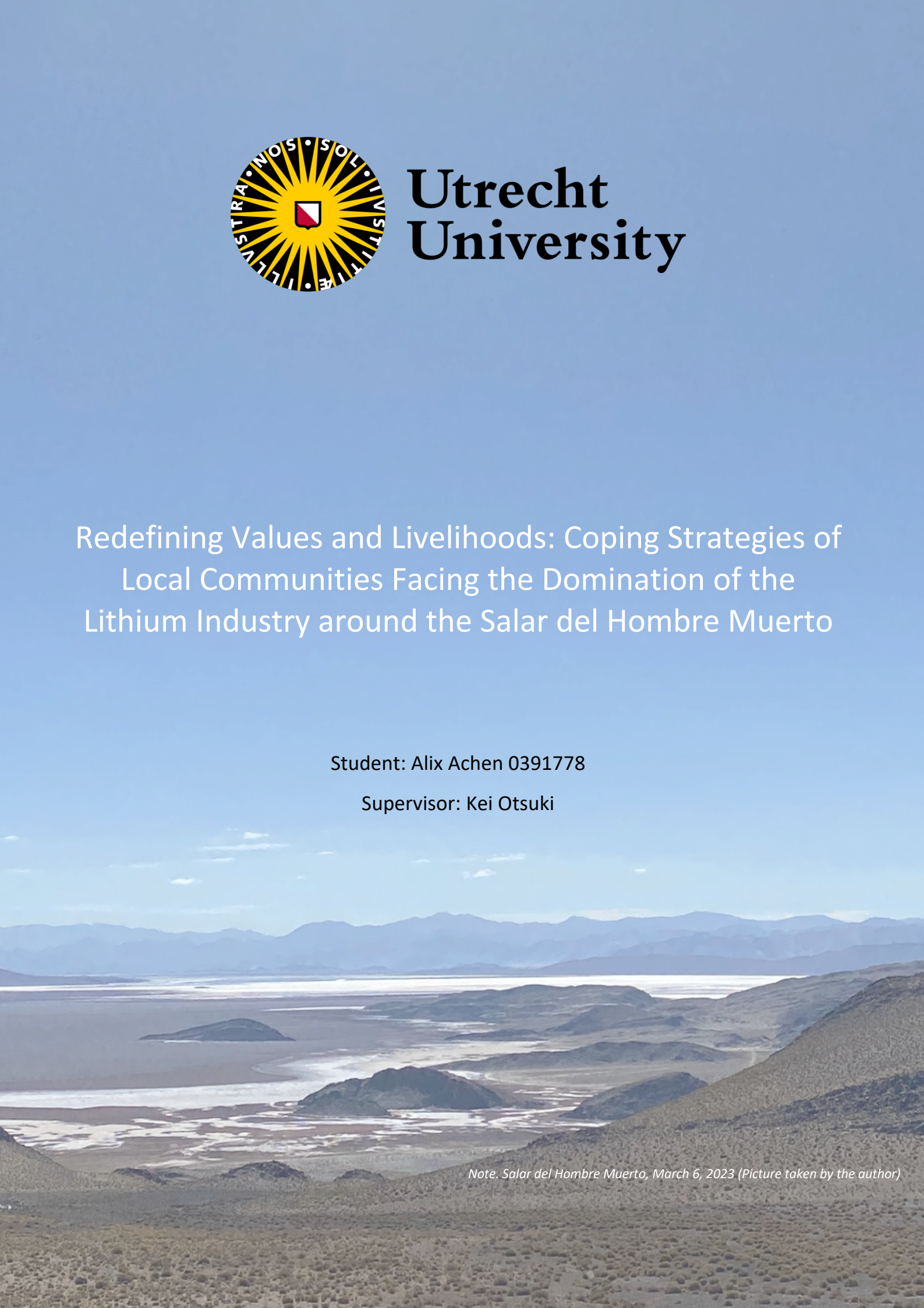
Utrecht University

Redefining Values and Livelihoods: Coping Strategies of Local Communities Facing the Domination of the Lithium Industry around the Salar del Hombre Muerto

Student: Alix Achen 0391778

Supervisor: Kei Otsuki



Note. Salar del Hombre Muerto, March 6, 2023 (Picture taken by the author)

Abstract

This study investigates how local communities cope with the domination of the lithium industry around the Salar del Hombre Muerto in Catamarca, Argentina. The aim is to understand why, in contrast to prior research on extractive zones, there has been little conflict reported in the current research area. Despite strong grounds for resistance against mining operations, criticism seems to be curbed and opposition suppressed. Drawing mainly on ethnographic observations and interviews conducted during fieldwork from March to May 2023, this research is situated within the context shaped by neoliberal globalization and neoextractivism. First, the aim is to unravel the domination mechanisms that contribute to this overarching acquiescence among the local population. After elucidating who and how the dominance around the Salar del Hombre Muerto is exerted, the attention shifts to the changes in local livelihoods and values. Economic displacement and the commodification of livelihoods seem to eventually lead to the erosion of traditional ways of life while deepening economic dependency on the lithium industry. The subsequent conflictive interests among the local population manifest as social fragmentation. The lack of a collective identity that marks the local context further contributes to the degradation of social cohesion. Moreover, the reduction of values to a purely economic dimension, coupled with a detachment from their cultural and spiritual connection to the land and its resources, emerges as another key factor in diminishing resistance. The findings also demonstrate that besides being economically bounded to agree to the development of lithium mining projects, many have internalized the modern values propagated by mega-mining companies. Especially the younger generation appears to be driven by material pursuits and visions of progress. Collectively, these dynamics explain why resistance movements have been limited and hence why the Salar del Hombre Muerto is considered a successful case by the mining companies.

Keywords: Neoextractivism, lithium, domination, coping, livelihoods, values, Salar del Hombre Muerto

Acknowledgments

I would like to express my heartfelt appreciation to everyone who has been a part of this research journey. It has been an extremely enriching experience for me, and I genuinely hope that each individual involved also has gained something valuable along the way.

I am grateful to my supervisor, Kei Otsuki, for her clear comments, expertise, and good insights that helped me stay on track - especially during moments when my thoughts and ideas seemed to wander. I also want to thank Felix Dorn for generously sharing his experiences and expertise and always being available to exchange ideas with me. My appreciation extends to my friends and family for enduring my endless lithium stories and providing unwavering support, also from afar.

Me gustaría incluir un agradecimiento especial a los participantes de la investigación. He cruzado a muchas personas increíbles en mi camino y quiero agradecer a cada una de ellas por confiar en mí y compartir sus valiosas experiencias, percepciones y conocimientos conmigo. De manera particular, quiero expresar mi profundo agradecimiento a Maria Cruz y su familia por hacerme sentir como en casa en Antofagasta de la Sierra. Además, no puedo dejar de mencionar a Guillermo Aybar, quien fue una persona fundamental en este viaje. Pasamos horas conversando y su sabiduría sobre Argentina, la región, cultura y vida en general me enseñaron mucho. Su compañía y orientación fueron inestimables para mí y han dejado una huella duradera en mi investigación. Hay tantas otras personas a las que me encantaría mencionar, por lo tanto, me gustaría enfatizar que mi gratitud va más allá de esta sección de agradecimientos.

