Overlapping governmentalities and the cosmo-politics of Mongolian water- and miningscapes

Mirja Schoderer *

German Institute of Development and Sustainability (IDOS), Germany
Institute for Environmental Studies (IVM), Vrije Universiteit Amsterdam, Netherlands

A R T I C L E   I N F O

A B S T R A C T

Since transitioning to a market-based economy, Mongolia has experienced a mining boom that turned extractive industries into a key contributor to the country's national budget. However, benefits from mining activities are allocated unevenly, with increasing rural poverty and degradation of water resources that threaten the livelihood and health of pastoralists, in particular. Regulatory efforts to improve the protection of water resources are confronted with severe implementation challenges as notions of what constitutes appropriate interpretations of the rules and appropriate ways of behaving diverge.

Applying Foucault's concept of governmentality and tying it to the literature on social imaginaries, I show how different rationalities overlap in Mongolian water- and miningscapes. They shape an extractive imaginary perpetuated by technical- managerial truth claims, an increasing monetization of social and social-environmental relationships, an imperative for industrial-economic development, and a state that performs sovereignty by enforcing procedures rather than substantive laws. However, an alternative, cosmo-political imaginary exists that derives its moral imperatives and individual incentive structures from an understanding that human land-use is contingent on the approval of spiritual entities that inhabit nature. As multiple governmentalities exercise power simultaneously, their interaction produces subjectivities that align with various and contradictory positions towards mining and that require negotiation. This challenges simplistic accounts of a homogeneous 'state' or 'community', as well as a priori assumptions about the interests and rationalities that motivate the behavior of stakeholders. It thus supports a call for environmental governance research and practice to give more attention to the cognitive-symbolic dimension of social-environmental interactions.

1. Introduction

Since transitioning to a market-based economy in the 1990s, Mongolia has experienced a mining boom that turned minerals and metals into the country's most important export goods (Ganbold and Ali, 2017). Before Socialism introduced a central administrative state, Mongolia was predominantly a country of semi-nomadic pastoralists (or herders, in the terms of my interlocutors and the Mongolian Studies literature) ruled by nobility and organized into civil units with a military function (Sneath, 2020). Its regulatory framework and administrative apparatus were therefore ill-prepared for the vigor of international extractive interests. In the following decades, the rapid economic development of the mining sector continued to outpace regulatory attempts to mitigate its environmental consequences, resulting in the degradation of water resources and pastures (Battogtokh et al., 2014,

Avlyush, 2011). In response, the so-called River Movement emerged in 2005, protesting lax environmental regulations and the granting of large concessions to international companies (Byambajav, 2012, 2015, Upton, 2012). Partly in line with their demands and partly in line with suggestions of international donors and organizations, Mongolian decision-makers adopted a series of reforms from 2009 onwards. Among other things, these reforms demanded environmental impact assessments for extractive projects, prohibited mining in and close to rivers, and included provisions to more comprehensively adopt Integrated Water Resources Management (IWRM) in Mongolia's Water Law. As part of the latter, decision-makers committed to creating multi-stakeholder fora at the river basin level so that diverging interests of water resource users could be negotiated (Lukat et al., 2022).

I first came to Mongolia in 2017, as part of a research and policy advice project to support the creation of these multi-stakeholder fora in

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a river basin in the Central North of the country and the implementation of IWRM in general. Charged with identifying implementation obstacles within the institutional framework and within the allocation of resources among administrative units, it was striking how often interviewees from the capital as well as the case study region pointed to factors unrelated to either of these when asked about the outcomes of water management. Instead, they referred to tight social networks and their use in subverting the enforcement of environmental protection laws, to spirits inhabiting nature, and to numerous other elements that impact how natural resources are governed and which resource uses and forms of governance are considered appropriate (Schoderer et al., 2021a).

This shows that next to administrative-managerial understandings, other rationalities regarding natural resources management play a role in the waterscapes and miningscapes that I encountered (Budds and Hinojosa, 2012, Schoderer et al., 2021).[1] In this paper, I pursue the question how these different rationalities overlap, mutually reinforce or contradict each other and produce coherent accounts of social reality, and to what extent actors deliberately employ specific rationalities to legitimize political actions. To do so, I apply Castoriadis' notion of social imaginaries, which describes collective networks of meaning that make current social reality intelligible as well as envision how it should be, and Foucault's concept of governmentality. Governmentality refers to the ensemble of "institutions, procedures, analyses and reflections, the calculations and tactics, […]" (Foucault, 1991:100) that sets conditions and educates desires, habits and beliefs, thereby conducting conduct. Foucault distinguishes four different types of governmentality: state sovereignty, operating through the legislative and enforcing authority of the state; truth, operating through unquestionable beliefs; discipline, which normalizes certain behaviors while casting others as deviant; and neoliberal governmentality, which approaches humans as rational benefit maximizers (Foucault, 2008). Applying a "multiple governmentalities framework can facilitate understanding of conflicts and/ or miscommunications […] among various environmental managers on the basis of fundamental differences in belief […] of which they themselves may be largely unaware" (Fletcher, 2017:313).

In the following, I will give a brief introduction to mining and its implications for water resources in Mongolia, focusing on the Central North where this research was located (section two), before providing some information on how data for this paper was collected and analyzed, reflecting on my own positionality (section three). In section four, I will introduce the concepts of governmentality and social imaginaries in more depth. I will then use the different governmentalities to untangle the multiple dynamics that shape water- and miningscapes in the case study region (section five). Section six demonstrates how the extractive social imaginary emerges as a result of multiple interlocking governmentalities that are situated within a specific historical and global context. It then discusses a cosmo-political imaginary (De la Cadena, 2010) that derives its notions of appropriate behavior from a diverging understanding about the meta-physical order of the world. Section seven concludes the paper.

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[1] The term 'waterscape' was coined to emphasize the mutual constitution of the social relationships, institutional arrangements, symbolic dimensions and the technological infrastructure that enable the material flows of water (Budds and Hinojosa 2012). 'Miningscapes' makes a corresponding point about the material and the symbolic dimension of mineral and metal extraction (Schoderer et al. 2021). I use them in conjunction ('water- and miningscapes') to underline their interconnected nature where, e.g., social relationships formed around mining affect infrastructures and material flows of water (see also Linton and Budds 2014, Linton 2010).

2. Mining and water resources control and allocation in Mongolia

Over the last 15 years, revenues from natural resources extraction have made up between 10% and 42% of Mongolia's GDP, with ores and metals responsible for 40 to 60% of its merchandise exports (World Bank, 2021). Predominantly, mining activities center on copper, iron ore, gold, and coal. While the mining sector contributed significantly to overall economic growth, Mongolia has been struggling to translate this into equitable welfare gains: in 2018, 28% of the country's population lived below the poverty line and another 15% just above it (Uochi et al., 2020). In the capital of Ulaanbaatar, rapid urbanization has led to unplanned settlements that are cut off from central services such as heating and water supply and sanitation. In rural areas, herders struggle with a lack of social security mechanisms as they confront the harsh climate and associated extreme weather events that threaten the survival of their herds (e.g. Myadar, 2011).

