This is a self-archived version of an original article. This version may differ from the original in pagination and typographic details.

**Author(s):** Strömmer, Maiju

**Title:** In the name of security: Governmentality apparatus in a multilingual mine in Arctic Finland

**Year:** 2021

**Version:** Published version

**Copyright:** © 2021 The Authors. Journal of Sociolinguistics published by John Wiley & Sons Ltd

**Rights:** CC BY 4.0

**Rights url:** https://creativecommons.org/licenses/by/4.0/

**Please cite the original version:**

https://doi.org/10.1111/josl.12458
In the name of security: Governmentality apparatus in a multilingual mine in Arctic Finland

Maiju Strömmer

Abstract
This critical sociolinguistic study explores how mining work is governed in the name of security in a mine in Arctic Finland. Although the mining industry is dominated by multinational corporations, mines themselves tend to be concentrated in peripheries where a mobile and multilingual workforce is recruited. Mining is a high-risk business: industrial accidents and environmental damage can be severe. Discursive practices play a crucial role in risk management. In this study, the nexus of language, security, and production in mining work is analyzed by applying the Foucauldian concept of ‘governmentality’. The data comprise ethnographic observations, work-related documents, and interviews collected onsite in 2018-2019. The analysis illustrates how security and production are interwoven in the mine’s safety program that applies the neoliberal logic of responsibilization and disciplinary strategies of surveillance, supervision and regulations. On a broader level, this governmentality apparatus serves the state in securitizing its economy and population.

Keywords
apparatus, governmentality, mining, multilingualism, safety, security

Abstrakti
Tämä kriittinen sosioliingvistinen tutkimus tarkastelee, miten kaivostyötä hallitaan turvallisuuden nimissä monikielisessä kaivoksessa Pohjois-Suomessa. Vaikka kaivosteollisuutta...
INTRODUCTION

Mining is a high-risk business: the risks for environmental damage and industrial accidents are substantial (see Kröger, 2016; Rolston, 2010). Communication is considered essential for safety in mining, in which long working hours, high-risk tasks, and shift work pose major challenges (Chirkov et al., 2017: 62). Hence, unsuccessful communication is regarded as a major reason for occupational accidents in high-risk industries (Albert et al., 2014; Keffane, 2015). However, critical sociolinguistic research has questioned the notion of straightforward causality between language problems and safety (see Daveluy, 2012; Kraft, 2019, 2020; Theodoropoulou, 2019). The higher accident rates among migrant employees can also be explained by aspects other than language, such as the employee leasing system and constantly changing personnel (Kraft, 2019, 2020). Capitalist logic entails that corporations seek to transfer risks to other organizations and individuals, such as temporary staff and subcontractors (Daudigeos et al., 2016; Gray, 2009). A strong focus on production can weaken risk perception and increase the risk for organizational accidents (Goh et al., 2012). However, it is in the interests of mining organizations to keep the accident rate low, not least to keep production uninterruptedly on stream (see Rolston, 2010).

This critical sociolinguistic study explores how mining work is governed in the name of security in a mine in Arctic Finland owned by a multinational corporation. Whereas mining is a global industry involving transnational corporations and global financial and international markets (Ellem, 2015), mineral deposits are place specific (Kröger, 2016: 543; Suopajärvi et al., 2017). In Arctic Finland, the “golden era” of mining began in the 1960s when the industry brought large-scale factory work and a new infrastructure to the northern peripheries (Pietikäinen & Allan, 2020). Since the mid-2000s, mining and prospecting for minerals in Finland has again grown rapidly (Kröger, 2016). In 2017, Finland
was ranked the best country in the world for investing in mining (Stedman & Green, 2018) due to low land costs and mining taxes, detailed geodata, reliable legislative procedures, and a good infrastructure (see also Kröger, 2016; Noras, 2016; Tolvanen et al., 2019).

Because mines are mostly located in peripheral areas, mining regions have for centuries been characterized by labor mobility and multilingual mining communities (see Cornips & Muysken, 2019; Pietikäinen, 2019; Hiss, 2017). Most of the research on language issues in mining has addressed historical cases (e.g. Cornips & de Rooij, 2019; Hiss, 2017; Marzo, 2019; Muysken, 2019). Ethnographic studies are rare, probably because gaining access to mining projects is challenging due to strict security procedures (see, however, Aikman, 2017; Bell, 2017; Kraft, 2020). Workplace safety and communication has to some extent been studied ethnographically in language disciplines (e.g. Daveluy, 2012; Handford & Matous, 2015; Kraft, 2019; Theodoropoulou, 2019). This study contributes to this research strand in the mining context.

To explore the nexus of security, multilingualism, and mining work from a critical sociolinguistic approach, I apply the concepts of ‘governmentality’ and ‘apparatus’ (Foucault, 2009). Governmentality refers to the technologies by which state and institutions govern individuals’ conduct and thoughts (Dean, 1999; Foucault, 2002, 2009; Rose, 1999). Closely related to governmentality, apparatus refers to the complex assemblage of discourses, practices, and regulations that answer an urgent need to govern individuals’ behavior in certain ways (Agamben, 2009; Foucault, 2009). This article investigates how mining work is governed in the name of security, utilizing ethnographic and discourse analytic data gathered in a mine in northern Finland (2018–2019). To analyze the interconnections and contradictions of governing safety and economy, I also apply insights from the ethnographic and discourse analytical approach of nexus analysis (Lane, 2014; Pietikäinen, 2015; Scollon & Scollon, 2007; Strömmer, 2016). This study illustrates how security and production are interwoven in the governmentality apparatus that utilizes different discursive strategies and forms of power, especially the neoliberal logics of responsibilization of risks and disciplinary power, including preventive surveillance and supervision.

