Extraordinary Underground

Fear, Fantasy, and Future Extraction¹

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Introduction

During a cold winter in a small town in the high North, strange things are happening. In the darkness of a deep underground mine, a mysterious white object is found. This is the starting point of *White Wall* (Salmenperä, 2020) a Finnish-Swedish television mystery drama that premiered in 2020. The eight-part series occurs in a fictional mining town in northern Sweden, site of the world's largest nuclear waste depository. With its slogan, "Are all mysteries meant to be solved?," *White Wall* is a tale of humankind's limited understanding of nature and the universe. An underground mine located in the high latitude comprises a particularly fitting backdrop for pursuing such a theme, as both the subterranean world and the high North have long been regarded as extraordinary and mysterious places (e.g., Davidson, 2005; Naum, 2016; Herva & Lahelma, 2019; Herva, Varnajot, & Pashkevich, 2020).

The repurposing of the mine in *White Wall* brings together the past and future, realities and fantasies, and hopes and fears, and it is within a similar frame that we discuss extractive industries in this chapter. Contemporary perceptions and discourses of Arctic mining are linked to concerns of local and global futures, especially in relation to climate change and its diverse ramifications for the Arctic and the world. The European far North and its resources have long been associated with hopes for a better future through extraction: The discovery of silver from northern Swedish mountains in the seventeenth century triggered hopes of colonial wealth in Sweden, and in the eighteenth century the North became a land of the future where opportunities and riches awaited exploitation. The representation of both the North and the subterranean in *White Wall* replicates centuries' old imaginations of the far North and of the underground as mysterious and enchanted worlds, with both ideas converging in the context of mines and mining.

This chapter explores how extractive industries in the Arctic, and more generally, are entwined with such beyond-the-rational conceptualizations and the associated

long-running fears and dreams linked to otherworldliness and danger but also treasure and a better future. These ideas and perceptions have a substantial affective potential, which is evident in historical and contemporary discourses of mining and the North. "The North" has been a continuous target of outside projections with various cultural, scholarly, and imaginative constructions since classical antiquity (Byrne, 2013: 7; Herva & Lahelma, 2019), commonly associated with features evoking connotations with death, coldness, barrenness, desolation, and remoteness (Hansson, 2012; Ryall, 2014: 122, 124). Alongside this, however, there is also a long tradition of placing visions of upcoming prosperity in the North. For example, the ancient Greeks believed that, beyond the barrenness and cold of the far North, a paradise of peace and plenty existed. The utopian visions regarding the North may have been fueled by the fact that the region was for centuries a source of many coveted treasures: furs, amber, ivory, and magical unicorn horns (Davidson, 2005: 51, 24). This entanglement of underground and Arctic imaginaries thus complicates our understanding of extractive industries in the region, and we demonstrate here that more attention should be paid to such phenomena.

We propose that the controversies around and affective qualities of contemporary mines and mining are entangled with the broader cultural ideas and perceptions of the subterranean. These ideas may not always be readily obvious or consciously recognized, but they nonetheless comprise a "sound board" that can amplify emotional responses to mines and mining. We explore how the cultural heritage of very long-term human entanglements with subterranean and extractive practices feature in perceptions of and attitudes to mining. As few people have extensive first-hand experience of the subterranean world, popular culture – here exemplified by *White Wall* – plays a central role in reproducing to the wider public centuries- and millennia-old cultural motifs associated with the underground realm. The emotional and affective power of mines and mining – their ability to elicit responses such as fear, excitement, and fascination – goes "beyond-the-rational" (Wright, 2012: 1113), which must be accounted for in order to unravel our complex historically and culturally mediated relationship with the world underneath.

