# Unintended (Dis)connectivities

## *The Role of Extractive Infrastructure in the Development of Informal Road Networks in Remote Siberia*

VERA KUKLINA, GERTRAUD ILLMEIER,
AND NATALIA KRASHNOSHTANOVA



**Abstract: This article focuses on informal road networks in remote Siberian communities: their connectivity and the relations between road owners and road users. These informal roads serve both as conduits and hindrances for local connectivities. Data was collected in the villages Vershina Khandy and Tokma of the Irkutsk region, and the study describes the variety of informal roads in the region: subsistence trails and tracks, inter-settlement roads, forest roads, and oil and gas service roads. Different actors participate in the expansion of the informal road network; our research demonstrates that communities accommodate new infrastructures and negotiate their mobility and connectivity informally according to their needs and desires under uneven power hierarchies. In conclusion, we discuss the possibilities and constraints that different groups of roads users experience because of the informal character of roads.**

**Keywords: connectivities, extractive industries, informal roads, infrastructure, Siberia**

Those who have had an experience of traveling in Siberia beyond its large cities know the uselessness of road maps and GPS for moving around: many remote settlements are not accessible by ground transportation, and to reach them overland one must rely on only locally known routes. Many of these routes have been constructed for extractive industrial development, such as forestry roads, seismic line clearings (lines clear of wood for geological exploration), and oil and gas service roads. The absence of these routes on road maps allows researchers to consider Siberia one of the last roadless regions, together with such regions as the Amazon and the Arctic parts of North America (Ibisch et al., 2016).

The other key characteristic that unites these regions is their location on traditional lands of Indigenous peoples and the rapid development of extractive industries. While the main reason for constructing these alternative routes was to connect private companies and state actors with local natural resources, their use beyond resource extraction has been neither intended nor planned. Since these routes exist beyond the official transportation infrastructure system, and/or have been created, maintained, and used beyond formally assigned protocols, we call them "informal roads" and understand them as "vehicular roadways beyond the current publicly governed road network constructed, maintained and/or used by various entities and individuals based on private, special purpose and/or informal practices and regulations" (Kuklina et al. 2020). Informal roads entail informal relations between road owners and operators on the one hand, and road users on the other hand, as well as forms of mobilities and connectedness that are negotiated and maintained by informal practices and arrangements.

Relations evolving around informal roads are more complex than a simple opposition between the state and remote communities, as is the case when talking about non-public roads, since they involve more stakeholders. In the case of Eastern Siberia these are representatives of diverse private companies and their subcontractors as well as recreational fishermen. These groups are entangled by a web of relations of formal and non-formal character. This framework of formalized "giving and taking" also contains a considerable space for informal negotiations. Connectivity as well as control over roads in such constellations are unevenly distributed among different actors, and the uses and benefits of roads are also differentiated. All this makes the study of informal roads important for understanding the complexity of connections and disconnections in remote regions.

Corporate roads of extractive industries are planned and constructed for highly specific purposes. The livelihood and other interests of people living in most of the extractive regions of Eastern Siberia are considered in the phase of planning and construction only in relation to the required environmental impact assessment. Local communities subsisting in a traditional economy receive limited prior information about industrial infrastructure building, so they are often taken by surprise—more often in dismay—when discovering another new cleared strip or devastated field adjacent to their forest hunting grounds. However, environmental degradation is only one effect—although a crucial one—of (informal) roads that is partially compensated by extractive companies (Kuklina et al. 2020). Increased accessibility to the forest and its resources and

connectivity of remote communities to administrative centers, as well as to the global capitalist system, is another effect with ambivalent implications for local communities, as we will illuminate in this article.