I would like to incorporate a quote from Antonio Gramsci, 'Pessimism of the Intellect, Optimism of the Will.' This quote serves as a poignant reminder to researchers and scientists to transcend hidden biases, refrain from wishful thinking, and strive to perceive the world as it truly is. Simultaneously, it emphasizes the importance of will, courage, and hope. While this quote encourages us to approach challenges with a determined outlook and without wishful thinking, it's important to remember that hope should never fade. This idea is beautifully encapsulated in the Quechua word "SUYAY," which serves as a guiding light, reminding us that hope can persist even in the face of adversity. With this sentiment in mind, I envision a more inclusive and considerate world, where all can thrive and freely choose the lives they want to live.

Thank you! Gracias!

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Abbreviations

AS = Antofagasta de la Sierra

FPIC = Free and Prior Informed Consent

INAI = Instituto Nacional de Asuntos Indígenas

m.a.s.l. = meters above sea level

NOA = Argentine Northwest (NorOeste Argentino)

SHM= Salar del Hombre Muerto

Introduction

Lithium extraction itself is not a new practice. Yet, in recent years the demand for lithium, a key component of rechargeable batteries, has been surging. This is mainly driven by the growing importance of low-carbon technologies, such as electric vehicles and renewable energy technologies (e.g. photovoltaics), which are at the core of the energy transition. Considering that all of these require energy storage, the European Commission President, Ursula von der Leyen, claimed during her State of the Union address that lithium "will soon be even more important than oil and gas" (European Commission, 2022). The onset of the Russia-Ukraine war, as well as the decision of the EU and other countries across the globe to ban the sales of fossil-fuel-powered vehicles by 2035, further accelerates this trend (Shemer, 2022). As a result, the intensification of the extractive industry is taking on other dimensions.

The expansion of lithium mining projects is especially pronounced in Argentina. Not only the world's second-largest identified lithium resources (U.S Geological Survey, 2022), but also the conducive investment climate attracted about 60 new lithium projects in the Argentine Puna (Dorn et al., 2022a). The neoliberal model has transformed the country into, what Jonas Köppel (2019) called, the "backyard of the hegemon". What once was conceived as "empty space" is now one of the fastest-growing lithium exploitation regions worldwide (Dorn & Peyré, 2020; Svampa, 2019).

According to previous literature, this expansion of the mining frontier is accompanied by a growing number of conflicts (Bebbington, 2007; Muradian, Martinez-Alier & Correa, 2003; Walter & Martinez-Alier, 2010). The conflicts, usually of socio-environmental nature, are driven by the opposition and resistance of local communities toward the dominance of the mining industry. The movements can encompass more than just struggles over resources and territory; they can also be driven by value systems. For instance, in case of a clash between traditional sociocultural values and the ideas of "modernization" and "progress".

In the province of Jujuy, the surge in mining conflicts has received a lot of academic attention. For instance, numerous studies have been published on the community's resistance in the case of Salinas Grandes, where lithium exploration projects started in the last decade (Puente & Argento, 2015; Veen, 2017; Dorn 2021a). In contrast, in Catamarca, where lithium is exported since 1997 from the Salar del Hombre Muerto strikingly little conflict has been reported.

This research will explore why this is the case. More specifically, this research aims to shed light on the different ways in which the local population around the Salar del Hombre Muerto (SHM) experiences and copes with the pressures of the lithium industry on their territories. This study also sets out to uncover the mechanisms, tactics, and techniques applied to prevent the emergence of major opposition to the development of lithium mining. The urgency to address mechanisms of

domination is further highlighted considering the recent developments in the province of Jujuy. Governor Gerardo Morales promoted the modification of various articles of the local constitution, including the criminalization of social protests to clear the path for further developments of the lithium industry in the area (Parodi & Maresca, 2023). Thus, protests (e.g. roadblocks) are banned and conflict is being repressed under the pretext of “peace-building”. The massive mobilizations following the constitutional reform at the beginning of June 2023 were violently repressed by the police. Numerous protestors were detained, injured, or went missing (Redacción central La Izquierda Diario, 2023).

As a primary target of Argentina's lithium exploitation, the area around the Salar del Hombre Muerto, which will be the focus of this study, has received very little academic research. This research gap can partly be attributed to the remoteness of the SHM and the structural difficulties of conducting research in this area. But, most importantly it is because the implications of the dominant neoextractivist model tend to be analyzed in terms of socio-environmental conflict. Previous research has largely focused on the presence of explicit resistance movements. This is because conflicts and social movements act as “vehicles through which the concerns of poor and marginalized groups are given greater visibility within civil society” (Bebbington et al., 2008). Due to the absence of overt conflict, news reports come to describe the SHM as a "success" case for the mining companies (Pedrazzoli, 2023).

However, the lack of opposition in the face of extractive projects should not be less scrutinized (Arsel et al., 2019). Although certainly less visible, silence and consent are also ways to cope with the dominant extractivist model. Yet, how communities around the SHM cope with the domination of mining companies has not been studied thoroughly. Therefore, the following research aims to shed light on the experiences and perceptions of local populations and the processes leading to their apparent consent toward the mining industry. This leads to the formulation of the following research questions:

How do local communities cope with the domination of the lithium industry around the Salar del Hombre Muerto?

(RQ1): *What are the mechanisms through which the lithium industry dominates the local communities around the Salar del Hombre Muerto?*
(RQ2): *How have local communities’ livelihoods changed with the domination of the lithium industry?*
(RQ3): *How have the values attached to livelihoods changed in local communities?*

It is essential to first understand the mechanisms through which the lithium industry dominates the local communities around the Salar del Hombre Muerto before examining how people cope with these challenges. By doing so, I lay a foundation for a comprehensive analysis of the situation, enabling to explore the context and factors that shape the coping strategies of the local populations. Hence, (RQ1) first analyzes who and then how the dominance around the SHM is exerted. After gaining a better understanding of the domination mechanisms as well as the involved actors, I investigate how the local population reacts. To shed light on the different strategies applied by the local population to cope with the domination of the lithium industry changes in local livelihoods and values will be examined. More specifically, while (RQ2) reflects on the ways in which coping strategies are linked to livelihoods, (RQ3) addresses underlying changes in local values.

Outline

First, a literature review is provided to outline the currently available knowledge and emphasize the research gap. After highlighting the relevance and the aim of this research, the theoretical framework is provided in Section 2. Section 3 presents a conceptual model depicting the relationship between the previously introduced concepts. Section 4 describes the research methodology by discussing the different steps of the data collection and offers a reflection on my positionality as a researcher. To gain a comprehensive understanding of the research area, a regional framework is presented. Hence, Section 5, encompassing the geographical and thematic context, illuminates the environment, the key actors, and their dynamics. Thereafter, the results are presented in Section 6, systematically divided into subsections based on the research questions. First, in Section 6.1., the domination mechanisms of the lithium industry are outlined to gain a better understanding of how human and natural resources around the SHM are controlled. Section 6.2. addresses the way the local population copes with the expansion of the mining frontier and the pressures exerted by the lithium industry. A more comprehensive understanding of these coping strategies is achieved by analyzing how local livelihoods have changed. Therefore, Section 6.3. illustrates the ways in which livelihoods shape or are shaped by coping mechanisms. Section 6.4. then shows how local values have been redefined during the process of domination by the lithium mining companies. Discussing the main findings then allows answering the research questions in Section 7. Thereafter, implications of the results are deduced, for both the local population, as well as human development beyond the research area. Finally, conclusions are drawn and recommendations for future research are provided.

