

RESEARCH ARTICLE

Shades of Conflict in Kyrgyzstan: National Actor Perceptions and Behaviour in Mining

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Confronted with advancing resource frontiers, local communities increasingly rely on conflict to re-establish order in the face of problematic interdependences brought about by mining transactions. This article captures the interactions at national level that engender these interdependences in the first place. We explore how national actor groups influence emerging regularities of behaviour in mining through the example of gold mining in Kyrgyzstan – a fragile resource-dependent country divided by mining conflicts. For the analysis of these emerging patterns of behaviour, we focus on shared beliefs and norms that in interaction with perceived dimensions of transactions provide motivation to act. The identified regularities of behaviour help differentiate the otherwise crude dichotomy of conflict and cooperation, pointing to shades of conflicts. Mining conflicts in Kyrgyzstan are driven by profound structural factors that are rooted in weak governance, lack of institutional trust and limited cooperation across national actor groups. Risks and costs are distributed to outgroups, threatening the local social-ecological systems and further fragmenting Kyrgyz society. If extraction continues in the current mode of governance, resource-based grievances are likely to persist in Kyrgyzstan, as mining will increasingly encroach on local ecosystems, livelihoods and cultural commons – unless the national perceptions and shared beliefs change.

Keywords: gold mining; shared beliefs and norms; transaction cost economics; local commons

1. Introduction

Despite concerted efforts to manage natural resource use within planetary boundaries (Steffen et al. 2015), mining remains a key sector underpinning economic growth and development. Mining is a complex operation that is shaped by material, social and normative dimensions. Mining transactions intensify or create interdependences between actors. They entail, on the one hand, flows of natural, economic and human resources that create opportunities for cooperation. On the other hand, they often evoke conflict, greed and grievance as opportunities for some may mean disturbances for others (Mining, Minerals and Sustainable Development Project 2002; Hilson 2002; Bebbington et al. 2008a; Stevens et al. 2013; Franks et al. 2014). With advancing resource frontiers and the concomitant disturbances of local social-ecological systems (Martinez-Alier 2002; Bridge 2004a; Martinez-Alier et al. 2010; Schaffartzik et al. 2016), we witness the intensification of resistance against new extractive projects worldwide (Bridge 2004b; Bebbington et al. 2008a; Bebbington et al. 2008b; Bebbington and Bury 2009; Temper et al. 2015; Conde 2017; Avcı 2017).

This paper focuses on gold mining in Kyrgyzstan – a fragile resource-dependent country at the commodity frontier (International Council on Mining & Metals 2018). Following the dissolution of the Soviet Union in 1991, Kyrgyzstan has become a player in the global commodity market through licensing ‘Kumtor’, its largest gold deposit. While gold mining has become the mainstay of the economy, since 2010 there has been an upsurge in local resistance (Bogdetsky and Noikov 2012; Gullette 2014). The increasing resistance towards gold mining has been accompanied by a growing attention in the literature on Kyrgyzstan (e.g. Lee

and Styers 2012; Gullette 2014; Tianien et al. 2014); however, conflicts in Central Asia have been under-researched compared to Latin America and Africa in the broader mining literature (Andrews et al. 2017). Nevertheless, the geopolitical and climatic conditions surrounding Kyrgyzstan make it a matter of urgency to investigate the underlying roots of the conflicts. As a mountainous country, Kyrgyzstan is vulnerable to glacial lake outflows and other climate emergencies (Kyrgyz Republic 2016). The conflict dynamics are exacerbated by overt, yet unpredictable, tensions over access to the shared water resources in Central Asia.

Reactions to mining are highly heterogenous and hinge on factors related to the given project, community, company and state (Bridge 2004b; Bebbington et al. 2008b; Avcı et al. 2010; Le Billon et al. 2016; Schaffartzik et al. 2016; Conde 2017; Conde and Le Billon 2017; Carvalho 2017; Walter and Urkidi 2017; Horrocks-Taylor 2018). Notwithstanding varying specific conceptualisations, conflicts are generally understood as expressions of resistance (Martinez-Alier 2002; Escobar 2006, Bebbington et al. 2008b; Martinez-Alier et al. 2010; Avcı et al. 2010; Conde 2017; Conde and Le Billon 2017). Through resisting the interdependences and uncertain future that mining entails, local actor groups seek to re-establish order in their communities (Urkidi 2010; Tiainen et al. 2014; Walter and Urkidi 2017; Conde 2017; Avcı 2017).

Most studies so far have focused on local perspectives and conflict at community scale. However, mining does not start there. Some of the community- and company-related conflict drivers identified in the literature are to be regarded as manifestations of other conflicts rather than the root of the problem. Building on this rich literature, we trace the structural roots of conflict upstream to the national level by adding an institutional economics perspective to the existing literature on mining conflicts. In an attempt to contribute to differentiated accounts of resource conflicts, we focus on the role of national actors and their perceptions in mining conflicts. We zoom into the key transaction of licensing as the gateway to gold mining in Kyrgyzstan and investigate how beliefs and norms of national actors interact with perceived dimensions of gold mining to shape regularities of behaviour. Our focus on national actors is important as these actors administer and govern the gold licensing transactions in Kyrgyzstan, and thus shape the disturbances and ensuing conflicts in the local commons. The patterns of behaviour we identify break with the conflict/cooperation dichotomy and demonstrate themselves in 'shades of conflict'.

2. Shared beliefs and norms regarding rules of behaviour

2.1. Institutions

This paper studies what motivates key national actors that initiate the mining commodity chain to behave in certain ways in licensing gold deposits and how these individual behaviours endogenously become, reinforce or alter the regularities of behaviour in Kyrgyz gold mining (Commons 1931; Crawford and Ostrom 1995; Hodgson 2006; Greif 2006; Aoki 2007). At the collective level, these regularities then constitute the institutionalised rules of behaviour that exogenously inform, enable and control future actions of individuals who are involved in and affected by gold mining. While a behaviour is not automatically an institution, a behaviour reinforced by collective acceptance can acquire the status of an institution (Searle 2005). Collective acceptance is then expressed in shared understanding and common knowledge about allowed, prescribed, monitored and sanctioned rules of behaviour.

Aoki (2001, 2007) conceptualises institutions as shared beliefs about how 'the game' is played and ought to be played, representing the repeated patterns of acceptable and expected social interactions. Thereby, Aoki similar to Greif (2006) emphasises beliefs as the linchpin of institutions due to the motivation they provide for rule-following and reinforcing common knowledge. Greif (2006) conceives institutions as a system of distinct but interrelated components of rules, beliefs, norms and organisations that form the micro-foundations of behaviour and generate regularities through the guidance they provide for individuals. Behaviour will follow rules only if people believe in and hence are motivated to follow them; this motivation is created by beliefs and norms. Organisations are then the arena where rules are produced, implemented, and beliefs and norms perpetuated.