Their semi-nomadic lifestyle also presents a challenge to Mongolia's centralized water supply and sanitation infrastructure, leaving herding families to draw on wells and, at times, rivers for drinking water. Private wells also represent an important source of drinking water in villages. This is problematic as researchers have found elevated levels of heavy metals in surface waters within the Selenge catchment, parts of which fall within the case study area, that they attribute primarily to gold mining (Karthe et al., 2017, Batbayar et al., 2017, McIntyre et al., 2016, Hofmann et al., 2015a, 2015b; Batsaikhan et al., 2017, Myangan et al., 2017), as well as in groundwater aquifers (Nottebaum et al., 2020, Pfeiffer et al., 2015). In addition, studies have identified bio-accumulation of heavy metals in fish, among them species targeted by recreational and commercial fishing (Kaus et al., 2017). Partly responsible for the extent of water quality degradation is the extraction of metals in or close to riverbeds, where many gold reserves are located. Even though a law to ban this practice was adopted in 2009, its implementation has not taken place comprehensively so far (Schoderer et al., 2021). In the Gobi desert where, inter alia, copper and gold are extracted by the mega mine Oyu Tolgoi, herders have observed falling groundwater tables that they connect to the water use of extractive operations (Jackson, 2018, Sternberg et al., 2022).

From an institutional perspective, mining-related water use is subject to licensing, the requirements for which are delineated in the Water Law, and linked to the mining licensing process regulated by the Minerals Law and the Environmental Impact Assessment Law. A water use license granted by the Ministry for Environment and Tourism or by the River Basin Authority of the area where the prospective mine is located is a prerequisite for receiving a mining license from Mongolia's Mineral Resources and Petroleum Authority. Another prerequisite is that the environmental impact assessment (EIA) for the project is approved by the Ministry for Environment and Tourism. However, the approval process has been criticized for providing insufficient quality control and a lack of transparency (Schoderer and Dombrowsky, 2020, Ahearn and Sternberg, 2022).

In addition to licensed mining, unlicensed activities play a big role. So-called ninja miners – named in reference to the comic *Ninja Turtles* for carrying round sifting pans on their backs – extract resources with various levels of mechanization. Ninja mining has been associated with negative environmental consequences such as deforestation, increased water turbidity, and the release of mercury into water bodies if mercury is used to separate gold from waste rock. However, it also represents a survival strategy for herders who have lost livestock, for example during a particularly long or cold winter, and urgently need a source of income.

Water governance in Mongolia has received some scholarly attention, in particular in relation to the implementation of IWRM (Dombrowsky et al., 2014; Houdret et al., 2014; Horlemann and Dombrowsky 2012; Heldt et al., 2017, Karthe et al., 2014). Here, investigations center on the institutional dimension, looking at issues of scale and administrative architecture. It has also been discussed critically by Jackson

(2018) whose study on the Oyu Tolgoi mine illustrates how, in the political decisions surrounding the project, multiple meanings of water were conflated into one single, technical-managerial notion of 'modern water'. The decision-making processes surrounding Oyu Tolgoi and its social-environmental impacts have been critically discussed by Meesters and Behagel (2017), Sternberg et al., (2022), and Ahearn and Sternberg (2022). Works by Jackson (2015), Myadar and Jackson (2019), and Bumochir and Munkherdene (2019) analyze the discursive construction of Mongolia as a mining nation by politicians and companies, while Bumochir (2019) investigates notions of homeland that underlie contestations of extraction. Upton (2012), Lahiri-Dutt and Dondov (2017) discuss the impact of mining on pastoralists, and High (2013) demonstrates how multiple notions of 'value' emerge and conflict in the dealings of herders with miners. Other investigations, primarily by anthropologists, have investigated the tension between mining activities and spiritual practices grounded in an understanding of nature as animated (e.g. Sneath, 2014, Empson, 2019). This paper is similarly preoccupied with the emergence and the role of social beliefs and practices but places a particular focus on how they impact the implementation of natural resources management on the ground in the Central North of Mongolia. It fills a geographic gap as most research on the intersection of mining and water focuses on the Gobi region, as well as an analytical one as few studies take account of the perspectives of decision-makers at the national level, sub-national administrative staff and herders and villages when explaining social-environmental outcomes (Ahearn and Sternberg, 2022).

3. Data collection and analysis

In this paper, I draw on fieldwork material collected between 2017 and 2020. Field research took place in the capital and in a river catchment in the Central North of Mongolia that cuts across three provinces (*Aimags*)[2] and where mining largely focusses on open-pit extraction of copper and gold, including two larger operations by a Chinese and a Canadian company but also medium-sized and smaller, sometimes unlicensed ones. The material comprises 47 in-depth interviews between 30 and 260 min of length with interviewees in public administration at the national and sub-national level, members of NGOs, herders, villagers, and Mongolian consultants and academics, as well as various instances of participant observation and numerous informal talks with translators and Mongolian colleagues. A detailed overview of interviews and field work material is available in the Supplementary data, items 1 and 2. Interviews were conducted partly in English, partly in Mongolian with the help of translators and then transcribed verbatim with edits made for grammar and readability. Interviews and field notes were coded in Atlas.ti, using a codebook with the different governmental rationalities as overarching codes and emerging topics (e.g. enforcement within state sovereignty) as sub-codes. In order to get a sense of the extent to which information and perspectives shared in interviews reflect mainstream accounts of water and mining, I supplemented them with a monitoring of water and mining issues in Mongolian print and online media conducted between October 2019 and April 2020. For each media item, an English summary is available in the Supplementary data, under component 3.

As an early career female researcher from and educated within Western Europe, my perspective is that of an outsider making sense of impressions and experiences with the help of cognitive frameworks shaped by this background. Being aware of possible cognitive bias, I worked closely with Mongolian colleagues and translators who shared their interpretation of social situations and statements. As my work in Mongolia was embedded in a research and policy advice project, I had

substantial discretion over project funds and an interest in appearing competent to interlocutors from the public sector. This limited my ability to ask for clarification on everyday dynamics and created an asymmetrical economic relationship. As seniority is considered an important indicator for expertise and authority in Mongolia, I made a point to emphasize my junior position within the project context and my occupation as a researcher rather than a consultant or decision-maker.

4. Governmentality as a lens for empirical research on environmental governance

Foucault first introduced the idea of governmentality during his lectures at the Collège de France in 1977 and 1978, arguing that to study technologies of power requires an analysis of the political rationality that underpins them. 'Governmentality' thus becomes an umbrella term for multiple techniques applied in order to dispose things "so as to lead to a convenient end" (Foucault, 2000:208). These "things" entail "men in their relations with […] wealth, resources, means of subsistence, the territory with its specific qualities, climate, irrigation, fertility, and so on; customs, habits, ways of acting and thinking, and so on […]; accidents and misfortunes such as famine, epidemics, death and so on." (Foucault, 2000:209). Governmental rationalities thus pertain to classic targets of governmental activities such resources and livelihoods but also to social and cognitive processes. Semantically linking governing to modes of thought, the word 'governmentality' connects government and subjectification, that is, the creation or the coming into being of governable subjects through the exercise of multiple forms and techniques of power (Lemke, 2001). It also creates governable objects, for example by framing natural phenomena and one's position towards them.

