

Discourses on the Taiga: The State, Geologists and Nature in the Soviet Union¹

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Abstract

The swift and dramatic change in the social order of Soviet Russia which took place after the revolution in 1917 brought with it a radical shift in the character of interactions between society and the natural environment. This article combines two perspectives on the historical and social constructions, underlying relations with nature in Soviet society. Different discourses on nature were analysed taking the history of geology in the Soviet Union as a starting point: the hegemonic discourse of the state and ways in which the environment is being embodied, valued and experienced in an array of social practices in a particular social milieu. Soviet policy not only transformed the geological profession from a small group of intellectuals into a booming field of applied science. State ideology also celebrated the geologists' colonisation of nature, putting them on a par with cosmonauts and pilots. The hegemonic discourse defined nature as meaningless unless it was exploited for human needs. According to this view different branches of science were required to serve in the 'conquest of nature'. The everyday experiences of the geologists, however, looked remarkably different. During month-long stays in the natural environment, the official doctrine gave way to other perspectives: hardships and starvation, unexpected encounters with men and beasts, and the quest for discoveries in spite of all difficulties. Geologists also enjoyed nature as visual harmony, and even found a small corner of freedom in nature as the 'taiga laws' of behaviour, friendship, and hospitality created an honest atmosphere around the campfire. For Soviet geologists, nature was not simply the 'house of treasures' that official rhetoric cherished but also an archipelago of freedom.

*While changing the course of history, it
is impossible not to affect the landscape!*
Soviet poet A. Zharov (1904–1984)²

In every society, nature is not only an irresistibly material environment but also a subject for interpretations and reinterpretations. In the Soviet

Union the official ideology of the conquest of nature co-existed with the individual's ventures for liberation from state control in 'wild nature'. In this article I consider the social production of interpretations of nature in politics and everyday life in Soviet society. The article intends to provide such an inquiry by focusing on geologists, a group that is especially well suited for a case study on the constructions of nature in Soviet society. Most importantly, it is the duality of the Soviet geologists' public image that deserves attention in this respect: s/he is seen as both a vanquisher and a relative of nature. 'Hold on, geologist, hold out, geologist, you are the brother of wind and sun'—these are the words of a popular Soviet song.³ Voices of this kind ascribe a special kinship with basic symbols of nature, such as the wind and sun, to the community of geologists while at the same time celebrating them as representatives of humankind who explore nature with the intention of finding the sites and the means for building future industrial centres, while also belonging to the world of rational scientific inquiry in its professional identification. In fact, geologists became a cult figure in Soviet society in the 1960s, standing on a par with cosmonauts and pilots. Romanticising exploration and exploitation of nature was a characteristic of the Soviet epoch.

Soviet geologists were among the main heroes in the exploration of new territories. In Soviet newspapers, films, songs and books they were described as pioneers and trailblazers, fortitudinous men and (sometimes) women. In official representations of their professional work, special attention was given to descriptions of their struggle with nature and constant overcoming of difficulties. The field life of geologists was represented as an everyday act of bravery in the taiga or tundra, to put them in the service of human needs and purposes. At the same time a geologist was seen as a brother of the elements, a wanderer, a romantic: one who is close to the world of nature. In this article the profession serves as a lens for analysing different interpretations of nature and ways of interaction with the natural environment in Soviet society.

Two different types of sources (representing different perspectives) were used here: first, the hegemonic discourse on nature was reconstructed on the basis of newspaper analyses;⁴ second, autobiographies of professional geologists and fifteen interviews with geologists who had worked in expeditions during Soviet times provided information about the geologists'

interpretations of nature.⁵ These materials allow an analysis of the different dimensions of interaction with the natural environment: What did the conquest of nature mean and how was it implemented in practice? What kinds of alternatives to the hegemonic discourse about nature existed in the USSR? In what ways does the material environment constitute social reality? As distinct from the state view on nature as a 'senseless' storehouse full of resources, the geologists' views of nature were much more diversified, filled with events, meetings, values and meanings; they encompassed encounters with bears and the Chukchee,⁶ the military and the banished, landscapes, scientific discoveries, hunger, and the death of friends.

Understanding nature: A theoretical perspective

The concept of 'nature' is possibly one of the most complex and polysemantic in philosophy and the social and natural sciences. Our views of nature are subject to considerable historic transformation. In particular, the dichotomy of nature/culture, which seems to be so self-evident, developed in the 16th to 17th centuries, when the *mechanistic view of nature* acquired currency in both philosophy and science. The mechanistic view of nature assumes:

(...) that nature can be divided into parts and that the parts can be rearranged to create other species of being. Facts or information bits can be extracted from the environmental context and rearranged according to a set of rules based on logical and mathematical operations. The results can then be tested and verified by re-submitting them to nature, the ultimate judge of their validity (Merchant 1980).

According to the philosopher R. Williams, the detachment of a human being from nature became a prerequisite for the origin of practices preconditioning an instrumental view of nature: *nature as a set of passive objects to be used and worked on by people* (Williams 1972). Prior to the emergence of this view, nature had been considered more as an organism, the heavenly essence, an integrity. The mechanistic view dominates in the contemporary sciences as well.

The traditional strict division of the world into 'natural' and 'social' domains has been assailed in the past few decades by both social sciences and by environmental and feminist social movements.

To be defined as 'nature' (...) is to be defined as passive, as non-agent and non-subject, as the 'environment' or invisible background conditions against which the 'foreground' achievements of reason or culture (...) take place. Is to be defined as (...) a resource empty of its own purposes or meanings, and hence available to be annexed for the purposes of those supposedly identified with reason or intellect (Plumwood 1993, 4).