This brings us to the possible incompatibility of written rules and enduring regularities of behaviour. Such incongruence indicates problems of enforceability (Ostrom 1990; Hodgson 2006), which have been studied empirically, including in post-socialist countries (Theesfeld 2004; Engvall 2016). The notion "ignored laws aren't rules" (Hodgson 2006: 6) becomes pivotal for institutional analysis of conflicts especially in transition contexts where drastic political changes have taken place. Co-evolution of selectively implemented written laws and non-written rules that regulate interactions in post-Soviet Kyrgyzstan epitomises this institutional challenge. Given our interest in retracing behaviour to its motivation in such an empirical context with a weak system of law and informal regulatory mechanisms, we place beliefs and norms at the centre of our analysis (Denzau and North 1994; North 2005; Schlüter and Theesfeld 2010). We thereby circumvent the

formal/informal institutions divide and study institutions as they are understood, produced, reinforced and changed by the national actors themselves. Together, these national actors design, administer, regulate and monitor gold licensing in Kyrgyzstan. Hence, their perceptions, beliefs and norms, upon which they act, significantly shape the disturbances that mining induces in local commons.

2.2. Transactions

If “institutions are the humanly devised constraints ... [and opportunities] ... connecting the past with the present and the future” (North 1991: 97), then our internalised beliefs and norms will reflect the history of interactions and our learnings while influencing our future strategies (North and Denzau 1994). These interactions are conceptualised as transactions in transaction cost economics (TCE), where they are established as the ultimate unit of analysis (Commons 1932: 4; Williamson 1985: 18). Originating in the domain of industrial organisation, TCE have been applied also for analysing interdependences between social and ecological systems (Beckmann 2002; Hagedorn 2008; Garrick et al. 2013; McCann 2013; Thiel et al. 2016).

Institutional elements such as beliefs, norms and organisations inherited from the past reflect the nature of our socio-economic transactions, while shaping the process leading to new institutions that again regularise transactions (Greif 2006). In other words, institutions emerge in response to the interdependences and costs caused by transactions and their attributes. By implication, institutions determine the modes of future transacting and its implications for uncertainty (North 1990), distribution (Knight 1992) and cost (Williamson 1985).

We endorse a conception of a transaction that includes transfer of resources, rights and information from one or more actors to one or many, which incurs direct or indirect impact on individuals (Greif 2006; Hagedorn 2008). Drawing on Greif’s contribution to TCE (2006) we advance a systemic analysis of mining transactions. In the current study, the national actors, whose behaviour we examine, officially represent public, private and non-profit organisations. They generate behaviour in the transactions that lead to gold mining and hence influence responses to mining nationwide. While these organisations are made up of different actors with potentially conflicting interests, we abstract the organisations as single actors for our analytical purposes (Ostrom 2005: 38; Hodgson 2006: 10).

2.3. Transaction system attributes

Traditional TCE asserts that “the principal dimensions with respect to which transactions differ are uncertainty, asset specificity and frequency” (Williamson 1985: 52). These material differences shape our social interactions that regulate resource governance (Bakker and Bridge 2006). Since mining transactions embody both industrial production and processes in ecological systems, additional biophysical attributes need to be taken into account (Ostrom et al. 1994). The extraction of minerals, such as gold, relies on the appropriation of water and land resources. Consequently, we incorporate additional attributes such as modularity and functional interdependence, excludability, rivalry, resource size, jointness/lack of separability, heterogeneity/variability, measurability/observability, distance, reversibility, complexity, legitimacy, etc. (Ostrom et al. 1994; Falconer 2002; Hagedorn 2002, 2008; McCann 2013; Thiel et al. 2016).

2.4. Institutional foundations of behavioural regularities

While the beliefs and norms that each national actor upholds regarding mining transactions is the starting point, ultimately, we are interested in identifying those beliefs and norms that are shared and generate patterns of behaviour. Analogous to the competition of alternative governance structures (Williamson 1999) and institutions (Knight 1992; Brousseau et al. 2011; Thiel et al. 2016), the task at hand is to ascertain the dominant coalition of beliefs and norms that are interrelated with transaction attributes (Greif 2006). Thus, after we explore the beliefs and norms at the individual level, we comparatively analyse the shared beliefs and norms at the level of national actor groups and examine how transactions are perceived by national subgroups of state, private and non-profit actors (Garrick and Aylward 2012; Coggan et al. 2013).

Figure 1 illustrates our analytical approach. Starting from the individual level, we trace behaviour to national actor beliefs and norms regarding the transaction system. Capturing the interaction of perceived attributes of transactions with beliefs and norms necessitates a different syntactical approach than the original conceptualisation of ‘institutional statements’ by Crawford and Ostrom (1995). We conceive institutional statements as the verbal expressions of internalised beliefs and norms about the transaction system and its attributes. Based on individual internalised beliefs and norms assigned to perceived attributes, we identify which institutional elements are shared within each group of national actors. This is followed by a comparative analysis of beliefs and norms shared across groups. Finally, we study the regularities of behaviour that the collective knowledge at the national level implies for gold mining transactions.

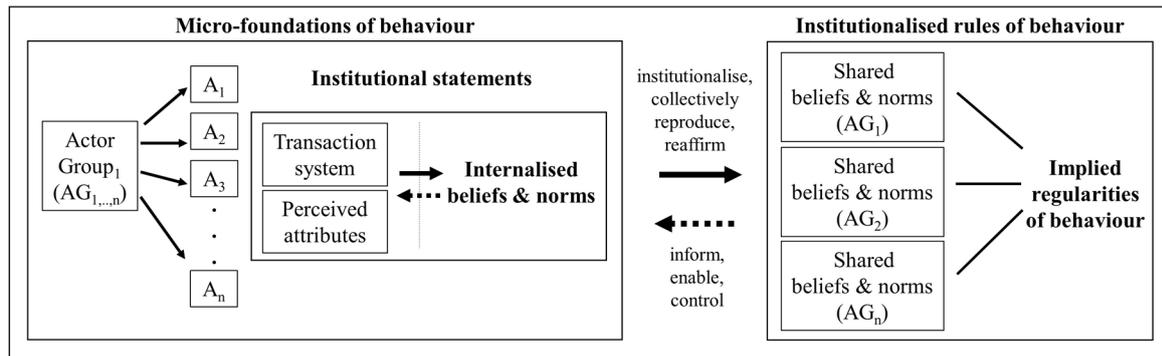


Figure 1: Institutional foundations of behaviour.