Underground Worlds

The story of *White Wall* begins when, from the depths of an underground mine that is being repurposed as a storage facility for nuclear waste, a white wall is found. The wall turns out to have some kind of agency, and it is questioned throughout the series whether the wall would have been better left undiscovered. The storyline repeats an age-old cultural motif of the underground as a place with supernatural properties, as discussed in this section. Exploring the depths of an underground

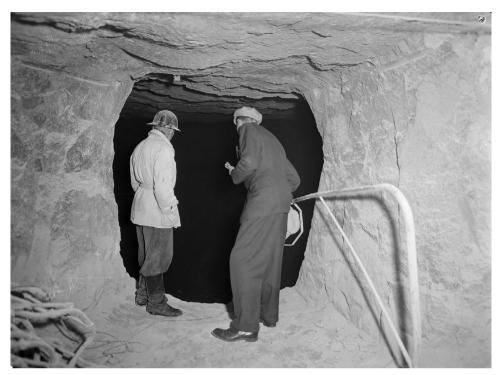


Figure 8.1 Facing the subterranean world in the limestone mine of Hangelby, Sipoo, 1956. Photo: Erkki Voutilainen/Finnish Heritage Agency. CC BY 4.0

world can reveal wonders and bring wealth, but the exploration of a forbidden or non-human domain can just as well unleash terror and destruction (Figure 8.1).

Rich orebodies linger in a space between imaginaries and reality, with agency-like qualities assigned to them, and having an aura of otherworldliness, similar to how treasures are described in folklore. Treasures are (potentially) material but simultaneously spectral, extraordinary, and otherworldly (Dillinger, 2011). Both hidden treasures and orebodies are characterized by their great potential accompanied with great uncertainty. Indeed, it is not uncommon to see metals and minerals referred to as "treasures" even in present-day Finnish news articles about mining (e.g., Malin, 2008; Ronkainen, 2018). By the same token, Norwegian Industry Minister Trond Giske boldly declared in 2010 that "God knew what he was doing when he made Norway," referring to the minerals located in Norwegian mountains, describing mineral prospecting as a "treasure hunt" (Tønset & Langørgen, 2010, authors' translation). Treasures embody the human dream of gaining happiness through sudden wealth (Sarmela, 2007: 452–459). Likewise, metals and minerals today hold a symbolic value beyond their mere material worth through their inherent promise of a better future (Engwicht, 2018: 263).

Human life and culture have built on and been critically entangled with various subterranean realities and imaginaries for thousands of years. At the same time, however, the subterranean world has been, and still is, a strange and unknown realm that inspires awe, fear, anxiety, and fascination (Kroonenberg, 2013; Hunt, 2019). In this view, it is not by coincidence that there are signs of "ritual" activities documented in relation to caves and other (artificial or natural) openings in the ground, from prehistory to the present. Cave art research shows that underground spaces have been invested with special meaning in Europe since the Upper Palaeolithic (c. 46,000–12,000 BP) for spiritual and cosmological reasons, exemplified in cave art. The Neolithic (c. 10,000-3,300 BCE) marked the emergence of new ways of life and being in the world, which involved increased material and symbolic engagement with the subterranean world (Herva & Lahelma, 2019). The discovery of metal-making intensified engagements with the underground world further, and extractive pursuits have been intertwined with major transformations in human culture, cosmology, and society since at least the Bronze Age (c. 3,300–500 BCE). Problematic as the division of prehistory into the Stone, Bronze, and Iron Ages may otherwise be, it does illustrate the deep importance of metals and, by implication, extractive practices to the human story for a very long time. This was not simply about accessing "better" materials for tools, but metals and metal-making, including the procuring of ores, mediated environmental relations and worldviews, and affected the very organization of societies, including early state formation in the Near East and eastern Mediterranean.

Later still, the introduction of iron brought about further socio-cultural changes, and not least because iron ore was readily available, unlike copper and particularly tin. This significance of iron in huge socio-cultural shifts was to be echoed in the making of the industrial world millennia later. Iron is a particularly powerful material in European folklore from the medieval and early modern periods to recent times: fairies, ghosts, witches, and other supernatural beings fear it, culturally reflecting the power humans can gain over the supernatural and the unknown through potent treasures from the underground. In addition to bringing about myriad social, economic, and cultural transformations, industrialization further marked new scales and ways of engaging with the subterranean world, including, for example, the increased construction of underground infrastructure, which in turn was associated with such metaphysical matters as truth-seeking through excavation (Williams, 1990) in Enlightenment antiquarianism.