2 | APPLYING THE CONCEPT OF APPARATUS TO THE STUDY OF GOVERNMENTALITY IN MINING WORK

To explore how mining work is governed in the name of security, I apply the concepts of governmentality and apparatus. Foucault (2002) uses the concept governmentality to describe the technologies that states and institutions use to control individuals – in this case workers – not directly, but in subtle, indirect ways. Through governmentality, the state aims at securing the health, welfare, and wealth of the population by drawing on different forms of knowledge and technical means (Dean, 1999: 19–20). The governance of a society happens through economic, social, psychological, and biological processes (Dean, 1999: 111). However, governmentality technologies are not limited to within the nation-state’s borders only but draw on global fields of knowledge (see Kaisto & Pyykön, 2010: 23).

Governmentality aims to make individuals perform in beneficial and desired ways (Rose et al., 2006). Furthermore, following neoliberal logic, governmentalizing forces also aim at shaping the selfhood of individuals, a process in which discourse is essential (Urla, 2019: 267). Neoliberal governmentality is constructed, strengthened, and disseminated via discourse by means of daily institutional practices (Martín Rojo & Del Percio, 2019: 2). Hence, previous sociolinguistic research adopting a governmentality framework has primarily focused on analyzing how language has been used as a medium for neoliberal governmentality in the management, guidance, and training of individuals,
such as language learners (Flubacher & Del Percio, 2017; Martín Rojo, 2019), workers (Barakos, 2016; Dlaske, 2016), and unemployed immigrants (Allan, 2013; Del Percio, 2018). These studies have shown how individuals are governed through ‘technologies of the self’, by making them internalize neoliberal requirements such as responsibility, flexibility, and employability, and, seemingly voluntarily, regulate their behavior accordingly. Foucault saw neoliberal governmentality as an assemblage of different modalities of power (sovereign, disciplinary, governmentalizing) and did not make a clear-cut distinction between them (Urla, 2019: 264). Accordingly, disciplinary power – power exercised by authorities through regulation, surveillance, and supervision to produce docile and useful subjects – can also be part of neoliberal governmentality (see Dlaske et al., 2016). Here, I study the nexus formed by different forms of power with the aim of identifying different regimes of practices applied in the governmentality of mining work.

To investigate the concrete modes in which the behaviors and thoughts of workers are governed in mining, I apply Foucault’s concept of apparatus. By apparatus, Foucault (2009: 20–21) refers to the different practices, measures, and regulations used to govern the behavior of individuals and groups in desired ways. The concept thus relates to governmentality, especially the formation of mechanisms, and has “as its major function at a given historical moment that of responding to an urgent need” (Foucault, 1980: 194). Furthermore, apparatus aims at having an instant effect on this need (Agamben, 2009: 8). In the present mine, to decrease the accident rate, a safety program called “Supervision Formula”, including a “Work Card System”, and, most recently, “Safety Round” was introduced. However, apparatus does not refer to concrete regulations alone but more broadly to “a thoroughly heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions – the system of relations that can be established between these elements” (Foucault, 1980: 194). Discourses, talk, texts, and genres in the workplace regulate work practices, and thus are central in analyzing how apparatuses act within the discursive networks of power. Here, I understand the concept of discourse in a Foucauldian sense, not as language use alone but also its embodiment in texts and practices in institutions.

Foucault (2009) defined three possible apparatuses of governmentality characterized by different principles with respect to space, events, and norms: (a) juridico-legal, (b) disciplinary, and (c) security based. The juridico-legal apparatus refers to law and punishment: it defines what is forbidden and includes penalties (Foucault, 2009: 20). In the case of breaching workplace safety rules, this could mean being fired (see Gray, 2009). In contrast, the disciplinary apparatus draws on the normation process by setting an ideal model to follow (Foucault, 2009: 85). In workplace settings, appropriate behavior is supported by safety training and preventive surveillance of work practices (Daudigeos et al., 2016: 740). The disciplinary apparatus analyzes the individuals, places, times, actions, and operations to be governed and defines how actions can be linked together in desired ways (Foucault, 2009: 85). The present organization’s safety program functions as a disciplinary apparatus, defining the steps that workers need to follow to work safely. The most important part of the safety program is a work card system. The work card provides a model for safe working routine and acts as a responsibilization mechanism applied throughout the mining area. A disciplinary apparatus is centripetal in that it defines the space in which the mechanisms of power can function without limits, thus confining the phenomenon, in this case occupational safety, to that space where discipline can regulate everything (Foucault, 2009: 67). In this way, it differs from the security-based apparatus, which is centrifugal: instead of defining a specific sphere of operations, it targets the whole population. Hence, a security-based apparatus does not aim at controlling everything but accepts the fact that accidents happen (see Daudigeos et al., 2016). In the present mine, the disciplinary apparatus is applied the most but works in interaction with juridico-legal and security-based apparatuses.
3 | CONTEXT: A MINE OF A MULTINATIONAL CORPORATION IN ARCTIC FINLAND

This study was conducted in Lapland, a region in northern Finland, where tourism and mining are the fastest growing industries, both of which capitalize on nature. While Arctic tourism is marketed by the imaginaries of untouched Arctic nature, mining in the very same areas potentially contradicts these imaginaries (see Pietikäinen & Allan, 2020). However, as Lapland has suffered from high unemployment, mining is mostly justified by the jobs generated by the sector (Ranta-Tyrkkö, 2018: 220). Compared to the mostly seasonal and low-paid work of the tourism industry, mining is year-round, well-paid fulltime work. Although mines have limited life spans and mineral prices fluctuate, tourism is even more vulnerable to seasonal and economic fluctuations, as evidenced during the COVID-19 pandemic. Moreover, unlike tourism, which is regarded as women’s work requiring hostessing skills, mining mostly employs men (see Veijola & Jokinen, 2008).