3. Analysing institutional foundations of behaviour: gold licensing in Kyrgyzstan

In this section, we first delineate the case study of gold licensing in Kyrgyzstan where it is executed, namely at the national level. Second, we introduce our data sources and methods of data collection and analysis for studying enduring patterns of behaviour in gold licensing reinforced by national actor beliefs and norms.

3.1. Gold licensing in Kyrgyzstan

Kyrgyzstan has undergone a rapid and fundamental regime shift with the dissolution of the Soviet Union in 1991. The country quickly earned a reputation for its immediate commitment to reform and transition to democracy. Kyrgyzstan was the first Central Asian country to follow the recommendations of international donors, undergoing a rapid liberalisation (Engvall 2016). Just one year after independence, Kyrgyzstan had become a player in the global commodity market through licensing 'Kumtor', the largest gold deposit in the country. Kumtor started its operations in 1997 with a \$450 million investment by the Canadian company Cameco (ibid.). Juxtaposed with the dire economic situation struck by the loss of major trading partners, the subsidies coming from Moscow and the external indebtedness of 111.5% of GNP (Grävingsholt et al. 2006: 45), licensing Kumtor gave the initial impetus for liberalising the Kyrgyz economy. Between 1994 and 2018, the Kumtor Gold Company's financial contributions to the country aggregated to \$3.77 billion (Kumtor Gold Company 2019a). In comparison, GDP averaged \$3.59 billion from 1990 until 2017 (Trading Economics 2019). In the meantime, another Canadian firm, Centerra, has become the sole proprietor of the Kumtor gold mine that continues to retain its economic hegemony to this day, contributing 18.4% to the industrial output and 8.6% to GDP (Kumtor Gold Company 2019b). In 2017, non-monetary gold accounted for 39.4% of foreign trade (Germany Trade and Invest 2018).

Nearly 30 years, two national uprisings ousting incumbent presidents and three revised Kumtor profit-sharing agreements later, Kyrgyzstan continues to stand out in the region. For Central Asian standards, the country retains a relatively high degree of pluralism and a vibrant civil society. At the same time, with 25.6% of the population living below the national poverty line, Kyrgyzstan is one of the poorest members of the Commonwealth of the Independent States, followed only by Tajikistan and Armenia (Asian Development Bank 2019). Despite its formal resolve to developing institutions of market democracy, enforcement has been selective. Thus, Kyrgyzstan remains a fragile resource-dependent state that does not channel mineral resource revenues to broader socio-economic development. In the meantime, today there are eight other producing gold mines in the country alongside Kumtor and gold accounts for 90% of the mining industry (Ernst & Young 2018). While the development of mining continues to be a national priority, local resistance against gold mining has been on the rise since 2010 (Bogdetsky and Noikov 2012; Gullette 2014).

The reasons behind the conflicts are interrelated and include among others: distrust towards the government and foreign companies, lack of structured multi-stakeholder dialogue, fear of environmental degradation, perceived threats to health and livelihoods, and perception of unfair hiring practices of mining companies (Sairinen et al. 2012; Lee and Styers 2012; National Institute for Strategic Studies (NISS) 2013; Martsynkavych and National Ecological Center of Ukraine (NECU) 2013; Gullette 2014; Gullette and Kalybekova 2014; Tianinen et al. 2014; Doolot and Heathershaw 2015; Eurasia Foundation of Central Asia et al. 2017; Horrocks-Taylor 2018). The conflicts manifest themselves in roadblocks, damaging and setting company property on fire, verbal and physical assaults and other forms of violent resistance; some are short-lived and acute while others are protracted. As conflict monitoring is not systematic and regular, the most recent number of incidents we could find was 43 problematic cases reported in 2013 (NISS 2013). One

of such cases broke out in southern Kyrgyzstan, close to the Fergana valley, when around 200 protestors attacked the offices of the exploration company. The valley is split between Kyrgyzstan, Uzbekistan and Tajikistan; the region is known as the agricultural heartland of Central Asia but also as a hotbed of cross-border clashes over land ownership and shared water resources. This particular dispute continues to make headlines. Meanwhile the license changed hands from an Australian-listed gold company to a Chinese one.

Such transfer of usufruct rights is not unheard of. Yet, in Kyrgyzstan this has taken on ambiguous dimensions as granting but also revoking licenses and permits has been increasingly haphazard. Doolot and Heathershaw (2015) argue that gold licensing has served to raise the scaffolding of a sovereign state which thereby provides rents for the elite while formally undertaking the role of a mediator for foreign companies and reasserting this sovereignty now and then in form of unpredictable control and regulation. The timing of upsurge in protests against gold mining from 2010 on is, therefore, not a coincidence as the mechanisms and extent of state performance and corruption have become public the same year. The first demonstrations in 1998 targeted Kumtor following the accident of a truck spilling 1.7 tons of sodium cyanide into the Barskoon river (Martsynkavych and NECU 2013). Over the years different lines of protest have coalesced into one driven by the general public's discontent with the ruling regimes, infiltration of organised crime in state and business, and corruption transformed into a business model for the state. Set against this context, Kumtor and other large-scale infrastructure projects laid the groundwork for building the Kyrgyz state as a marketplace (Engvall 2016) whereas the nation has become increasingly fragmented. Concurrently, public policy and state regulation have been selectively performed as a source of finance while sustaining the image of an aspiring democracy towards international actors.

In this study, we seek to advance our understanding of the interwoven conflict dynamics in transition countries such as Kyrgyzstan where formal post-Soviet state-building and institutional design have co-evolved with informal rules that regulate strategic infrastructure projects as sources of rent. Employing the analytical framework presented in Section 2 (**Figure 1**), we analyse how key national actors involved in the aforementioned schemes shape the enduring regularities in gold mining through their perception of licensing transactions. We conceptualise our case study at the national level where the gold commodity chain starts within the national borders when a mining company acquires the legal license to pursue an investment project. In line with the subsoil law of the Kyrgyz Republic, the execution of a licensing transaction is the legal precondition for any further mining activity (Kyrgyz Republic 2018, Chapter 4, Article 29: 18). As depicted in **Figure 2**, mining licensing is the focal transaction in our institutional analysis regardless of the specific license required for different mine development stages (prospecting, exploring or developing).