1. Literature review

A comprehensive review of the existing literature on the lithium industry in South America allows clarifying what is already known on the topic and identifying what remains unclear. Previous research has consistently demonstrated the connection between the development of the extractive industry and the surge in conflicts (Escobar, 2006; Walter & Martinez-Alier, 2010; Argento and Puente, 2019; Jerez et al., 2021; Dorn, 2021b). In fact, research has shown that currently, no Latin American country with mining projects is exempt from social conflicts between communities, mining companies, and the government (Svampa, 2019). Various scholars come to conclude that conflict is inherent to neoliberal globalization and the Latin American neoextractive model (Escobar, 2006; Svampa, 2019), which essentially is an expression of political domination (Brand et al., 2016).

Scholars have identified various sources of conflict associated with the lithium rush. Primarily, the extractive model translates into struggles over land and resources. Local livelihoods and ecosystems in the (semi) arid regions of the Northwestern Argentinian (NOA) Puna are naturally threatened by water scarcity, an issue further intensified by climate change. On top of that, the lithium industry exacerbates the challenges encountered in the area. The reason for this is that lithium brine mining is an extremely water-intensive activity, during which water is extracted and evaporated in open pools to obtain a concentrated lithium solution. Consequently, the most recurrent and conflictive aspect has been water use (León et al. 2020). Yet, the ecological degradation and manifestations triggered by lithium overexploitation are certainly not limited to hydrological concerns. Conflicts can also have a cultural or symbolic dimension, for instance, regarding traditional methods of extracting and using salt from the salt flats (Puente & Argento, 2015).

Moreover, research suggests that conflicts over mining go beyond the access and use of natural resources. As such, conflicts can also be caused by contrasting worldviews and divergent understandings of development (Brand et al., 2016). Marta Conde's academic review showed that, for instance, representation and recognition are highly valued among indigenous people (2017). Additionally, past examples of communities condemning gold mining activities in the Cauca Mountains indicate that values such as independence play a major role. In an open letter to the government, the activist Francia Márquez emphasized the love and respect towards their ancestral territories and demanded dignity and autonomy instead of persecution and dependency. The underlying neocolonial processes of accumulation by dispossession come into conflict with the recognition of identity and territorial self-determination, which were shown to be highly valued by indigenous communities.

Yet, despite the long-term presence of lithium companies in the SHM, and the multitude of potential sources of conflict surprisingly few concerns have been reported in the area. However, before studying the underlying reasons for that and addressing the lack of knowledge on the

communities living around the SHM, findings on the experiences of communities in other regions facing the pressures of the extractive lithium industry will be revised. In fact, divergent reactions to the mining industry in different territorialities have been found previously (Pragier, 2019; Dorn, 2021a). Even though the lithium exploration and exportation in Jujuy started more than 15 years later than in Catamarca, the province has been at the center of academic attention. For instance, numerous studies have been published on the community's resistance in the case of Salinas Grandes (Puente & Argento, 2015; Veen, 2017; Dorn, 2021a).

In addition, the arrival of lithium companies in the province of Jujuy showed that different communities perceive and react distinctly to this new actor. Furthermore, research indicates that both within and between communities the reactions toward the lithium mining industry can diverge a lot. To illustrate this, Felix Dorn compared the reactions and strategies of communities living around the Salar de Olaroz-Cauchari with those around Salinas Grandes-Guayatayoc (2021a). While the former case largely exemplifies collaboration between the communities and the lithium mining companies, in the latter case the companies face protests and opposition. The author describes that the communities living around the Salinas Grandes are well-aware of their indigenous rights, their identification with the community and land, and the fragility of the aforementioned. In contrast, the rather positive reaction toward the development of the lithium industry at the Salar de Olaroz-Cauchari is attributed to the new job opportunities, and improved quality of life, to avoid or reverse depopulation.

This is also consistent with earlier findings showing contrary reactions from the two salt flats in Jujuy, despite the communities' cultural, contextual, and geographical proximity (Pragier, 2019). There are distinct ways of framing that determine how the arrival of the lithium companies is perceived and the type of demand that is consequently made by the communities. The two contrasting frameworks, namely dependent and autonomous, lead to demands for retribution and recognition respectively. Deborah Pragier concludes that different communities perceive lithium projects differently and hence, accept or reject them. The author effectively links reactions (coping mechansims) to other underlying factors, such as valuing or prioritizing economic development or indigenous rights. Nonetheless, there is a need to bridge the gap between extremes, such as consent or opposition, and go beyond the polarity outlined here.

Apart from the lacking nuance around the topic, there is a general lack of knowledge on the perceptions of local populations around the SHM in Catamarca, Argentina. Surprisingly, the situation around the SHM, from where lithium is being exported already over 25 years, has not been covered extensively yet. Besides the few studies published on the conflicts in Jujuy (Argentina) most of the

articles about the lithium industry and affected local communities focused on Bolivia and Chile, where conflicts have been abundant (Jerez et al., 2021).

One of the few studies specifically covering the research area of interest is the recent study published by Escosteguy et al. (2022), addressing the consultation process around lithium mining in Catamarca. The authors describe the Free and Prior Informed Consent (FPIC) [1], consultations as neither fair nor transparent as the local communities face many barriers to participating and making their voices heard. Therefore, the establishment of a more democratic framework for conducting lithium extraction is advocated for.

Undoubtedly, it is crucial to highlight the shortcomings of the consultation processes. However, due to the predominant emphasis of previous research on FPIC, processes of dispossession have been largely reduced to an issue of lacking consent. Thereby, the fact that even consensual encounters may not resolve the negative externalities of extractivism is obscured. Furthermore, unequal power relations tend to be overshadowed. Obtaining consent and improving the FPIC consultations alone does not guarantee a sustainable and inclusive development of the lithium industry.

Likewise, substantially less attention has been given to what happens after the consent (Otsuki et al., 2017). Not much is known about the mechanisms leading to consent nor about people's experiences and strategies emerging following consent. In fact, consent can be used to legitimize extractive operations and further strengthen corporate power. When companies assert that consultation has taken place and that they comply with the regulations, local populations' possibilities to contest processes of dispossession fade while the problems often remain.

Hence, the reviewed literature highlights the necessity of expanding our knowledge of the experiences of the local populations living around the SHM and deepening our understanding of consent-building mechanisms preventing opposition to the development of the extractive lithium industry.

Already several decades ago, scholars understood that "the importance of engineering consent" cannot be overstated as it profoundly affects almost every aspect of our daily lives (Bernays, 1947). In contemporary times, mass media is the predominant means of diffusing narratives, generating support and compliance, and shaping public opinion and aspirations in other ways. However, the focus of the research at hand is how this consent is constructed at the local level, namely amongst the people who are directly affected by the extractive industry. Besides, as it serves the

[1] Principle based on the ILO Convention 169 and the 2007 United Nations Declaration on the Rights of Indigenous Peoples which requires indigenous communities be consulted about any proposed projects, policies, or activities that may impact them.

powerful entities to maintain the perceptions of lithium zones as “empty spaces”, public attention has, so far, “successfully” been limited.

A core objective of this research is to uncover the mechanisms at play which allow for the development and expansion of the lithium industry in AS. Some of the techniques and technologies to manufacture consent were explained in a study published by Verweijen and Dunlap (2021). The authors claim that mining companies suppress resistance through processes of “social engineering”. This essentially refers to the tactics used by mega-mining companies to improve the acceptance and legitimacy of their operations. These include amongst others ‘inclusionary control’ which for instance consists of buying time, making empty promises, and creating pseudo-participatory FPIC consultations, a practice also reported by Escosteguy et al. (2022). Besides the discursive legitimization of extractive operations is also shown to be accompanied by techniques, for instance dividing the opposition or more coercively repressing it. They conclude by emphasizing the need to study less common reactions to dispossession, such as acquiescence.