The mine studied here is owned by a multinational corporation that has mining operations on different continents. The mine located in northern Finland is one of the biggest employers in the region and aims at upholding a responsible labor policy. Before starting operations in Finland, mining companies seek to gain local acceptance, manifested in a Social License to Operate (SLO), in addition to the mandatory environmental license (Heikkinen et al., 2016; Lesser et al., 2017). Job creation, especially for local and regional people, is one strategy for securing ethical approval (Bell, 2017; Lesser et al., 2017) and that is exactly what the company highlights in their web pages, publicly available materials, and public events. When the mine opened, many tourism workers changed their career to work for the mining company owing to its better terms and conditions of employment. Before starting operations, the company organized training in cooperation with the local employment office for hundreds of people living in the local and neighboring municipalities in order to hire them. Finland’s employment services are state run, and such training courses aim to produce employable subjects who meet the nation-state’s economic needs. The central aim of a state is to secure the economy of the state and create well-being for its population. This entails creating both productive citizens and workplaces (see Dean, 1999: 19, 116–118).

When the multinational corporation opened the mine in Finnish Lapland, the higher management was sent from the company headquarters to supervise the start of operations. For the first few years, the main working language of the management was English, although some meetings and documents were in both English and Finnish. However, the mineworkers themselves mainly communicated in Finnish, with interpretation given when needed. A few years ago, in line with the company’s policy of running its mines with local managements, local Finnish-speaking managers were recruited to replace the expats. Consequently, with the exception of extension projects that require specialized knowledge not available in Finland, Finnish is nowadays the main company language. Based on my interviews with HR personnel, English language skills are required for higher positions but not for underground manual work, in which Finnish is the dominant work language. This is a practical choice as Finnish is the first language of most employees and thus a linguistic resource freely available to the company.

To act responsibly, the company does not dismiss or lay off workers. Instead, fluctuation in labor needs is managed by subcontractors hired for temporary construction projects or as surplus labor to expand production at times of peak demand (see also Ellem, 2015; Roberts, 1995). In the present mine, subcontractors execute temporary projects such as construction work and building infrastructure (tunnels, roads, electricity) but also more permanent tasks such as cleaning, loading ore, and maintaining roads in the mining area. Moreover, they contribute specialized knowledge, machinery, and techniques pertaining to mining operations. Subcontractors vary in number but on average supply about half of the workforce. Many are Lapland based while others have come from, e.g. Sweden, Norway, Bulgaria,
Poland, Spain, and Portugal (see Table 1). The workers employed by subcontractors have to pass an orientation exam, available online in Finnish and English. Thus, in theory, either Finnish or English skills are required. In practice, workers’ English skills can be rather limited, leaving foremen or other team members to act as language brokers between local and mobile workers (see also Kraft, 2020). Furthermore, some of the permanent workers speak Swedish with subcontractors’ employees, since Swedish, an official language in Finland, is studied in comprehensive school and many people living in Lapland know Swedish well due to the closeness of the Swedish border. Such heterogeneous language practices may be economically motivated in corporations that need flexible labor (see Duchêne & Heller, 2012; Flores, 2019; Kraft, 2019).

The mine produces metal ore by underground mining and mineral processing. The underground mine is a constantly changing environment: new drifts are blasted daily and old ones filled in, new tunnels and roads are constructed, and operations and worksites change accordingly. The mineworkers mostly work individually or in small teams in two shifts, a night shift and a day shift, operating mining machinery for drilling, loading, and transporting metal ore. Moving underground is challenging owing to poor visibility caused by darkness, dust, and fog (see also Cornips & Muysken, 2019). The mineworkers mostly communicate in Finnish via radiophones, e.g. to inform others where they are heading or loading minerals. The signs in the underground mine are in Finnish but often accompanied with pictures, while emergency evacuation messages are transmitted via radiophones in three languages: Finnish, English, and Swedish.

### 4 | DATA AND METHODOLOGY

This study adopted a critical ethnographic sociolinguistic approach designed to investigate how language and discourse matter socially, politically and economically (Heller et al., 2017). Heller et al. (2017: 15) see critical ethnography as “a dynamic, non-linear process of knowledge production” in which the ethnographer maps, traces, and connects complex categories, processes, and relations encountered in the field to make her claims. This kind of rhizomatic process of conducting research also links with nexus analysis, which aids the ethnographer in tracing the connectivity and interaction between the trajectories of practices, social actors, language resources, and discourses that intersect and enable the social action under scrutiny (Lane, 2014; Pietikäinen, 2015; Scollon & Scollon, 2007; Strömmer, 2016). This study draws insights from the nexus analytical approach, especially in combining and making connections between different kinds of data and on conducting situated discourse analysis that is linked to and explained by ethnographic observations.