The execution of a gold licensing transaction is influenced by the exchange of information and knowledge that generates beliefs about the behaviour in this focal transaction. We refer to these secondary interactions as auxiliary transactions; they occur between the parties of the focal transaction (state and private actors) and also between non-profit actors that represent different segments of civil society. The exchange of beliefs, such as about impunity in case of failure to conduct legally binding environmental impact assessments

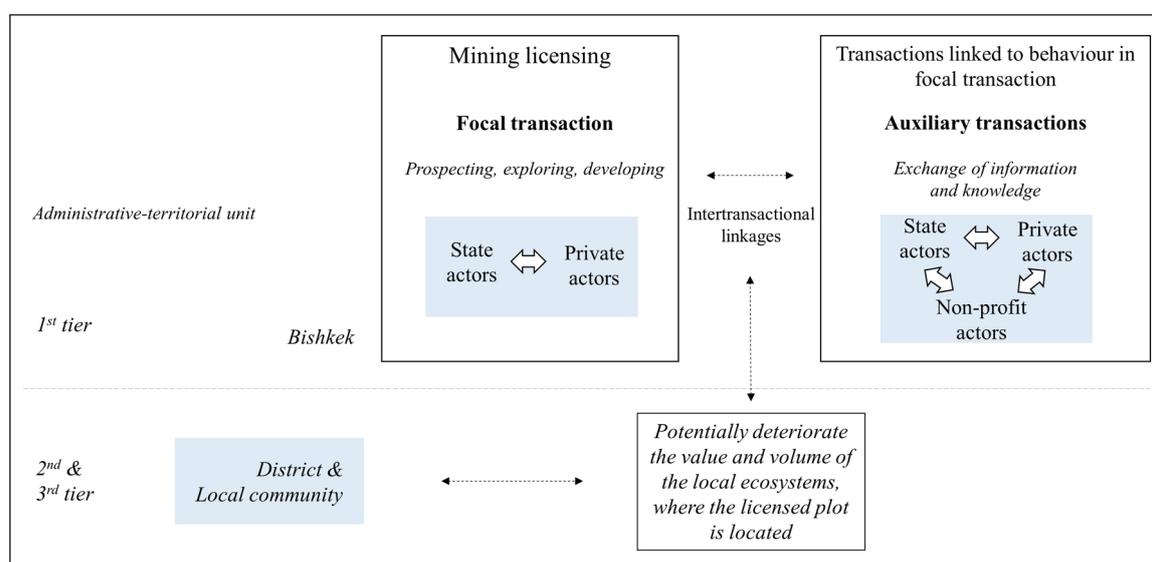


Figure 2: Transaction system of mining licensing and intertransactional linkages.

or opportunities to facilitate access to licenses through illicit payments, are examples of how auxiliary transactions can be intertwined with behaviour in the focal licensing transaction through intertransactional linkages.

Figure 2 illustrates two sets of intertransactional linkages that are crucial for generating behaviour in the gold mining sector. The first set unfolds at the national level between parties to the mining licensing and other national actors that are in a capacity to influence the former through generating institutional elements. Second, the transactions that are executed at the national level in the capital Bishkek (1st tier) are linked to transactions at the local (district and community) level where the land plot subject to the licensing transaction is located (2nd & 3rd tier). The transactions at the national level produce implications for the local social-ecological systems and thus create new or intensify existing interdependences there, but these are not the focus of the present study.

3.2. Materials and methods

This study draws on qualitative empirical data collected in June 2015 in Bishkek, Kyrgyzstan (see Appendix 1 for data sources, collection methods and sample size). Data collection relied mainly on in-depth semi-structured interviews conducted individually ($n = 23$) and in small groups ($n = 5$). We interviewed the key policy-makers and state officials who administer and regulate gold licenses ($n = 9$), private actors who are either license-holders or represent business interests ($n = 9$) and finally non-profit actors who have been working on sustainable management of natural resources ($n = 11$). Non-state actors without profit-orientation beyond non-governmental organisations such as international donor organisations and research institutes were also included in the data collection. The initial set of key national actors was expanded via snowball sampling. The opening questions covered the official mandate of the interviewed actor, their work approaches and processes, the status of project development (in case of mining companies), experiences and opinions regarding the gold mining sector including the regulatory framework, relationships to other key actors including challenges and opportunities of the mining sector (see Appendix 2 for guiding questions). Following the initial questions and establishing rapport, the interviews were conducted so as to follow their own dynamics, allowing unobservable institutional elements to manifest themselves through viewpoints deemed important by the interviewed actors. This granted us access to crucial contextual and historical information about mining in the country as actors elucidated their perceptions and beliefs that transcended the time and place of the interview.

All data were recorded upon the consent of the informants and transcribed verbatim in the original data language (mostly Russian but occasionally English). The transcribed empirical data were systemically coded using computer assisted qualitative data analysis, specifically the software NVivo. We deductively coded for capturing broad themes in line with our theoretical approach as shown in **Figure 1**, such as 'actor groups', 'elements of the transaction system' and 'attributes of the transaction system', while allowing for 'in vivo' codes that came directly from statements (Strauss and Corbin 1990). Primary coding in NVivo enabled us to get acquainted with our data and identify the transaction system attributes perceived by the actors. However, due to difficulties similar to those faced by Watkins and Westphal (2015), we proceeded with secondary coding that included manual extraction of institutional statements into a spreadsheet. As actors "do not talk in institutional statements" (ibid.), based on our analytical framework in **Figure 1** we developed the following coding criteria for extracting institutional statements if and only if the empirical data included:

- An actor belief and/or norm interrelated with
- A perceived attribute corresponding to
- The transaction system of gold mining licensing or an element thereof in the case country.

The spreadsheet included the name of the organisation that actors represented, the extracted institutional statements fulfilling the coding criteria as well as reference to the different attributes mentioned in these statements together with a judgement of their magnitude, i.e. low, medium or high. Only those transaction attributes that were implied by the actors were extracted. Most of the extracted statements consisted of multiple sentences conveying one coherent opinion while they naturally differed in their structure, length and content. **Table 1** illustrates examples of extracted institutional statement, one from each actor group, highlighting the perceived attributes of the transaction system.

Following the extraction of the individual institutional statements, we identified 211 individual beliefs and norms in relation to the transaction system entailing 14 attributes thereof that were perceived by the interviewees (i.e. micro-foundations of behaviour, **Figure 1**). Next, we categorised the actor beliefs and

norms according to the magnitude of the attributes as perceived by the actors. At this stage, we analysed which of the beliefs and norms were shared within the respective group of actors (i.e. state, private and non-profit). Once we abstracted the shared beliefs and norms within each actor group, we identified beliefs and norms shared across groups that implied certain regularities of behaviour in gold mining as elaborated next (i.e. institutionalised rules of behaviour, **Figure 1**).