First, the discrimination between the human being and nature is considered to be a source of the present environmental crisis. Second, the critical analytics claim that the very concept of 'nature' is polysemantic, and that 'natures' are multiple and constantly being socially produced (Macnaghten & Urry 1998).

From this perspective, the various concepts and views of nature are considered as historical and social constructions (e.g. Macnaghten & Urry 1998; Merchant 1980). Conceptual frames of the place of humans in the natural world and relations of human beings to nature are determined by cultural norms, social ideologies, philosophical ideas, developing in a concrete society. In every society individuals form concepts of nature and their own relation to it, based on the ideas and norms of a society in which they were born and socialised. The idea of the social construction of nature is criticised by supporters of the actor-network theory for ignoring the material world, which consists of a plenitude of organisms, entities, artefacts, technologies participating in social relationships. Within this perspective, attention is paid to interactions between humans and non-humans (e.g. Callon 1995; Latour 1998; 1999).

The relations between society and nature, the interaction between the human and non-human constituents of the world in a historic perspective are considered within the framework of environmental history. The literature on the environmental history of Russia and the Soviet Union is still quite limited. Douglas Weiner carried out important research on the history of natural reserves and nature protection organisations in Soviet Russia (Weiner 1988; 1999). Publications by Paul Josephson, Bernd Stevens Richter, and David Turnock also pay attention to some aspects of the Soviet Union's environmental history (Josephson 2002; Richter 1997; Turnock 2001). Given the size of the Soviet Empire and its importance for world history in the twentieth century, however, there is a need for more intensive investigations in the research field of Soviet environmental history.

The general methodological framework of this article is the methodology of discourse analysis, which was already used by other authors for researching the nature/society border and analysing the complicated constellation of the ideas and practices on nature (Dryzek 1997; Eckersley 1999; Eder 1996). The concept of discourses on nature was used by such authors as Paul Macnaghten (1999) and Klaus Eder (1996). The concept comprises generally accepted systems of ideas on nature, the meanings of nature and practices of interaction with the environment. Discourse analysis is used for research into what people say about nature, what they do, as well as mechanisms for the production and reproduction of discourses. Discourses on nature are interconnected, interdependent, and correlated with social and physical processes: power, social relations, institutions, beliefs, and material practices, which are being crystallised into material landscapes. Some of the discourses become hegemonic and thus define what should be considered as truth, knowledge and common sense (Foucault 1972; Fairclough 1995). The social world is rooted in a natural, material environment and comprises a multiplicity of parallel developments of different interpretations of nature. It is the hegemonic discourse, however, that has the power to shape the future and transform the material space.

In the next chapters of the article I analyse the hegemonic discourse on nature developed in Soviet society, and then go on to reconstruct alternative interpretations of nature which were characteristic for the professional community of 'Soviet geologists'—one among many social milieus of this society.

The State: Conquering nature in the USSR

*He proudly steps on the pole, and river courses change,
the high mountain peaks move, a Soviet everyman.*

From a Soviet song (1936)⁷

Slogans on the conquest and subjection of nature were among the most important ideological frames of reference in the Soviet state. The idea of human dominance over nature, and the call for human beings to subdue, modify and reconstruct a chaotic and meaningless nature in order to regulate natural processes supplemented the overarching goal of a total

reconstruction of the social order, thus creating an intrinsic link between state policy and the ideology of conquering nature in the USSR. The different branches of science were required to serve this goal, and analysis of the development of science in the Soviet Union can provide a basis for understanding the Soviet ideology of the conquest of nature. After a few remarks on the institutional development of geology in the Soviet Union, this article will present a discussion of the hegemonic and other discourses on nature and geologists.

Soviet industrialisation and its impact on geology

The exploration of unknown territory had long been a standing feature in the history of Tsarist Russia, as the countless explorers of the period readily show. Exploration gained a new urgency, however, with the inception of a massive industrialisation programme in the 1920s, and the Soviet state authorities set out to explore the distant territories of the country in order to secure the resources for industrial development (Grigoriev 1947). Weakened by the long civil war and the devastation it had brought, the strategic aim of the Soviet state was to eliminate the necessity to import mineral resources, assuming that resources of this kind could be found in abundance in the country's vast unexplored territory. Geologists were the vanguard of exploration of the new lands. They were often the first to come to places where, depending on the results of their investigations, a new industrial complex could arise.

This situation, and especially the forced character of development, defined the numerous features of the science of geology in the USSR. In institutional terms, geology started in Tsarist Russia in 1882, when a decree of Alexander III created a Geological Committee (Petrov & Zhamojda 2002). Interestingly, this occurred only three years after the creation of the Geological Survey in the United States of America (Rabbitt 1989). Before the revolution of 1917, there were also a number of geological associations in Russia, usually groups of predominantly male intellectuals who belonged to the scientific elite of Russian society. After the revolution, geology quickly turned into an applied science, with close connections to industry and the military. To be sure, the military-industrial complex

had great influence on the development of geology and other earth sciences in other countries as well, but the Soviet Union probably stood out in the speed of the transformation. Shortly before the revolution, the Geological Survey of Russia comprised a total of 72 persons, resulting in an urgent need for qualified geologists (Grigoriev 1947). In order to boost education, many rabfacs (specialised courses for workers), technical schools and university departments were organised by Soviet authorities. Special scholarships and high salaries served to increase the attractiveness of geology.

The distribution of graduates was centralised, and depending on the state's need for qualified personnel, a graduate of any institution could be sent to any part of the country. It is noteworthy that this was a typical feature of the Soviet state that caused the category of space in the USSR to be transformed completely. Any citizen of the country could be sent to any place, and often was, resulting in a rapid rise in both geographic and social mobility. The state monopolised the power to transform the territory and to distribute specialists in accordance with its needs.