Most of the data were generated in 2018–2019 when I spent 4 months in total in the municipality where the mine is located. It took some time and effort to gain access to the mining organization.

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>The categories of mineworkers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core workforce</strong></td>
<td><strong>Surplus labor</strong></td>
</tr>
<tr>
<td>Employer</td>
<td>Employed directly by the mine</td>
</tr>
<tr>
<td>Contract</td>
<td>Permanent full-time contracts</td>
</tr>
<tr>
<td>Mobilities</td>
<td>50% reside in the municipality where the mine is located, 90% live in Lapland</td>
</tr>
<tr>
<td>Language requirements</td>
<td>Finnish skills required</td>
</tr>
</tbody>
</table>
Before starting the research, my co-researchers and I visited the mine three times to discuss the project with management and negotiate consent. During these visits, we mapped the participants and activities to be followed in this large organization. Following these negotiations, we obtained permission to investigate language practices at the mine. To protect participant anonymity, we agreed to withhold names and other company details. However, given the limited number of mines in the area, the mine may be recognized by those knowledgeable in the field. This possibility was raised with and accepted by both the participants and management before obtaining their consent.

I found that English language lessons are organized for the mine’s foremen and obtained permission to participate in the lessons. The language course acquainted me with these individuals and their crucial role as an everyday link between management and mineworkers. I introduced myself as a language researcher, and the course participants – Finnish men aged 35 to 65 – positioned me, a younger Finnish woman, as skilled in languages but a novice on mining practices. This was helpful, as they were willing to tell me about their work and language use, and two of them (pseudonyms Juhani and Jussi) allowed me to observe them at work. The foremen were responsible for the safe and efficient production of ore, and hence it was highly relevant to observe their workdays in addition to participating in the language course. I told them that in addition to speaking Finnish and English, I understand some Swedish, German, and Italian. Therefore, Juhani asked me to visit the worksite of the Italian-speaking employees with him. However, owing to security protocols, access was limited. I received permission to observe the shifts four times. I was not allowed to move freely in the mining area but had to follow my hosts: I attended their meetings at the beginning of each shift after which I spent most of the time in their cars in the underground tunnels. When they visited their subordinates, I was sometimes allowed to join them but otherwise stayed in the car if it was considered unsafe to step out. Hence, I talked a lot with the foremen during their shifts but had few opportunities to talk with the mineworkers themselves. When, as a new face, I met the (mostly male) mineworkers in the coffee room, they were interested to know who I was. On hearing about my research, they shared some of their work experiences with me, but these conversations were general and brief.

Another limitation of the data collection was that I was not given permission to take photographs or record conversations underground. Instead, I made as detailed fieldnotes as possible. Although the English course was not within the scope of this analysis, my observations and recordings of the lessons provided me with crucial contextual knowledge, as the course included many conversation exercises where the participants discussed their work practices. Furthermore, I collected security-related documents such as safety brochures, news leaflets and work cards to analyze the discourses circulating in the mine. The work card turned out to be the main tool of the mine’s safety program, and therefore, the use of it is analyzed in Section 5.2.

I also conducted 17 semi-structured interviews. In 2018 and 2019, I interviewed foremen, mining engineers, HR personnel, and the mine’s training, communication, and safety specialists (12 interviews). The aim was to obtain informants’ experiences of the mine’s recruitment, work and language practices, and the history and use of the work card. Eleven of these interviews were conducted in offices and meeting rooms at the mine and one in a restaurant outside the mine. I also interviewed municipal officers in their offices at the town hall and in the employment office in 2017 and 2018 (five interviews). The aim of these interviews was to understand the role and significance of the mine for the region and nation.

To analyze the governmentality of mining work as situated and historically embedded social action, I applied the nexus analytical concept of ‘discourses in place’ according to which discourses are constructed and employed by social actors in time and space (Scollon & Scollon, 2004, 163). I also define discourses here from the Foucauldian perspective as relatively stable ways of constructing...
meanings of different aspects of the world from a specific viewpoint (Foucault, 1972, 80). Discourses have material conditions and consequences (Määttä & Pietikäinen, 2014), and therefore the following critical discourse analysis of the work-related texts and interviews are situated by ethnographic observations.

5 GOVERNMENTALITY APPARATUS OF MINING WORK: REGULATING SECURITY

5.1 The discourses of safety and governable subjects

Safety was materially signified as a norm in the mine area, as became evident to me during my 15 visits to the mine. At the gate, a sign informed visitors that surveillance cameras cover the area and photography is forbidden. The text was in Finnish, accompanied with visual symbols. Past the gate, next to the parking lot, an electronic sign announced the number of days since the last accident that had led to sick leave and the record of the total number of accident-free days in a row. The sign indicates collective responsibility for mitigating workplace risks (see also Rolston, 2010). On each visit to the mine, I had to enter the administration building through the security portal and announce my own, my employer’s, and my host’s names, which were then reported to visitor accounting and inscribed on a visitor badge. Safety manuals in Finnish and English were available at the security desk. A fenced area next to the administration building contained the mineworkers’ buildings and tunnels to the underground mine. As a visitor, I could only enter that area through the iron gate when accompanied by my host. The main building housing the mineworkers’ locker rooms and meeting rooms stood opposite the iron gate. In this building, reminders about safety protocols, such as helmets, safety gear, and signs, were clearly visible. Before observing work shifts in the underground mine, I was issued with protective clothing: a jacket with “VISITOR” printed on the back, safety footwear, goggles, a protective helmet, a miner’s lamp, earplugs, and a respirator. In addition, I received a GPS tracker: everybody moving in the underground mine carried one to enable surveillance of their movements (Fieldnotes March 12, 2018). I was anxious because I had never been so deep underground and appreciated the safety gear I got.

