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Introduction: Language in the mines

1 Introduction

All over the world the language practices surrounding mining activities pose a particular challenge for sociolinguistics, since mining activities create a number of very specific social ecological circumstances. This special issue of the *International Journal of the Sociology of Language* is entitled "Language in the mines" and not "Mining languages". Even though some cases involve a specific mining language, the phenomena involved turn out to be highly complex and go much beyond language use in underground working conditions. The present issue presents the contributions of an international symposium on Language in the Mines, comparing mining languages in Africa, South America, and North Western Europe, held at Maastricht University, the Netherlands.[1]

The aim of our project is to study the social practices and structural features of mining languages in a comparative perspective. Mining languages have a unique social ecology. Factors involved are often labour shortages and various recruiting strategies, rapid expansion and migration, the multi-ethnic composition of the workforce, power hierarchies between unskilled and skilled workers, various ethnic groups, gender and male bonding, concerns for danger and safety, special technology, job specialization, life underground as distinct from above ground, non-verbal communication also play a role, and the darkness of the mine makes explicit oral communication mandatory. There are often center-periphery dynamics between places where mines are exploited and power centers in the

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nation-state. Generally, the language underground is not that of the owners of the mines, but a lingua franca spoken by a large chunk of the workforce. Also, there is always special vocabulary and new words being formed.

The focus here is on three continents: Africa, South America, and Europe, and specialists presented case studies, with an attempt to reach a more global perspective. As far as we are aware, this is the first time that different mining languages are placed in a comparative perspective. Many issues remain to be further developed, as we will show in the next section.

In Table 1 we give an overview of some of the places in the world where specific language phenomena have been noted related to mining activities. Only some of these can be discussed in this issue. It is also based on a superficial search; more concerted research efforts will reveal many more relevant sites since mining activities have profoundly affected different peoples and cultures all over the globe.

Table 1: Brief overview of some of the mining regions where specific changes in language practices related to them have been documented; the cases discussed in this issue are highlighted in italics.

	Location	Time	Mineral	Language	Reference
North America	Old Mines, Missouri	1720-	Lead	French	Carrière (1939)
Australia	New South Wales, Victoria	1840-	Gold, other minerals	(Heritage) Chinese, English	Carrington (1960)
Europe	Uppland and in Östergötland, Sweden	1620–1655	Iron	French	Hildebrand (1992)
	Harz, Germany			Upper Harz German dialect	Borchers (1927)
	Yorkshire, England		Coal	English dialects	Redmonds (2016)
	Heerlen, Netherlands	1920-	Coal	Polish, German, Italian, Dutch dialects and the standard language	van de Wijngaard and Crompvoets (1989); Cornips and De Rooij (this volume)
	Maaseik, Belgium		Coal	French, Dutch, German	Pecht (this volume), Auer and Cornips (2018)
	Genk, Belgium		Coal	French, Dutch, Italian	Di Marzo (this volume)

Table 1: (*continued*)

	Location	Time	Mineral	Language	Reference
Africa	*Johannesburg area, South Africa*			Fanakalo, Zulu, Afrikaans, English	Mesthrie (this volume)
	Copper Belt, Democratic Republic of Congo			French, Swahili, other Bantu languages, Swahili, French	Cornips and De Rooij (this volume)
South America	*Minas Gerais, Brazil*		Gold	African languages, Portuguese	Álvarez Lopez (this volume)
	Potosí, Bolivia	1540–1800	Silver	Aymara, Quechua, Spanish	Muysken (this volume)
	La Oroya, Cerro de Pasco, Peru	1800-		Various Quechua dialects	Pearce and Heggarty (2011)

2 Issues in the study of language practices in the mines[2]

Before turning to the articles in this issue we would like to outline some of the general issues that came up in the presentations and ensuing discussions about language use in and about the mines, also pointing out some crucial aspects where the different mining areas surveyed differ from each other. We will divide these into social ecology, language practices and contact-induced language effects.