Different types of geological surveys were conducted systematically on the entire territory of the country beginning in the 1920s, resulting in a constant expansion of the institutional structure of geology. As a result, the geological branch comprised more than 10,000 specialists with higher education in 1947, a figure that does not include sub-professionals and technical workers (Grigoriev 1947). By the early 1950s, geologists of the Soviet Union accounted for about one half of the total number of geologists in the entire world (Graham 1998). The state exercised strict control in defining the types of mineral resources to be found, the regions where expeditions had to take place, and priorities of work. The geological surveys focused predominantly on the far north of the country, Siberia, and the Russian Far East. With the data obtained during field expeditions (where the majority of the Soviet geologists spent about 5–6 months every year), the 'white spots' on the map continued to shrink, and countless deposits of mineral resources were struck and tested. Given the environmental conditions of all regions explored, however, it becomes clear that there was a need for an enthusiastic corps of field workers. Agitation was thus started for the 'struggle with nature' seeking to incite people to be enthusiastic about being sent to remote regions to 'master the land'.

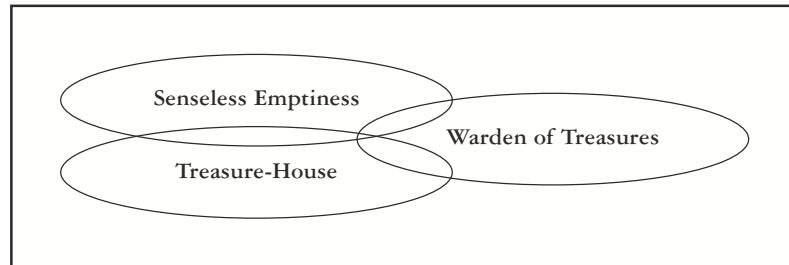
The hegemonic discourse on nature in Soviet newspapers: The senseless taiga

The Soviet hegemonic discourse on nature was a creation of revolutionary romanticism and pathos. Nature was a metaphor for the struggle with and the ultimate conquest of the old order and the construction of the new one. With that, nature was defined as wild and hostile. Interpretations of nature in literature and newspapers during the first years of the Soviet regime often carried allusions to revolutionary rhetoric and romanticism; they became tales of revolutionary struggle, of renovation and reconstruction. After the Second World War, notions of 'war with nature' and 'conquest of nature' became more prominent. One could argue that romanticising the struggle with nature is a general characteristic of large industrial countries like the Soviet Union and the United States. Both countries favoured a way of understanding and exploring nature that one might call 'colonisation of nature'; as distinct from the 'civilisation of nature' that took place in Western Europe over the ages. While civilisation of nature envisioned a domestication of 'nature as my backyard', colonisation sought a conquest of 'wild, alien land'.

Until the 1960s, the hegemonic discourse on nature was practically unchallenged; Soviet newspapers were full of calls for action against nature during these years. The ideas of man's power over nature and the necessity of struggle with nature were implicit in the vast majority of articles, and newspapers routinely carried glowing descriptions of drastic alterations of the environment corresponding to human needs. In fact, the style of writing about nature became homogeneous to an extreme extent: when going through the newspaper articles over the decades, one would think that they were all written by the same author. Articles on the issue routinely adopted a pathetic style, used a certain set of metaphors and standing phrases, and even employed similar grammatical constructions. The representation of nature in Soviet newspapers is remarkably similar to that in Russian fairy-tales: The Soviet people appear as the symbolic heirs to the Russian fairy-tale hero Ivan: they always win in struggles with insidious elements and life's rigors. This is particularly important in the articles on geologists, the Soviet heroes of the 1960s. Stories on the geologists' work are commonly narratives on the exploration of, struggle

with, and conquest of nature. Most prominently, nature was interpreted as a *Senseless Emptiness*, a *Treasure-House*, and a *Warden of Treasures*. A few excerpts from newspaper articles will serve to illustrate these discursive lines.

Figure 1. Interpretations of nature in the Soviet hegemonic discourse on nature



Nature as Senseless Emptiness. According to the discursive line, nature does not in itself make sense: it is devoid of any inherent rationality, let alone intrinsic value. It gains its meaning only through the activity of civilised man, who lends character and meaning to a certain locality through the construction of different objects. From this point of view, natives living in these places and non-human beings did not have their own rationality and were thus subject to unification or/and usage.

In accordance with this general idea, newspaper articles describe nature as undifferentiated, dark, and senseless. Here is a typical example:

A uniform and dark taiga was everywhere around; this was a kingdom of impassable swamps and gnats. (...) How much time will it take for people to get here, to deepen riverbeds and dry the swamps, to clear the taiga, to build roads and cities.⁸

Soviet man is a creator, the Lord of the land, he changes space to his convenience and thus animates it, awakes sleeping, passive nature, creates variety, brings light. Another example is the following:

In the evening, sitting around the campfire with its glowing coals, the discoverers were talking about the future, about the life that Soviet people will bring here, to the 'land of eternal silence'.⁹

A huge amount of energy was needed in order to awaken nature from its sleep. The discourse of conquering nature was thus most frequently directed to the youth capable of answering the call of the authorities to go to distant lands to explore new territories. Articles juxtaposed the wild and desolate land with the enthusiasm and energy of young people:

Young scientists in the search for new deposits of minerals needle their ways in the taiga, mark out places for future cities, establish production of the most valuable metals. Their labour transfigures the formerly unsettled, neglected land.¹⁰

The titles of many newspaper articles reflected the Soviet cult of everything 'new' and 'first': '*They come first*', '*We wish you new successes, discoverers!*'¹¹

Nature as a Treasure-House. The view of nature as a house of treasures was closely linked with the projection of it as senseless emptiness. In a way, one could combine the two discourse lines in the oxymoron of 'rich emptiness'. In other words, while many articles stressed the emptiness of nature and saw territory as meaningless until it showed traces of human activity, they also depicted nature as rich with natural resources that were waiting to be exploited.

