiary "Kola GMK". Soviet holiday being co-opted into the new capitalist system (photo by the author).

The results of this work leads me to theorize that much of the original – Stalinist – purpose of Monchegorsk continues in a capitalist economy and that part of this continuity lies in the usefulness of the material objects themselves, which continue to reproduce similar sorts of relationships they did in the past. Instead of discussing path dependencies, we could also consider past dependencies where the accumulated past plays a substantial role in its present. These observations highlight the need to understand the materiality of factories, houses, and infrastructure when it comes to the study of resource extraction.

2.0 Theoretical background

The theoretical basis for this work is rooted in the neo-materialist perspectives that argues that humans are not the sole agents of social transformations or historical developments. Rather humans are within a vast network of objects, plants, and non-human animals that co-create the world (Bruno, 2016; LeCain, 2017; Olsen, 2010). Specifically, when discussing the idea of heritage, I embrace the concept of "unruly heritage" that rejects the idea of heritage as something that is chosen, wished-for, valued, or preserved for future generations (Olsen and Pétursdóttir, 2016; Olsen and Vinogradova, 2019). Rather, this paper employs the concept of heritage as an involuntary, accidental, and lived-with past without temporal demarcation that has a certain degree of agency to influence the present and the future. People rarely voluntarily choose to preserve this or that particular structure, object, or landscape. Rather, the past accumulates as human-made things outlive, crumble, shift, and become repurposed by subsequent generations, creating a multi-temporal present based on durations of different things (Olivier, 2011; Olsen, 2010, pp. 167–169).

In discussing this multi-temporality, archaeologists often draw on lingering materiality from the past – like abandoned or reused structures – that refuse to neatly disappear into the pages of history by remaining in the landscape as a form of physical memory (Andreassen et al., 2010; Burstöm et al., 2009; DeSilvey and Edensor, 2012; Edensor, 2008; Olsen, 2013a; Olsen and Pétursdóttir, 2014; Pétursdóttir and Olsen, 2014a, 2014c). Contrary to historical narratives, that sees the past as a series of progressing instants (Olsen, 2013b); lingering material things become matter out of place stranded out of regular, ordered progression of time (González-Ruibal, 2019, p. 132; Pétursdóttir, 2012, 2013).

This foundation is useful for the subsequent discussion where things entangle into everyday lives of humans, animals, plants, and other things (DeSilvey, 2006; Pétursdóttir, 2017, 2018; Pétursdóttir and Olsen, 2017). Similarly, the

symmetrical relations between functional things and humans have received a healthy discussion in places like actor-network theory, post-humanism, and related strands of thought (Coole and Frost, 2010; Ingold, 2008, 2012; Latour, 1999, 2005; Olsen, 2003, 2010; Olsen et al., 2012).

Where this discussion goes deeper is on the question of how these symmetrical relations manifest themselves when the past functions just fine the way it is – where objects created in a past system find themselves within new, rapidly changing systems. In these situations it is clear that some things have no place in a new system, thus becoming abandoned, ruined, or torn down, while others still provide value, becoming reused in a variety of forms. This is particularly manifest over the territory of Russia where the guts of the Soviet Union, consisting of architecture, transportation, infrastructure, and communication lines, still form much of the material substance for a modern capitalist country (Brown, 2001, p. 22; Olsen, 2013a, p. 215). Instead of making the socialist system, it now supports the Russian one. What happens in that new relationship?

This shift can be a bit pernicious. Often it is through absence, loss, or breakage that a thing comes to mind. However, if a thing is employed without interruptions but continues to function from one system to another it can remain hidden from conscious consideration (Heidegger, 1962, pp. 97–98; Olsen, 2010, pp. 69–76). By being a product from another time, the thing continues to reproduce the relationships, the structures, and the affects from the past into the present just by being there as a useful physical manifestation of past systems (Fig. 4). This is implicit in Henri Bergson's idea of habit memory whereby familiarization of people to things through motor skills makes the objects fade into the background of the mind as the body implicitly navigates a tool, a building, or a city (Bergson, 2004; also see Olsen, 2010, pp. 116–121 for an excellent discussion).

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Figure Fig. 4

Statue of Lenin, Plashchad' Revolyutsii (Revolution Square), Monchegorsk (photo by the author).