Safety was also discursively constructed as a priority in the work-related documents and interviews. The excerpt below, taken from a leading article written by the mine’s general manager, illustrates how safety discourse is constructed in the annual newsletter targeted at the mine’s stakeholders. Before this excerpt, which describes a halt in the mineral processing plant, the new extension to the plant has been discussed:

Extract 1: Greetings from the manager of the mine

The excerpt has been translated into English. The original Finnish version is omitted to protect the organization’s anonymity. The parts most important for the analysis are bolded.

In May and June, the mineral processing plant was shut down almost two months for regular maintenance and construction work on extending the plant. Everything went as planned and no severe accidents occurred despite the large number of subcontractors. We managed to get the mineral processing plant back in production before midsummer and slightly ahead of time.
The safety and wellbeing of our employees has always been our first priority. At the beginning of the year, we began Safety Round, an extensive safety program aimed at further enhancing our safety culture. We want each of our own employees as well as those of sub-contractors to hold safety close to their hearts. This year we have invested especially in developing employee well-being.

Neoliberal governmentality focuses on the management of people’s practices in the name of securing their health, productivity, and safety (see Lemke, 2001), all of which aspects are visible in this excerpt. Safety is constructed in several ways as the main priority in the mine. In this excerpt, the manager gives an example of how safe work practices are successfully applied even in exceptional circumstances: the 2-month maintenance break went “as planned” and without “severe accidents” “despite the large number of subcontractors”. The fact that subcontractors are mentioned in connection with accidents, albeit through negation (“no accidents”, “despite”), indicates the higher probability of accidents when multiple contractors are working simultaneously. Accident frequency reports showed that subcontractors were involved in more accidents than permanent workers, although the situation had improved in 2019—the mine’s management now pays more attention to the safety statistics of the subcontractors before making a contract with them (email communication to me from the mine’s safety specialist, January 3, 2020). Foucault saw statistics as an example of the “technologies of knowledge”: they facilitate the managing of a specific group of people by informing managers about the groups' characteristics and regularities (Urla, 2019: 263). The manager also mentions how the extended plant was in production sooner than predicted, thereby showing how safety and productivity are intertwined in the mine. The word choices “production” and “invested” hint at the economic discourse, but it is not constructed as a priority: the safety discourse is more dominant here.

In the second paragraph, safety is discussed in relation to employees. In the first sentence, employees are referred to as “our employees”, i.e. as belonging to the organization. However, later in the paragraph, subcontractors’ employees are mentioned separately, along with the organization’s “own employees”. This textual choice constructs them as a distinct group with special relevance to safety. Discursive practices play a central role when new regulations, control mechanisms, and measures are being introduced and justified, e.g. by framing a particular group as a threat (Charalambous et al., 2015: 2; Kraft, 2019: 33). The manager speaks about the organization’s “safety culture” that is being further developed with the help of the latest safety procedure, the “Safety Round” program: managers and foremen regularly conduct on-site safety inspections. According to the manager, it is not enough that workers follow the safety protocols, but they also have to hold safety “close to their hearts”. The aim of neoliberalism is to maintain security through ‘personal responsibility’ and ‘self-care’ (Lemke, 2001: 203), precisely the objective of this message.

In the next interview excerpt, the contractors’ employees are framed as subjects who are difficult to govern. The interviewee is a mining engineer. He has a good understanding of the language and work practices of the mine, as he has worked there from the very beginning:

Extract 2: Interview with a mining engineer, March 23, 2018

Participants: Mining engineer (E), Researcher (R)
Place: A restaurant
Language: English
Transcript conventions:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>()</td>
<td>pause in speech</td>
</tr>
<tr>
<td>[ ]</td>
<td>explanation</td>
</tr>
<tr>
<td>(-)</td>
<td>unintelligible</td>
</tr>
</tbody>
</table>
E: if you are trying to hire people even talking about contractors we are always on this debate now if they are (.) abroad like (.) there is a problem with that because they might not understand security messages and so on or cannot interact with operators [mineworkers hired directly by the mine] because not all of our operators are able to speak English or not willing to

R: right so are the security messages in Finnish then or in?

E: yeah (.) yeah for example mine radio so if there is an evacuation then it will be both in Finnish and English but just (.) for traffic reasons or something there is a lot of things going of course in Finnish on the radio (.) so there is a little bit of debate on on on (-) and a-all the signage underground is in Finnish so not everyone in going to understand that but we have had people from Czech before and so on and Portugal and Sweden

A precondition for successful governmentality is to shape governable subjects (Lorenzini, 2018). The phrases they might not understand the security messages or cannot interact with operators construct the employees of subcontractors as potentially challenging subjects to govern. Here, the interviewee explains how the difficulty of governance is due to employees’ deficient language skills. Mining work is language marginal in terms of quantity: mineworkers mostly operate machines individually. However, the rare moments of communication, such as receiving instructions or negotiating work phases with co-workers, impact the safety and productivity of mining operations. Although the higher safety risks presented by foreign subcontractors might partially be explained by their lack of language skills, it is possible that they have not been as fully socialized as others to the organization’s safety protocols. Furthermore, Finland has its own Act of Labour Protection, which might be unfamiliar to subcontractors’ workers even though the law concerns them, too. The training coordinator of the mine told me that the mineworkers have to pass occupational safety card training regularly (Interview February 16, 2018), and this is how the national expertise of workplace safety is applied in the mine. Next, I analyze how a specific governmentality apparatus, the work card system, is used as a normalizing and disciplinary apparatus to govern safe and efficient ore production underground.