The large variety of emerging relations between extractive companies and the villages in Eastern Siberia allows us to explore the question of the role of informal roads in shaping the connectivities of remote communities. We aim to answer this overall research question in two steps: first, we explore the ways in which informal roads change the connectivity of the two remote villages; second, we ask how the informal character of roads and usage regimes applied on corporate roads shape relations between road owners and other road users — employees of extractive companies, local communities, and external people visiting for recreation. What are the possibilities and constraints that different groups of road users experience as a result of the informal character of negotiations over road usage regimes? These two lines of questioning are intimately interlinked, since connectivity is not only a matter of material infrastructures, but of social networks formed by these infrastructures and vice versa, as has been demonstrated by many researchers of infrastructure.

All actors in the taiga, be they local hunters, reindeer herders, or representatives of extractive companies, are highly mobile. However, the direction of travel, destinations, distances, and frequency vary significantly. Regardless of the reasons for the construction of existing roads and trails, they are the main places where human and nonhuman encounters take place. Depending on informal practices and regulations for usage—who, when, and by what means one has access to a corporate road—different prospects of encounters emerge and conflicting views on the forest collide. From extractivist and local perspectives there are different elements of the forest that make sense and present importance.

The study of infrastructures has seen high interest in recent years across academic disciplines and global regions (for the global north, see Schweitzer 2017). While environmental scientists express concerns about the use of seismic line clearings by all-terrain vehicles (Stern et al. 2018; van Rensen et al. 2015) and unofficial forest road development (e.g., Arima et al. 2015; Brandão and Souza 2006), among other issues, social scientists of the circumpolar north have recently begun to explore the impact of extractive infrastructure on local mobilities and sociality (Davydov 2017; Illmeier and Krasnoshtanova 2022). In this article we highlight the informality of arrangements that involve material infrastructures as well as social interactions around corporate roads built to enable natural resource extraction.

In the sections that follow, we start by examining how infrastructure, and roads in particular, have been conceptualized in social anthropology and geography. We discuss informal relations around corporate roads against the backdrop of the political and socioeconomic characteristics of postsocialist Russia. Following that, we present our study region with the two villages and the surrounding infrastructural development that has led to an expansion of informal roads networks. This section outlines the (blurred) differentiation between formal and informal roads, with a short overview of how existing roads have been emerging over time in the region under scrutiny. We approach roads as spaces of encounter for three main groups of road users: local villages; extractive companies that own and operate the roads; and leisure fishermen from nearby settlements and towns. We focus on how the informal character of roads affects interactions between these groups. Finally, we discuss how informal roads that form specific (dis)connections for local communities and other users are usually given scant consideration during planning, construction, and maintenance of large infrastructure systems.

This article is informed by data collected during several field studies. In 2019, six interviews were gathered in the village Vershina Khandy; in 2021, five interviews with former residents of Magistralny in Kazachinsko-Lenskii raion were also gathered.[1] We then conducted thirteen interviews in 2016, twenty-six interviews in 2019, ten in 2020, and nine in 2021, all in the village Tokma of Katangskii raion of Irkutsk region.[2] All interviews with local community members were recorded. They were also supplemented by participant observation and travel on the informal roads in summer and winter. For the analysis, we also used public environmental impact assessment materials for the Kovyktinskoe gas deposit (FREKOM 2002), and municipal reports.

## Theoretical Context

Infrastructure has recently become a specific focus in humanities studies, although it has already long been a lucrative field for cultural studies, social and power relations, and human–nature relations. Studying traditional livelihoods, anthropologist Tim Ingold makes a distinction between "transportation networks" and what he terms a "meshwork of wayfaring" (Ingold 2011: 151). However, this distinction is not always evident. On the one hand, the latter are represented by trails and paths that constitute the "accumulated imprint of countless

journeys that people have made" (Ingold 2011: 167). On the other hand, Tatiana Argounova-Low (2012) emphasized social significance as the main feature defining roads, so even roads traveled by motorized vehicles count. However, the scale of infrastructure matters.