While much remains unexplained, we know that the domination of the lithium industry plays out on different levels and through different means. Furthermore, it was shown that both between and within communities the reactions toward the lithium mining industry can diverge a lot (Dorn, 2021a). This means that people facing the domination of transnational companies do not necessarily respond with the resistance expected of them. The reactions depend on a whole range of factors, such as community values, social relationships, and identity.

The general lack of attention to the socio-economic, environmental, and cultural dynamics around the SHM constitutes a clear research gap. Moreover, as mentioned earlier, prior research has largely centered around the extraction sites where overt conflict emerged. When conflict is visible it tends to illicit clear and urgent concern. Hence, it attracts a lot of activist and scholarly attention, especially from social sciences. On the contrary, where the domination of the extractive industry is subtle, changes are gradual, and the communities are remote, considerably less academic attention is paid. Yet, regardless of their reaction to the negative externalities of the extractivist model, the lives and experiences of people living around mining sites are all equally valuable. Therefore, to gain a more nuanced understanding of the sociocultural and political dynamics on the edges of the lithium frontier, the scope needs to be broadened to include the full spectrum of reactions, decision-making processes, and coping strategies of local communities, whether they contest or consent to the lithium extraction.

Lastly, academic research in this area has primarily focused on indigenous rights. While this emphasis is crucial to address historical injustices and protect the rights of these communities that have been marginalized, it also has led to a relative lack of knowledge on the perceptions, experiences, and challenges of non-indigenous communities. Moreover, consultation processes are centered

around the rights of indigenous people. However, also communities that may not be recognized as indigenous are affected by extractive mining operations. Disregarding the experiences of communities who are not constitutionally avowed self-determination rights fails to fully capture and address the challenges linked to the development of lithium projects. To develop a more comprehensive understanding of the diverse dynamics around (neo)extractive projects, it is essential to include the perspectives of *all* affected communities. Recognizing and bridging this knowledge gap is imperative to ensure inclusive and holistic research and decision-making processes.

Consequently, the overall aim of this thesis is to uncover processes that shape the supposedly empty land and shed light on the previously overlooked reactions of people affected by the extractive industry around the SHM. To understand coping strategies that emerge in the communities living around the SHM facing the domination of the lithium industry, their livelihoods and value systems are examined. These however cannot be studied in isolation; hence, the analysis is broadened to include the underlying processes and power relations. Hence, a core contribution of this research is to highlight the processes and mechanisms shaping coping and livelihood adaptation strategies.

2. Theoretical Framework

This study is framed within the context of neoextractivism, which emerged as a continuation or outcome of neoliberal globalization in the 1980s/90s. It also intersected with the increasingly prominent progressive left-leaning governments in Latin America and their leftist/socialist redistributive policies in the mid-2000s (Svampa, 2019). Neoextractivism represents a departure from the classical extractivist model characterized by extensive scale and intensity of resource extraction, raw or minimally processed resource exportation, and negative environmental impacts. What distinguishes neoextractivism from classical extractivism is its dual focus on satisfying global market demands while also integrating economic (liberal) and social(ist) considerations. In addition to exploiting, commodifying, and exporting natural resources, neoextractivist governments invest in social welfare initiatives and development programs to legitimize their accumulation strategy (Acosta, 2013).

During the 1990s, under the Menem government, Argentina embraced market-oriented policies, transitioning to an ideology of free market principles, privatization, and deregulation. This shift was accompanied by increased foreign direct investments, and international institutions like the World Bank and IMF reinforced these trends through the Washington Consensus (Haslam et al., 2016). The lithium industry's potential profitability was also highlighted during this period, leading to tax advantages for international mining companies. As a result, Argentina became a commercial lithium

exporter with the opening of the Fénix project on the Salar del Hombre Muerto in 1997 (Gonzáles & Silvana, 2021).

The extractive practices tied to neoextractivism have significant negative externalities, and despite promises of wealth redistribution, local communities often experience further marginalization (Gudynas, 2012). Additionally, the dependency on raw materials sustains Northern hegemony, reinforcing power asymmetries between the Global North and Global South (Dorn, 2021b; Hernandez & Newell, 2022).

Accordingly, Brand et al. (2016) conclude that neoextractivism is essentially a manifestation of political dominance, where the material, cultural, and socio-political dimensions and conflicts of a new development model converge. The processes and mechanisms of domination play a major role on the lithium extraction frontier; however, they tend to be overlooked in research, and overshadowed by the label of 'context'. Especially, livelihoods approaches, which are widely spread in development studies, focus primarily on local communities and their livelihood outcome but thereby disregard the processes as well as the institutions, such as the government and the policies that shape these (Scoones, 2009). Hence, analyzing the tactics from above will help to highlight the power relations and existing inequalities, which previously often have been failed to address.

Societal progress, modernization, and development are prominent discourses that sustain the extractive model in Argentina. On top of that, terms such as "green transition" and "clean energy" are deployed to further legitimize the development of lithium mining activities. The main narrative around this transition is that it is both necessary and beneficial. Therefore, to improve the acceptance and legitimacy of mining operations, the mechanism of "social engineering" is applied (Verweijen & Dunlap, 2021). To engineer or manufacture consent many different tactics can be applied. Pacification, defined as "an invisible security architecture that operates as a naturalized and internalized regime of domination" is one mechanism (Huff & Orengo, 2020). The employment of terms such as "harvesting" in relation to lithium extraction illustrates how mining companies and institutional stakeholders depict their activities as environmentally friendly (Forget & Bos, 2022). Likewise, the emphasis on the use of the sun, as energy source in the evaporation process of the saline water, central to the lithium concentration process, allows portraying it as a natural and peaceful process. Thereby, the colonial patterns of accumulation by dispossession are overshadowed and the severe problems created by the industry, such as water depletion, are disregarded altogether.

In addition, the weak institutional framework and the hegemonic alliance between the government and mining companies create a conducive environment for neo-colonial and hegemonic practices. This alliance consolidates the power of extractive industries and serves to control both

human and natural resources while disregarding the problems created by the industry and impacts on local communities and the environment.

In the following, the concept of domination mechanisms and other key concepts that underpin this research are introduced and a clear framework for analysis is provided. Hence, domination mechanisms include techniques, strategies, or processes through which lithium mining companies obtain access to the territory and its natural resource, entrench power inequalities, and legitimate their extractive operations. The tactics 'from above' aimed at curbing criticism and manufacturing consent for the exploitation will be at the core of the analysis. The techniques may be co-constructed by mining companies and the government as they both intend to avoid conflict while gaining legitimacy for the mining operations.

There are 'soft' and 'hard' domination techniques and mechanisms (Verweijen & Dunlap, 2021). However, to avoid falling into dichotomies and obscuring the complexities and intricacy of these mechanisms, categorizations are eluded in the following paper. Similarly, it is difficult to evaluate techniques as more or less violent and assess their degree of severity. Yet, it should be acknowledged that tactics 'from above' vary in the extent to which they are overt/covert. There are more subtle ways to suppress opposition and gain sympathy, such as for instance through propaganda and social pacification (Huff & Orengo, 2020). At the same time, there are also more overtly violent techniques, such as the application of brutal force to repress a manifestation.