A way is traced on the map only. Here, in the taiga there are only animal paths, only wild thickets and swamps, and clouds of mosquitoes. It is necessary to go through all this to find a treasure-trove carefully hidden by nature. For the sake of this the discoverers go through the taiga, and they are called 'geologists'.¹²

In Soviet journalese, 'treasure', 'treasure-trove', and 'storehouse' were the common metaphors for describing natural resources. Geologists were finding treasures for the sake of the country, treasures which were very hard to come by since they often had to be recovered from natural forces. The geologist went without roads, but roads—the main symbol of the territorial exploration by humans—and cities were built just behind him.

A typical feature of the representation of nature in Soviet newspapers is its wildness. The absence of roads serves as illustration of this characteristic. Nature is often referred to as 'untrodden' and 'impassable' in reports on geologists. The implicit logic was that where there were no roads, there was no life either. Geologists give meaning to a place, with life starting after their arrival.

They go in their life on untrodden paths, through the intrepid taiga and impassable deserts. Where they pass, life starts; earth gives its treasures to people.¹³

Figure 2. Geologists as heroes of newspapers



Nature as a Warden of Treasures. In spite of the fact that nature was usually portrayed as devoid of senses—i.e. deaf, sleeping, and silent—newspapers still depicted it as an actor. Appearing as an active agent, nature was in a position to hide and guard its treasures, and to fend off human intrusion.

High and deep, in the very heart of the mountains nature hid one of its treasures, molybdenum. It was not easy to get to, and it was even more difficult to wrest it from the stone storehouse. But there came to the mountains the bearded people. They built roads in the mountains, constructed walls of shop floors and houses, and snatched off the locks from the storehouses. Humans turned out to be more durable than the most durable stone. And in reward for their insistence, nature gave to people its treasure; valuable ore started to flow in powerful streams.¹⁴

As a scientist, the geologist longs for discovery: he wants to know. Nature opposes him and keeps its silence:

The earth setting its teeth kept its secrets. He, tall and bearded, with his eyes bright and lustrous, he called out to the calm and stately river: 'You, tell me where the treasure is buried? Tell me!' But the Ob' river kept its silence.¹⁵

The beard serves as a symbol of the geologist, while the glitter in his eyes is characteristic of the scientist. He will surely find oil; he is a hero, trailblazer and explorer, he just cannot fail to defeat the resistance of wild nature. After all, man is a much more powerful actor than nature. Nature only hides or guards, while Soviet man invades, conquers and builds.

The treasures of the Yakutia entrails were guarded by impassable mountain chains, taiga, frost, pergelisol, saults on rivers for centuries. (...) the Soviet people have conquered nature.¹⁶

Based on this discussion, it is possible to draw some conclusions on the dominant interpretation of nature in the Soviet Union. The hegemonic discourse depicted nature as a passive, meaningless matter lacking a creative constituent. It saw the Soviet people as totally detached from the world of nature, aspiring to get free from dependence on natural processes; the Soviet people possessed the ability to turn the chaotic, elemental, and often alien environment into order. In this perspective, nature is not simply an entity in need of being researched, and then used to satisfy human needs; in the Soviet interpretation, nature is also an alien that needs to be fought and conquered. It is only in this fight that man can find his true self, and become a Superhuman, a Lord governing the natural world and himself/herself.

In evaluating this hegemonic discourse, one can characterise the dominant Soviet view of nature as simplification, reduction of variety to homogeneity. The basic aim of a state is to control and to use, thus ignoring any local knowledge, meanings and significances. A variant of the modernist mechanistic view of nature was implemented in the USSR (see the theoretical part of the article), which the American historian James Scott called 'high-modernist ideology':

A strong, one might even say muscle-bound, version of self-confidence about scientific and technical progress, the expansion of production, the growing satisfaction of human needs, the mastery of nature (including human nature), and above all, the rational design of social order commensurate with the scientific understanding of natural laws (Scott 1998, 4).¹⁷

The ideology of conquering nature was far more than ‘just words’. It is a characteristic of authoritarian states that they meet few obstacles in the implementation of ideological concerns. It is thus important to realise that the ideology of conquering nature was intimately connected with the massive transformation of the country’s landscape over the 74 years of Soviet power. The forced industrialisation in the decades after the revolution of 1917 transformed the country from an agricultural economy to an industrial one. However, the precarious position of many industrial (often mono-industrial) cities is more evident in hindsight, as many of them have basically been hanging in a state between life and death since the collapse of the Soviet Union. Cities dependant on one type of enterprise often thrived in Soviet times, while nowadays most of them are suffering from economic depression and poverty. Numerous territories in today’s Russia are considered ‘environmental disaster areas’—another consequence of the hegemonic discourse of conquering nature. It is obvious that the social construction of nature in the Soviet Union entails perceptible and visual consequences.