Railroads, airports, and highways crossing vast spaces have served as the most prominent features of modernity (Scott 1998) and the human endeavor of "mastering nature" (Slavin 1982). They are often celebrated for their promise of speed, political integration, and economic connectivity, and the expectation that certain intentions and relations will materialize (Harvey and Knox 2015). Some forms of traditional mobilities are disrupted and hindered by new infrastructure development, which is sometimes conceptualized as "infrastructural violence" (Rodgers and O'Neill 2012). Soviet and Russian policies regulating transport and travel were among the main instruments used to assimilate rural Siberian peoples, by connecting them with the Soviet system (Campbell 2001).

These and other examples show that definitions of infrastructure and the social relations that accompany it always have to be contextualized: new roads can be advocated by Indigenous people willing to participate in the market economy (Bennett 2018). "Marginal landscapes" (such as Amazonia or Siberia) require "creative informal infrastructures" in order for a "homemade connectivity" to be established and maintained, as Amy Penfield (2019) illustrates in the case of Amazonian "wildcat gold mining." Such "noninstitutional infrastructures" are crucial in remote places where remoteness is understood as a "lack of institutional infrastructures" like roads, buildings or power supplies" (ibid. 233). Informal infrastructures are often what support the life and mobility of communities lacking power, resources, and knowledge (McFarlane and Vasudevan 2014).

In Russia and among socialist countries in general, the situation becomes even more complicated due to the legacy of the Soviet period with widespread informal relations (Morris 2016). Using the term "aggressive immobility," Samuel A. Greene (2018), points to ordinary Russians' desire and ability to secure their livelihoods informally. In general, one of the important features of informality is the autonomy of actors seeking to avoid state control (Scott 1998. At the same time, there are local expectations toward the state and extractive companies to accommodate local needs during the maintenance and utilization of transportation infrastructure (Tysiachniouk et al. 2018; Saxinger, Krasnoshtanova, and Illmeier 2021). In this article, we approach informality as a way to handle relations based on locally and socially defined

unwritten norms and expectations rather than on officially established rules and regulations.

In regard to transportation infrastructure, Harvey and Knox (2015) demonstrated that the study of roads is highly productive in terms of exploring state effects as a manifestation of state uncertainty rather than state capacity. Informal roads should not be confused with illegal roads, although it can be questioned whether in a remote and confusing territory like Eastern Siberia any informal road fulfills all legal requirements in a strict sense. Corporate roads are under private ownership but are imbued with official legitimacy, since they come into being through a policy strongly promoted by the centralized state and thus materialize the state's presence in people's lives (Harvey and Knox 2015).

The norms and rules of automobile road construction and exploitation are regulated by Russian Federal Law No. 257 (Ob Avtomobil'nykh Dorogakh 2019) and classified according to their significance and jurisdiction (Federal'noe Dorozhnoe Agentstvo 2019). Depending on the level of significance, respective authorities are responsible for the construction and maintenance of roads under public jurisdiction (e.g., federal, regional, or municipal). However, budget allocation is also the subject of negotiations between and within different government bodies and private companies. For example, many roads in Soviet times belonged to different agencies, which were responsible for their construction and maintenance. Construction, maintenance and use of private roads follow regulations for automobile roads. Access to these roads is often negotiated and regulated informally, which allows us to consider them informal roads. In addition, after the dissolution of the planning system, many nonpublic roads were left unmaintained and officially abandoned due to changes in priorities and budgets (Moliarenko 2017). Removal of these roads from official road maps would not always mean that they ceased to exist; rather, the character of their use shifted from a formal to an informal one.

These examples demonstrate that there is a wide variety of factors that lead to the existence of informal roads, many of which are highly context specific. That is why we find it especially insightful to utilize a geographic approach that situates knowledge on how human–infrastructure relations evolve in specific places and communities.

## Study Communities and Networks of Public (Official) Roads

The territory of our study has been traditionally settled by Evenki, Indigenous people who speak a Tungusic language. According to Milana Ragulina (2000), Evenki maintain a strong attachment to land not only through subsistence activities, but also through spiritual rituals and moral obligations. Their traditional land use includes hunting for ungulates, fishing, gathering Siberian pine nuts, berries, and herbs that provide them with food, hunting sables, and gathering Siberian pine nuts for cash income.