In his later lectures, Foucault distinguishes four specific rationalities. These are i. state sovereignty, where authority is derived from the state monopoly over the legitimate use of violence and held up through law and its enforcement; ii. truth, where authority derives from a metaphysical world order and takes the form of unquestionable beliefs, e.g. in religion or certain kinds of positivist science; iii. discipline, which operates through normalization and conformity by establishing a moral norm or an ideal that subjects internalize and police themselves to conform to what is perceived to be 'normal' and 'morally right'; iv. neoliberal governmentality, which approaches people as rational subjects pursuing their own self-interests and shapes their surroundings so that acting according to these interests produces desired or convenient outcomes. These rationalities "overlap, lean on each, challenge each other, and struggle with each other" (Foucault, 2008:313).

Foucault's research agenda centers on discursive and non-discursive practices of governing and on how they emerge within a temporally and geographically specific assemblage that makes it possible to govern through particular "techniques and procedures for directing human behaviour" (Foucault, 1997:82). This assemblage combines "practical knowledge with modes of perception, practices of calculation, vocabularies, types of authority, forms of judgement, architectural forms, human capacities, non-human objects and devices, inscription techniques and so forth" (Rose 1999:52) in a complex manner that often produces results that differ from those intended by the architects of governmental programs. Li (2007), for example, demonstrates how ruling regimes and elites struggle to implement social and economic programs in Indonesia as they planned, pointing out how the 'powerful actors' are differently responsible for and capable of effecting outcomes and implementing plans, and how some of them have less discretion over outcomes than they seem to. The multiplicity of actors, their limited spheres of influence and the contingency of objects and actors that resist governance efforts emphasize the need to include empirical politics of implementation into analyses of governmentality, as these are conjectures where "power can be examined empirically, in its diverse forms and complex multiplicities, its instability, and its historical and spatial specificity" (Li, 2007:5). If power is indeed understood as a

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[2] Not further specified as the number of environmental officials and local NGOs in the case study region is rather small, so that naming the districts would endanger the anonymity of my interviewees.

permanent provocation (as Foucault posits), it bears asking which actions and reactions governmental programs, as its articulations, provoke.

Fletcher (2017) echoes this preoccupation at the end of his review of environmental governance research applying a governmentality lens, when he identifies emerging and promising strands of research. Among these is the question of vision versus execution, that is, of the difference and the interactions between what authorities intend to happen and how these visions play out in on-the-ground practices (further pursued in the special collection introduced in Fletcher and Cortes-Vazquez, 2020). Another strand of investigation that he envisions is the linking of scales and levels in order to assess how and whether different governmentalities operate within and across these different contexts. By focusing on how multiple governmentalities overlap and interact in Mongolia's water- and miningscapes in practices and in theory, as well as across scales, I follow Li's (2007) shift towards empirical politics of implementation and, in doing so, pursue some of the research avenues identified by Fletcher (2017) and Fletcher and Cortes-Vazquez (2020).

While Foucault mentions that governmental rationalities overlap, lean on each other or contest each other, he does not conceptualize these interactions further or provide an account of how overlapping governmentalities produce a coherent account of reality that stabilizes or challenges the status quo. In order to close this link, I employ the notion of social imaginaries as developed by Castoriadis (1987, 1991) and contextualized by Gilleard (2018).[3] Social imaginaries describe collective beliefs that societies hold about reality both as it is and as it should be, and along which they proceed to shape it. Social imaginaries thus constitute 'real facts' as well as symbolic entities. According to Castoriadis, they are constrained by the symbolic organization of social thought (i.e. existing discourses and linguistic signifiers) but at the same time unbound by the radical imaginative of the individual.[4] I argue that social imaginaries can be viewed as an effect of interlocking governmentalities, as they comprise understandings of what is allowed by state authorities (state sovereignty), what is true (truth), what is morally right (discipline) and what is individually beneficial (neoliberal governmentality) and the actions that arise out of these understandings. Where governmentalities mutually reinforce each other, social imaginaries gain coherence and potency, consolidating or contesting a status quo.

While environmental governance research increasingly applies a governmentality lens to identify strategies of subjectification and resistance in relation to conservation (e.g. Biermann and Anderson, 2017, Agrawal, 2005, Asiyanbi et al., 2019), and, to a lesser extent, to water governance (Annala 2021, Birkenholtz, 2009, Ward, 2013, Hellberg, 2014, Clarke-Sather, 2017, Rogers et al., 2016) and mining (Levacher and le Meur 2021, Strömme, 2021, Bustamante, 2020, Meesters and Behagel 2017, Andreucci and Kallis, 2017, van Teijlingen, 2016), significantly fewer studies distinguish explicitly between different governmental rationalities (for an exception, see Boelens, 2014) or are concerned with governmentality in interconnected water- and miningscapes. Exceptions here are Valladares and Boelens (2019) who focus on conducts and counter-conducts in Ecuador's Quimsacocha mining

project and Duarte-Abadía and colleagues (2021) who analyze how the political and discursive practices of mining interests, urban water users, and governmental agencies oppose and entwine to enclose common areas in Colombian Santurbán wetlands. While social imaginaries have been mentioned as a constitutive element of water- and miningscapes (e. g., Budds and Hinojosa, 2012, Sultana, 2013), they are rarely discussed as a proper concept (for an exception, see Wagner 2012, Chaloping-March 2014, and Velicu and Kaika, 2017), supporting Gilleard's (2018) claim that questions of how collective social representation(s) emerge still deserve more scholarly attention.

5. Analyzing water-and miningscapes along the multiple governmentalities framework

5.1. State sovereignty – The absence and presence of the state as a regulator and enforcer

Governing through law and order, through a demonstration of strength bound up in the state monopoly on legislative and punitive force, is an important factor in how national-level as well as sub-national administrators in the case study area approach water and mining. The primary way in which the state asserts its authority is through its capacity as a regulator by setting out detailed procedural requirements and insisting on their observation. Numerous news items announce new or amended laws and regulations, casting the Mongolian state as an industrious, prolific regulator, while various checklists and regulations lay out the licensing procedure for water use and mineral exploration and exploitation in minute detail. When asked about the prerequisites for mining operations to receive a license, government employees at the national as well as the subnational level, from mining- as well as water-related bodies refer to compliance with these procedural requirements. "I check if the application is made according to the methodology" says a lower level bureaucrat in the Mineral Resources and Petroleum Authority of Mongolia (MRPAM) in charge of assessing mining license requests, "if it doesn't comply with the laws and regulations, I send it back and give suggestions to the company on what they need to improve" (interview_8). An officer of the River Basin Authority (RBA) reports the same in relation to water use licenses (interview_23), demonstrating that receiving permission to use natural resources is a matter of observing procedural requirements rather than a qualitative consideration of the merits of each application and potentially diverging use interests.