Geologists: The explorers' everyday life

Representations of nature produced by a hegemonic regime do not provide an exhaustive picture about how people interacted with nature in everyday life. Authoritarian governments always seek a monopoly of producing meaning, but fortunately, they have proven unable to control this process in its entirety. Social actors, who are active users and producers, do not simply adopt the hegemonic discourse but rather incorporate them into a complex set of meanings and representation that includes personal goals, life strategies and tactics, and everyday practices as well.¹⁸ Soviet geologists, being called upon by the state to master distant regions, have

only slightly shared the conquering pathos of the Soviet hegemonic discourse on nature. They have developed their own interpretations and meanings of nature. The following ethnographic analysis of the geologists’ profession seeks to contribute to a better understanding of the interpretations of nature and interaction with the natural environment in the USSR.

Peculiarities of geological work in the USSR

According to the Soviet hegemonic discourse, geologists were the pioneers, trailblazers, who went where ‘there is nobody and nothing’. What does ‘nobody’ and ‘nothing’ mean and how did people experience it in their everyday lives? A distinctive feature of geological work in the Soviet Union was the combination of creative scientific work and the different kinds of physical work on geological expeditions. For the geological profession, the field season could take up to eight months, and expeditions often took the geologists into remote regions. Lengthy stays of a small number of people in a natural environment exercised a huge influence on the character of social relations in the professional community, contributing greatly to the formation of a powerful professional subculture. To be sure, expeditions were not entirely beyond the reach of civilisation since geologists were interacting on a regular basis with a number of local actors during field expeditions: local authorities, local inhabitants (sometimes indigenous population), former and current prisoners, the military and border guards. However, expeditions had encounters with native Chukchee people and bears with about the same frequency, and it is interesting to note that such encounters were often registered in the field diary.

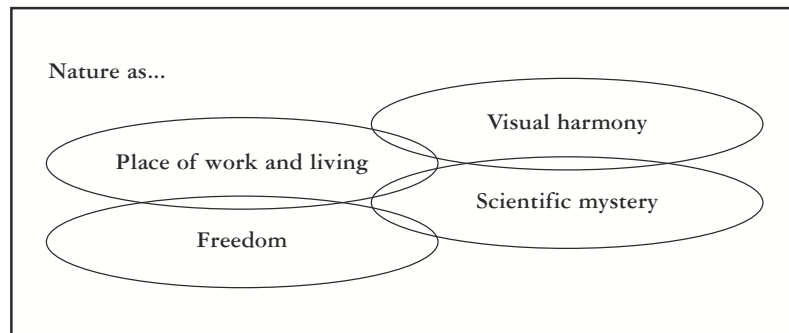
The memoirs of Soviet geologist Vojnovsky-Kruger provide a typical description of geological field work:

Sometimes it was difficult. Sometimes we starved and froze. We were extremely tired. It was difficult not to know for months what was happening in the world, what was happening at home. But all this was compensated by our interaction with nature, wonderful sleep to the sound of the mountain river, the morning wash up in cold river water. And, most importantly—by interesting routes, discoveries and findings, which offered the fascinating scientific challenges and puzzles that resisted solution (Vojnovsky-Kruger 1987).

In some respects, this quotation summarises the essence of life on a geological field expedition. One can describe the main components of a geologists' life by four words: hardships – nature – science – people.

A geologist's life in the Soviet Union was typically divided into two different parts: 'field life' and 'city life', with the key feature of the former being the month-long stay in a natural environment. In general, it needs to be stressed that there was a wide array of ideas about nature and interaction with the natural world within the geological community. Of course, the hegemonic discourse on nature was also present at the micro-level, but it overlapped and mixed with other notions and interpretations. One can distinguish a number of different views of nature in the everyday life of a geologist. Some of them were conflicting quite a bit, and yet it is important to realise that divergent interpretations of nature could get along easily in everyday life. From an analytical standpoint, one can distinguish four parallel discourses on nature in the daily life of a geologist.

Figure 3. Interpretations of nature within the geological community



Nature as a scientific mystery

From a scientific view of the natural world, nature is divided into parts, analysed, and its laws are identified—the interconnections and objective laws between separate observed facts. The scale of geological thinking is measured in millions of years; geologists strive to restore the picture of

geological processes, which took place on the Earth in the remote past, by reconstructing it with scientific methods of analysis.

The most obvious part of the geologist's everyday life was the conduct of scientific research: the reconstruction of geological processes that had taken place in a given location over time. Geologists routinely kept diaries of observations in the field, where they described their findings in geological terms. Geologists made drawings and collected rock samples, carefully documenting their locations on a map, together with initial descriptions. The samples were to be analysed thoroughly later on under stationary conditions; this was a typical 'city' activity during winters. Based on all these findings, geologists wrote their project reports and developed their theoretical models.

Without the aid of laboratory tools, geologists often encountered difficulties in the field when attempting to interpret data. What was more, drilling work for the taking of samples was difficult and expensive, resulting in a limited use of this option until the material and technological base of geological institutes was strengthened in the 1970s. Geologists thus often had to contend with what they called 'rock outcroppings', i.e. unmixed mountain rocks visible on the surface. In swamps and lowlands, where crust rock exposures were usually non-existent, their situation was even more difficult. Many geologists thus said that simply collecting pieces of evidence did not suffice for successful field work: to become a good geologist, one needed a 'geological imagination' as well, the ability to assemble findings on the basis of an incomplete and somewhat ambiguous set of evidence. The following quotation from the memoirs of Mihajlov provides a fitting demonstration of what 'geological imagination' meant in field work:

The local rocks were already familiar to me. Certain interconnections between them started to come to light. I wondered, why particular minerals appear in the same combinations in a strictly determined order—in 'mineral associations' or 'mineral paragenesis'. Moving on from trench to trench day by day, I tried to draw the general picture, to identify certain principles (Mihajlov 2003).