Cossacks, as agents of Russian colonization, settled in the region in the seventeenth and eighteenth centuries, attracted by its rich fur game resources. As the colonization of Siberia started along major Siberian rivers (Sablin and Savelieva 2011), Cossacks arrived via the Lena River. Among the settlements formed during that time is the village Kazachinskoe, founded in 1776 on the Kirenga river by Cossacks and peasants. It is about 50 kilometers away from Vershina Khandy. A lot of interethnic marriages between residents of these two villages led to migration by some Evenks to Kazachinskoe and usage of territories of traditional land use by these mixed families. In 1802 Russians founded a hamlet that eventually grew into the village of Tokma. Its active development began after the establishment of the Tokma Native Council by the Kirenskii District Council in 1928 (Kopylov, Pogudin, and Romanov 2009). On the territory of the Native Council, there were two settlements with a mixed Russian-Evenki population (Tokma and Volokon), and others with an Evenki population. All settlements were connected by taiga paths, and in the summer, some travel was taken by boats on the rivers.

A sparse network of settlements persisted until 1975, when the construction of the Baikal-Amur Mainline (BAM) brought thousands of migrants to settle in more northern regions and build dozens of settlements, hundreds of bridges, and thousands of kilometers of railways (Belkin and Sheregi 1985). Some of the Evenki and early settlers moved to the BAM settlements, such as Magistralny, located on the railroad 39 km from Vershina Khandy, and found employment beyond traditional subsistence activities.

Despite being in the epicenter of rapid extractive industrial development, the local communities of Vershina Khandy and Tokma are lacking official permanent roads, mobile phone connectivity, and power lines. Tokma has seasonal access by an official 100-kilometer-long municipal winter road connecting the village with the federal winter

road "Mirninskii." The maintenance of this municipal winter road does not go beyond using a snowplow about two or three times a winter. Another, more reliable connection is provided by the regionally subsidized helicopter flights that occur twice a month in winter and three times a week in summer. The route of the helicopter is Kirensk–Tokma–Ika–Bur–Kirensk. In 8–13 days, depending on the season, the same helicopter has the route Kirensk–Nepa–Preobrazhenka–Erema–Erbogachen–Kirensk. Therefore, if anybody from Tokma needs to visit the raion center Erbogachen, they would first need to take a flight to Kirensk, wait for 13 days there, fly to Erbogachen, wait there for 9–14 days before flying back to Kirensk, and then wait another day to fly back to Tokma. Those needing to travel to Erbogachen usually wait for the winter road (January to early March) or the navigable summer period (about late May to early June) to save a month of travel and spend just a couple of days on the journey (the distance from Tokma to Erbogachen is about 400 km).

The village Vershina Khandy has practically no official roads connecting it with other settlements or large public roads. The existing road officially is considered a winter road; however, even in winter it is not maintained by the local municipality due to budget deficits. Together with other small settlements, the village is counted as an "inter-settlement territory," with an estimated population of 57 (Rosstat 2020). In the 1990s, during a short period of ethnocultural revival, Evenki received recognition for their unique cultures with regionally granted lands for traditional land use. Two villages had different approaches to manage the land: the residents of Vershina Khandy became a core of the "Khandinskaia neighbor territorial *obshchina*" (hereafter Khandinskaia *obshchina*), organized in 1990, which included all Evenki of the Kazachinsko-Lenskii raion and their close relatives. They were the first in the region to whom the Irkutsk regional government granted land (299,067 hectares) to organize a territory for traditional land use (the territory of Kazachinsko-Lenskii raion is 3.3 million hectares). In 2002 there were about 71 Evenki in the raion, with 48 people in the village of Vershina Khandy, the only settlement located on the territory of traditional land use (FREKOM 2002). The absence of a requirement to live in the village has been important: in 2017 a local Evenki leader estimated the current population of Evenki in the area of Khandinskaia *obshchina* traditional land to be about the same as in 2002, with only six people living in the village permanently (Viatkina 2017).