2.1 Social ecology

A first set of issues concerns the social ecologies of the mines. These concern migration and the workforce, center-periphery dynamics, housing, gender, ownership, and technology.

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[2] We are grateful for insightful comments during the discussions, and in particular would like to acknowledge the input of Peter Auer, Ad Knotter and Vincent de Rooij.

2.1.1 Migration and multi-ethnic composition of the work force

A first factor to take into account is that mines on the whole require a very large work force, which often needs to be recruited from pretty far away, coming together in one place. Hence, the labour shortages in mining are a key component, and have had many consequences, due to different recruitment strategies (see the excellent overview in Knotter [2015]). Key is the difference between skilled and unskilled workers, which often corresponded to an ethnic difference as well. In some places there was seasonal rotational labour of rural workers, either forced or voluntary. This rotational work force sometimes became more permanent as time went on, as in Donbass region in the Ukraine. Often, there was an intermediary group of labor contractors. In several regions, convicts were employed as miners. Particularly in the British Commonwealth and the United States, skilled British miners were employed to start new mining activities. In continental Europe, the Polish were an important skilled workforce employed to start new mines in different places, including northern France. In the mid-twentieth century, there was state-mediated migration in Europe, in which Italian workers also played an important role. In Australia, Chinese immigration gained momentum in the nineteenth century due to mining activities, as well; the Chinese were also present in the mines in western Canada.

Often, there is *deterritorialization* (delocation), a concept which is used to analyze "the cultural dynamics of people and practices that either no longer inhabit one locale (finding themselves in borderlands, diasporic groups, or mixed cultural environments) or inhabit a locality radically transformed by global cultural phenomena" (Jacquemet 2010: 50) such as mining sites. According to Jacquemet (2005: 263), on the one hand, these processes may emphasize and magnify what is considered the local, "indigenous" identity/code/language; on the other, they can combine and enlarge local identity construction with linguistic practices that are considered translocal. In any case, transidiomatic practices (cf. Jacquemet 2005, Jacquemet 2010) require increasing work as language contact and language mixing increase and speakers increasingly take part in widely varying linguistic repertoires. In all studies reported here, languages like Swahili, French, Polish, German, travel to new places and, hence, are taken out of their original context. In contact with others on their way there they "settle down" and superimpose on another "native" language(s). Migration of languages on their way to the mine (varieties of German, Swahili) sometimes involves dialect blending and leveling, as in the case of the Harz in Germany. Thus, when a new language arrives with its speakers at the mining site, it will be treated differently in accordance with the particularities of the new place (Pan 2016: 545), This is the case of a small

language island of French in Missouri, USA, due to lead mining activities in the eighteenth century. Other cases are Refined Swahili in DR Congo, as argued by Cornips and De Rooij (this volume), and Polish in Western Europe (Pecht this volume).

2.1.2 Center-periphery dynamics within the nation-state

The governing boards of the mines were like imperial centers that created relations between centers and peripheries, whether within the state itself, or Western Europe, South Africa, or DR Congo. As Heller et al. (2016: 68) cite Wallerstein (2004): "The role of the periphery is to supply the center with human and material resources as needed, and to act as a frontier for economic expansion, absorbing surplus population and providing new spaces for investment. State centralization produced peripheries as potentially exploitable and explorable spaces." Heller et al. (2016) emphasize that Western European states, with their increasing investments in capitalism, required sources of raw material and of labor, and found them in their own nation-state's geographical periphery like Limburg or the Kempen for instance. Natural resources may well be located at the periphery of the nation-state, as is the case in the Netherlands and Belgium.

2.1.3 Housing policies

Depending on the type of labor recruitment policy adopted in a particular mine, housing often was a crucial issue. We find different housing policies above ground, for the work force and sometimes their families. Sometimes strict ethnic separation is enforced, with each ethnic group housed in separate compounds, and sometimes the employers created neighborhoods where miners of different ethnic backgrounds settled next to each other.