4. Implied regularities of behaviour in gold mining

In this section, we present the regularities of behaviour in gold licensing reinforced by the national actors in a capacity to prevent or mitigate conflicts. The perception of licensing attributes by the key national actors underlies the formation of those beliefs and norms upon which these actors act or forbear. Based on the aggregate shared beliefs across actor groups, we identified 15 regularities of behaviour. These recurring patterns of behaviour regulate gold licensing by either enabling or sanctioning the shared beliefs and norms. These patterns demonstrate themselves as different shades of conflict as depicted in **Figure 3**, conjointly forming a spectrum of behaviour with four overarching categories, which are presented in turn (refer to Appendix 3 for a detailed version).

4.1. Distrust

National actors perceive a high degree of functional interdependence within the transaction system. This perception corroborates the significance of mining in the country. At the same time, the perception of the problematic extent to which gold licensing is linked to other political and economic transactions since

Table 1: Example institutional statements.

Actor	Institutional statement	Implied transaction system attributes
Public	No one [at the local community] understands geology [...] Because of that it is the easiest to shout about the environment. It's very important to conduct the EIA. ¹ It's a legal requirement. That's why we always tell the company, conduct an EIA [...] Otherwise, the company will be blamed for everything.	Highly complex and human asset specific transaction system; capacity not prevalent at the local level Low measurability/observability which can be increased by EIA; low <i>de facto</i> legitimacy of EIA, hence the need to underline the need to conduct it Low jointness of the focal transaction
Private	Government in Bishkek grants you the license and then you arrive in the village, as if it is a completely different government.	Distance between partners highly influential; increases uncertainty of the transaction system Focal transaction has low <i>de facto</i> legitimacy
Non-profit	Incompetent people work in the inspection and [there is] corruption: if only [...]the company] were to be blamed, mine would have been shut down long ago and not been able to dump waste rock on glacier. Someone issued the permission.	Condition of high human asset specificity not fulfilled by state actors High functional interdependence of the transaction system with corruption and weak law enforcement



Figure 3: Regularities of behaviour as shades of conflict.

¹ Environmental Impact Assessment.

the independence reveals the shared belief about underlying weak law enforcement. Ultimately, different manifestations of this shared belief reinforce distrust in the state's capacity to mobilise the economic potential of mining – including distrust by state actors.

State actors believe that the smooth implementation of licensing is the responsibility of local government and failure to fulfil these duties calls forth the conflicts. Thereby they allude to the limited enforceability of the legal license and underline the necessity of acquiring a 'social license' from local communities as representation of their consent to the extractive project. Private actors, in turn, believe the interdependences to be caused by competing claims to resources under high uncertainty. The interplay between licensing and local actors such as farmers but also politicians, who fear the adverse effects of licensing, is cited as an example. Finally, non-profit actors believe that licensing transactions mirror the unstable nature of the economic, political and societal processes in the country that have been ongoing since independence. They refer to mismanagement of and corruption around large-scale infrastructure projects as examples.

This general distrust is voiced also towards both the local concerns about the ecological footprint of mining and mining impact monitoring. The ability to observe, measure and assign the mining impact in the ecosystem to single drivers is perceived by all actor groups as an important attribute of licensing, despite diverging assessments thereof. State actors are aware of the ecological concerns even if these are admitted only half in jest. They believe that licensing does not trigger more joint outcomes than any other anthropogenic impact on the environment. Jocular statements that local communities prefer to live with bad roads, but an intact ecology, disclose that the state actors neither trust local communities nor recognise their ecological and health concerns as genuine conflict drivers.

When it comes to monitoring and regulation of mining impact, state actors differ widely in their beliefs. State representatives with mining policy and enforcement mandates believe the impact of licensing to be readily observable and measurable. Contrarily, a few of the state actors believe that current policy design, implementation and regulation are highly inefficient and costly, compromising the already low measurability of the licensing impact.

Private and non-profit actors believe that the jointness of licensing transactions, i.e. producing interconnected outcomes, prevents the analytical separation of material, environmental and sentimental reasons behind community resistance. From this vantage point, private actors recognise jointness to be conducive to ecological instrumentalisation by different local groups. Non-profit actors link the low measurability of impact to the high degree of jointness that licensing exhibits. They believe that lack of state willingness and cooperation in implementing transparent measures to monitor the fiscal benefits and environmental costs of licensing aggravates distrust and fuels conflicts.

4.2. Limited outgroup trust, cooperation and collective action

Next, we identify distrust between the actor groups with polarising effects in a more systematic fashion. Specifically, a perception of widespread incompetence and lack of capacity to execute licensing undermines the legitimacy of the transaction and erodes the basis for trust and cooperation for addressing the roots of local resistance at the national level.

While all actor groups perceive the necessity of idiosyncratic assets for comprehending and executing mining licensing, they do not believe this condition to be fulfilled. State actors perceive a dire lack of competence at the local level, which subsequently determines the local responses towards the transaction. Private and non-profit actors believe that neither the required quality and nor the quantity of human resources is present across all territorial-administrative units. They also believe that decentralised governance, combined with missing investment in competence at local administrative levels, is an underlying structural cause of conflict.

The perception of insufficient competence is concomitant with a pervasive perception of complexity in limiting cooperation and collective action at the national level. State actors perceive that the transaction is too complex to be grasped by local communities and their representatives as they lack the necessary mining know-how. Private actors believe that mining companies are left alone with the communities as a result of limited competence and capacity in state structures. Together with non-profit actors, they also relate the complexity of the transaction system to its joint nature, which makes it challenging to comprehend and manage the system. In the light of the current impact regulation, non-profit actors perceive complexity also in terms of unmanaged uncertainty entailed in licensing. They believe that ignorance of mental models, especially of the local actors, breeds more uncertainty. In the end, the shared belief that complexity is caused by 'others' that are 'elsewhere' justifies limiting one's own action in overcoming the underlying drivers of complexity at the national level.

Finally, the disputed *de facto* legitimacy of gold licensing consolidates disbelief in the transaction system. State actors hold the local administrations responsible for compromising the transaction legitimacy and

thereby hindering its execution. Non-profit actors claim that uncertainty and path-dependency challenge the legitimacy further. Private actors also perceive the contested legitimacy of licensing whilst discerning tangible state support for bigger gold deposits that increase legitimacy. In this case, the legitimacy of the transaction system is questioned, but not that of the gold deposits of national significance.