5.2 Governmentality of mining work in the name of security: The work card

The mine’s surveillance system is strongly reliant on the work card, which is systematically used as a disciplinary apparatus of governmentality, regulating workers’ behaviors by categorizing actions that are governed, starting from the instructions given at shift start to reporting at shift end. It is also a responsibilization strategy (Lemke, 2001), as it makes risk management a routine and the responsibility of all workers.

The mine’s safety specialist told me in the interview that the work card system is based on international safety management software developed in the U.S.A. The main aim of the software is risk management: deviations and comments on work cards are saved to the software, which then calculates safety-related statistics and reports. The work card model was introduced into the mine from headquarters 10 years ago and modified to suit local conditions (Interview December 16, 2019). In this sense, the governmentality of safety in mining work is based on the circulation of international expertise. According to the safety specialist, both mineworkers and foremen initially considered the work card system as just extra “paperwork”. However, according to her, they subsequently understood that the aim of the work card is to make work practices safer for everyone (Interview December 16, 2019). Based on my observations, filling in the work card is quite routine like when the worksite is familiar.
The work card is part of the “Supervision Formula” described in the mine’s Safety Manual. The next excerpt illustrates how the governmentality of mining work through use of the work card is rationalized in the manual:

Extract 3: Safety Manual
Language: English

Work cards and the supervision formula

A work management system called the Supervision Formula is in use throughout the mine area. Contractors too are covered by this system. A work card, which covers safety and environmental matters and is used for reporting, is the system’s main tool. The main purpose of the work card is to provide a means of continuous risk analysis.

Supervisors fill in the first page of the work card before the beginning of a shift, and the supervisor and employees add information to the other sections of the card during the shift. At the end of the workday, the card is returned to the supervisor. Work cards may be used in investigations of incidents when doing so is necessary.

The Safety Manual frames the work card as the “main tool” of the work management model termed the “Supervision Formula”. The word “formula” indicates that the model formulates regimes of practices, meaning routinized institutional practices, and ritualized ways of behaving in certain places and at certain times (Dean, 1999: 21). The work card lists the compulsory daily tasks of supervisors and their subordinates, with the aim of ensuring a safe working routine as a repeatable outcome. Typical of a disciplinary apparatus, supervision applies “throughout the mine area”, the idea being to isolate the space where every aspect of discipline is regulated (Foucault, 2009: 67). The work card implements preventive surveillance (Foucault, 2009: 84–85) by providing workers with “a means of continuous risk analysis”. Subcontractors are mentioned separately, indicating that it may not be self-evident that the Supervision Formula also applies to them. In filling in the work card, workers have not only to reflect on risks but also take responsibility for safe working. The cards are then returned to the supervisor, who saves their consent to the software. This in turn may be used in “investigations of incidents”. This apparatus thus includes the aspect of accountability (see also Dean, 1999: 21).

The aim of the daily work rhythm is to maintain safety through routine (see also Kraft, 2020: 175). As the Safety Manual makes clear, the work card is a management tool that both supervisors (foremen) and subordinates use throughout their workday. Supervisors work 12 hr and their subordinates 10 hr per day, in two shifts. I had the opportunity to observe the supervisors on both their day (6 am to 6 pm) and night (6 pm to 6 am) shifts. Because the mine is a constantly changing environment, supervisors must carefully report deviations that could affect the next shift. When their shift begins, they note meaningful deviations on a shared online platform, and one of them projects these onto a whiteboard. Supervisors then fill in page 1 of their subordinates’ work cards, which comprises three elements: (a) Task list, (b) Workplace situation before shift, and (c) Supervisor’s comments regarding tasks and risks (Fieldnotes March 12, 2018 and interview with supervisors December 12, 2019).

The mineworkers’ day shift runs from 7 am to 5 pm and the night shift from 7 pm to 5 am. Each shift begins with a brief routine-like information session. One of the supervisors leads the session and goes through the previous week’s deviations under the categories: (a) Work card comments from the previous shift, (b) Environmental deviations, and (c) Accidents (personal injuries, material damage, near-misses, and fires):
7 pm I follow Juhani [a foreman] to a big room containing rows of chairs and a data projector. There are approximately 100 workers there, all in their neon-colored working gears. Many of them have helmets as well. There are many seats left still. The foremen are sitting in front of the room, on the right-hand side against the wall. The other rows are facing the whiteboard. Jussi [a foreman] is leading the meeting; he begins a few minutes after seven. He speaks very clearly and briefly, only in Finnish, giving the same information as that projected on the whiteboard and printed on handouts. They go through the deviations reported over the last seven days. Jussi reads some of the issues directly from the screen (which is projected on the whiteboard), for instance: “Happipullot varastoitava vaakatasoon” (“Oxygen bottles have to be stored horizontally”). He goes through the environmental deviations as well. The meeting takes about 5 minutes, after which the foremen give instructions to their subordinates. Jussi gives work cards and short instructions to more than ten of the men.