2.1.4 Gender

Gender is another important aspect differentiating different mining settings, as most cogently argued by Forestell (1998). Often, but not always, the work underground is restricted to males. The same holds for the miner neighborhoods, where the presence of women and girls was often restricted to the interior of the homes.

2.1.5 Ownership, empowerment and authority

There are complex patterns of ownership and empowerment in the mining setting. First of all, there is the question of ownership of the land and the product mined (not necessarily the same, but often these coincide). Then there is the ownership of machinery and mining infrastructure. Finally, there is the "ownership" of the exploratory and extraction skills. These three types of ownership are often unevenly distributed, leading to very different power relations, also depending on the technological level and scale of the mining operations.

2.1.6 Technological development, scale and underground/above ground discontinuities

In some mines, particularly small-scale day mining, the differences between above ground life and below ground activities are slight: the whole family may be involved in the mining operation. In other cases, however, family life and working life are totally separate entities. However, underground conditions like darkness will hinder rich and subtle spoken communicative practices. In larger mines we often find strong economic differentiation, with large salary differences, sometimes corresponding to ethnic differences as well. As technology increases, electric machines labor will produce increasing noise levels, hampering spoken communicative practices and promoting non-verbal ones.

2.2 Language practices

A number of language practices owe their properties to the social ecology of the mines. These include locality production, instruction manuals, missionary activities.

2.2.1 Locality production through dialect use or the choice of local languages

The relocating languages may under specific conditions foster locality production. A mining site as a socially meaningful "place" is constructed through people's social, economical and linguistic practices. A topic in locality production which we are not able to touch upon here is the numerous work songs

that have been created in mining communities all over the world. In several places, such as Heerlen, the Netherlands, and Katanga, DR Congo, the (Catholic) Church played an important role in helping to control and regulate the work force. The role of missionaries is thus important to consider in this context.

The linguistic practices used to produce a mining site as a socially meaningful place may include a variety of multilingual practices such as code-mixing, code-switching, language choice, borrowing, languaging, speaking in the language of the other, the use of a lingua receptive and/or lingua franca.

2.2.2 Practice of lingua franca and dialect mixture

When there is migration, in the first stage there are often xenophobic reactions to newcomers. However, in other cases where the mines are in populated areas, locals are employed in the mine. The importance of demography or "demographic power" (Mesthrie this volume) cannot be overestimated. Sometimes mining leads to multiple rapid displacements, and high mobility of the work force. Often lingua franca's play an important role in the mines, and in several places, there is evidence of dialect mixture.

2.2.3 Practice of language choice, imposition, instruction

Who chooses the language or languages spoken underground and above ground? This is a complex issue. There is a number of cases in which no language policy was imposed (Dutch mines), in which management has tried to impose a particular language, and sometimes successfully. Often there must have been situations in which an imposed language was only known receptively, and recourse was taken to mixed language use.

2.2.4 Practice of instruction manuals and written language

Both in South Africa and in Bolivia specialized instruction manuals were written to ensure that new workers were able to safely operate in the mines. In Katanga, Swahili was used as a written language by the authorities in more standard varieties, and more local varieties were adopted in informal writings.

2.2.5 Safety practices, shared knowledge, and the need for a common code

In many mines it is evident that management and workers are aware that mutual understanding is crucial for the well being and hence ultimate success of the enterprise. The exceptional ecology of the mine is probably a factor ensuring a common code, much more so than in industrial production above ground, where ethnically homogeneous work teams can operate separately from each other.

Non-verbal communication also likely plays a role, but as mentioned already above, the darkness of the mine makes explicit oral communication mandatory.

2.3 Language contact effects: Development over time and changing indexicalities

Mining activities tend to show steep temporal curves, with very rapid growth in boom years, sometimes followed by equally rapid decay, leaving ecologically and economically devastated zones. This makes it crucial to keep a sharp historical perspective and keep the big changes over time in mind. Thus, the languages involved may go from language of oppression to work-related language to valued local language (Marzo this volume), and from deterritorialized languages to local languages through place-making. Grammatically, they may evolve from restricted contact varieties, strongly characterized by imperatives, to grammatically more elaborate structures.