4.3. Resistance/conflict

In the absence of trust and cooperation between the national actor groups, they fail to counteract the adverse mining impact; hence, local communities resist gold mining. Resistance is recognised by non-state actors as an expression of local discontent caused by weak rule of law. Accordingly, they believe that the conflicts aim at reversing the licensing transactions. Non-profit actors stress that conflicts do not emerge out of nowhere: they epitomise community distrust and discontent with the past and present modes of mining management by the state; Kumtor is mentioned as an example.

Non-state actors perceive that communities resist mining when they perceive or fear a decrease in value and/or volume of their local resources. They acknowledge that gold licensing intensifies the local perceptions of rivalry and pressure over local commons. Non-profit actors believe this rivalry to be over (i) land, (ii) mineral resources beneath the land as well as (iii) means of production to implement the mining project including water. If the sense of competition escalates under uncertain futures, local communities will resist and defend their resources.

State actors, in contrast, do not perceive institutional uncertainty. They believe that local actors and mining companies cause uncertainty in licensing transactions. Contrarily, non-state actors perceive high uncertainty and believe that associated costs are borne solely by the communities and companies, while benefits accruing from the transaction remain unpredictable. They recognise conflicts as a form of community response to high uncertainty.

It is an open secret that the state's motivation to watch or act depends on the size of the licensed deposit. In case of smaller deposits, resistance is more persistent and sooner or later mining companies withdraw from operation, unless the communities choose to negotiate with the companies. Risk-averse companies that are disproportionately exposed to political fluctuations around Kumtor avoid investing in the country. Larger gold deposits are, on the one hand, monitored and regulated more rigorously by the state in order to prevent conflicts in the first place. On the other hand, the communities around large mines, as sources of substantial public finances and rents, do not enjoy the same freedom and can be sanctioned for protesting.

4.4. Conflict resolution

If communities resist, there might be efforts to resolve the frictions depending on three factors: (1) national state actors' perception of the conflict drivers, (2) the significance of the deposit in question and (3) the resources required for settling the dispute. National actor groups agree that each mining site and community is different. Hence, their reactions vary corresponding to the contextual differences. Nevertheless, non-state actors stress that national political changes and uncertain developments around large-scale deposits also impinge on the community responses. For state actors it is the uninformed local actors who fear the environmental and health impacts of licensing and hence oppose it.

When it comes to bigger gold mines closer to the capital, state actors are motivated to counteract the frictions quickly and do not wait until the communities grant their consent. In case of large-scale deposits, they perceive a high level of asset-specificity that the state alone cannot meet for operationalising the mines. Further, the more palpable conflicts closer to the capital are prioritised by the state organs. Non-state actors believe that the limited state capacity motivates the prioritisation of the conflicts that are less costly because they are closer to the state apparatus. Similarly, private actors perceive that the distance between the transacting partners increases licensing uncertainty and exacerbates tensions. Non-profit actors also observe that greater distance between parties is detrimental for outgroup cooperation. Finally, non-state actor groups believe that decentralised administration magnifies distance further. At the same time, perception of distance by state actors motivates limiting their own responsibilities. They believe that raising awareness about gold mining is the responsibility of the local administration as they themselves are "far away".

5. Discussion

Increasing global demand for mineral resources, be it for digitalised manufacturing, electromobility or mere capital accumulation, continues to push extractive frontiers further into emerging economies with liberal regulatory regimes (Bebbington and Bury 2009; Schaffartzik et al. 2016; Conde 2017; Conde and Le Billon 2017). The expansion of mining can be financially generative providing much needed investment for broader-based development in emerging markets. Yet, balancing the distribution of mining wealth

against concurrent ecological degradation remains a challenge for countries at the commodity frontiers, such as Kyrgyzstan, Peru (Bebbington and Burry 2009) or Nigeria (Conde and Le Billon 2017), where strong institutional frameworks are yet to be crafted. Failing to harness the revenues from mining for socio-economic development and at the same time failing to minimise the disturbances of local social-ecological systems intensifies and/or creates new problematic interdependences. Across the globe, these failures provoke resistance against mining operations.

Environmental concerns sparked by company conduct as in the Pascua-Lama gold mine in Chile (Urkidi 2010) and in Kumtor in Kyrgyzstan, both permafrost mining encroaching on glaciers, or discrepancies in developmental aspirations across actor groups as in the case of gold mining at Mount Ida in Turkey (Avcı et al. 2010), are just two of the many conflict drivers cited in the literature. These factors are often interrelated and influential in combination. This concurrence challenges the attribution of causes and effects, especially where biophysical alterations, material motives, social configurations and normative perspectives become entangled. In such complicated constellations, it becomes imperative to tell apart the root and the manifestation of the conflicts. Is the collapse of a glacier an unforeseen project-related environmental shock, a risk that has been downplayed by the company, an action legally permitted by the state officials or only a rumour spread by the local population?

In an attempt to contribute to differentiated accounts of conflicts, we set our study where mining starts. We deliberately limited our study to the national level for tracing the structural-historical roots of conflicts in Kyrgyzstan. We zoomed into the key licensing transactions as the gateway to all gold mining projects in the country. We teased out how state officials, mining companies, business representatives and non-profit actors reinforce regularities in behaviour in gold mining, thereby influencing conflict potential. Focusing on national actor beliefs and norms as well as their underlying perceptions of key gold mining attributes made this institutional analysis of conflicts possible, despite the institutional incongruence prevalent in Kyrgyzstan. This way we also elucidated the conflict dimensions such as the role of internal perspectives of national actors, interactions between state and non-state actors (Bebbington et al. 2008b; Conde 2017; Conde and Le Billon 2017) as well as perceptions and beliefs (Avcı et al. 2010).

Our analysis reveals that the regularities of behaviour in gold mining are not adequately captured through the conflict and cooperation divide. Rather, they unfold in multiple and subtly different shades of conflict. The shades we found present but a single snapshot of a system of shared perceptions and positions that is in constant flux attesting to the dynamic nature of conflict potential and escalation. This has implications for conflict prevention. Each actor can be influential in tilting the equilibrium of shared beliefs towards a new equilibrium where different patterns of behaviour will be prescribed and sanctioned. Before discussing the implications of our findings for the literature, next we highlight the methodological challenges associated with conflict research.