At this point, the supervisors talk about tasks and risks with their subordinates and may also use other languages. Work cards are available in Finnish, English, and Swedish. When I observed Juhani, a supervisor who works with subcontractors’ employees, he used multiple language resources with his workers: Finnish, English, Swedish, and some Italian phrases he had learned abroad. As some of his subordinates understood little English, Juhani tried explaining their tasks to them in different ways, including pictorially, but a barrier remained. Some of the employees spoke “meänkieli” (a Finnish dialect that has minority language status in Sweden). Juhani told me he finds it difficult to understand (Fieldnotes November, 2018).

<table>
<thead>
<tr>
<th>SAFETY CHECK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symbols: OK (x) Not OK (!) Fixed (o) No use (-)</td>
</tr>
</tbody>
</table>

| WORKSITE | Place | Place | Place |
|----------------|
| THE NEAREST PLACE OF REFUGE |
| Worker and foreman | Worker | Foreman | Worker | Foreman | Worker | Foreman |
| Safety gear (Helmet, protective clothes, boots, gas detector, safety harness, goggles) |  |
| Roads (Quality, trenches and water holes open, pitch, enough gravel) |  |
| Closed areas and signs (unsupported, loose rocks, drilling above, work below, hazard) |  |
| Rock quality and support (cracks, loose rocks, net, bolting) |  |
| Electrical safety (lights, cables, plugs, power unit, safety switch) |  |
| Work tasks (been given, have read, need to update) |  |
After receiving their instructions, employees drive underground down the tunnels. Their workday is regulated by the work card as follows: pages 2 and 3 are filled in by both supervisor and subordinate in four stages: (a) Safety Check, (b) Communication, (c) Decision, and (d) Implementation. The first stage (see Table 2) guides the worker on the necessary safety checks step-by-step, starting from their own safety gear to checking the equipment, and goes through the on-site environmental risks. The Safety Check page functions as a norm, a disciplinary model for a safe routine before starting work (see Foucault, 2009: 84). The elements crucial for safety are listed and thus govern the employee’s actions. This disciplinary apparatus entails surveillance, as these elements are double-checked onsite every day by the supervisor. If the employee moves to a new worksite during the shift, both – subordinate and supervisor – go through the list again.

After these checks, supervisor and subordinate enter into “communication” to plan the work (see the “Communication” step in Table 3). Supervisors fill in the tasks during their first and second onsite visits, and the worker has to evaluate the risks they present and possible solutions to these. Thus, the work card guides the contents of the communication mandated between employee and supervisor. In the next stage, “Decision”, they must confirm their mutual understanding, give assurances that the work can be performed safely and authorize its continuation. That these three aspects – understanding, safety, and production – are defined as the most important elements to be governed shows that shared understanding is linked with safe and efficient mining. Both supervisor and subordinate have to sign off on these aspects for work to continue, and thus the function of this stage is to make both workers responsible for safe and productive working. If they think risks exist, they need to resolve them before continuing work. During their second onsite visit, supervisors check (“Implementation” stage) whether the work is being performed as planned.

**TABLE 3 Work card, page 3: Communication, decision, and implementation**

**COMMUNICATION**

Communication: Supervisor and Subordinate

**Task:** *Filled by the supervisor*

1st visit:

2nd visit:

**Risks:** *Filled by the subordinate:* “What is my risk here?” *(Mandatory)*

**Solutions:** *Filled by the subordinate (Mandatory)*

**DECISION**

1. I confirm that we have understood each other. **Yes**
2. I assure that the tasks can be carried out safely. **Yes**
3. I authorize the continuation of work. **Yes**

**Supervisor:**

**Subordinate:**

**IMPLEMENTATION**

Does the work match the decision? **Yes**

*(Supervisor)* **No**
When I observed Juhani (November, 28 and December, 7, 2018), most of these onsite visits were brief: if everything was fine, the worker and supervisor talked briefly and signed the work card. However, achieving mutual understanding was not always easy. When I visited an Italian speakers’ worksite with Juhani, he used English with them, as no Finnish-speaking language broker was present. I found their talk hard to follow – their English was not very fluent, they used a lot of body language, and there was a lot of noise because they were drilling at the same time (Fieldnotes December 7, 2018). Before checking if the work was being done in accordance with the decision, Juhani told me that it was hard to tell whether the workers had correctly understood their instructions (Interview December 12, 2019). Nevertheless, he had to sign the work card to enable work to continue. Thus, the work card regime ignores language problems: workers have to mark “yes” to the statements (understanding, safety, production) on the “Decision” section (see Table 3) to continue working. The alternative would be to stop work and resolve outstanding safety issues, an exceptional event, as it means interrupting production.

At shift end, at 5 am and 5 pm, the mineworkers return above ground and hand their work cards back to their supervisors. Page 1 of the work card includes a blank box framed in red with the heading: “Worker’s comments (safety and environment)”. This is the most important section of the work card for the transmission of information, as all comments will be passed on to the next shift to alert the workers to possible safety threats. The supervisors countersign the comments below the red box in the space marked “Supervisor’s signature”. This surveillance system makes both workers and supervisors responsible for risk management. Thus, the authorities, here foremen, are also subject to the exercise of governmentality (see Dean, 1999: 27–28).