Another central concept explored in this research is coping strategies. Generally speaking, coping strategies consist of responses to stressors. In light of the present research, I frame this concept in a way that it refers to the responses and reactions 'from below'. Hence, the responses of local people affected by the domination of the lithium industry, will are considered coping strategies. These can include amongst others, resisting, opposing/confronting, accepting, denying/disengaging, and reinterpreting the stressor etc. Previous research has focused on the communities' active, confrontative ways of coping with the corporate domination around mining sites. However, it is important to recognize that acceptance, silence, and consent can also function as coping strategies. These strategies should not be overlooked as they contribute to a comprehensive understanding of the decision-making processes within local communities. While looking at the way local communities navigate their environments subjugated by the lithium mining industry, their agency needs to be kept in mind at all times. Thus, livelihood decisions in the face of the presence of mega mining corporations are termed 'coping'.

Shedding light on coping strategies emphasizes the agency of local communities and avoids portraying them as mere victims of the energy transition. It furthermore aims to contribute to the

coping capabilities of vulnerable communities to increase their resilience, which is central to social sciences (Molnar, 2010).

There are two additional concepts that help make sense of the reactions of the local communities facing the domination of the lithium industry. They can result from, reinforce, or enable the above-mentioned core concepts. First, livelihoods can be defined as "a function of assets and structures, and a source of subsistence, income, identity, and meaning" (Bebbington et al., 2008). It refers to the ways in which communities sustain their daily lives. This goes beyond economic activities and also encompasses people's identity, cultural practices, and social relationships. Essentially, the "lifeworlds - the domains of everyday, meaningful practice" of the local population living around the SHM will be analyzed (Bebbington et al., 2008). Livelihoods partly determine what people value and vice versa, there are value systems underlying the livelihood decisions of people.

Second, value systems refer to the set of beliefs, principles, and ideals that guide individuals, groups, or societies in determining what is important, desirable, and morally acceptable. The term "values" is very broad and includes preferences, interests, wants, likes and dislikes, goals, needs etc. (Williams Jr, 1979). The values held by the community can shape their aspirations, priorities, and decision-making processes. Furthermore, they can be dynamic and individuals as well as societies can internalize different values. Research by Robbins showed that when new values are introduced and old values are contested, a change in values follows (2007). Subsequently, a cultural change occurs, and "new stable structures may arise" (ibid.). Thus, changes in value systems will be at the core of the analysis. Therefore, intergenerational differences will be examined. The idea is to see whether the values of younger generations who grew up with the presence of the mining industry differ substantially from older generations who grew up in more traditional environments preceding the arrival of lithium mining companies.

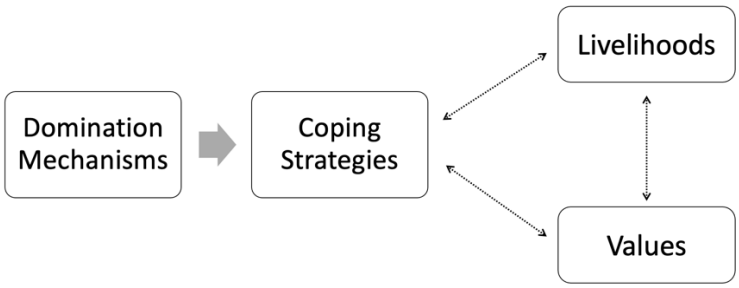
3. Conceptual Framework

This section presents a conceptual framework illustrating the intricate and interdependent relationship between the above-mentioned concepts. Figure 1 aims to depict the central focus and question of this research, namely local communities' ways of coping with the domination of the lithium industry around the SHM. The mechanisms and techniques applied 'from above' shape the reactions 'from below' and the decision-making processes of local people. Hence, local livelihoods may be revalued and subsequently redefined. As individuals have the subjective capability to understand their circumstances as well as their position within them (Otsuki, 2016), they are expected to redefine their personal livelihoods and values in different ways. Changes in values and local livelihoods can both result from the domination and, at the same time, facilitate or support the

continuation of the domination. Likewise, depending on people's values and livelihoods they might cope differently with the domination of lithium companies. While decision-making may be based on values, alternatively, values can also be matched to decision-making. Hence, there is a dynamic interplay between livelihoods, values, and coping strategies and their influence can be multidirectional. Furthermore, it is important to note the ambivalence of actors whose values, livelihood decisions, and coping strategies may not be aligned. Lastly, they are not fixed and can change over time.

Figure 1

Conceptual Model



4. Methodology

The fieldwork investigation was conducted over March and April 2023 in the province of Catamarca, Argentina. The target population of this research consists of individuals residing around the Salar del Hombre Muerto, where lithium projects are abundant. The aim is to capture the perceptions and reactions of people who are directly affected by the mining industry and the dynamics shaping these. Therefore, the following study primarily relied on interviews, informal conversations, and ethnography through participant observations. The research was further complemented by secondary data, both quantitative and qualitative.

4.1. Qualitative research methods

To study the ways local populations cope with the presence of the mining companies and get insights into the perspectives on this dominating industry, in-depth interviews were conducted. First, unstructured interviews were used to get a better understanding of the local context. Later, semi-structured interviews allowed the collection of data focusing on the research question. The ethnographic work helped me gain insight into local livelihoods and particularly into the changes in the ways of living.

Ethnography

Participation in the community, their daily tasks, and cultural events allowed me to get to know the field in which this research is set in. Engaging in subsistence activities, such as harvesting fields, herding, and slaughtering animals, added not only to my knowledge of how people live but also permitted me to build rapport with potential participants. Furthermore, it allowed me to observe how people relate to nature and more specifically their postures toward lithium mining.

The immerse myself in the field, I participated in local events, for example, a women's gathering in AS on the occasion of International Women's Day on March 8. This allowed me to observe social interactions as well as engage myself with the local population. Moreover, I participated in an educational training program organized by geologists. This event took place in the context of the Mining Development in Communities Program, hence, was directly related to my research topic. It revealed a lot about the postures of both the community and the institution.

Regarding the changing value systems, observations at the secondary school of AS proved to be useful. Participating in English classes gave me the opportunity to interact with the local youth. I gained insights into what the generations, who were born with the presence of the lithium mining companies, value and aspire to.

Interviews

The participants mainly involve local community members living in the department of AS. To include a diversity of interests and power positions also government officials, police officers, lithium company representatives, and other experts on the topic (e.g. journalist, academic) were interviewed. All interviews were conducted by myself in Spanish.

Sampling method

Considering the posed research question regarding local livelihoods and ways of coping with the domination of the mining companies, the study population encompasses all habitants living around the SHM. Taking into account potential differences due to the geographic location (e.g. proximity to a lithium plant), participants from different localities were selected. Moreover, the heterogeneity of indigenous communities was addressed by including several members of each community around the SHM. Thereby, I aimed to make room for potential differences between as well as within communities.

After some weeks of data collection, I segmented the participants according to demographic criteria, such as gender and age group. Then, I purposively selected more young participants from the study population, as they appeared underrepresented in the sample.

Asking for consent, explaining the objective of the research, and informing the interviewee about confidentiality, was commonly followed by the same set of questions. Apart from building rapport, the introductory questions were meant to get insights into the participant's background (community, livelihood,..). Due to the interviewees' distinct positionality, the follow-up questions varied between interviewees. Most interviews were voice recorded, with the exception of the interviews with the police, the mining control, and the company representatives. No questions were refused, and note-taking was always permitted.

After visiting the main localities and communities around the SHM and conducting 32 interviews a point of saturation was reached. The same perspectives and coping strategies started to repeat, and no more new positions could be identified.