Modern cultures and lifestyles are built on the products of mining: aircraft, buses, trains, cars, phones, televisions, fertilisers, medical and surgical equipment, water, electricity and gas infrastructure, and the processing of solar, wind, and water energy. All these things need minerals (Taylor, 2014). We are surrounded

and supported by products of the subterranean and underground infrastructures that effectively make possible the human world as we know it today. Yet relatively few have first-hand experience of extraction sites, which tend to be inaccessible and invisible in the everyday flow of life (Bridge, 2015). Despite advances in technology and human capability to exploit mineral resources, underground worlds still are and appear alien and unpredictable; they are deeply different from the ordinary human lifeworld aboveground and "cannot be directly visualized, touched, or manipulated outside of excavation or sampling" (Kinchy, Phadke, & Smith, 2018: 31). Underground mines, for example, are distinctive places where the boundaries between the natural and cultural are mixed and blurred. This is cinematographically shown in White Wall, with the subterranean as a jumble of lights, shadows, forms, and things difficult to distinguish from each other. The subterranean world is presented as governed by laws and processes distinctly different from those aboveground. Even time is experienced differently underground. Like caves, mines can similarly be imagined as "portals, worm-holes between two worlds in which time and space work differently" (Bridge, 2015).

The strangeness and otherness associated with the subterranean – whether natural caves or constructed underground spaces – is not founded only on imaginations of that unfamiliar world, but the bodily experience of them as well: "The physical geography of rock and spaces affects how a human body may encounter and experience caves, shaping sensuous and intimate underground knowledges" (Cant, 2003: 68). The peculiar bodily-sensory and cognitive effects of mines are related to the play of light, colours, sounds, material features, sense of time, and so forth, all of which creates a form of "infrastructure of enchantment" (Holloway, 2010) for curious phenomena and experiences that feed miners' folklore (see, e.g., Hand, 1942). Rather than mere anecdotes and "beliefs," historical and contemporary folklore accounts of the strange subterranean world are better understood as reflecting the complex human relationship with the subterranean, as well as the difficult conditions underground requiring special knowledges and practices.

Besides the peculiar sensory properties of subterranean spaces, the underground has yielded various tangible wonders from crystals, gems, and ores to ancient artefacts, fossils, and human remains – the wondrous wall in *White Wall* resonates readily with this broader theme. Such finds materialize and solidify many otherwise intangible notions of subterranean otherworldliness. Finnish folklore, for example, contains numerous stories about hidden treasures and instructions for obtaining them, often communicating a moral lesson about the futility of pursuing the unattainable (Sarmela, 2007: 452–459). The underground also has a transformative effect on things, as seen in alteration of organic matter, changing their appearance or constitution, or devouring them completely. This reflects the dynamic nature of the underground: it "is not fixed, inert, or lifeless," but "comes

to be through interlinked political, economic, cultural, and technoscientific practices and processes" (Kinchy et al., 2018: 23–24; see also Kroonenberg, 2013).

Importantly, industrialization and modernization have not erased the supernatural from the lived world (e.g., Virtanen, 1992). Narratives, rituals, and supernatural beliefs continue to haunt engagements with the underground and thus affect extractive approaches and practices. One of the greatest markers of modernity and urbanity, the building of underground railways, first in London from 1863, might have *appeared* to finally dispel any vestiges of magical thinking in relation of the underground by normalizing being-in-the-underground, or colonizing the underground, through technological achievement. However, as Alex Bevan (2019) has illustrated, the London Underground is as susceptible as anywhere to supernatural associations, arising in great part from centuries-old associations of the underground as the realm of the dead and its connotations with hell. Further, classic ghost stories such as E. F. Benson's *In the Tube* (1923) have shown that fiction was inspired by the fast-accreting narratives of the eery and supernatural in the urban underground – or, simply, Gothic imaginations were inspired by being in such an environment.