In this context, it makes little sense to talk about entanglement between humans and things in a web, meshwork, or network but rather critically evaluate the number of ways of *how* humans and things interact (Hodder, 2014, pp. 21, 25). How does the lived with heritage of Soviet era industries influences the people who live with that heritage today? According to Ian Hodder, objects create their own path dependencies through cycles of maintenance, anthropogenic environmental change, and deepening complexity (Hodder, 2014, pp. 31–33). Without being able to undo the material culture or imagine a life without it due to our embodied routines, entrapping cycles of managing things draw humans

into relationships that are not always necessarily healthy, helpful, or productive (Hodder, 2011, p. 164; 2014, pp. 30–32). Therefore, things bring their own unintended consequences while familiarity and comfort with things pushes the duration of their use into the future (Olsen, 2010, pp. 120–121).

3.0 The soviet union and its environmental legacies

There are perhaps few better examples of unintended consequences of things and their physical duration than the Soviet monotown (моногород or monogorod) and its related industries. As the name suggests, the economies around the monotowns revolved around one or a few closely related economic or military activities. Many of these were founded during the Stalin era from the belief on behalf of Soviet planners and officials who saw monotowns as the best and most rational way to turn nature into usable resources (Josephson, 2014, pp. 238–239). In doing so, they emptied lands from their original inhabitants, most often Indigenous people, and replaced them with large numbers of new inhabitants which consisted of volunteer labourers and gulag workers from more populated regions of the country. Together they worked at building and operating the towns' industries and the associated support services (Brown, 2001, pp. 26, 29–33; Josephson, 2014, pp. 280–284). With the end of forced migrations after the death of Stalin, Soviet officials employed higher salaries, better services, and promises of new housing to attract workers to the country's northern and eastern peripheries (Bolotova and Vorobyev, 2007; Bruno, 2016, p. 198; Josephson, 2014, pp. 238–239; Kalemeneva, 2019; Nedoseka and Zhigunova, 2019, p. 103).

These northern subsidies dried up with the collapse of the Soviet Union. In response, many people rapidly out-migrated to better climates while the industries shifted into private hands. Monotowns, however, remained single-industry towns in a new capitalist Russia and scholars have put significant amount of research into diversifying the economies of these monotowns (for examples see Didyk and Rjabova, 2014; Gladysheva, 2017; Plisetskiy and Malitskaya, 2017; Shastitko and Fatikhova, 2015, 2016;). However, based on the most recent list provided by the Government of the Russian Federation, approximately 1100 monotowns remain with 313 linked to industrial activities with a combined population of approximately 13.5 million people (Pravitelʹstva Russkoj Federacii, 2014; Shastitko and Fatikhova, 2015, p. 5).

To make matters worse, the collapse of the Soviet Union left a landscape of 50,000,000 standardized, uniform apartment units across the entire country (Sverdlov, 2009, p. 100). Mass housing, which began under Stalin in the later years of World War II, accelerated under Khrushchev with a push for cheap, efficient, standardized apartments (Smith, 2010). While originally considered practical and desirable housing solutions, some pre-fabricated Soviet homes have outlived their use lives by as much as 30 years (Olsen and Vinogradova, 2019, pp. 7–8) – though later iterations were meant to be far more durable (Meuser and Zadorin, 2015). Drawing on Tim Edensor (2005, pp. 106, 132), Thomas Lahusen referred to Khrushchev and later Brezhnev-period apartment houses as "zero-value rubbish" due to their age, standardization, ubiquity, and suboptimal construction methods arguing that they cannot be monetized by capitalism via museums or gentrification (Lahusen, 2006, p. 738). Lack of maintenance under the Soviet and post-Soviet regimes has left many in a dilapidated state. Reconstructing them will require an immense amount of effort and money that most places outside of the affluent core cities of Moscow and St. Petersburg cannot easily afford. Thus, most people, especially in peripheral monotowns, will continue to live with the decaying Soviet-era housing blocks for the foreseeable future (Gundersen, 2009, p. 131; Lahusen, 2006, p. 738).