The state also makes efforts to appear as a strict enforcer, primarily during yearly inspections of mining sites and in relation to 'ninja' (i.e. unlicensed) mining. By framing ninja mining as environmentally destructive and miners as "vandals" or "gangs" (interview_15), governmental officials deploy discursive force against miners that is matched by physical aggression. A development worker reports how ninja miners "were always chased by law enforcement", having "their equipment confiscated", and being "treated brutally, beaten up, imprisoned" (interview_25). However, asserting state sovereignty over ninja mining in this manner has clear limits in a country as vast and as difficult to traverse as Mongolia. Therefore, state efforts have shifted to formalizing the sector instead, "to get illegal miners to [...] pay their water tax and the personal tax and to make them do rehabilitation in the area" (interview_4), as one Sum governor describes. Rather than asserting its authority as an enforcer, the state again presents itself primarily as a regulator.

Formal inspections of licensed mines are similar demonstrations of authority: "once or twice per year there's a big group inspection and [employees from several agencies] come to the mining sites together [in] 4-wheel Jeeps, big cars, like the president. They like to think they are the bosses", as an interviewee from the private sector describes (interview_15). Again following a detailed checklist, the inspection team checks that the company is complying with its environmental management plan, existing agreements, and national laws. If that is not the case, an injunction is brought against the company and their activities are

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[3] The term was also employed in a similar manner by Taylor (2002) but with different ontological assumptions, which is why I focus on Castoriadis' conceptualization. Gilleard (2018) explains this in detail.

[4] For Castoriadis, an individual becomes a social being by entering into the symbolic order that "institutes a network of meanings whose form is imposed by the social imaginary – that is the social–historical order that exists outside the individual psyche – but never over-determined". The symbolic order can always be subverted because in any given society, a surplus of signifiers exists, creating the conditions for alternative representations. Both Castoriadis and Foucault thus view subjectification as an effect of power, of entering into a predetermined order (which Foucault calls discursive and Castoriadis symbolic), that can nonetheless be subverted through individual and collective action, accounting for the influence of structure as well as agency.

halted until they can demonstrate compliance. However, this performance of authority during the inspection itself is not matched by its consequences. In fact, injunctions are rarely enforced, as interviewees from all sectors and levels of government agree. One employee in the Ministry of Mining and Heavy Industries (MMHI) laments that "on paper we have [a regulation for] everything but nothing is ever followed up on" (interview_9). An environmental lawyer adds that "who is in charge of the consequences is not always clear" (interview 5). She subsequently mentions the importance of mining for the economy and alludes to this uncertainty as a (potentially deliberate) effect of collusion between politicians and the private sector, as the diffusion of responsibility renders it difficult to know whom to hold accountable for the lack of follow-through and its social-environmental consequences. As a result, governmental actors as well as herders and villagers share a general skepticism towards the capacity – and the willingness – of the state to adequately enforce its laws, speaking to an absence of state sovereignty rather than a presence.

A similar lack of enforcement and diffusion of responsibilities afflicts the stipulations for public consultations. These consultations are a mandatory part of environmental impact assessments, which undergo an approval process by an expert group at the Ministry of Environment and Tourism. In practice, consultations rarely take place and all herders and villagers in our case study area that took part in one described it as a merely informative event. According to them, "the decision is already made at the higher level" (interview_38, see also interview_28, _34, _42). Asked about why she thinks these meetings happen at all, a herder answers "because it is required. So they can say 'we had the meeting, you could say things then'" (interview_38). Another herder claims " the mines […] come and introduce all their official documents and let locals know about their operations [….] They already got their license and their permits from the Mongolian government, there is no use being against it" (interview_29). It is unclear, however, who or even which level of government that comprises. The exact composition of the aforementioned expert group, for example, and its decision-making process remain unspecified in the law. In addition, the Mongolian Minerals Law ostensibly diverts some decision-making power to local (i.e. district or *Sum* in Mongolian) governors who are required to consult with the Sum Khural (parliamentary body) and are then to either approve or refuse a request for a mining license. Yet, as one Sum governor describes, "all permissions come from the upper officials, then the last step is that we sign", leaving "not much of a role or a right for local governors" (interview_27). An employee of the MRPAM confirms "if the local governor says 'no', he [sic] has to explain precisely based on which points of the law he [sic] refuses" (interview_22). In consequence, local governors have little discretion over the use of natural resources in their districts, even as constituents look to them to defend their interests, which Ahearn and Sternberg (2022) problematize in their study in the Gobi region. In our case study area, this has caused frustrations among herders and villagers who approach the Sum government with concerns about the environmental consequences of mining: "We bring this up during meetings with the local governor or citizen representatives but they don't reply with concrete solutions. They say: We don't really have the power to solve these issues, we have to bring it up with higher level officials" (interview_34).

In that manner, the state as the sovereign authority over natural resources use is both present and absent in Mongolia's Central North. It asserts sovereignty by setting out detailed procedural requirements and insisting on their observation and by performing its role as an enforcer during on-site inspections of mines and (formerly) vis-à-vis ninja miners. However, it fails to enforce substantive legal provisions, e.g. in relation to ninja mining, injunctions again mines, or the right of Sum citizens to participate in public consultations. As my interlocutors seek to pinpoint the responsible entity for this lack of enforcement, the ostensibly solid unit of "the state" dissolves into governors at different levels, officials at various agencies, expert groups, etc. In consequence, while a center of power is evoked and, in fact, manifests in how local realities are (re)

shaped, it remains elusive.

5.2. Truth – Diverging notions of nature and question of knowledge

Truth governmentality is grounded in metaphysical beliefs and unquestioned forms of knowledge that entail particular notions of appropriate or common-sense behavior. For many interviewees in the capital as well as the case study region, unquestionable authority seems to derive from natural science based knowledge claims that focus on the biogeochemical properties of water while omitting its social dimension.[5] "Our problem here is that the government doesn't monitor […] water quality. It's as if our stomach and health is the measurement" (interview_13), says an NGO member, referring to the lack of available information that is partly an effect of the state's low monitoring capacities and partly an effect of the delayed and fragmented nature with which such information is shared (Schoderer and Dombrowsky, 2020). Implying that the lack of factual information on water quality represents the biggest hurdle to protecting it from mining-related degradation, however, presumes that having this information at hand would automatically result in improved water protection measures, omitting the political nature of the process in which many factors other than factual knowledge play a role, and the manner in which factual knowledge itself can be deployed strategically in political processes, as Meesters and Behagel (2017) describe for the Oyu Tolgoi mine. Here, the company used the reference to scientific research to legitimize the diversion of a river against the claims of herders, which were substantiated by additional studies but only after the diversion had already been implemented. Several interviewees also used references to scientific knowledge or a lack thereof to dismiss challenges to mining, in particular government officials and other interlocutors in the capital. A political consultant, for example, says "the majority [of herders and villagers] is not educated. Especially older people. That's why they are complaining. That's why they always think of mining as contaminating the soil and vegetation" (interview_15).