In the village Tokma, population is estimated to be about 54 people and consists of people of mixed Evenki and European Russia descent. The village has a "senior specialist" as a representative of the

municipality with very limited functions; two workers at the diesel power generating station; and workers who staff the post office, library, medical clinic, airport, and meteorological station. The hunters of the village of Tokma organized an *obshchina* in 2003 based not on ethnicity but on actual hunting practices, with 1.12 million hectares of land allocated for traditional use. In 2009, their license was extended to the neighboring Evenki village of Bur, with an allotment of additional 598,000 hectares of land. As a result, Tokma *obshchina* includes 53 male hunters, of which about 20 are from Tokma. The *obshchina* has in total 1.71 million hectares. Some of the members have already moved to other settlements or have retired from hunting and passed their hunting plots on to their children or other relatives.

## The Participants Developing the Informal Roads Network

The history of informal road network development represents state and corporate intentions to get access to the resources of the region. Geological expeditions and the building of the Baikal-Amur Mainline were organized mostly to connect the country with rich local mineral and fuel deposits. In the twenty-first century we witness federal deals with China for export of forest products, the construction of "East Siberia–Pacific Ocean" (ESPO) and "Power of Siberia" pipelines, and the related renewal of geological exploration and oil and gas extraction.

Since the 1960s the study villages and their traditionally used territories have been under geological exploration. In the prospecting phase, oil and gas deposits are typically explored by applying the seismic reflection method, which requires straight clearings along which the testing is carried out. When operations started, according to a local interviewee, oil drilling stations were mounted on heavy off-road military vehicles, such as GAZ-66, and the seismic stations were mounted on even heavier ZIL-131off-road military vehicles. For these machines to pass, they were clearing forest and creating straight more or less parallel paths every 4–5 kilometers. Using these grids, connections between natural resources and the state were established. These surveys allowed geologists to discover the Yaraktinskoe oil deposit near Tokma and the biggest gas deposit in the Russian East, Kovyktinskoe near Vershina Khandy. New methods of geological exploration create even denser grid of geological roads: quite often they run every 400–800 meters (Figure 1).