It has been suggested that the dualistic nature of various spirits, such as the both malevolent and benevolent Wild Man in Renaissance Germany, occupying underground mines, has personified the simultaneous danger, uncertainty, and desirability of the mining industry (Asmussen & Long, 2019: 14, 21). The motif is also known from early modern Sweden, where the "keeper spirits" of orebodies had the same ambiguous nature (Fors, 2015). The subterranean is a place of monsters, gods, alien technology, and communities outside normal society, alongside the potential for new worlds and discoveries. Myriad books and films build on ideas of hidden underground places, natural and artificial, and feature magical, supernatural, and frightening elements, ranging from Tolkien's Middleearth (e.g., Tolkien, 1995 [1954–1955]) to Tim Powers's *The Anubis Gates* (1983) and Jeff Long's *The Descent* (1999), to name a few. Some of these works are "genre" fiction, such as horror, science fiction, or fantasy, but similar themes appear also in mainstream culture, as exemplified by *White Wall*.

Monumental and Extraordinary

Some scenes of *White Wall* were filmed in the Pyhäsalmi underground copper and zinc mine in Finland. Pyhäsalmi (Figure 2.2) is one of Europe's deepest and oldest operative underground mines, although the plan was to close its operations in 2021 (First Quantum Minerals, 2020). The fact that some of the filming took place 700 meters below the surface has been heavily utilized in the marketing of the series. Working in such extraordinary conditions necessitated, according to the director Aleksi Salmenperä, the

presence of a psychiatric nurse during the filming in case deep tunnels proved to be too distressing for the cast and crew members (Broholm, 2020). This echoes the special character of mines as operational environments, underscored by newspaper articles stressing the special, mysterious, unnatural, and potentially dangerous nature of working deep underground, which calls for particular safety measures in order for humans to operate there (see, e.g., Koivuranta, 2020; Myllykoski, 2020).

Working underground poses numerous physical and psychological hazards to people, and managing the non-human conditions hinges, in part, on non-human agents, such as technology. Mines are arenas where entanglements and interaction between humans and sometimes autonomous non-humans, technological or otherwise, are acutely felt and in part produced and mediated by working with mechanical and digital devices (Figure 8.2). This emphasizes the "unnatural" aspect of mines and mining, which resonates with divided and disturbing emotional responses: It is an environment where people must deal with inherent uncertainty and rely on non-humans, whether machines or spirits, not only to be successful but also to simply survive, regardless of whether workers wear "low-tech" hard hats or more "hi-tech" breathing masks (LeCain, 2009: 46-47). Mines have been compared to spaceships: both are highly engineered environments that enable survival and operation in otherwise lethal non-human, or beyond-human, conditions (LeCain 2009: 55). Modern technology is used to give humans superhuman or supernatural qualities so that they can adequately deal with the beyond-human supernature of the underground. In this sense, mining machines comprise an elementary constituent of the "ecologies" of extraction sites, which is obvious in White Wall. A curiously malfunctioning machine sets the plot going, and human-machine interaction is a recurrent motif both in terms of the storyline and aesthetics of the series. People, machines, and underground spaces are often shown in ways where boundaries between them are difficult to identify, which enhances the sense of the extraordinary, abnormality, and the mysterious. In the early modern period, too, mines in northern Fennoscandia were subject to intrigue that revolved around the simultaneously scientific and enchanted nature of technology and the subterranean, and human interaction with them (Naum, 2019).