Having environmental information at hand, especially in a numerical form, facilitates its translation into economic values. In particular interviewees from the national government and consultancies assign strong authority to economic calculations that seek to determine the monetary value of water. In this case, underlying beliefs about the nature of science and the commensurability of values allow for the commodification of water, so that protecting it becomes a matter of calculating the price accurately and according to the correct methodology, while enforcing environmental protection becomes a question of collecting fees and compensation payments. Referring to the mining boom that Mongolia experienced upon transitioning to a market-based system, an interviewee says "mining licensing was out of control because nobody could stop it, with politicians sharing in the mining interest. What we can do now is valuing the water, reducing operations by demanding high payments" (interview_15). A consultant adds "the government is talking with these mining companies in the language that they understand: money. You are polluting the environment so you have to pay" (interview_1). While the regulation that describes how to assign water pollution fees is still being developed, fees for water use are already being charged according to an elaborate procedure that an officer from the Ministry of Environment explains to me with the help of a handbook with several hundred pages. It includes a multiplication factor for the respective industrial sector and another multiplication factor according to the abundance or scarcity of water in the river basin. Here,

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[5] Further explanations on the social-hydrological nature of water and the manner in which its materiality and social dimension mutually construct each other can be found in the geography of water literature (e.g. Linton and Budds 2014, Linton 2010, Boelens et al. 2016, Swyngedouw 2004). On the interrelation of the materiality and social construction of 'nature', see also Bakker and Bridge (2006).

the elaborate detail of the calculation procedure serves to create the impression of equivalence, the impression that the amount of money to be paid is equal to the value of water used. Economic valuation also plays an important role in litigation, according to an environmental lawyer who describes her work as mostly focused on human rights impacts of mining and "economic degradation" (interview_5), meaning environmental degradation measured in economic terms to claim compensation payments. The focus on numerical information as a self-evident truth is echoed in the media coverage on water and mining issues. In the six months of monitoring, 20 articles were published on mining statistics. The few articles that explicitly dealt with water (15 out of 120) mostly did so in relation to water use efficiency, again focusing on water predominantly as an economic good.

However, the ostensible neutrality and self-evident nature of natural scientific facts and the politics that they legitimize are questioned by interviewees in the capital as well as sub-national governmental officials and herders: "On the database of the mining and mineral agency [MRPAM] in the city, most of the area looks healthy and green from satellite images. But that doesn't match real life. I guess they don't conduct research or ground-proofing – they just base it on information from years ago. We approach them to fix it and they say they will but then they don't take action. Maybe in some cases they hesitate to tell the truth and just say it looks healthy because they are the mineral and mining agency" (interview_26), says one *Sum* governor and another supports the claim (interview_27). A lawyer adds "in the Minerals Law and the heritage law [referring to the Law on the Protection of Cultural Heritage], it says that sacred sites need to be protected but the research on identifying those areas is very poor. The companies and people from outside the community are not interested in maintaining those sites. Sometimes they fake documents so that they can say there are no heritage sites in the area" (interview_5).

Heritage sites are locations where authorities explicitly recognize nature as a cultural good worthy of protection. They thus indicate and uphold a conflicting account of the 'nature of nature' to that of economic valuation and the logic of commensurability. According to Bumochir and Munkherdene (2019), anxieties over the risks and negative impacts of large-scale infrastructure projects and extractive operations have prompted efforts to "revitalize cultural heritage" (ibid:85), while international agreements such as the UN World Heritage Convention[6] but also descriptions of EIAs as purported by the World Bank provided the discursive framing to do so. The reference to cultural heritage provides a tool to safeguard spiritual practices and the environment in which they take place but it also denaturalizes these practice by assigning them a discursive marker instead of leaving them unmarked as the "normal" way of relating to nature (see e.g. Haraway, 1988). Furthermore, it invites the differentiation of practices and sites into those considered worthy of protection as loci of cultural heritage and the dismissal of others, ostensibly not 'important enough' to warrant that designation.

Various herders and villagers in the case study area articulated an understanding of the natural world as animated by spiritual entities who control the natural conditions of an area and the fate of those who inhabit it. From this meta-physical order, diverging notions of correct or appropriate behavior are derived: in order to derive benefits from the land and nature (via agriculture, herding, etc.), humans have to gain the favor of these entities who can be capricious and vengeful when angered. Interviewees from all age groups describe how they avoid putting milk or animal products in the water as a tradition inherited from their elders and some women mention that they do not go near the river while they are menstruating (interview_28, _29, _32, _34, _40, _42, _43). They splash milk or tea on the ground in their camps as an offering when the season starts, "asking nature to also supply back, so we will have prosperity for the family" (interview_36), indicating a reciprocal relationship

between humans and nature. Some interviewees also make offerings at an *Obo* (a ritual cairn) or participate in annual *obo* ceremonies to reaffirm and strengthen the relationship to the spirits (interview_39, _41).

Several times, they describe how improper interactions with nature can lead to retribution: "maybe snakes come close to the *ger* [yurt] and try to enter, or wolves come and catch our animals while they drink at the river. Then we say, maybe someone put milk or dairy products in the water and that's why this is happening" (interview_32). Mining activities violate the integrity of nature because "you are not allowed to touch the ground" (interview_29), in the words of one herder. In particular in sacred areas, such activities anger the spirits who then bring bad fortune over miners or cause rivers to dry up, as two interviewees describe (interview_41, _38). Others add "when villagers and miners dig coal, then that person gets sick and they have to go to a monk or shaman" (interview_43), and "if you use all the water, cut many trees for logging, or wash the gold and pollute the water, then you usually will not live very long, your success in life will slow" (interview_29). However, these are not fixed rules as the descriptions of offerings or visits to Shamans, temples, etc. show, which are conducted to pacify spirits after an infraction or to gain their permission to use the land. Spiritual relationships are thus understood to be flexible and subject to negotiation. Although some of my interlocutors mentioned learning about these questions from their parents and described their practices as "traditional", they did not mark their beliefs as "cultural heritage". Instead, they accorded them the status of the unquestioned normal, constituting the metaphysical underpinning of their interactions with the environment. These underpinnings differ vastly from the understanding of water as an exclusively material element best described through numerical information, indicating the simultaneous presence of two distinct truth governmentalities.

5.3. Discipline – Supporting or rejecting extraction on moral grounds

Disciplinary governmentality operates through internalized notions of what is 'morally right' and what is 'normal' conduct. Here, the ideal of achieving social development through 'responsible' extraction plays a large role, establishing mining as the common-sense thing to do in order to increase societal welfare and, in turn, casts contestations of mining as deviant.[7] Interlocutors from all sectors frequently reference importance of mining for Mongolia's economy, some officials calling it an economic "engine" (interview_10) or "backbone" (interview_1). The latter in particular justifies the prioritization of mining-related forms of water use over others and normalizes the support of mining interests, as the integrity of the backbone is essential for an organism to function. As one interviewee spells out: "to improve the economy, mining must work. And what they need is water" (ibid.) The economic importance of the sector pertains less to employment and more to revenues for the state budget, the magnitude of which various newspaper items emphasize (e. g. items_9, _37, _38, _44 in Appendix 3), along with reports of donations by companies (item_77, _108), solidifying the image of mining companies as "the main taxpayers" (interview_1). The connection between economic performance and social welfare is made explicit when a governmental press release introduces the opening of a new area to mining as "contributing to the social and economic development and budget of the country" (item_39) and plans are announced to sell shares of a mineral deposit on the stock market in order to use these funds to pay off the pension loan of senior citizens (item_42). Mining companies also enter into so-called 'local development contracts'. In these contracts, companies agree to contribute to the *Sum* budget, a large portion of which is used for improvements to district infrastructure. By funding these projects, adding to the national budget, and providing donations,

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[6] In full: the UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (1972).