6 | CONCLUSION

This article analyzed how mining work is governed in the name of security in a multilingual mining company in Finland. The critical sociolinguistic analysis revealed that a discourse of safety permeates work-related documents and practices. In the governmentality apparatus, safety is interwoven with production: both the economic and safety risks of the enterprise are partially transferred to its subcontractors and employees. These governmentalizing strategies are linked to the state’s aims of securitizing its economy and citizens: the mine produces metal ore for export and provides secure jobs for the Finnish population, while managing fluctuation in labor needs by hiring subcontractors.

The mining company uses a safety program as a concrete apparatus of governmentality, utilizing global bodies of knowledge. In modern societies, most power is normalizing: certain actions, such as safety procedures, are regarded as norms that everybody has to follow (see Foucault, 2009: 85). Accordingly, the main tool of the mine’s safety program is the work card, which functions as a disciplinary apparatus by setting the norms to be followed. The program also includes a “Supervision Formula”, in which disciplinary power draws on supervision and surveillance. The work card acts as a responsibilization mechanism (see Lemke, 2001) by making supervisors and subordinates responsible for the safe continuation of work. The work card frames shared understanding, safety, and production as the key elements to be controlled. However, language problems are not considered in this system: the work card does not give guidance on how to act if a shared understanding of tasks and risks is hard to achieve. Hence, supervisors working with multilingual surplus labor are subjected to the tensions of being responsible for workplace safety in a situation where their subordinates are not equipped to fully follow the company’s preferred language practices. This means that employees have to affirm shared understanding in circumstances where investment in good practices for communication problems is lacking.

The previous research on language and mining has illustrated the long history of language contact and multilingual practices in mining communities (Aikman, 2017; Cornips & de Rooij, 2019; Hiss,
The present study contributes to this research strand in the context of the current globalized mining industry. The analysis shows how the multilingual employees of subcontractors are framed as difficult subjects to govern. In addition to language barriers, other factors may explain the higher accident rate among subcontractors’ personnel (see also Kraft, 2019, 2020). For instance, surplus labor might not be as familiar as permanent labor with the organization’s work and safety culture or working methods. Here, the work card may be useful as it offers a model of safe work routines. It is important to acknowledge that the organization’s safety program works well in general: accident rates among both permanent and surplus labor have fallen since its introduction (see also Rolston, 2010). Safety at work and the terms and conditions of employment are relatively good in the mining industry in Finland compared to other countries (Noras, 2016). However, the impact of language and culture diversity on workplace safety could more systematically be considered in the safety program: alternative strategies such as audio-visual materials, color-coded signs, and hands-on training opportunities could be offered to employees who encounter language barriers (see De Jesus-Rivas et al., 2016).

A critical sociolinguistics of governmentality has addressed how neoliberal governmentality operates through the processes of subjectification and self-governance in particular (e.g. Allan, 2013; Barakos, 2016; Del Percio, 2018; Dlaske, 2016; Martín Rojo, 2019). This article illustrated how a nexus of different governmentality technologies and bodies of knowledge are employed in the mine’s governmentality apparatus that combines the neoliberal technology of responsibilization with the disciplinary strategies of surveillance, supervision, and regulations. However, I was not able to analyze the perspectives of the governed subjects in depth because of the limitations of the data. Hence, this study could inspire further sociolinguistic research on how governmentality apparatuses are adapted, resisted, or modified by individuals in industrial work contexts.

ACKNOWLEDGMENTS

This study belongs to a research project “Cold Rush: Dynamics of language and identity in expanding Arctic economics”, funded by the Academy of Finland (296564). I am grateful to the Cold Rush team for insightful discussions and support. First and foremost, I would like to thank Sari Pietikäinen, the PI of the project, for invaluable feedback during different phases of this manuscript preparation. Furthermore, this article has benefitted greatly from discussions with Kori Allan, Ingrid de Saint-Georges, and Luisa Martín Rojo. I would also like to thank the members of the Language and Work group, Jyväskylä Discourse Hub, LaLiWo (Language & Literacy in Working Life) network, and Cold Rush Seminar “Muuttuva työkulttuuri, uudet odotukset” for your useful feedback. Any mistakes are my own.

CONFLICT OF INTEREST

There are no potential conflicts of interest.

ORCID

Maiju Strömmer https://orcid.org/0000-0002-6905-2920

ENDNOTES

1 A recent but growing body of sociolinguistic studies has discussed (in)securitization in different contexts, as well (see e.g., Charalambous, Charalambous and Rampton, 2015; Khan 2017; Kraft, 2019; Rampton and Charalambous, 2020; Jones, 2020). Securitization refers to institutional technologies and regulations that aim at preventing threats to the state or other institutions (Charalambous et al., 2015: 2).

2 Legg (2011) discusses how the Deleuzian concept of ‘assemblage’ can be thought dialectically together with the Foucauldian concept ‘apparatus’ (dispositif). The Deleuzian theory could be applied more in future discourse analytical and critical sociolinguistic studies on multilingualism (see e.g., Pietikäinen, 2018).
This study forms part of the research project Cold Rush: Dynamics of language and identity in expanding Arctic economics. The project relies on multi-sited team ethnography and although I was the only researcher in the present study, team members, especially the PI, professor Sari Pietikäinen, participated in negotiating access to the mine.

REFERENCES


---

**How to cite this article:** Strömmer M. In the name of security: Governmentality apparatus in a multilingual mine in Arctic Finland. *J Sociolinguistics*. 2021;00:1–18. https://doi.org/10.1111/josl.12458