Another unsettling and emotionally affective aspect of modern mines and mining is their monumental scale. Modern mining is embedded in development ideology, with the image of mining the industry wishes to convey that of "greatness of economic success linked to grandeur of technological scale and high-quality human performance," often through "repetitive proclamations about the extremely large scale of the technology" (Trigger 1997: 165–166). The sheer scale of mines evokes feelings of awe, unease, and fear in a similar way to other natural and built monuments from Niagara Falls and the Grand Canyon to pyramids and skyscrapers (e.g., Nye, 1994) (Figure 8.3). Indeed, the admiration and dread that



Figure 8.2 A loading machine in a mine. Photo: Foto Roos/Finnish Heritage Agency. CC BY 4.0



Figure 8.3 A monumental "sacrificial" mining landscape in Kiruna. Photo: Witext/ Wikimedia Commons. CC BY $4.0\,$

people potentially experience when faced with new and strange technologies has been likened to a religious experience (Mikkola, 2009: 207). Huge open pits or hundreds and thousands of kilometres of tunnels and galleries underground, alongside monumental piles of waste material and massive infrastructure, also make mines seem like monstrous and constantly changing giants, "dragons" or "tricksters," not completely controllable by humans (Ureta & Flores, 2018). Mining may represent the triumph of human control over chaotic nature through technology but underlying this are concerns that this changing giant may get out of control yet, with catastrophic consequences. It is fitting, then, that mines are often characterized as "sacrifice zones," as Reinert (2018) discusses in his examination of a prospective mine in northern Norway: Places are destroyed or damaged both below ground and above ground in exchange for the supposed gains that the underground is expected to provide.

Mining is a thoroughly technological pursuit, and technology, in turn, has always been subject to wonder and magic, as illustrated by European travellers' fascination with the extraordinary technology in early modern Swedish mines (Naum, 2019) or the present-day "techno-paganism" among ICT specialists (Aupers, 2009). For Gell (1988), technology is indeed a form of magic due to its power to enchant us and thus also provoke emotions. Hornborg (2015: 52) argues that "modern technology is magic. It is a specific way of exerting power over other people while concealing the extent to which it is mediated by human perceptions." Magical thinking is not absent in spaces of modern mining and industry either, but mines can provoke supernatural experiences and narratives (e.g., Hand, 1942).

In more concrete terms, Hemminki (2020: 213) discusses the continued relationship between metallurgy and the supernatural during industrialization in Finland in the twentieth century and shows, for instance, that factory-made metal objects were thought to possess magical powers and could be used for curing diseases. Indeed, as Aupers (2009: 171) saliently points out, "technological progress may paradoxically be responsible for the growth and flowering of mystery and magic in the late-modern world." Technology often works in mysterious ways and affords a sense and awareness of a deeply interconnected (and broadly spiritual) nature of lived and experienced reality. Mines as extraordinary spaces where diverse powers and agents are in operation readily emphasize that the world is not only about humans, but that they co-inhabit it with a host of non-human entities that have diverse influences on human life, ranging from lichen to spectral animals to ghosts and from trolls to spiritual keeper entities of ores that can manifest themselves and be experienced in various ways. In some ways, modern mines with their myriad non-human beings and powers can be compared to the age-old shamanistic ideas of the enchanted underworld.

Magic and Volatility

Early on in White Wall, the viewers learn that the project to create a nuclear waste deposit in the mine has been delayed for some time. There is a pressure to open the facility as soon as possible because the company in charge is running out of money, motivating the site manager to find out the nature of the strange object found underground (the "white wall") quickly and without publicity. Money, of course, is an important driver in the drama around mines and mining in real life. It is simultaneously enmeshed in contemporary magical thinking: "capitalism and its supporting mechanisms are not often as rational as they made themselves out to be" (Moeran & Waal Malefyt, 2018: 2; see also, e.g., Hoffman, 1967 on the folklore of Wall Street). One function of magical practices is to manage with uncertainty and unpredictability (see Moeran & Waal Malefyt, 2018: 10-12), which in turn are integral aspects of both contemporary extractive industries and economies, affected by invisible, mysterious, and volatile forces of the "markets" and the "invisible hand of capital." Modern money and the markets can seem to behave quite erratically. and indeed have a life of their own and are frequently out of control, which renders them as mysterious as the premodern world with its spiritual powers, which add to the affective dimensions of such megaprojects as mines.