Figure 4. Primary analysis in the field



An important category that was related to this discourse and connects it to the hegemonic discourse on nature was discovery. The notion of discovery combined the scientific desire to understand nature with the interests of the state in identifying deposits of valuable minerals and thus locating natural resources. Therefore, making a discovery led to a higher status among fellow scientists and material rewards at the same time, with the USSR being quite generous regarding the latter. As a result, Soviet geology abounds in stories of discoveries being concealed or stolen by others, or of those involved in the discovery work suffering prosecution or repression.

Nature as habitat and place of work

From this view, nature was considered as the lived space, the material setting for the geologist's everyday life during a field expedition. Work was the main content of life during this time, and all work was directed towards fulfilling the expedition's task. Unlike the indigenous people, geologists did

not see the tundra or taiga as a setting for their entire lives. The geologist's routine life in the field differed significantly from that in the city. It was characterised by mobility, a temporary status, and a set of specific practices. The routine on a geological expedition and the way that human practices interacted with the natural world can be considered under four general headlines: encounters, local knowledge, living conditions, and hardships.

Encounters

During an expedition, geologists regularly interacted with a number of actors. Some contacts took place during the preparatory stage of an expedition, such as meetings with local authorities which the geologists had to inform about the work they planned and their arrival to the expedition site. This brought geologists into contact with regional secretaries of the Communist Party, the police, and the border patrol in some areas. Geologists frequently requested the officials' cooperation during these meetings. Furthermore geologists were often dependent on the help of local authorities to ensure food supply and transport.

During field work, geologists routinely met with a wide spectrum of local actors:

- *Local residents*: mainly hunters and fishermen, who were sometimes representatives of the local indigenous population. These meetings could occur unexpectedly and at a great distance from civilisation, as indigenous people often moved from one place to another during the summer in pursuit of their prey.
- *Inmates*: geologists sometimes hired former prison inmates for physically demanding work, and sometimes worked with current inmates if there was a GULAG camp in the area, which was frequently the case in Siberia. As one geologist noted in his memoirs, 'In geological parties, trenches were dug out by inmates so it was impossible to avoid communication with them' (Mihajlov 2003).
- *Employees of the NKVD* (People's Commissariat on Internal Affairs, the Soviet secret police): they sometimes helped geologists to solve transportation problems and sometimes guarded inmates who were

assisting the geologists. In an interview one geologist notes in retrospect, 'In those days Siberia was packed with GULAG camps'.

- *Other geologists*: by the 1950s, the Geological Service of the USSR had evolved into a highly developed structure, with departments and offices in every region of the country. As a result, geological teams often crossed each others' paths. Geologists exchanged information on these occasions and sometimes helped out with food. Of course, there was also some competition between teams at times.
- *Animals*: the most memorable were encounters with bears, about which a number of unbelievable stories and jokes circulated among geologists. Bears were feared and respected, and geologists saw them as the lords of the taiga. If geologists hunted a bear, they did so only with great caution and after careful preparation. In the case of success, they took a photo of the trophy which became an object of special pride for the group. However, geologists also met elk, deer, hawks, moose, foxes, partridges and other animals during expeditions. Whether these animals were hunted or observed depended on the group, individual personalities, and the situation of the food supply.
- *Tourists*: depending on the region, geological expeditions could encounter backpacking tourists. They sometimes helped them with food, matches, transportation, and maps.
- *Tramps*, a category of people that is easily overlooked: they lived in the woods and occasionally showed up at the geologists' camps. Out of necessity, tramps were also hunters or fishermen, but they were usually not native people; among the tramps were often escaped inmates of the GULAG. Geologists were generally afraid of this group.

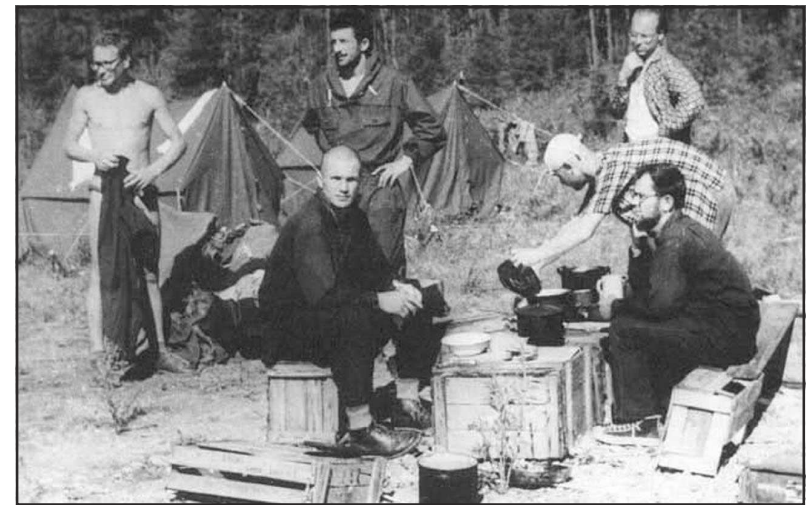
Local knowledge

Interactions with local people were of great importance to geological expeditions. Local inhabitants often possessed an intimate knowledge of the area, an invaluable resource for geologists. Geologists hired locals as guides for expeditions and as transportation specialists since locals were able to work with reindeer and dogs. For the local population, a geologist was usually a representative of the state who could draw on the state's resources, and locals were eager to tap these resources in exchange for services or information.