Ecological damage is another form of heritage inherited from the Soviet period. The environmental failures of Soviet industry are well-documented (Bruno, 2016; Darst, 2001; Feshbach and Friendly, 1992; Josephson, 2014; Josephson et al., 2013). Starting with Stalin, rapid construction and perception of nature as only a trove of valuable resources for the state, characterized industrialization from the 1920s into the 1950s. Unskilled and undersupplied workforce, combined with unrealistic planning expectations, and disregard for the local environment plagued early stages of many industrial enterprises (Bruno, 2010; 2016, pp. 71–120; 2018; Josephson et al., 2013, pp. 71–133). Rapid development and disregard for the environment continued under Khrushchev, even though better planning and a much more educated workforce characterized the Soviet economy in the second half of the twentieth century. The first environmental laws in the Soviet Union appeared during the 1960s, though they proved ineffective at curbing pollution (Bruno, 2016, p. 198; Josephson et al., 2013, pp. 136–181). Still, much of the ecological impact was heterogeneous and, under certain parameters, equivalent to the West (Bruno, 2016, pp. 213–219; 2018, p. 149; Lajus, 2020, p. 333).

However, the worst period of ecological damage in the Soviet Union took place in the 1970s and 80 s as the Soviet Union expanded production to compensate for the global economic slump (Bruno, 2016, p. 204; 2018, p. 150). Despite environmental protection being written into the 1977 Soviet constitution (Josephson, 2014, pp. 254–255; Lajus, 2020, p. 323), company managers chose to pay the fines for polluting rather than falling behind production quotas which lead to the worst ecological degradation. In sum, environmental degradation in the former Soviet Union was a varied, cumulative, multi-causal phenomenon but one that is nevertheless a reminder that socialist industries have left their own forms of "mass destruction" behind (see LeCain, 2009).

Heterogeneously accumulated legacies of ecological mass destruction are conspicuous in the Murmansk Oblast. While the region is host to one of the first ecological reserves in the Soviet Union, it also became the centre of development for single industry towns starting in the 1930s. These towns primarily focused on extraction and processing of metals and minerals and include Monchegorsk, Nikel, and Zapolyarny (nickel, copper, and cobalt); Olenegorsk and Kovdor (iron); Kirovsk, Titan, and Koashva (apatite); and Revda (rare earth minerals). Many of the industries surrounding these towns have a legacy of soil and water contamination with non-ferrous metal manufacturers being some of the worst purveys of this pollution (Bambulyak et al., 2013; Bruno, 2016, pp. 170–219; Josephson, 2014, pp. 241–256).

Since the collapse of the Soviet Union and the scaling back of production, the ecological situation in Murmansk Oblast has been improving to a level of "regular ruin" – i.e. that comparable with non-ferrous metal plants in the West (Bruno, 2016, pp. 213, 215). In 2003, the sulphur dioxide emissions from the non-ferrous metal industry in the region were 165.9 thousand tons (Bambulyak et al., 2013, p. 25). This dropped to 105.6 tons in 2017 (Njaa, 2018, p. 16). While the reduction in these emissions has led to flora and fauna regeneration, they remain by far the biggest polluters in the region (Bambulyak et al., 2013, pp. 23, 27). At the same time, heavy metal contamination remains a problem, as documented in the water, fish, and people surrounding the industrial settlements (Moiseenko et al., 2018; Razinkova, 2019, p. 16). Ten out of 42 environmental hot spots are located in the Murmansk Oblast, as designated by the Barents Euro-Arctic Council Working Group on the Environment (Bambulyak et al., 2013; Mård, 2013).

4.0 Monchegorsk

4.1 Historical overview

Within this broader historical and environmental context, the discussion turns specifically to the town of Monchegorsk. Monchegorsk is located on the traditional land of the Indigenous Sámi and its name is derived from the Sámi word for "beautiful tundra" (Bogomolov, 1957, p. 76). Before the construction of the industrial town, the Sámi used the area for fishing, hunting, and reindeer herding (Allemann, 2013, pp. 84–86; Wheelersburg and Gutsol, 2008, pp. 92–93). Significant transformations started to take place with the construction of the telegraph line in the mid-19th century and, more significantly, the construction of the railroad in 1916 that made the Sámi shift their settlement patterns (Wheelersburg and Gutsol, 2008, p. 85). The railroad opened the western Kola Peninsula for mineral exploration that began in the 1920s (Wheelersburg and Gutsol, 2008, p. 82).