Table 1

List of Interviews with Different Actors

Participant groups		**Nbr of interviewees**
Local population	- Antofagasta de la Sierra	15
	- Antofalla	4
	- Los Nacimientos	5
	- El Peñón	3
	- Other settlements	4
Government officials	- Department Mining Secretary	1
	- Centro de Control Minero Ambiental (CCMA) de AS	1
	- Police	2
Mining companies	- Albermale	1
	- Lithium Energi Argentina SA	1
Other participants	- Academics (CONICET)	2
	- Journalist	1
	- Fundación Ecoconciencia	1
Total		40

To uncover the power dynamics at play it is important to interview a diverse range of participants. This also allows gaining a more comprehensive and nuanced understanding of the issue. The key informants, such as government officials, company representatives, and experts on the topic, were interviewed to get an understanding of the main narratives and discourses around the extractive projects in AS. It also helped uncover different postures towards the local populations as well as shed light on the underlying tactics used to dominate them. To examine the lived experiences of people facing the domination of the lithium industry, a sample of the local population was observed and interviewed. As stated earlier, different localities were considered. The interviews were conducted

with male and female respondents, encompassing various age groups to explore potential generational differences in perceiving and coping with the domination. To protect the identity of the participants, all names and other identifying information have been omitted in the following sections. However, to understand the power dynamics, their societal position is indicated. Thereby confidentiality and respect for the privacy of the individuals involved in this study is ensured.

Table 2

Demographic Characteristics of Local Population

Variable	Local Population (*n*=31)
Gender	
Males	14
Females	17
Age range (years)	
15 - 30	7
30 - 50	8
> 50	16

Note. This gender categorization should not imply that it is a binary construct. Other gender identities were acknowledged yet the participants in this study identified as women or men.

Secondary data

The research data was further complemented by news articles, company reports, documentaries, etc. The primary purpose of using secondary data was to get a better understanding of the local context. Although the secondary data may lack in nuance and objectivity and is prone to sensationalism, it is helpful to get an insight into the most flagrant conflictive issues at hand. Later, the gathered information could also be compared to the perspectives of local people. Furthermore, it allows for comparing global, national, and local narratives around the topic. Discrepancies and divergences between different viewpoints, narratives, and perspectives on lithium extraction in the SHM highlight its social construction, which is influenced by various contextual factors. In addition, the Environmental Impact Assessment Report published by Livent (2022) allowed not only to learn about the company's projects on the SHM but also reveal its stance on the environmental degradation that comes along with them. By illustrating the challenges faced by local populations, documentaries offered an overview of potential sources of conflict emerging around the SHM. The diverse sources of information helped to preliminary explore the topic and area of interest and get a general sense of the situation around the SHM, the different stakeholders, and power dynamics at play.

4.2. Quantitative Research Methods

Data from Antofagasta de la Sierra's most recent population census of 2022, obtained through the municipality, provided some demographic context. Due to the confidential nature of the data, appropriate measures were taken to ensure its secure handling and ethical use. Relevant variables and characteristics were selected from the census data based on their alignment with the research objectives. Apart from general demographics of the research area, such as the population size, the data also revealed personal information, including respondents' employment status. Given that employment status directly relates to their economic activities and sources of income, it provides valuable insights into the local livelihoods. Hence, this information was used alongside the qualitatively gathered data. By combining both primary and secondary data, I aimed to enhance the robustness and comprehensiveness of your research, allowing for a more comprehensive analysis and interpretation of the research area.

Additionally, secondary data obtained from Catamarca's Association of Geologists was included in the research. During the fieldwork, I participated in the training offered within the Program on Mining Development in Communities in Catamarca. The content taught by the geologists as well as the ways in which they presented information in this course was indicative of the interests they defend. Apart from providing information and educational training to the local population of AS, they also conducted a survey to assess the habitant's opinions about the lithium mining industry (see Appendix). It is important to acknowledge that the validity of this data cannot be assured. Therefore, this research did not rely on it. Nonetheless, it provided valuable insights and served as an indication of what findings could be expected during the in-depth qualitative data collection.

4.3. Methodological Considerations

When conducting qualitative research, it is imperative to recognize that the researcher him- or herself becomes an instrument for data collection (Merriam & Tisdell, 2015). This realization highlights the need to consider the researcher's reflexivity and positionality, as subjective views inevitably shape the research process. Rather than denying my subjectivity, I embrace it by recognizing its potential influence on the study.

First, I actively challenged the tendency of relying on the artificial dichotomy between "us", modern, rational individuals, and "them", traditional (or indigenous) people. This bias was not only identified but also contested as, in fact, the observations in the field did not align with common links made between indigenous people and their connection to the land and their intrinsic way of valuing nature. This further underlined the need to move away from these oversimplifications and overgeneralizations.

Then, to ensure transparency, I engaged in reflective practices throughout my research journey, including considering the approach taken to enter the research area and build relationships with the communities. Knowing the language of the participants and being curious as well as respectful towards their history and culture helped me gain the trust of the participants. Nonetheless, considering the regional extractive context and the domination of practically only foreign companies, my position as a researcher from the Global North, and the power asymmetries associated with this identity, were of concern to me. Therefore, I chose to prioritize showing empathy with the participants rather than maintaining a strictly neutral stance. This anticipated outsider's discomfort is an obstacle that may stem from the awareness of potentially being associated with a group that has historically controlled and exploited human and natural resources in the area. This worry of mistrust needs to be reflected upon, yet I believe that it did not overshadow the attitudes of respect, openness, curiosity, and discovery that guided my interactions and data collection process. Instead, empathizing, as well as validating experiences and perspectives, encouraged participants to share more openly and honestly. Showing empathy can contribute to the authenticity and depth of the research findings, which considering the sensitivity of the topic, was especially important.

The ethnographic approach and choice of immersing myself in the field and the communities also came with its own challenges. Alongside the research fatigue resulting from the constant exposure to the topic, the fieldwork also emotionally challenged me at times. Confronting the injustices and exploitation faced by research participants evoked a sense of helplessness in me. Thus, recognizing the boundaries of the research role while being aware of the struggles faced by the participants was difficult for me. However, sharing my experiences with fellow researchers allowed me to navigate these challenges. I am confident that my vulnerability did not prevent me from maintaining the integrity of the research but instead helped me conduct it in a supportive and sensitive way. Furthermore, although I cannot deny that my eyes and ears played a role while collecting, filtering, analyzing, and interpreting the data (Lichtman, 2012), I ensured that neither my values nor beliefs were imposed on any participants. Besides, as suggested by previous research, I provided space for differences between actors as well as ambivalence within actors (Lorca et al., 2022).

Moreover, ethical considerations were taken into account at all times. Voluntary participation and informed consent were ensured before the interviews. Furthermore, to guarantee confidentiality, participants were anonymized, and quotes were not linked to a particular community or locality. Finally, to maintain a balanced perspective and ensure a comprehensive exploration of different viewpoints surrounding the topic a diverse range of participants, in terms of age, gender, position/status (power dynamics), was selected.

5. Regional Framework

This section aims at describing the area where the research is conducted. First, a geographical background is provided. Then, the local population and the mining companies present in this area are described. This is essential for understanding the local context and the challenges faced there.

5.1. Geographic Context

A salt flat that is increasingly attracting lithium mining companies is the Salar del Hombre Muerto. It is situated in the province of Catamarca, one of the three provinces in the NOA, where the lithium rush is being materialized. More specifically, the Department of Antofagasta de la Sierra, in which the SHM and the affected communities are located in, will be of interest to the current research (see Figure 2).