Since mining, at whatever level of technical development, requires technologies not needed elsewhere, we find frequent cases of (shared) lexical innovation. These can take many forms: compounding and phrase formation, metaphorical use of existing terms, adoption and localization of terms from elsewhere. This lexical innovation led to the production of mining dictionaries all over the world to document vocabulary for new employees or for a highly mobile workforce.

3 The contributions in the present issue

The present issue contains six contributions touching upon mining settings in three continents: Africa, northern Europe and South America.

Rajend Mesthrie describes the origin and evolving status of Fanakalo in the province of Gauteng, South Africa. It was recruited for the purposes of creating a

mining language after 1867, which then was very widely spread. In recent years it has both been reviled and re-valued. Whereas Fanakalo has been invariably denigrated by intellectuals as a language of oppression rather than culture, there have been some surprising recent developments. Recently, Fanakalo has gained new force as the language preferred by the strikers for mass meetings and negotiations with management.

Leonie Cornips and Vincent de Rooij compare sociolinguistic and structural outcomes of language contact processes in two mining areas on two different continents, namely the African Katanga region in the southeast of what is now the DR Congo and in Europe, Heerlen as a centre of the former Eastern Mine District in the southeastern province of Limburg in the Netherlands. Both in Katanga and Heerlen, the natural copper and coal resources were located in border regions that were peripheral to central seats of government. In both regions, the exploitation of these resources and the growth of mining industries and rapid urbanization began in the same period, the late nineteenth to early twentieth centuries. Similar social conditions of language contact were responsible for the genesis of the language varieties underground and above ground, in Dutch and Swahili respectively. These were characterized by the regularization of grammatical properties and the expansion of aspect marking.

Discussing a mining area near the one explored by Cornips, but across the border in Belgium, Nantke Pecht investigates grammatical features of Cité Duits, a moribund in-group coalminers' language spoken in the town of Eisden in Belgian Limburg. Certain features of Cité Duits are a fusion of Southern Dutch, German and the Maaslands dialect spoken in the area. Speakers produce forms and syntactic structures not found in one of the three contact varieties involved, suggesting a reallocated deployment of the grammatical system. These findings suggest that not only contact-induced effects, but also language-internal tendencies may play a role: speakers use linguistic resources in novel ways and develop "innovative structures" to mark semantic properties.

In a nearby region, Stefania Marzo investigates the short and long-term effects of the language issues Italian mine workers families encountered when they arrived in Belgian Limburg (Flanders). The complex linguistic integration of the first-generation migrants was picked up and further developed by the new generations and transmitted in young peoples' meta-reflections on their actual hybrid linguistic practices. The study corroborates universal characteristics of mining jargons and opens new perspectives on the study of linguistic and social long-term effects of these varieties.

Shifting to South America, Pieter Muysken charts the multilingual setting of the silver mines in Potosí, Bolivia, and the complex relations between Spanish and the two main indigenous languages Quechua and Aymara in the mining

languages. The main source used is a mining vocabulary from 1610, which contains terms both in Spanish and in the indigenous languages Quechua and Aymara.

Finally, Laura Álvarez López turns to Brazil, analyzing specific vocabulary, possibly the remains of a mining language spoken by descendants of Africans. She analyzes 149 lexical items that were registered in the 1920s in a rural region of Minas Gerais, near the city of Diamantina. The distribution of the lexical items in different semantic domains and word classes indicates that the language of the enslaved Africans, Umbundu, maintained a high status in the area, and that this variety was not limited to mining activities, but was probably used in everyday life as a secret code.

4 Prospects

We hope that the current issue contributes to a broader perspective on the way specific social practices constitute ecologies in which specific linguistic practices emerge. Here the case presented was mining, but related topics would include tunneling and the oil industry. Of course, there is a large tradition in pidgin and creole studies to link specific economic activities to linguistic practices such as the emergence of specific kinds of pidgins, but the potential scope of this line of enquiry is much wider, as we hope to have shown.

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