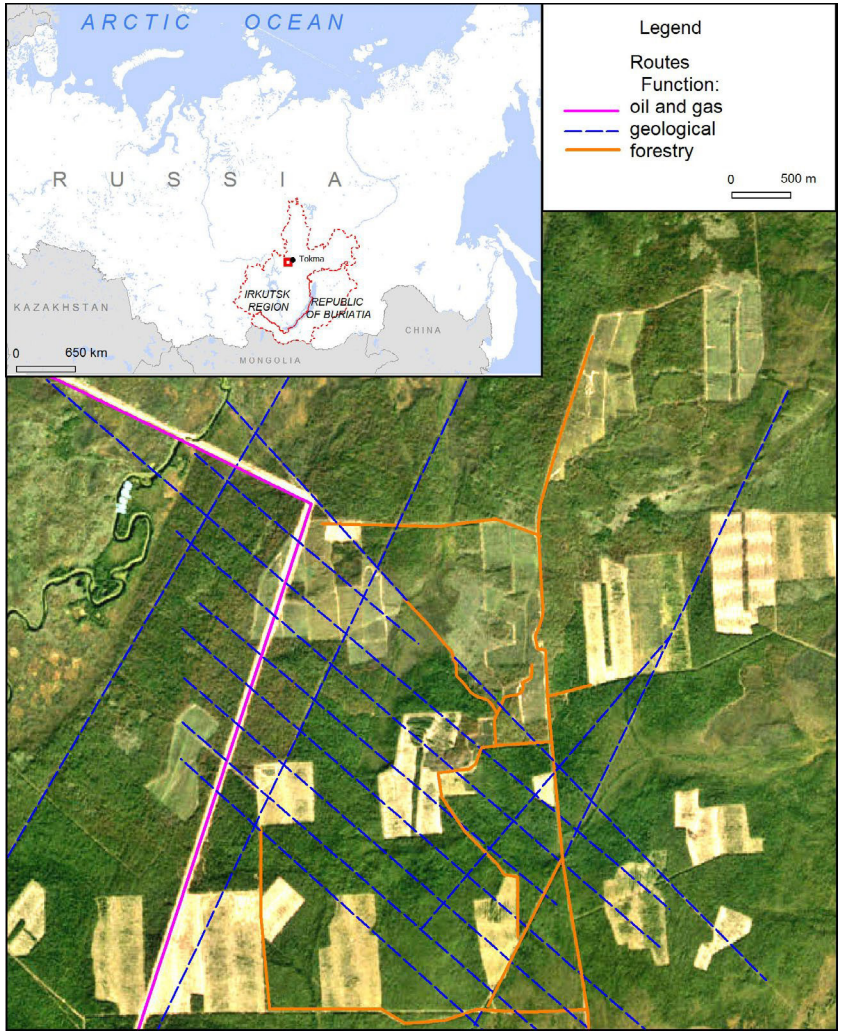


**Figure 1.** Location of study area and examples of informal forestry, geological and oil and gas roads. Author: V. Bogdanov.

The forestry industry followed this geological exploration: the state forest service and later forestry companies have made use of abandoned seismic lines. Building their own roads along seismic lines was much easier than starting completely new roads. In the 1980s, the forest industry started to develop on the territory near Tokma, first with YantalLes, and then in the 1990s with the Russian-Japanese company Igirma–Tairiku. At the end of the 2000s the forest lands were rented

by the Transsiberian Forest Company (TSLK). Nowadays, the names of renting forest companies are constantly changing; however, local residents believe that the owners are the same people who are just avoiding taxation (Illmeier and Krasnoshtanova 2022). Forest companies operating in the area of traditional land use of Khanda Evenki include the state-owned Forest Service, the Russian private companies RusForest and KirenskLes, and the Chinese-owned company "Eurasia." The Irkutsk Oil Company (INK) started oil exploration on the Yaraktinskoe, Ichedinskoe, and Zapadno-Yaraktinskoe oil deposits near the Tokma *obshchina* in the 2000s, which included infrastructural development (construction of pipelines, drilling sites, access and service roads) that crossed local hunting areas. Yaraktinskoe (40 kilometers from the village) has been the main and biggest oil exploration site of the company.

Numerous attempts by different companies to explore the Kovyktinskoe deposit failed until infrastructural development around the "East Siberia–Pacific Ocean" oil pipeline (ESPO), built in 2006, really took off and included construction of new power gridlines, more geological exploration, and modernization of the Baikal-Amur Mainline. An agreement between Gazprom (the current owner of the Kovyktinskoe deposit) and the Chinese National Petroleum Company (CNPC) on the construction of the "Power of Siberia" gas pipeline from the Kovyktinskoe gas condensate deposit was signed at the highest level in 2014 (Gazprom 2019a, 2019b). A connection between the gas pipeline and the Kovyktinskoe gas condensate deposit was built in 2022 and became the main source of gas transported to China by this pipeline. That means that the territory of Khandinskaia *obshchina* traditional land use will be intersected by new geological exploration, pipelines, access roads, and drilling sites.

The variety of different actors participating in the expansion of the informal road network shows the interconnectedness of these extractive enterprises. While each of them was creating a specific linear infrastructure, they all contributed to the resulting network, in which it is becoming difficult to discern particular elements. The main uniting principle is that their use has extended beyond the original purpose but has never become part of the official public transportation infrastructure.

## Informal Roads as Hindrances for Local Connectivities

Not only have different regimes of access and different methods of laying tracks sometimes not improved local connectivities, but they have even brought disruptions to local mobilities. Beyond the ways that extractive industries have disrupted hunting and fishing, there are numerous other hindrances that are smaller but are also important for local communities. Private roads afford movement only in a certain direction and, in contrast official public roads, have multiple accessibility requirements. While some of these requirements are formulated in the access policy by the road owners, others are more implicit: some roads are passable only by heavy vehicles, such as UAZ, or only by very light vehicles, such as swamp buggies. Information about the location of these roads is not always available.