Figure 2

Research Area showing Main Localities and Salar del Hombre Muerto (Source: own illustration)

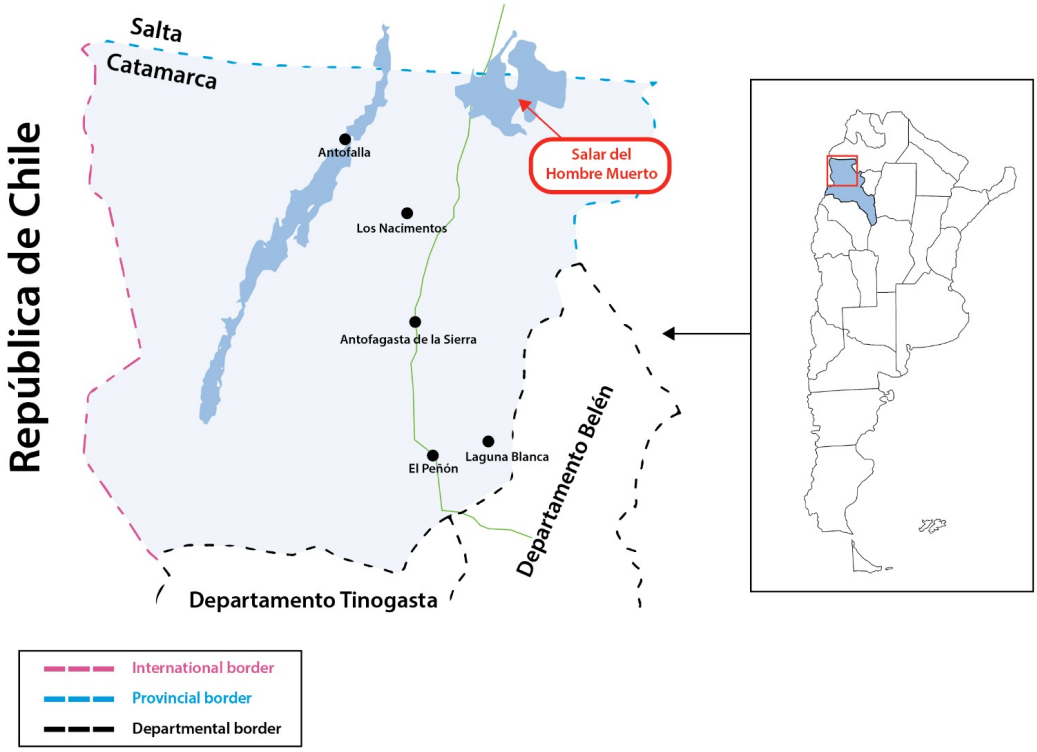


Figure 3

View on the Salar del Hombre Muerto (photo by the author, March 2023).

The first characteristic of the study area that needs to be mentioned is its isolation and remoteness. The closest small town is 200km away from AS, while the provincial capitals San Fernando del Valle (Catamarca) and Salta, are both more than 500 km away. Also, within the department, the localities are isolated. Therefore, to trade goods and services it used to be very common to travel on a mule for several days to reach another community, whereas today many have 4x4 trucks. Nonetheless, considering the large distances coupled with the lack of paved roads and public transport, the communities are very isolated. This potentially hinders the emergence of collective actions and could pose a challenge to social cohesion in general. Similarly, the remoteness contributes to the challenge of making visible local or indigenous struggles. The way these characteristics of the research area clearly favour the Argentinian extractivist model will be elaborated in the results section. Furthermore, on an average altitude of 3500 meters above sea level (m.a.s.l.), AS covers a substantial portion of the Argentine Puna region in Catamarca. The region is characterized by countless volcanoes, mountains, and wetlands, such as salt lakes and lagoons.

Figure 4

Vicuña in Crater of Galan Volcano at 5000 m.a.s.l. (photo by the author, March 2023)

Considering that the indigenous translation of Antofagasta de la Sierra is 'House of the People of the Sun', it comes as no surprise that the area is marked by a mostly arid climate and high solar radiation. Even without human interference, the water balance in the Puna region is negative, meaning that the evapotranspiration outweighs the rainfall in this region. These conditions facilitate lithium extraction through the evaporitic technique widely used across South America. However, for the same reasons, water scarcity is a predominant concern for local populations, ecosystems, and wildlife. The meadows, known as *vegas,* are highly valued by the Antofagasteños as they help maintain wildlife, protect threatened species (e.g. flamingos), and provide fresh water. For this reason, they are also of high relevance to the context of the current research. Especially, the case of the vega linked to the Trapiche River is central to the discussion. Extracting around 380.000 liters of water per hour, using the river as their main water source, Livent Corp. admitted having caused the draught of an 11 km stretch of the vega Trapiche (see Figure 5) (Pucará, 2020).

Figure 5

The Previously Green Vega Trapiche Now Black and Dry (photo by the author, March 2023).

Note. The Condorí Family House can be seen in the Background.

5.2. Actors

Local Population

The population considered in this study resides around the SHM in the department of AS in the North of Catamarca. According to the most recent population census about 1700 people live in the department of AS, of which more than half (n = 886) can be found in a town sharing the same name. The communities concentrate mainly around the following localities: Antofagasta de la Sierra, El Peñón, Antofalla and Los Nacimientos (see Figure 2 for Map). Characteristically, these settlements consist of adobe houses clustered around a church, a municipal house, and a school.

Figure 6

Antofagasta de la Sierra's Village Church (photo by the author, March 2023).

Figure 7

Street in Antofagasta de la Sierra (photo by the author, March 2023).

While some form part of a community, others live in smaller settlements are scattered around the region, usually in proximity to rivers and meadows. Moreover, many have temporary “posts” at higher altitudes to which they move with their animals during summer when some pasture is available.

Figure 8

Summer Post (photo by the author, March 2023).

The human occupation of the territory began more than 10 thousand years ago (Martínez, 2019). These indigenous populations, of Diaguita and Kolla-Atacameño origin, lived in small groups using caves as protection (Izquierdo et al., 2022). Traditionally, the main economic activity has been transhumant pastoralism (predominantly llamas and sheep). Frequently, livestock rearing is complemented with small-scale agricultural activities, encompassing crops such as corn, beans, and

potatoes. In addition, the commercialization of salt and weavings contributes to the economic viability of the area, as well as the tourism sector which expanded in recent years. Hence, local livelihoods consist of subsistence activities which are increasingly being complemented or replaced by remunerated activities, including mining. Section 6.3. will elaborate on how local livelihoods have been reshaped.

Figure 9

Peñas Coloradas Petroglyphs. Evidence of pre-Hispanic Llama Caravan traffic (photo by the author, March 2023).

Among the communities, some identify as indigenous communities while others do not. The self-identification of indigeneity is only in the case of one community, Kolla Atacameña, accompanied by national recognition and legal status. Table 3 provides an overview of the indigenous communities located in the research area.

Table 3

Overview of Indigenous Communities Living Around the SHM

Community Name	**Cacique**
Kolla Atacameño (Antofalla)	Isidro Ramos
Atacameños del Altiplano (Antofagasta/ Ciénaga Redonda)	Roman Guitian
Antifacu (Laguna Blanca)	Claudia Santos Vázquez
Diaguita Carachi Pampa (El Peñon)	Florentin Vázquez

Note. The locations mentioned in this table are displayed on a map in Figure 2.