[7] 'Development' here as "a process of planned social change designed to promote the well-being of the population as a whole in conjunction with a dynamic process of economic development" (Midgley 1995:25).

mining companies appear as good and reliable corporate citizens that add to the common good. From that angle, supporting mining in return becomes the normal, the morally right thing to do. The prevalence of this framing and the strength of the discursive connection between mining, economic development, and an increase in social wellbeing establishes a strong disciplinary governmentality in favor of mineral and metal extraction. As Meesters and Behagel (2017) and Bumochir and Munkherdene (2019) describe, decision-makers at the national level have deliberately deployed it in an effort to overcome contestation in relation to the Oyu Tolgoi mine, allowing them to frame the project as a necessity and a matter of patriotism (on the link between extraction and national building, see also Jackson, 2015).

My interviewees, in particular civil society representatives and herders and villagers from rural areas, have challenged this narrative on two counts: firstly in relation to the economic benefits of mining and the increase in welfare that these supposedly effect. One herder says "I don't know how mining companies create benefits for the people of Mongolia, if you talk about the big picture. Only some people get benefits from it" (interview_34). Another adds "I don't understand why we have all this mining. They extract a lot and they must earn a lot of money. But if that is the case, then why is the Mongolian economy still so bad? Why has it not improved?" (interview_24). While only represented marginally, this skepticism towards mining as a driver of economic development and of a subsequent increase in social welfare has nonetheless been included in media representations of water- and miningscapes (item_59, _16). It has also given rise to demands for decision-makers to ensure that a larger part of Mongolia's natural resources wealth stay within the country, which decision-makers as well as some academics labeled as populist or resource nationalist strategies in an attempt to discursively contain them (Myadar and Jackson, 2019, Bumochir, 2019).

A second contention is brought to prioritizing economic benefits over the protection of cultural heritage, bound up in an intact environment: "every region has its own culture" says an environmental lawyer, "if the environment is degraded then the heritage is also degraded" (interview_5). This concern about the long-term effects of mining on the social-cultural fabric of society is shared by several interviewees in the case study area. "The people here disappear. […] The water will dry out and the groundwater will be less. The mining companies extract now but what will happen afterwards?" (interview_34) says one herder. "Officials should consider these issues if they really think about their countries" (interview_33) adds another. Even a policy consultant in the capital emphasizes "we are nomadic, you know? Herding livestock is our traditional lifestyle. In this context, animal husbandry [rather than mining] must be the priority. But now everything is in reverse" (interview_1).

From that perspective, mining activities threaten not only the locations of cultural heritage (e.g. sacred burial sites that are turned into excavation pits) but also the people and practices that carry it forward. The morally right thing to do, in that view, is to oppose mining, like the founder of an environmental NGO does: "[Mining] benefits the Mongolian economy but still water is more important. There are a few rivers who feed every Mongolian in this region. So I am against any form of mining" (interview_14).

5.4. Neoliberal governmentality – Providing (economic) incentives for individuals

Neoliberal governmentality approaches humans as rational, self-interested individuals, for whom it shapes surroundings and provides incentives. In Mongolia, the transition to a market-based economy in the 1990 s changed the social-economic conditions drastically, dismantling social security mechanisms and privatizing land and livestock. Previously organized into herding collectives that shared machinery and pasture area and guaranteed a minimum price for livestock, privatization and increasing land enclosures have resulted in economic gains for some herders but left many struggling (Ichinkhorloo, 2017). Whereas

public officials used to enjoy comparatively safe employment conditions, a shift in power during national elections nowadays often results in the replacement also of lower-tier bureaucratic staff (Schoderer et al., 2021).[8] In that manner, the transition to global capitalism has created conditions where herders and Mongolians in general are called upon to look out for themselves and to ensure that their interests and needs are met. As one interviewee states "after 1990, [you are] on your own. If someone eats your rice, you have to complain because nobody will feed you" (interview_15), describing a sense of social fragmentation and individualization. Allegations of corruption and nepotism are ubiquitous: "a lot of the administrators or their families operate mining companies themselves" (interview_14), says an interviewee from an NGO, and another who contributed to the legislation on environmental impact assessments makes a similar claim for the companies that conduct these assessments. "[T]he salary [of civil servants] is not good", explains a policy consultant – a point on which interviewees outside of the sector agree as well – "so [if I am a civil servant, that] means I should open a second channel of finance to ensure the well-being of my family" (interview_15). "Even if they [mining companies] fail an inspection, they stop to operate for two days and then they start again" (interview_29), says a herder and another interviewee agrees "[t]he companies use their private connections and then […] some politician will restore the operation" (interview_15). This speaks to a shared perception that rather than engaging as public servants on behalf of all Mongolians, governmental officials act as individual economic agents, pursuing their own interests.

At the individual level, mining represents a livelihood strategy, especially for herders or villagers with little economic capital and confronting a lack of social security mechanisms: "other than herding we don't have an alternative income, so if a mining company operates in the area, they will hire local people for construction and odd jobs [and] […] buy meat and dairy products", says one herder, "families with 1.000 heads of livestock don't understand the need […] because they have enough [to] slaughter" (interview_29). However, as one of my translators explains, slaughtering and selling animals does not necessarily help if a family urgently needs access to cash, as meat is sometimes traded for other goods and finding a buyer for larger quantities might take time. (Ninja) mining, on the other hand, offers quick access to money. She then describes how she herself has washed gold in the river several times to supplement her income. Most herders and villagers and even members of rural NGOs empathize with those engaged in ninja mining: "most of the families' livelihoods are improved because they wash gold, they buy cars and build new households" (interview_32), says one of them. "They do it because […] livelihood sources are disappearing", says an NGO member (interview_13) or, as another pointedly calls it, "for tomorrow's meal." (interview_14).

Mining companies take advantage of the situation by providing economic incentives for residents who do not contest their operations, manufacturing the impression of consent: "perhaps the father and the mother are quite old and were expecting their children to continue herding. But their pasture land and surrounding area [shrink or are degraded by] the company. And then the company promises a good apartment and a jeep. The young generation will […] move the parents to the center of the *Sum* and then move to the city [Ulaanbaatar] themselves", says one interviewee. He adds "these practices are experienced a lot. They shut the mouth quietly. Maybe the son even asks the family not to complain or say anything to the local governor" (interview_1).

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[8] According to one interviewee, legislation is being drafted to address this issue.