Living conditions

Organising a way of life in the field was not an easy job. The site of the camp often moved on a daily basis, requiring a mobile organisation of everyday life. In some cases, a tent and a sleeping bag counted as great comfort; they were used only at the base camp, from which teams departed for hikes that varied in length from several days to several weeks. On these hikes, geologists often did not take tents and sleeping bags with them as they slept near the campfire on a sleeping place made of branches, turning from time to time from one side to the other to keep warm. Considering that the field season lasted at least from May until October, these were tough living conditions indeed. Since it was impossible to move from one place to the next with heavy luggage, leaving 'unnecessary goods' behind was often an essential requirement; geologists usually carried only food and their equipment. Many geologists brought diversity to their rather unexciting food supply through fishing and hunting. In the years after the Second World War, this was practically a necessity as geological teams received only scarce supplies during this period. Also, hunting and fishing supplied the geologists with food that they did not have to carry with them from place to place.

Figure 5. Cooking under field conditions



Hardships

In the memoirs and reports of geologists, their work appears as a constant battle with difficulties. Supplies and transportation were essential for every geological expedition, and both were often difficult to come by. Especially in the early years, these issues were often dealt with on an ad-hoc basis and with the help of locals: the directors of kolkhozes, fishing cooperations and cooperatives, the military and camp authorities. At the beginning of the field season, geologists spent a significant amount of time on preparation work: the search for appropriate means of transportation and staff. Depending on local conditions, the former could be horses, reindeer, mules, boats, dogs, and sometimes camels. Since the 1960s, the use of cars, helicopters, all-terrain vehicles and aircraft became more common. It is worth quoting one interview recollection of transportation problems on a particular expedition that used horses as means of transport: *'The horses were overloaded, they could not walk and fell. We had to help them getting back up. Mosquitoes, gnats were eating us, and them. We did a lot of stops. Oh God, what pain to them! And to us!'*

Many stories and reports of geologists deal with delays in the transport back home at the end of the field season. For the members of an expedition, this meant distressing waiting periods, inactivity, a growing shortage of food and uncertainty about rescue. Hunger is an omnipresent subject in interviews and memoirs; practically every geologist experienced hunger to a more or less serious extent. In these situations, geologists described nature as cruel and indifferent towards their own suffering.

Nature as visual harmony

This perspective on nature assumes the presence of an observer who admires the visual harmony and beauty of a certain place. Usually, these observations take place on a hill that offers a panoramic view on the area. Geologists often include an account of viewing a stunning landscape from the top of a mountain, alongside their tales of the long and difficult journey to that destination. In these cases, the beauty of nature serves as a compensation for the strains of the voyage and a reward for the exhausting work of the geologists. In many cases, these observations also betrayed

their professional inclinations, and the delight over the beauty of nature mixes with geological observations and presumptions about the area's natural history, as in the following quotation:

Emerald sea, green volcanoes, sea terraces at various levels in bays, beautiful Trias conglomerate outcropping, sandstone with enclosed weathering produced unforgettable impressions (...) The shore of a bay that extends for several kilometres is framed by beautiful outcroppings of white two-mica granite. At the shore there is a gorgeous white beach and a beautiful lagoon lake. And the water in the bay is clear and of greenish-blue colour! Here we were alone with the seagulls. On the western shore an escarpment lined out, which had risen from sea level as a result of the sea's regression (Organova 1998).

Geological field expeditions often attracted artists and writers during Soviet times. Driven by the chance to see beautiful natural areas, they were hired as working personnel in geological parties, thus giving them the opportunity to travel a territory that otherwise would have been inaccessible to them. In his song 'Behind the fog' of 1965, Yury Kukin, a famous bard in Soviet times, who had worked with geological expeditions for several seasons, described some reasons why people chose the geological profession. He portrayed himself as an original who joins an expedition for fog, mountains, firs, and the smell of the taiga. *'Some people travel on business. Some people look for money, or an escape from boredom and debt, but I am going to search for the fog, just for the fog, for the fog and the smell of the taiga.'*

Nature as freedom

This interpretation of nature was an indirect result of the persistence of the Soviet system for more than 70 years. The suppression of civil liberties, the absence of public space for criticising the powerful, the state's persistent attempts to control the private life of citizens turned nature into a sphere of freedom. Going out into nature offered a chance to escape from the control of the system, if only for the duration of the expedition. In interviews and memoirs, geologists routinely point to the absence of snoopers in the field: there was no one listening in around the campfire, there were no spies, and everybody was honest. Even more, one of the hallmarks of geological

expeditions was the absence of bosses: at the campfire, everyone was equal, and everyone ate from the same pan. At least during field work, geologists were free to work almost without authorities.

Figure 6. A free campfire



The campfire thus stood as a symbol of social equality during the expedition, and a symbol of trust and honesty. By putting a physical distance between themselves and the authorities, geologists enjoyed an escape from state control, thus fostering a type of quiet protest against the system that has become known as ‘internal emigration’. Becoming a part of nature and participating in the life of a small collective gave geologists a feeling of freedom from the ‘things not true’: from cities, the petty bourgeoisie, and boredom. Nature served as a place for confirmation, a confirmation of themselves and others. For many geologists, embarking on a field expedition also meant embarking on a search for uniqueness, honesty in relationships, and real friendship.