Popular Russian histories of Monchegorsk refer to a Sámi man by the name of Arhinov and his sister, Matrena, who occupied the shores of what would become the industrial town (Lukichev, 1993, pp. 8–9, 48). In 1930, geologists working in the area identified significant deposits of nickel, copper, and cobalt (Lukichev, 1993, p. 13). In April 1935, an order came down from the People's Commissar of Heavy Industry in the USSR to develop the nickel plant in Monchegorsk with the ability to produce nickel and copper by the end of 1937 (Bruno, 2016, p. 179). One of the major interests in nickel was its use as an important alloy for military applications. With 98% of the world's nickel coming from Canada in the 1930s, the Soviet Union saw the need to develop their local nickel industry as a matter of national defence (Bruno, 2016, pp. 185–191). The construction of the industrial town forced the Sámi out of the region, though some chose to integrate into the incoming Russian population (Allemann, 2013, pp. 84–87; Wheelersburg and Gutsol, 2008, p. 89).

Much like other projects of the period, the construction of Monchegorsk and the industrial facilities of Severonickel leaned heavily on gulag labour, with over 11,000 labouring in the region by 1937 (Bruno, 2016, pp. 182–183). Poor planning, unskilled workforce, inefficient management, and insufficient knowledge of ore deposits delayed the first industrial production of nickel until February 1939 when a sufficient amount of good quality ores were discovered (Bruno, 2016, pp. 183–184).

While the start of the Second World War initially put a stop to metal production as the town was almost completely evacuated, production resumed in 1942 and the plant was able to produce a moderate amount of nickel for the war effort (Bruno, 2016, p. 189). Post war reconstruction continued to use gulag labour as well as receiving a boost from the 4.7 thousand German prisoners of war that were used as slave labour from 1945 to 1949 (Lukichev, 1993, pp. 69–71).

While Monchegorsk was being built, the housing conditions were abysmal, characterized by overcrowding, waste, and poor construction (Bruno, 2016, pp. 182–183). For those who could get proper houses, the town's architects borrowed styles from other northern countries to create what they envisioned to be a unique urban landscape of "Соцгород" ("Sotzgorod" or "Socialist City") (Lukichev, 1993, pp. 40–41). The Soviet planners built it to avoid the planning mistakes of Kirovsk, an earlier town further south built around the apatite mining industry (Lukichev, 1993, p. 37). This decision spared many old growth trees and the town planning facilitated the creation of large public green spaces (Poznjakov, 1999, pp. 23–24). In 1971, the meeting of architects, project managers, and construction workers declared Monchegorsk as one of the best-planned cities in the northern region of the country (Lukichev, 1993, p. 91).

However, like in all Soviet cities, the push for cheap, mass-produced homes witnessed a shift in house construction in the late 1950s with the introduction of prefabricated, mass produced, concrete panel buildings (Lukichev, 1993, pp. 86–87, 95; Meuser and Zadorin, 2015). These houses replaced most of the earlier wooden houses and came to dominate most of the urban landscape in Monchegorsk. Most construction stopped in the early 1990s after the collapse of the Soviet Union and the subsequent economic stagnation.

At its peak, the population of Monchegorsk was 72.5 thousand people but since then experienced contraction and consolidation (Lukichev, 1993, p. 105). As of 2018, it was estimated that 42,099 people lived in Monchegorsk (ROSSTAT, 2018), a 42% drop since 1993. Currently, the town of Monchegorsk is listed as Category 2 in the List of Single Industry Municipalities of the Russian Federation, meaning that it is at risk of diminishment in its social and economic quality of life (Pravitel′stva Russkoj Federacii, 2014, p. 11).

4.2 Environmental overview

While urban transformations were taking place within Monchegorsk, the environment outside was being radically transformed. The ores that the Severonickel plant processed were sulphuric and of lower quality than originally predicted. The factory tried to develop new technologies to smelt lower quality ores and convert sulphuric gases and other pollutants into usable substances like sulphuric acid. Unfortunately, chaotic planning and unskilled labour doomed these plans letting sulphur dioxide and heavy metals escape into the atmosphere unabated (Bruno, 2016, pp. 181–182; Lejbenzon, 2008, pp. 21–23). Fortunately for the residents of the town, the planners placed Severonickel downwind from Monchegorsk, meaning that much of the town was spared the worst effects (Bruno, 2016, p. 180). The "beautiful tundra" of the Sámi, however, received the brunt of the industrial devastation.