Due to the sensitive nature of the research, data collection involved interviewing actors that are formally part of the transaction system; informal actor groups had to be left out of the scope of this research. Also, we cannot rule out that other actors representing the same organisation might have responded differently. However, in serious conflicts actors do not tend to give away any internal organisational differences (Nuijten, 2005: 9). They might have given strategic answers instead. This, in turn, advised caution when analysing the implicit institutions and made the contextual information we recorded and our acquaintance with the country through 12 years of previous work and research ever more important.

In this paper, we analysed how national actor behaviour influences mining conflicts through the example of gold mining in Kyrgyzstan. Institutional analysis was well suited for tracing interdependence, conflict and order that are implicit in mining transactions. We structured our analysis following the framework presented in Section 2 (**Figure 1**). This allowed for interrelations between perceived transaction attributes, and beliefs and norms upon which actors behave. The framework enabled us to establish a formal foundation for studying informal motivations in a convoluted and tense political setting while maintaining a critical distance to the rhetoric employed by actors. This analytical lens rendered possible a formal analytical inquiry into how the perceived materiality of resources interacts with individual beliefs and norms to reproduce, reaffirm or challenge different patterns of human behaviour that govern mineral resources (Bakker and Bridge 2006; Bebbington et al. 2018).

Our analysis unveiled a crucial gap in the conflict timeline, ascertaining patterns of behaviour that lead to resistance. Accordingly, distrust and limited cooperation among key national actors that govern gold licensing precede the outbreak of conflicts. The conflicts are then only the tip of the iceberg. Beneath lies a widespread misalignment of institutions at the national level that can not respond to the key attributes of gold mining for minimising the intensification of adverse interdependences. The analysis of shared beliefs

and norms of national actors contextualised the mining conflicts and unearthed their structural roots at the national level. A widely shared belief of a weak rule of law reinforces complete institutional distrust in the state's capacity and willingness to transform the mineral base rather than using it for short-term gains as has been the case since independence (Doolot and Heathershaw 2015; Engvall 2016). Interestingly, this pattern is also reinforced by the state actors themselves as they hold local administrations accountable for failing to align conflicting interests. The state actors perceive the national and local scales as completely disconnected from one another, except in cases of significant gold mines. This disconnection, officially justified through decentralised governance, has been problematised by the interviewed non-state actors as well as the literature (Grävingsholt et al. 2006; Doolot and Heathershaw 2015) and it plays a crucial role in the conflict proclivity.² Taken together, distrust and limited intergroup cooperation are likely to manifest themselves not only in mining but also in other infrastructural, capital-intensive investments with transaction attributes similar to those perceived in gold mining (Horrocks-Taylor 2018).

Our results indicate that state and non-state actors understand conflict drivers rather differently. For most state actors, the conflicts are place-based, locally driven and sometimes evoked by company conduct. On the one hand, state actors portray local communities and conflict drivers as heterogeneous. On the other hand, they contend that conflicts are generally caused by weak local administrations that fail to implement the regulatory framework for licensing. While local communities' ecological and health concerns are known, they are not recognised as valid. Policy-makers and state officials with oversight functions believe conflicts to be driven by misinformation and lack of knowledge at the local level. They also imply opportunistic motivations to be at play. In sum, mining attributes such as jointness, uncertainty or degree of measurability/observability of impact are not conceived of as critical dimensions that need to be incorporated in the policy design and followed by stringent enforcement and monitoring. These actors believe that mining operations impact the ecology just like any other production.

Both private and non-profit actor groups have a more differentiated view of the conflicts, notwithstanding the belief that local elites might be interested in the perpetuation of conflicts. Whereas state actors tend to blame local actors for fuelling the conflicts, non-state actors perceive lack of competence and enforcement to be pervasive across the country, starting with the central government in Bishkek. They recognise the conflicts as community responses to competing claims over local resources in the face of an uncertain future with limited state efforts to monitor and manage impact. When the adverse mining impacts – actual, anticipated or feared – cannot be counteracted, conflicts arise, aiming at reversing the licensing transactions or improving the community positions in these transactions (e.g. Urkidi 2010; Sairinen et al. 2012; Lee and Styers 2012; Gullette 2014; Walter and Urkidi 2017; Conde 2017; Avci 2017).

The patterns of conflict we identified in Kyrgyz gold mining refine three insights discussed in the literature. First of all, conflict dynamics are related to scale. Community resistance around smaller deposits tends to have greater impact on negotiations compared to large-scale operations as such movements tend to be overlooked by the state. In such cases, resistance may lead to direct negotiations with the mining companies outside of national regulatory frameworks often leaving local communities more vulnerable unless risk-averse companies readily withdraw. The Kyrgyz state has a greater interest in resolving or suppressing conflicts around larger mines on which it depends, conflicts that are more palpable due to their proximity to the capital and/or those that can be solved with minimal resources. The key attributes of mining are perceived differently in these cases. State actors are motivated to pay lip service to environmental regulations, to the participation of local communities or basically to adhering to written rules, as sanctioning non-compliant companies would cover the monitoring costs, while allowing the state to perform sovereignty and capture rents (Doolot and Heathershaw 2015).

Secondly, the importance of cooperating with the communities in order to win their trust was stressed by most of the respondents and has been highlighted by the mining literature (e.g. Avci et al. 2010; Tianien et al. 2014; Gullette 2014; Conde and Le Billon 2017). However, our shades of conflict reveal that trust and cooperation must already exist between actors at the national level for obviating conflicts. Indeed, different actor groups can influence the terms of how mining unfolds, as institutions and discourses that govern shared resources are struggled over and co-produced through the interactions of these actors (Bridge 2004b; Bebbington et al. 2008b; Carvalho 2017). Walter and Urkidi (2017) showcase the potential of hybrid governance through cooperation between actor groups using the example of the Latin American mining consultations. Civil engagement is especially called for in countries with widespread corruption in order

² The distinction between national and local levels in this paper follows the administrative divisions and is therefore heuristic. The relations between the two are indeed more interwoven than abstracted here.

to hold governments to account; ranking at place 132 out of 180, Kyrgyzstan is one of the most corrupt countries in the world (Transparency International 2019).

The non-state actors we studied are more receptive to the threats of mining. Yet, it is either more expedient for them to play along and/or they do not believe they can formally change the rules of behaviour that largely follow informal motivations. The patterns of behaviour we identified motivate reciprocating distrust. As reciprocal distrust becomes consolidated, it erodes the basis for collectively identifying pathways (Poteete et al. 2010) to reconcile mining and sustainable development within a safe operating space (Steffen et al. 2015). In collectivist societies such as Kyrgyzstan, lacking institutional trust in the capacity of public institutions to enforce the written rules and sanction cheaters negatively influences prosociality and cooperation (Irwin 2009; Andriani and Sabatini 2015) and foments group membership leading to in/outgroup distinctions. Order is then likely to be achieved by maximising ingroup benefits and distributing risks and transaction costs to outgroups across scales. Hence, conflict and cooperation coexist.