The growth of the finance sector over the 2000s and the increased separation of speculative economies from real economies may be particularly evident in the extractive sector that is heavily dependent on attracting enormous outside investments, which, according to Tsing (2000: 120, 127), is done through the "self-conscious making of a spectacle." Capital is conjured through magic, and excitement toward new projects is created with grandiose promises and "manufacturing of drama." In other words, the projects are made to look better than they are in order to attract finances, which make it difficult to distinguish viable mining projects from unrealistic ones (Tsing, 2000: 120, 127; see also Reinert, 2018). Simultaneously, however, mining projects may have very real and large-scale environmental and social impacts already in the planning stage of mines. This duality between the invisible (or speculative) and visible (or real) worlds can readily create discomfort and thus emotional engagement, whether "negative" or "positive," with mines and mining, alongside the environmental and aesthetic degradation that comes with them.

Perceptions of mining revolve around fear and hope, associated with notions such as mining bringing salvation to economically challenged peripheral regions or else bringing doom through destruction of the environment, with uncertain or unsubstantiated positive impacts. Through centuries, mining has been seen in negative terms as morally suspicious treasure-hunting driven by greed, as well as a positive force that generates economic and social well-being. The twenty-first century has largely been marked by a moral condemnation of greed, which is now

seen as destructive for society, and global companies have become the icons of greed and excess (Oka & Kuijt, 2014: 36, 41, 44). For example, a quick Google search offers numerous cautionary opinion pieces where it is suggested that current mining ventures are being driven by greed (e.g., Koskiniemi, 2012; Hartio, 2015; Rutledge, 2017; Huttunen, 2018; Widdup, 2018; Prashad, 2019).

Naum (2019) observes that, in the seventeenth century, critics of mining considered it an "unnatural" and "destructive" activity, governed by greed that would cause harmful social and environmental repercussions by "wounding the organic body of the Earth." For these critics, interfering with the underground world was morally and cosmologically wrong, whereas the proponents emphasized the material and social benefits of mining – industrial work was taken to improve people and their quality of life (Naum, 2019: 2–3, 19). The "unnatural" character of mining echoes, to at least some degree, the fear of the strange and unknown subterranean realm and how the greed for harvesting its riches may bring destruction not only through natural causes but also supernatural agency – a theme that has been pursued in modern fiction.

In J. R. R. Tolkien's *The Lord of the Rings* (1995 [1954–1955]), the greedy dwarves mined too deep for their desired *mithril* in Moria, awakening an ancient demonic entity, a Balrog, which in turn results in the annihilation of the dwarf kingdom under the mountain. Similarly, the existence of the entire planet of the Na'vi is threatened by resource extraction in James Cameron's film *Avatar* (2009). Mining has come to exemplify the destructive side of modernity, as evidenced by historical and contemporary ruined, toxic, and monstrous landscapes that extractive industries produce. The real and fictional views on the destructive character of mining stem from such concrete phenomena as environmental disasters, social problems, violence, and warfare associated with mining (Ballard and Banks 2003), but cultural and cosmological ideas about the troubling nature of engaging with the subterranean otherworld are also in play, however vague and subconscious they may be.

While the real and fictive greed for underground resources can have dystopian consequences with potentially supernatural dimensions, the positive views on mining also tend to have an aspect of faith and miracle-work to them. Extractive industries are seen to generate wealth and well-being almost by magic. Mining projects are frequently portrayed, and understood among supporters, as eliciting dream-like expectations of prosperity and a better future, documented among communities of diverse cultural and geographical backgrounds. This has been demonstrated in recent research addressing expectations toward modern mining projects (Filer & Macintyre, 2006; Pijpers, 2016; Engwicht, 2018; Haikola & Anshelm, 2018; Poelzer & Ejdemo, 2018; Wiegink, 2018). Moreover, it is intriguing that, as Wilson and Stammler (2016) observe in the context of Arctic

mining, "expectations tend to be the same, no matter how many times such expectations have been disappointed, or opportunities wasted in other regions in the past" (Wilson & Stammler, 2016: 1; see further Wormbs, 2018). This is perhaps, as Filer and Macintyre (2006: 224) suggest, because there is enough evidence of wealth generated through mining to feed fantasy-like expectations toward new mining projects.