Despite this, the early years of Severonickel witnessed relatively low levels of pollution compared to other nickel plants of the 1930s. However, the extensive growth of the post war years created visible environmental impacts by the 1960s. Residents living closest to the plant had to be resettled and forest damage was visible 2020 kilometres km around the Severonickel plant (Bruno, 2016, pp. 200–201). Things became three times worse in the 1970s. paralleling broader ecological degradation of the Soviet Union in the 1970s and 80 s, sulphur emissions tripled with the importation of sulphur-heavy ores from Siberia (Bruno, 2016, p. 204). As Andy Bruno has shown, the reason for this shift was the exhaustion of local reserves around Monchegorsk in 1974 (2016, p. 206). Driven by pressure of produce more in response to a stagnating economy and the rapidly expanding extraction activities in Siberia, polluting activities at Monchegorsk ramped up even as the local mining ceased. Toward the end of this period, the area outside of the town became a massive environmental dead zone covering 400–500500 square kilometre km²s at its largest extent (Hønneland and Jørgensen, 2003, pp. 148–150) (Fig. 5).

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FigureFig. 5

Severonickel processing plant (photo by the author).

As mentioned earlier, it was not until the fall of the Soviet Union, the drop in production, and the later modernization of factories, that saw the amount of sulphur dioxide emissions decrease. Output of sulphur from Severonickel fell from a high of nearly 300,000 tons in 1975, to 233,000 tons in 1990, to 98,000 tons in 1994 (Bruno, 2016, p. 215; Darst, 2001, p. 120). In 2017, the emissions were at 36,963 tons – below the annual permissible level of 39,900 tons (Razinkova, 2019, p. 25). However, there are regular spikes in emissions, light and periodically unenforced penalties against major polluters, inconsistencies in emission measurements depending on different governmental and corporate monitoring agencies, and little information as to how the emissions are going to be handled when all of Nornickel's[1] smelting operations move to Monchegorsk (Njaa, 2018, p. 8, 19–20; Razinkova, 2019, p. 27).

5.0 Analysis

5.1 Monchegorsk in the post-soviet era

Today, Monchegorsk lies in what is still the industrial heartland of Murmansk Oblast. Driving from the regional capital of Murmansk to Monchegorsk along the sole north-south highway, E105, one has to pass piles of waste rock and large tailings fields that abut the highway creating an unmistakable sense of being in an area dominated by resource extraction (Fig. 6). The town itself lies on a flat plain and on approach the stunted and dead vegetation acts as a reminder of the region's troubled ecological past. The Severonickel plant covers an area almost the same size as the town. Looking from the road, the nine-storey Brezhnev-period apartment buildings look tiny compared to the industrial facilities (Fig. 7).

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Mine tailings and waste rock from the mining operations in Olenegorsk as seen from the highway (photo by the author).

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Severonickel plant from E105. The southern suburb on Monchegorsk, made up of 1970s and 80′s nine-storey panel block apartments is barely visible along the horizon on the left hand side of the picture (photo by the author).

In contrast to its rural surroundings, the original planning principles within Monchegorsk still shine through to make it a beautiful town. This planning is still visible along Prospekt Metallurgov (Metallurgists' Avenue) – the main street of Monchegorsk. At seventy meters wide, lined with Stalin-period houses that are brightly painted and well maintained, the street bisects the town west to east (Fig. 8). On the western end, it has a monument to the "Conquerors of Monche-Tundra" – the first miners of the region – put up in 1977 (Borodkina, 2012, p. 42). On the eastern end is a World War II monument to the defenders of the Russian Arctic put up in 1978 (Borodkina, 2012, p. 53). In the middle is the Plashchad' Revolyutsii (Revolution Square) with a statue of Lenin staring down the street – erected in 1981 (Borodkina, 2012, p. 31). Thus, the central avenue has all the trappings of a central Stalinist procession way decorated with late-Soviet monuments.