The private forest roads are closed to the public in summer, and local communities take additional measures to gain access. For example, every year, the leader of the *obshchina* of Vershina Khandy gives the company that owns the road a list of registration numbers of the vehicles owned by either *obshchina* members or others who regularly visit the village, so that these vehicles would be allowed to pass the checkpoints. In addition, during the fire seasons, all forest roads are closed to the public, with checkpoints set on the main roads and forest workers patrolling the area, sometimes accompanied by police officers.

The shift workers' camp and other infrastructural objects on the territory of Yaraktinskoe were built along the former postal road between Tokma and Verkhnemarkovo—the nearest settlement in the area—and changed the route of the municipal winter road. Beyond the all-season Mirninskii road, INK has also built other all-season service roads leading to its oil drilling sites and along pipelines connecting the drilling sites and oil refineries with the "East Siberia–Pacific Ocean" pipeline. However, these service roads can be accessed only with INK permission, which is given only to INK workers or their service providers. The entrances to these roads from official public roads are closed off by access gates and monitored and controlled by guards. The entrance to the service roads from the forest roads is not closed, but "YIELD" signs are installed at the crossroads, giving priority to vehicles moving on the oil service road. In addition, the service roads are regularly patrolled by security guards, which makes these roads less accessible for use by ordinary people. The local hunters have not been formally granted access to these roads; however, those who met patrolling officers while

driving on the road to their hunting grounds were allowed to move on after they showed their hunting licenses.

The bridge over the Nepa River, mentioned earlier, became a hindrance for local motor boats during its construction:

> They started laying down this pipe. Where is it up to? To Krasnoyarsk Krai? Or where is it going? In general, no one said anything to anyone. We stopped in the fall, in September, for fishing on the Nepa river upstream. Literally, we boated up there, and after about three days we boated back… and there is already a bridge across the river! And such a bridge, well, like a house, a little lower, probably. A real bridge! They blocked the river and that's it. Well, the river water was flowing through the pipes, but we already could not cross it. We had big long boats, there were only three of us and two boats. Well, that's it. The three of us would not be able to drag a boat. Well, they were still working there near the river. They set up the bridge, moved to another side, and were already working there. If they had warned us, we would not have gone there. Well, and here they had machinery, they used it to drag us back across the bridge. We did not get to fish and got nothing. And no one warns anyone. (an Evenk participant around age 65)

The geophysical line clearings that Gazprom's contractors cut in the forest are negatively perceived in comparison to the lines created in Soviet times. First, they are much denser (every 300 to 600 meters in contrast with every 4–5 kilometers for the Soviet ones). These clearings are not meant for driving, which means not all trees are cut and the remains of the cut trees are left in place. When these clearings intersect with hunting trails, they often destroy or remove traps, bury them under debris, or even make the hunting trails impassable:

> There was once an incident: they blocked the way, and a man could not get back to the village, he needed to go home. He had to go on the track, and on these ... These are not called tracks, but their logging roads, or whatever it is called, where the oilmen do these roads. He had to go out there and look for a car, wait for a car, to get a ride at least to the nearest town (240 kilometers away), then to get back to the village. And he can die there, with these blockages. (an Evenk participant, age 60)

When the gas pipeline "Power of Siberia" is built, it will cross a local inter-settlement road, some forest roads, and the hunting grounds of several *obshchina* members. There is a preliminary agreement that those who have *obshchina* membership (local residents and some other Evenks

and members of their families in Kazachinskoe and Magistralny) will have the right to pass along the pipeline and service roads to get to the village and to hunting and fishing grounds. The details have not been discussed yet. Meanwhile, in the initial phase of operations at Yaraktinskoe oilfield, people in Tokma were promised that they could use the oil road on the basis of an identity cards issued only to permanent residents of the village. This way, uncontrolled driving on the roads would be prevented. However, this promise has never been put on paper and was not fulfilled (Illmeier and Krasnoshtanova 2022).