6. Discussion

6.1. The extractive imaginary and its historical and global context

While contestations exist within and across governmentalities as section five has shown, they also overlap and lean on each other. Neoliberal governmentality casts mining as beneficial or even necessary at the individual level in a context of social and economic insecurity, which afflicts herders in the case study area as well as administrative staff in the capital, while disciplinary governmentality adds an ideal of mining as contributing to general welfare, creating a moral imperative to support it. Truth governmentality establishes positivist science and administrative technologies (such as EIAs and economic instruments) which usually originate from and are assessed in the capital as means by which the impacts of mining become intelligible and controllable. Enforcing procedures and conducting periodic inspections allows the state to perform sovereignty without significantly hurting mining interests. Different governmental rationalities thus interlock a mutually reinforcing manner, creating a consistent social imaginary of what the extraction of minerals and metals means, how it can be controlled and what kind of future it leads towards, as well as what the role of water is – and is to be – in these processes. This imaginary is promoted by political consultants, national level decision-makers but in parts also articulated by sub-national administrative staff and villagers in the case study area. It is embedded in a specific historical and geographical but also in a global context that has created the conditions under which it could unfold.

After transitioning to a market system, social relationships have increasingly been monetized (Sneath, 2006). Traditionally, there is a distinction between "legitimate enactions" (Sneath, 2006:90) that materialize one's role as a helpful friend or relative and which are perceived as honorable ways of enacting social relationships within the long history of mutual aid networks in Mongolia, and "illegitimate transactions" (ibid.), the exchange of favors for money. However, as different kinds of value are increasingly subsumed into monetary ones, the distinction becomes hard to maintain (see also Plueckhahn and Bumochir 2018). One interviewee expressed this by referring to being helpful and doing each other favors as an essential Mongolian norm – establishing a positive connotation – before indicating that these practices are used to subvert the enforcement of environmental legislation – tying them to harmful, illegitimate transactions. While my interview partners from rural areas located illegitimate transactions in the capital and with political, economic and social elites, they also extended the circle to provincial (*Aimag*, in Mongolian) governors and an official at the river basin level turned similar allegations towards NGOs contesting mining. This points to a more pervasive sense among my interlocutors of illicit practices as being present potentially everywhere and perpetuated by potentially anyone, which illustrates how the difficulty in distinguishing between morally appropriate enactions and illegitimate transactions has led to a general lack of trust and sense of social fragmentation, leaving each individual to look out for their own best interests.

Here, a moral norm that expressed and actualized a strong disciplinary governmentality has been unsettled in a political economic national context that promotes individual benefit maximization. The abolishment of social security mechanisms creates incentives for herders and villagers to sell animal products to mines, seek employment there, or to conduct ninja mining themselves, and for badly paid and job-insecure public officers to seek private benefits, e.g. by supporting the mining activities of family members, owning EIA companies, or helping to circumvent sanctions. This echoes political practices in various parts of the world (e.g. Harvey, 2005).

However, the difficulty in distinguishing legitimate enactions from illegitimate transactions also takes place in line with and potentially represents an effect of a shift in truth governmentality: As Sneath (2006) describes, multiple values and currencies (silver, silk scarves, tea, livestock) are increasingly conflated into a single one (cash), speaking to a change in the underlying belief about the nature of these items. Rather than constituting entirely separate entities whose value cannot be measured against each other, they become commensurable in monetary terms. A similar conflation is taking place in relation to values associated with water, as Jackson (2018) also describes in her research on the Gobi. In the techniques described by national and sub-national administrative staff, consultants, and academics, multiple ways of relating to water are subsumed into one single notion according to a "politics of equivalence" (Levacher and le Meur, quoting Li, 2015), as has also been described for water- and miningscapes elsewhere (e.g. Duarte-Abadía et al., 2021). Various interviewees framed the conflation of values into a monetary figure in terms of achieving a common language with mining companies, obscuring the fact that this practice subsumes other values and forms of interacting with nature, excluding knowledge on social-environmental interactions that resists quantification.

As a direct political consequence, expertise is only accorded to those capable of speaking that language or approaching water management as a technical-managerial task. Expertise is accrued either through someone's position, e.g. as an environmental officer or through their ability to produce positivist science, e.g. by measuring water quality parameters that can be translated into monetary values for water pollution fees or compensation payments. In our case study area, this has resulted in the exclusion of regular citizens from multi-stakeholder platforms at the river basin scale, as officials in charge of suggesting and approving members considered them to have insufficient knowledge to participate (Lukat et al., 2022), illustrating how truth governmentality affects political configurations and (non–)representation.

This echoes the discursive othering that Andreucci and Kallis (2017) identify as a strategy to contain opposition to mining in Peru. It also links to practices that promote conformity with an established ideal of mineral extraction 'in the name of development', which van Teijlingen (2016) analyzes as a governmentality project in Ecuador, showing the effects on the subjectivities of people living in the vicinity of the Mirador mine. Similarly, Duarte-Abadía and colleagues (2021) show how extractive companies in Colombia deploy notions of 'good citizenship' and the moral need to support 'societal progress' in order to manufacture support for their activities.

The notion of mining – and industrial production – as necessary for social progress and therefore morally right has been an object of discursive struggle in Mongolia for decades. As Tsetsentsolmon (2014) shows, socialist ideology posited that industrialization, as the political-economic foundation for class struggle, was necessary for social evolution. A political economy based on pastoralism was viewed as incompatible with 'modern civilization'. Consequently, nomadic lifestyles, which have long formed the basis of Mongolian livelihoods and identity, were framed as "uncivilized" (ibid.: 423). In response, Mongolian intellectuals developed the notion of a 'nomadic civilization', seeking to "counter a sense of discrimination against 'nomadic' peoples." (ibid, see also Myadar, 2011). This notion of a 'nomadic civilization' was repeated frequently by my interviewees, also by those who live and work in the capital for the private sector or who fulfill high public functions. They employed the notion of a 'nomadic civilization' to criticize particular elements and effects of the extractive imaginary, such as the prioritization of mining interests over, e.g., environmental protection, the destruction of heritage sites, or the opportunities for illicit transactions in natural resources management. However, when doing so, references to the 'nomadic civilization' and to herding were usually tied to cultural heritage, to traditions to be upheld out of an allegiance to a sense of national identity, but not as lifestyles equally forward-looking or compatible with an increase of general welfare as those based on

industrial production within a market economy.[9] This discursive confinement to the past potentially explains why even as my interlocutors in higher governmental positions or urban spaces expressly identify with a 'nomadic civilization', political action to increase the wellbeing of herding families – especially where this would occur in opposition to mining interests – or to elevate the voices and perspectives of herders in decision-making fora has yet to occur, at least in the Central North of the country. In this case, even as the disciplinary dimension of the extractive imaginary is contested, visions of the future are still entirely bound up within it and guide political decisions.