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~~Figure~~Fig. 8

Post-war Stalinkas along Prospekt Metallurgov (photo by the author).

Beyond the Prospekt Metallurgov and the few other adjacent streets from the post-war reconstruction that display late Stalinist architecture, the town is dominated by the five- and nine-storey pre-fabricated apartment blocks typical of many Soviet cities (Meuser and Zadorin, 2015) (Fig. 9). Spatial arrangement of buildings in Monchegorsk is also distinctly Soviet. The first mass produced houses of the 1950s and 60 s were placed in rows as Soviet plans saw that configuration as more efficient from an economic point of view (Meuser and Zadorin, 2015, pp. 145, 167). However, there was a marked change in this arrangement starting in the late 1960s with the rise of the micro-district (microrayon or микрорайон) that saw buildings organized around inner car-free courtyards sheltering playgrounds, schools, and other amenities (Meuser and Zadorin, 2015, pp. 151–153). ~~Fig. 10~~

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~~Figure~~Fig. 9

Mid-to-late 1970s Brezhnevka on Leningradskaya Naberezhnaya (photo by the author).

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~~Figures~~ Figs. 10

Shop inside of a ~~walled up, built on, and~~ retrofitted Khrushchev-period building with bricked-up windows and built-on attachments - back side (photos by the author).

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~~Figure~~ Fig. 11

Shop inside of a ~~walled up, built on, and~~ retrofitted Khrushchev-period building with bricked-up windows and built-on attachments - front side (photos by the author).

Monchegorsk displays both types of spatial organization but, as common in many post-Soviet Russian cities, there is also significant repurposing of socialist buildings for capitalist use. This comes across most commonly on the first floors of buildings where former dwelling spaces are converted into shops. Other times, entire facades are built upon, hollowed out, and modified to create a capitalist space within a socialist shell (~~Figures~~ Fig. 10 and Fig. 11 ~~11~~). Central courtyards are also no longer car free zones. Instead, in Monchegorsk, central courtyards have become parking lots for cars, Russia's largest tradeable commodity (Fig. 12).

Playground turned into a parking lot in front of a late Soviet apartment block in the northeast corner of Monchegorsk, (photo by the author).

The buildings and their spatial organization create a sense of placelessness stemming from their Sovietness – once inside the town, one could be anywhere in the former Soviet bloc (Andreassen et al., 2010, pp. 57–58; Lahusen, 2006). What makes the affect of the Soviet architecture particularly striking in this context is that the buildings and the park-like setting cut off fields of view to the Severonickel plant and the environmental damage outside. The contrast is stark between the lush, Russian town of Monchegorsk and the traditional land of the Indigenous Sámi beyond that witnessed 90 years of mass destruction that culminates in a legacy of scorched soil, disused buildings, and abandoned quarries.

The entrapping Sovietness visible in Monchegorsk and other monotowns help explain some of the difficulties regularly encountered when trying to plan and introduce economic diversification and broader political engagement to these places (Didyk and Rjabova, 2014; Didyk et al., 2018; Gladysheva, 2017; Plisetskiy and Malitskaya, 2017). Most residents of extraction-based monotowns repeatedly express more interest in further development of minerals and factories over other alternative investments (Nedoseka and Zhigunova, 2019, p. 105; Suutarinen, 2015, p. 104). This in turn contributes to tolerance of environmental degradation that both local workers and those who come from abroad accept as normal (Bolotova, 2012, p. 667; Didyk et al., 2018, p. 14).

Meanwhile, industrial imagery within monotowns becomes co-opted by local political elites who come from backgrounds within the town's industry and regularly frame their communities as "cities of labour glory" celebrating its working class achievements (Nedoseka and Zhigunova, 2019, p. 108). There is plenty of such imagery in Monchegorsk. These include a large sign at the entrance to the town that proclaims "Monchegorsk – The City of Metallurgists!" and banners on the road to the Severonickel plant that proclaim "Nornickel – Our Hope!" During Metallurgist Day celebrations, the music stage heralded the former Soviet workers' day as "a day of the company" while the Nornickel logo was emblazoned everywhere (Fig. 3). Thus, the Soviet industrial past becomes a source of glory, pride, stability, and celebration – Soviet nostalgia is stronger in monotowns as opposed to other cities within the Russian federation (Nedoseka and Zhigunova, 2019, pp. 101, 109).