## Discussion and Conclusions

Social interactions and networks between different groups in the study region evolve and develop around informal roads. These entanglements in manifold ways shape the everyday life of local communities, development prospects for extractive companies, and recreational activities of travelers.

For extractive companies, most important is the level of infrastructural development of the area, allowing them to gain access to territory that was previously "inaccessible." Seismic lines clearings, forest roads, power grid lines, and service and access roads overlay one other, intersecting and supporting each other. While extractive industrial development as the major power behind informal road network development very much resembles colonial relations, even among extractive companies there are differences in approach between the various actors, be it a regional private company like Irkutsk Oil or a Chinese company like Eurasia. For recreational travelers these informal roads mean access to other kinds of resources—fisheries, imagined remoteness.

For local communities, roads bring a better—but still somewhat ambivalent—connectivity with contradictory effects. Also, it would be a simplification to consider local residents victims of infrastructural violence: they actively engage with the constantly transforming infrastructure, negotiating their mobility and connectivity according to their needs and desires, and sometimes even contributing to its development. Informal roads ease the life of remote communities through improved opportunities for supply and care for personal relations, but at the same time they draw an increasing number of outsiders into previously inaccessible regions, posing a potential risk to crucial resources (increased danger of forest fires, littering, poaching). Informal roads also strengthen involvement in global market mechanisms, increasing the

dependency of local people on external structures and reducing local autonomy.

For the users, it makes no difference who maintains and owns the road as long as it is accessible. However, informal roads also change power relations: by controlling access to infrastructure, infrastructure maintenance companies can, on the one hand, address some urgent issues, such as wildfires (there are far fewer wildfires in the zones controlled by oil companies), while on the other hand, they may have additional leverage in negotiating corporate responsibility and benefit sharing with local and Indigenous communities. On the one hand, this is manifested in lingering Soviet legacies of paternalistic relations, while on the other, it is dictated by the logic of profitability. Local communities are not interested in unlimited connectivity, but want to control the level of connectedness and the intensity and quality of social interaction this entails, for which informal practices provide some space. Utilizing the notion of informal roads, we draw attention to the complexity of existing social and infrastructure relations where existing theories should be once again critically examined.

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**Vera Kuklina is a Research Professor at the Department of Geography, The George Washington University. Her research interests include urbanization of Indigenous people, traditional land use, socioecological systems, cultural geographies of infrastructure, and remoteness. Her research is based on field studies and collaborations with local and Indigenous communities in the Baikal region, the Republic of Sakha (Yakutia), northern Mongolia, and Alaska. She is the author of about eighty publications, including papers in *Arctic Science, Environmental Research Letters, Polar Science, Polar Record,* and *Geoforum*. Email: kuklina@gwu.edu; ORCID: 0000-0001-8618-8507.**

**Gertraud Illmeier received her MA from the University of Vienna in Eastern European History and Social and Cultural Anthropology. From 2014 to 2020 she was a student collaborator with"CoRe—Configurations of Remoteness (CoRe): Entanglements of Humans and Transportation Infrastructure in the Baikal-Amur Mainline (BAM) Region," conducting ethnographic fieldwork in Eastern Siberia. In her MA project, she explored the affordances of industrial (transportation) infrastructures such as seismic lines for mobile northern livelihoods. Her research interests include human–nature relations, Indigenous land use and ontologies, space/place/landscape, remoteness, and climate change adaptation with a regional focus on the Circumpolar regions. Email: a9002954@univie.ac.at.**

**Natalia Krasnoshtanova is a Senior Researcher at the V. B. Sochava Institute of Geography of the Siberian Branch of the Russian Academy of Sciences, candidate of Geographical Sciences (PhD) in the field of human geography. She conducts research on regional development, transportation infrastructures, and informal roads in Eastern Siberia, and the impact of industrial development on Indigenous communities. Email: knesun@mail.ru; ORCID 0000-0001-7643-6693.**

## Notes

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