Thirdly, high transaction costs in mining, limited state capacity and willingness to invest in institutional trust go together with restricted collective action to prevent conflicts. Risk-neutral non-profit actors, despite being conversant with local narratives, abstain from partaking in critical public discourse. In the end, local communities are suppressed or left alone with mining companies, social-ecological threats of mining are largely ignored while transparent and equal redistribution of gold revenues is pending. Put mildly, the national actor beliefs and norms we presented reinforce problematic regularities of behaviour. These can hardly be considered effective institutions for governing the resources in the country. Rather they will continue to hinder the implementation of institutions that will advance sustainable resource management. Introducing modern regulations is not necessarily one of Kyrgyzstan's weaknesses, albeit inconsistencies therein; Kyrgyzstan has been acclaimed for its ambitious economic and legal reforms after independence compared to other Central Asian countries. The continuously revised subsoil law foreseeing the development of social benefit packages with and for the communities, regional development funds or revenue-generation schemes (Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development 2018) are examples of the on-going institutional innovations. It is their selective enforcement that is the crux of the problem and will likely remain so, as long as the national perceptions and shared beliefs elaborated here remain intact.

Through our findings, we seek to draw attention to alarming precursors of ignored conflicts in brittle contexts. According to fragile state indicators for Kyrgyzstan, despite the overall performance improvement over the last decade, the prevalence of 'factionalised elites' and 'group grievance' continue to counteract this progress (The Fund for Peace 2019). Both reflect a wide range of schisms in the society such as over equal access to and distribution of resources. Kyrgyzstan recorded significant accomplishments in terms of social pluralism and public sector accountability; far more than other resource-rich countries in the region. The very fact that we can talk about protests in Kyrgyzstan is a case in point. Nevertheless, our analysis testifies to fragmentation and we anticipate the intensification of resource-based grievances with effects beyond the local scale. The Kumtor operations are planned to come to an end by 2026. It is likely that other gold projects will continue, and new ones will emerge. Operations are expected to shift towards dispersed and biodiverse areas with the growing global demand for metals (Sonter et al. 2018). With over 60% of the population living in rural areas (United Nations Statistics Division 2019), these communities will continue to resist as extraction will increasingly encroach on their ecosystems, livelihoods and cultural commons – unless Kyrgyzstan joins its neighbours and becomes also a consolidated authoritarian regime. In the long run, however, unregulated extraction may trigger the transgression of certain boundaries in local resource systems, impacting also shared resources in the region.

6. Conclusion

The diversity of framings, methods and case studies across the globe enriches our understanding of reactions to the expanding resource frontiers. Local communities resist for achieving their sense of order in response to the interdependences created by mining transactions that do not incorporate their positions but impact their resources, their lives. Our study went upstream to the national level and captured the interactions that engender these interdependences in the first place thereby addressing a crucial research gap in the conflict timeline.

We studied conflicts through the lens of institutions as they are understood, produced, reinforced and changed by the national actors, thereby circumventing the formal/informal institutions divide. Analysing conflicts from an institutional perspective on the basis of such a divide would have been a scratch on the surface. In Kyrgyzstan, the real obstacle is not the quality of written rules. It is the intrinsic motivation of

state officials and influential non-state actors to not enforce these rules. Conceptualising institutions as shared beliefs and norms about the prescribed and expected rules of behaviour allowed us to study the mental models of those actors that govern gold licensing and decide on the future of the country's shared resources. Our analytical framework and research methodology made, firstly, in-depth conflict research in the context of Kyrgyzstan possible and, secondly, enabled a nuanced account of conflict across a spectrum of shades.

Mining conflicts in Kyrgyzstan are driven by profound structural factors that are rooted in weak governance, lack of institutional trust and limited cooperation across national actor groups. Risks and costs are distributed to outgroups, threatening the local social-ecological systems and further fragmenting society. If extraction continues in the current mode of governance, resource-based grievances are likely to persist as mining will increasingly impinge upon land and water systems on which local communities depend. The conflict dynamics will take on new dimensions beyond the local scale in this already resource-stressed region should the effects of the current mining practices spill over into the neighbouring countries.

The study of beliefs and norms of the key national actors holds promise for opening up new avenues in conflict research, especially in fragile transition contexts where intertwined lines of conflict pre-exist. Hence, further research on resource conflicts across scales starting at the national level are needed for advancing a nuanced account of conflicts worldwide. A differentiated comprehension of conflicts will refine our understanding of conflict proclivity and guide us to the underlying roots and the conditions under which conflicts can be prevented. Such theoretically driven and empirically informed investigations will provide a solid basis for actor groups that are ready to collectively work towards reconciling competing claims. The shared beliefs of the national actors that were presented and discussed here are, however, only one side of the mining conflicts. In Kyrgyzstan it is imperative for future research to shed light on actors' mental models, motivations and beliefs at the local level so as to complement the findings of this paper.

Additional Files

The additional files for this article can be found as follows:

- **Appendix 1.** Data collection methods, national actors and sample size. DOI: <https://doi.org/10.5334/ijc.988.s1>
- **Appendix 2.** Interview Guidelines. DOI: <https://doi.org/10.5334/ijc.988.s2>
- **Appendix 3.** Institutional foundations of behaviour in mining transactions. DOI: <https://doi.org/10.5334/ijc.988.s3>

Acknowledgements

We are indebted to our colleagues at the Integrative Research Institute for Transformation of Human Environment Systems (IRI THESys) for the invaluable discussions over the course of the manuscript's development. We extend our thanks to all the interview partners. This paper would not have been possible without the curious and endless support of Benedikt Ibele. The research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. We also acknowledge the two anonymous reviewers for their insightful comments. Finally, we are grateful to IJC's co-editor-in-chief Michael Schoon for his professionalism and for seeing this article through publication.

Competing Interests

The authors have no competing interests to declare.

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How to cite this article: Ocaklı, B., Krueger, T., & Niewöhner, J. (2020). Shades of Conflict in Kyrgyzstan: National Actor Perceptions and Behaviour in Mining. *International Journal of the Commons*, 14(1), pp. 191–207. DOI: <https://doi.org/10.5334/ijc.988>

Submitted: 12 July 2019

Accepted: 19 January 2020

Published: 20 February 2020

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