Table 1. An overview of discourses

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|---|
| <p>Soviet hegemonic discourse on nature <i>Ideology of the conquest of nature.</i> Nature is considered as a natural resource. Economic rationality. Activity: to master, to use, to modify.</p> |
| <p>Alternative interpretations of nature within the geological community</p> <ul style="list-style-type: none"> – <i>Nature as a scientific mystery.</i> Scientific rationality. Activity: to discover, to research, to reveal laws of nature. – <i>Nature as a place of work and living.</i> Rationalities of life. Activity: everyday practices, interaction with social and natural world. – <i>Nature as visual harmony.</i> Observation of visual harmony of a landscape. Action: passive contemplation. – <i>Nature as freedom.</i> Implicit protest against the authoritarian state system. Actions: escape from state control, geographic distancing from authorities. |

Conclusion: The discursive taiga

For geologists in the Soviet Union, ‘taiga’ was more than the name of a type of vegetation: it was a word with almost magical connotations. To many geologists, the taiga meant a way of life, a landscape that produced its specific ‘taiga laws’ of behaviour, friendship, and hospitality. The taiga seemed to dictate certain everyday practices and forms of social life, in a way unifying different social positions and levels. It consists of the complicated network of people, creatures, artefacts, and their respective trails. This inhabited taiga brought together geologists, inmates, local NKVD officials, party secretaries, tourists, and bears, all living in the same terrain and in accordance with its laws.

The hegemonic discourse presented a completely different view of the taiga. For the state, the taiga appeared as an utterly simple, even primitive environment. It is easy to ignore the complex world of the taiga in the wake of the hegemonic Soviet discourse on the natural environment. However, while the notion of conquest of nature found its expression in elaborate schemes of regulation and control, it is important to consider that there were everyday practices, local interactions, and an abundance of microcosms comprising the production of other meanings of space. In

spite of the intention of the authoritarian state to dominate and control the production of meanings and interpretations within its boundaries, the political actors' dream of total control was, fortunately, impossible. Living their lives, individuals and communities participated in the production of social order, inventing thousands of microscopic ways to construct their own life-world within the dominant system.

At the same time, the 'production of natures' is not just a discourse, but also implies physical changes of the natural environment. In a way, the history of geology in the Soviet Union resembled that of Orientalism, a profession that arose, according to Said's famous narrative, out of a genuine interest in the culture of the 'countries of the East' and yet supplied the knowledge necessary for the colonisation of these countries.¹⁹ In a strikingly similar manner, the scientific knowledge of nature obtained by geologists who were in many cases 'in love with nature' provided the foundations for Soviet projects of colonising and subduing nature. The ideology of conquering nature found its most extreme expression in the 'projects of the century' that sought a transformation of nature on a grand scale; the Siberian River Diversion Project was the best-known example. However, the projects ultimately found its critics even within Soviet society, and towards the end of the Soviet regime, protest was even voiced openly, especially by intellectuals.

Protest is accumulated in society by the microscopic actions of citizens producing social order in their own way, beyond the purview of the ruling class. The microscopic transformations of the social system happen every day and every moment, and each individual participates in the process simply by living his or her own life. In the case under consideration here, the state ideology of conquering nature led to the creation of an 'escape' for citizens to nature as the last archipelago of freedom²⁰ in the first place, and later contributed to some extent to the generation of the first ecological protests in Soviet society.

Notes

¹ The shorter version of this article published in *Historical Social Research* 29 (3), 2004, 104–123. An earlier version of it was presented on the Young Scholars Forum 'Environment, Culture, Politics: Transatlantic Perspectives' (German Historical

- Institute, Washington, DC May 27–30, 2004). For comments on draft versions and stimulating discussion, thanks to Tatiana Saphonova, Frank Uekoetter, Dmitry Vorobyev, Verena Winiwarter and Bernhard Wieser.
- ² *Izvestiya* of September 12, 1931. A. Zharov 'Volga vpadat v Moskvu' (Volga meets Moscow).
- ³ *Geologi* (Geologists), 1959. Text by S. Grebennikov and N. Dobronravov, music by A. Pachmutova.
- ⁴ The methodology of discourse analysis was used for the newspaper analysis. Five newspapers were analysed from the 1930s to the 1960s. This article presents an analysis of 1960s material only.
- ⁵ The interviews were conducted by the author in 2002 and 2003. Transcripts are in the author's possession.
- ⁶ An ethnic, indigenous population living in the Magadan region of Russia.
- ⁷ *Sovetskij prostoj chelovek* (The Soviet everyman), 1936. Text by V. Lebedev-Kumach, music by L. Shtrejher.
- ⁸ *Pravda* of April 2, 1967: 'Novyh uspehov, pervoprohodcy! Nas zhdu otkrytija!' (We wish you successes, explorers! Discoveries are waiting for us).
- ⁹ *Sovetskaya Rossiya* of June 16, 1961: 'Druz'ja solnca i vetra' (Friends of sun and wind).
- ¹⁰ *Komsomol'skaya pravda* of January 19, 1962, p. 1: 'Kladovaja otkrytij' (Treasure-house of discoveries).
- ¹¹ *Trud* of April 6, 1969; *Pravda* of April 2, 1967.
- ¹² *Izvestiya* of April 18, 1961.
- ¹³ *Trud* of April 6, 1969: 'Oni prihodjat pervymi' (They come first).
- ¹⁴ *Izvestiya* of September 17, 1961.
- ¹⁵ *Sovetskaya Rossiya* of July 20, 1969: 'Rozy v tajge' (Roses in taiga).
- ¹⁶ *Leningradskaya pravda* of November 17, 1956.
- ¹⁷ James Scott has analysed many cases of implementation of this ideology in his book *Seeing like a State* (Scott 1999). One of the most interesting examples is of a forest that became extinct in Germany, which can be the results of the 'cabinet' strategy of simplifying natural processes and tentative to 'correct' complexity of natural phenomena.
- ¹⁸ See de Certeau (1984); Korkin (1995); Fitzpatrick (1999); Petrone (2000).
- ¹⁹ Cf. Said (1979).
- ²⁰ Cf. Douglas Weiner's metaphor of a 'little corner of freedom', which describes a sphere of freedom for biologists in national nature reserves (Weiner 1999).

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