5.2 Past dependency

Confronted with Monchegorsk's materiality, it is understandable why economic diversification has proved difficult and why Soviet nostalgia runs strongly in "the city of metallurgists". As Ian Hodder has argued, objects have entrapping properties by creating path dependencies of management, maintenance, and expansion. The building of houses of sun-dried mudbricks, for instance, creates the need to procure wooden posts in order to support the sagging walls, the need to procure wooden posts requires the creation of ground stone axes, and etc. (Hodder, 2014, p. 29). Each development and each technological innovation adds levels of complexity that needs extra levels of maintenance and dependence.

In a context like Monchegorsk, path dependency consists of maintaining houses, streets, monuments, and factories from the Soviet era that serve as the basis for the town's social and economic reality. Soviet materiality gets reproduced based

on need and familiarity beyond purely functional questions of economics, health, or long-term sustainability. Together, these represent the habit memory of Soviet industry. In navigating the things inherited from the Soviet past, people who live in monotowns continue to reproduce that which they are comfortable with through an implicit bodily memory. In these circumstances, the dependency on industry combined with few viable alternative economic opportunities in remote tundra climates leads to a certain degree of self-perpetuating entrapment within the industrial heritage of the Soviet Union (Hodder, 2014, pp. 30–31).

Given this and the preceding discussion on the exploration of Monchegorsk through a combination of historical and archaeological fieldwork, it might not be accurate to refer to Monchegorsk's Soviet past as "offline" or "zero value rubbish" as some previous scholars have postulated (Lahusen, 2006, p. 738; Olsen, 2013b, p. 185). For one, the Soviet past is not a monolithic entity of ecological damage and panel block apartments, but rather an accumulation of material pasts that formed over a rapidly shifting set of policies, ideologies, and economic plans. Each part of that past has value (or lack of it) in each successive present. Second, the accumulation of the Soviet pasts as seen in Monchegorsk is not valueless or offline but is instead re-plugged into a post-socialist reality. Many of the elements of Soviet heritage keep Monchegorsk going today as they did during the Soviet period due to their utility and familiarity. With these observations, it might be better to postulate a "past" dependency, whereby the unruly and unintended accumulations of the past enable certain modes of living while curtailing other opportunities.

The accumulation of the Soviet pasts in Monchegorsk began with destruction – the removal of the Indigenous Sámi inhabitants through the heavy-handed construction campaign of the 1930s. Today, the Sámi are consigned to a distant past visible mostly in the town's name. It is perhaps telling that the local museum displays the Sámi collection as part of the area's "natural history" exhibit.

In the place of the region's original inhabitants, Monchegorsk was developed as a Stalinist project with an imported population to extract and process nickel and copper reserves. Even when nickel reserves proved to be scanty, the Soviet authorities pushed the project through to completion. As the local reserves depleted in the 1970s, the Severonickel facilities continued through the smelting of imported ores. After the collapse of the Soviet Union, Severonickel was not abandoned but instead continues to function as a national nickel and copper processing hub. Through the shifts of political, economic, and ideological realities, Severonickel continues in its original purpose.

The urban fabric of Monchegorsk displays similar multi-temporal accumulations in response to a rapid succession of varying ideologies that produced it, while also maintaining its original purpose as a "socialist city". Good town planning is still visible in the green spaces and Stalin-period houses that line the Prospekt Metallurgov. They are cared for, repainted, repaired, and preserved. In contrast, Khrushchev and Brezhnev-period panel apartment blocks overrode other Stalin-period constructions but now reveal minimal evidence of maintenance – highlighting just what kind of pasts are celebrated in Monchegorsk.

The accumulated sum of the socialist pasts, what has elsewhere been described as the heavy heritage of the Soviet Union (Olsen, 2013a, pp. 211–215; 2013b, pp. 185–187; Olsen and Vinogradova, 2019), is clearly visible in the buildings, the infrastructure, and the monuments of Monchegorsk. However, unlike many Soviet buildings and facilities that became superfluous and now lie abandoned across Russia, most of Monchegorsk has value.