6.2. The cosmo-politics of mining

While the extractive imaginary has potent effects at the social, environmental, political-economic, and the symbolic level, in the case study area as well as on decision-making in the national capital, it is challenged by an alternative social imaginary. This imaginary is based on a diverging understanding of nature, which views it as animated by spiritual entities who are the true masters of the land. Humans serve as custodians only whose land use is contingent on the approval of the spirits. In consequence, the "landscape becomes an interactive field of engagement rather than a passive background setting from which resources can be extracted and on which human action takes place" (Empson, 2019:267). This worldview has led to a different set of practices predominantly described and enacted by the herders and villagers I interviewed. They articulate an understanding that an intact environmental is morally right as it upholds a positive relationship with the spirits and thus promotes general wellbeing (drawing on disciplinary governmentality) but also individually beneficial (and thus supported by a neoliberal rationality), if one wants to avoid incurring the wrath of these entities and their subsequent retribution. Ultimately, however, appropriate forms of behavior are derived in accordance with a shared understanding about the meta-physical order of the world, which roots them in truth governmentality.

Rituals or visits to a shaman are means by which humans can enact good relations with the spirits. Bristley and Tumen-Ochir (2021), e.g., describe how ritual offerings are made to evoke happiness in spirits in order to bridge the distance between humans and the spirits whose favor they seek. These enactions re-affirm an ongoing relationship of patronage within which the use and also the extraction of resources are permitted (Empson, 2019, Sneath, 2001). Before the Socialist period, the relationship of patronage between humans and spirits was echoed by a political-economic organization that resembled feudal systems, where subjects owed military and civil service to a lord who in return granted land use and protection (Sneath, 2020). Political-economic relationships among humans thus reflected those among humans and spirits in a homogenous cosmo-political order.

While this symmetry between the organization of the human and the more-than-human world has largely been broken at the national level in the "age of the market" (ibid:195),[10] understanding nature as animated still implies that land-use is subject to negotiations with a spiritual entity, and therefore a function of a social relationship rather than an economic transaction, even as it occurs within a neoliberal economic framework. As Empson details, "when resources are sought, economic life is not just a series of transactions. Integral cosmological work goes into securing one's share and determining one's fate, so that exchange in the market and cosmological life are one and the same in the production of modern economics" (Empson, 2019:265). Following De la Cadena (2010), she thus suggests viewing natural resources use as a question of cosmo-politics. Cosmo-politics considers the agency of non-human entities in governing natural resources and challenges current understandings of politics that rest on a clear separation between humanity and nature, within which voice is only given to humans – and largely only to humans who reason in line with this assumed separation. The concept thus advocates for a politics that recognizes "nature as multiplicity" (ibid.:361) and is closely linked to debates around ontological difference (e.g. Yates et al., 2017, Hein and Thomsen, 2022) and the pluriverse (Escobar, 2015, Blaser and de la Dadena, 2018).

The cosmo-political imaginary of water- and miningscapes in the case study area provides a comprehensive interpretation of social reality as it is as well as a vision for how it should be, one that is built around maintaining good relationships between humans and spirits in order to achieve individual and collective wealth. It thereby challenges accounts of social progress and individual benefit maximization through mineral extraction, as well as understandings of natural resources as commodities and current ways of performing state sovereignty. However, it neither figures in the media items surveyed nor have interviewees in higher political positions in the national capital shared it – potentially also out of a concern for my ontological assumptions as a Western researcher.

7. Conclusion

This paper takes a governmentality lens to water- and miningscapes in Mongolia's Central North and analyzes how different rationalities interlink to, on the one hand, promote extraction and, on the other hand, to contest it. The analysis demonstrates how rationalities overlap and lean on each other and how their mutual reinforcement creates coherent accounts of social reality that can be conceptualized as social imaginaries. In line with Li's (2007) ethnographic expansion to governmentality research and Fletcher's (2017) call to take account of multi-level dynamics and of vision vs. execution, the paper shows how different actors at multiple levels frame and justify their actions in line with different governmental rationalities and how their interplay has produced specific social-environmental outcomes.

While an understanding of water as a commodity and mining as beneficial to society as a whole is primarily pushed by high-level actors from the public sector or the private sector in the capital, interviewees from the capital and from within the public and the private sector also contest the moral legitimacy of mining and some of the truth claims that support it. Similarly, actors who speak of nature as animated and therefore consider mining to be morally wrong, still express understanding for the economic circumstances that drive others to support or conduct mining and might even do or have done so themselves. This shows that as governmentalities overlap, they shape subjectivities that align with several rationalities at once, resulting in positionings that are multiple rather than fixed in alignment and that therefore require negotiation – at the individual level, as well as between members of society and between humans and spirits. For example, state officials are required to act as agents of the state, performing its authority in their interactions with mining companies and citizens. On the other hand, they are citizens themselves within a political economic context that incentivizes the pursuit of individual benefits, or operate in hierarchical relationships that limit their room for maneuver. Here, the rationalities of state sovereignty and neoliberal governmentality create a tension that state officials need to resolve.

Paying closer attention to these negotiation processes and to the multiple rationalities that guide behavior allows for a fuller picture of water- and miningscapes to emerge that accounts for the heterogeneity of interests and perspectives within actor groups that are often treated as monolithic composites (e.g. 'the state', 'the community') (Li, 2015, Schoderer and Ott, 2022, Welker, 2014). It also provides a more comprehensive account of the various political-economic, social, and symbolic elements in which power articulates and perpetuates itself and

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[9] Myadar (2011) shows how the emphasis on nomadism in constructions and representations of national identity answers to anxieties regarding land enclosures and their social and economic consequences.

[10] See Plueckhahn and Bumochir (2018) for a discussion of diverse economic practices and the intrinsic interconnection between politics and economy in Mongolia.

that impact how policies are implemented. Especially in relation to research on water and mining, it can also provide a way to refuse neoliberalism conceptual and discursive centrality as the main explanation for social-environmental interactions by (re)emphasizing the multiple logics that shape behavior and the diversity of ways in which elements of neoliberalism manifest and are contested (see Plueckhahn and Bumochir 2018, Gibson-Graham, 1996).

At the practical level, recognizing that positionings and understandings of social reality are multiple challenges a priori assumptions about the interests of stakeholders and stakeholder groups. It provides additional urgency to the integration of voices and perspectives so far excluded from decision-making in line with a cosmo-politics that "would accept what we call nature as multiplicity and allow for the conflicting views about that multiplicity into argumentative forums" (De la Cadena, 2010: 361). Practical expressions of such a politics can be found in attempts to integrate the rights of nature into national legislation or in efforts to recognize the multiple values and understandings of water in institutional frameworks for the mining sector (e.g. Schoderer et al., 2020).

Increasing public participation and ensuring that all stakeholder groups are represented provides an opportunity for diverging understandings to be voiced and heard. As various studies have cautioned, participation does not automatically entail equal authority, provide expert status to non-dominant forms of knowledge or establish the economic or logistic conditions that would allow different stakeholders to join such processes (see, e.g., Lukat et al., 2022, Schoderer et al., 2021 in relation to Mongolia). However, the recent adoption of a quota for different stakeholder groups in river basin multi-stakeholder fora in Mongolia nonetheless represents an important step forward in creating at least the possibility to articulate diverging understandings of the present and visions of the future in a somewhat authoritative context.

CRediT authorship contribution statement

Mirja Schoderer: Conceptualization, Formal analysis, Investigation, Methodology, Visualization, Writing – original draft.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available upon request but might require significant modification to ensure anonymity as Mongolia is a small country in terms of population.

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Appendix A. Supplementary data

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