The capacity for large-scale infrastructure to enchant and conjure excitement and hope has been discussed previously, for example in the context of road building in Peru (Harvey & Knox, 2012). Such industrial projects are not mere material forms, but inherent in them is the promise of their ability to transform the future. Harvey and Knox (2012: 523-524, 534) argue that even though industrial projects are marketed as rational projects, it is their power of enchantment that helps to understand how development projects generate hopes of a better tomorrow, even in the face of recent failures. The economically and socially transformative potential of mines is a kind of "technology of enchantment" (Gell, 1988: 7) that can generate goodwill toward industrial projects but also overrule "common sense" or conceal critical issues that might erode such beliefs (Moeran, 2017: 147-148, 150). Magic can be understood as a kind of ideal technology that inspires real technology. And, just like real mining projects are never as spectacular as ideals, the affective power of the "magical mine" is nonetheless a driver of real-life projects. As Gell (1988: 9) observes, "It is because non-magical technology is effective, up to a point, that the idealized version of technology which is embodied in magical discourse is imaginatively compelling."

Historically, there are utopian or "beyond-the-rational" dimensions to mining projects in northern Fennoscandia (e.g., Herva & Lahelma, 2019: 35–36, 40), and these cultural legacies can be identified in attitudes to contemporary northern mining projects. The idea of "treasure" comprises one link between mining and "supernatural" riches across different time horizons, dating back to at least early modern times. In Scandinavian folklore, mines and mineral deposits were thought to be owned by keeper entities, or trolls, who decided whether humans were allowed to discover orebodies and whether their mining ventures would succeed or fail; the keeper entities could, for instance, transform ores into worthless substances (Fors, 2015: 31-32, 35). There was, then, a supernatural aspect to mining and ores in a similar vein as treasures are considered to have supernatural qualities (see Dillinger, 2012), and this is where the idea of treasure intersects with extractive practices. Modern Lapland gold prospecting lore, for instance, holds that big nuggets are not simply found as a result of human activity, but nuggets also seek their finders (Partanen, 1999; Sallinen, 2017; Kultahippu.fi, 2019).

Conclusion

Beyond-the-rational conceptualizations of the underground and of the far North today follow in long-running dreams and imaginaries linked to treasure, danger, and potential. The European far North has been conceived both as a resource space and the land of the supernatural and extraordinary (e.g., Naum, 2016; Herva et al., 2020). These visions also mediate the attitudes toward land use, affecting not only how local communities may respond to planned mining projects but also how our societies in general approach mining (Komu, 2019, 2020). Culturally, the far North has been considered an enchanted fantasyland inhabited by supernatural beings and powers - all of which renders the Arctic as a "strange" world. This in turn strikes a chord with how people have perceived mines and subterranean places for centuries and millennia. Effectively, then, Arctic mining is predominantly about engaging with otherness and otherworldliness, although extractive industries in the far North are, on the surface, about rational economic and technological projects. Seen in such a cultural-cosmological perspective, it becomes possible to recontextualize various aspects of controversies around Arctic mining; that is, they are not only about concrete and conscious matters but also cosmological and "existentialist" issues related to the perceptions of and relationships with, for instance, otherness, the unfamiliar, non-human, and unknown (Arctic and subterranean) realms.

The combined imaginaries of the underground and the European far North, in turn, have direct influences on how mines and mining are imagined and affect us. Support for, and opposition against, mining projects are built on underlying cultural dreams and meanings given to mining and metals as well as real-life developments and rational calculations (Komu, 2019). Peoples' attitudes toward mining projects do not necessarily follow, or cannot be predicted, purely by real-world developments. Local mining operations are also linked to wider sociocultural imaginaries that surpass various spatial and temporal scales (Komu, 2020), linked to myriad heritages and popular cultures. These factors are essential when it comes to considering motivations for, and engagements with, mining activities. We have created a dependency on something with which we are existentially uncomfortable.

Note

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