It is not unique in this category, as most monotowns survive as single industry towns fulfilling the same roles they did during the Soviet period. In this sense, Monchegorsk acts as a microcosm of past dependency – reproduction of Soviet economic purpose inside a capitalist system. The monuments of the industrial past – both formal ones like the statue to the "Conquerors of Monche-Tundra" and informal ones like the plant at Severonickel and the degraded ecosystem surrounding it – continue to reinforce the town's identity as an industrial town. New futures emerge through, for example, extensive interior urbanism around Monchegorsk and other former Soviet cities (Andreassen et al., 2010, pp. 111–135; Buchli, 1999; Sverdlov, 2009) or possible eventual replacement of the Soviet built environment and the diversification of the local economy. However, the brute force of the inherited Soviet past will keep Monchegorsk going in much its original form into the near future as it continues to draw on the city's socialist past for the material to sustain its ongoing industrial operations.

6.0 Conclusion

"When did the Soviet Union end – and has it ended?" (Olsen, 2013a, p. 215). This article tried to explore this question by looking at the monotown of Monchegorsk. Monchegorsk, as an active industrial community, has economic value in the present and through its habit memory continues to reproduce the Soviet past on the landscape and the built material environment long after the dissolution of the Soviet Union. If one would think of Monchegorsk through the archaeological time of varying durations, as opposed to historic time of sequences and events (Olivier, 2011), the accumulated durations from the Soviet Union is not only present but continue to be recreated. On the resource peripheries of Russia, the body of the Soviet Union is very much alive and continues to grow and expand.

The continued dependence on resource extraction and processing highlights the entrapping nature of the activity. When resource extraction becomes entrenched, the people who were most impacted by the resource extraction industry through effects on their health, long working hours, and environmental degradation become its biggest supporters when those industries plan on downsizing or shutting down (Brown, 2001, p. 48; Wråkberg, 2019, pp. 5–7). Thus, resource dependence has a material component, a past dependency, where monuments and material memories mobilize and push resource extraction into the future while making it difficult and undesirable to imagine alternatives. While the focus on the material is not new to history, especially environmental history (Bruno, 2016; LeCain, 2009, 2017), archaeology can provide new perspectives to these inquiries through its inherent materialistic expertise in studying things (Olsen et al., 2012). In this paper, a contemporary archaeology of Monchegorsk reveals that, when discussing the topic of resource dependency, scholars need to pay more attention on the materiality of the extractive industry itself to see how it acts to promote certain futures while limiting others.

Uncited references:

Bruno, 2018, Ingold, 2012, Latour, 2005, Pétursdóttir, 2013, Pétursdóttir, 2018, Pétursdóttir and Olsen, 2014c, Shastitko and Fatikhova, 2016.

Declaration of Competing Interest

I declare no special interest in the research, conduct, and compilation of this paper.

Acknowledgements

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(i) The corrections made in this section will be reviewed and approved by a journal production editor. The newly added/removed references and its citations will be reordered and rearranged by the production team.

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Footnotes

Text Footnotes

[1] Nornickel (or Norilsk Nickel) is the current owner of the Severonickel plant in Monchegorsk and the world-leading producer of nickel, palladium, and other metals (Razinkova, 2019, p. 4).

Highlights

- Material legacies of objects outlast systems that created them, slowing history.
- Soviet single industry towns still populate the landscape of modern russia.
- Exploration of one such town shows how soviet legacies are still a part of it.
- These legacies promote new resource development, prolonging its duration.

- This highlights the need to study materiality of extractive industry.

Queries and Answers

Q1

Query: Please confirm that givennames and surnames have been identified correctly.

Answer: Yes

Q2

Query: CE: Please check fig 10 citation manually.

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Q3

Query: CE: Please verify both fig 10 and 11 same caption given, Captions has given separately, please check.

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Q4

Query: This section comprises references that occur in the reference list but not in the body of the text. Please position each reference in the text or, alternatively, delete it.

Answer: All of these references are in the boyd of the text but they are all behind after other citations for example for Pétursdóttir, 2013 it appears as (Pétursdóttir, 2012; 2013). Please sure that they are properly hyperlinked.