As the Instituto Nacional de Asuntos Indígenas (INAI), only recognizes the Kolla Atacameña Community of Antofalla, they are, compared to the other communities, in a more powerful position which is why I will elaborate on them. The community is legally recognized since 2007 and is situated in a small locality called Antofalla, surrounded by a salt flat and a volcano (6409 m.a.s.l.) carrying the same name.

Due to the challenging living conditions and the limited access to essential services, and the absence of education beyond the primary level, many have moved away or live only temporarily (during summer) in Antofalla. Today, the community, consisting of about 30 families, is regularly consulted by mining companies intending to expand the mining frontier.

Figure 10

Welcome Board at the Entrance of the Ancestral Community Territory (photo by the author, April 2023).

Yet, as mentioned earlier, not all Antofagasteños live in communities. The Condorí Family, for instance, lives in isolation far away from a settlement. The family, consisting of Amelia, the mother, and her three sons, resides next to what once was the Trapiche River (see Figure 4). Two daughters have passed away; one of them recently died unexpectedly, leaving the family in doubt about the cause of death. Due to the fact that they live only 1000 meters away from Livent's lithium extraction plant, they are among the most directly impacted people. Catamarca's first and biggest lithium project, called Fénix, transformed the ancestral territory of the Condorí Family into, what Zografos and Robbins would call, a "green sacrifice zone" (2020). They have experienced visible livelihood losses and land displacement, which stands in contrast to, for instance, less visible socio-cultural displacement.

Lithium mining companies

Thus far, there has been only one active lithium project on the Salar del Hombre Muerto, Catamarca. This project, known under the name of Fénix, was inaugurated in 1997 by FMC Corporation. It has been operating continuously ever since and has undergone major expansion in recent years. In 2019, FMC Corporation created a spin-off company called Livent Corporation, which subsequently assumed control of the project Fénix and its ongoing expansion.

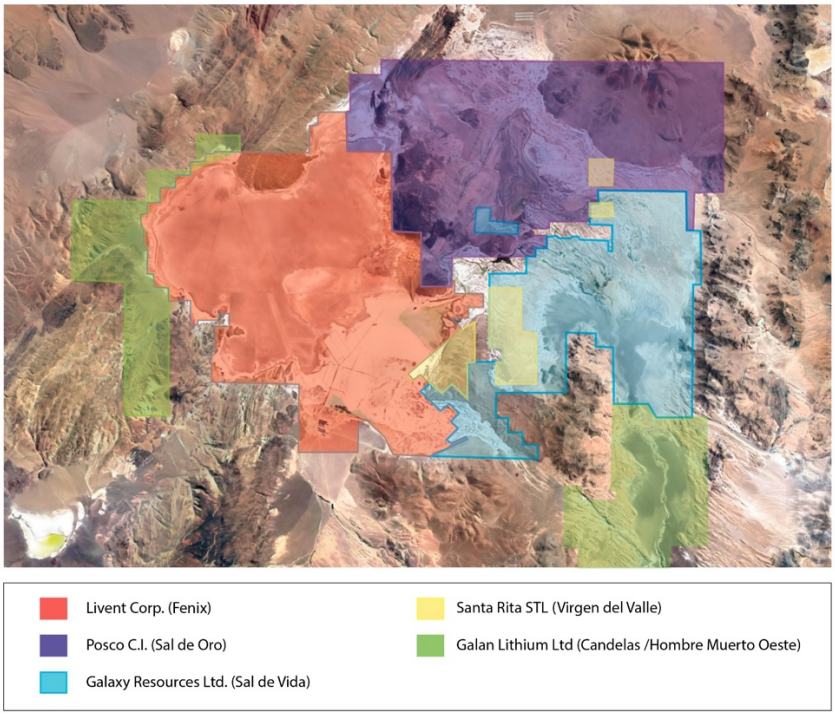
Likewise, numerous other companies have been attracted by the surging global demand for lithium and the Argentinian neoliberal and neoextractivist climate. Most companies present on the SHM dedicate themselves to the supply of lithium carbonate for battery production (Marconi, Arengo & Clark, 2022).

The companies with projects at an advanced exploration stage driving the expansion of the lithium frontier in Catamarca, Argentina, are (see Figure 11) :

- Livent Corporation
- Posco Argentina S.A.U.
- Galaxy (Sal de Vida) S.A.
- Minera Santa Rita SRL
- Galán (Candelas / Hombre Muerto Oeste)

Figure 11

Map of SHM and Current Lithium Projects at an Advanced Stage



Note. The map illustrates the Salar del Hombre Muerto and the approximate locations of the lithium projects which are in an advanced stage. Each coloured marker represents a different lithium project. The markers, placed on a map generated using Google Earth, are for illustration purposes only and may not precisely represent the exact geographical locations or measurements. See Marconi, P., Arengo, F., & Clark, A. (2022) for more accurate and detailed information on the locations of lithium projects.

5.3. Thematic Context

This section provides a review of the state of the art of the topic in its geographical context and addresses potential sources of conflict. Based on secondary data some insights into the dynamics between the communities, the government, and the companies can be gained. It is important to understand the challenges the local communities around the SHM face before studying their ways of coping with this.

The most recent estimates published by the Instituto Nacional de Estadística y Censos (INDEC) have shown that, despite its mineral wealth, Catamarca still remains one of the poorest provinces in the country (2023b). But apart from absolute economic terms, poverty in Catamarca is characterized as a mainly structural problem, due to, for instance, inadequate infrastructure, lacking essential services, etc. Thus, hopes for inclusive and sustainable development are high.

Yet, as a member of the PUCARÁ Assembly (Pueblos Catamarqueños en Resistencia y Autodeterminación) stated "There is no distribution of the alleged royalties that mining generates, nor is there a positive economic impact on the communities. Anyone familiar with Antofagasta de la Sierra knows that, in the last 20 years, in terms of essential basic services and the needs of the people, things are the same as always. There is no 24-hour electricity, there are no good access roads, and there is limited access to healthcare and education." (Guerrero, 2023, June 29).

The most recurring subject of conflict regarding lithium mining projects in the Puna region is water supply. Here, the case of the aqueduct Livent has built to redirect the Trapiche River's water to the lithium plant is of particular importance. It has received a lot of attention as it caused the death of all vegetation and animals around the vega Trapiche. Despite this disastrous precedent case, history is now to be repeated. Not only Livent but four additional companies received the authorization to extract fresh water from the Los Patos River, which in the near future is very likely to suffer the same fate as the Trapiche River.

Furthermore, environmental spills are also far from uncommon. For instance, at the beginning of February 2023, a truck from the mega-mining company Livent spilled 20.000 L of hydrochloric acid.

The American company did not comment on this incident which contradicts their supposedly green commitments. The government addressed the toxic spill in a press release only when a video of the overturned truck went public 11 days later. Associated with such environmental disasters are frequent reports of dead vicuñas and other animals found dead without apparent cause of death.

Another source of concern is the absence of secure tenure. The majority of the local population does not belong to an INAI-registered indigenous community. This means that their territories are, even if inhabited by them for centuries, at risk of being concessioned to mining companies by the provincial government. This has for example been the case for the Morales family whose ancestral land was transformed into an airstrip and later further divided by a mining bypass for company trucks to access the lithium plant.

Moreover, COVID-19 halted the construction work of the Fénix expansion project and caused, according to Escosteguy et al. (2023), 500 workers to be laid off without compensation.

Lastly, Catamarca's custom control recently confirmed that the lithium exports were sold below market value. The relationship between Livent and the provincial government is characterized by corruption, under-invoicing, and tax evasion. Accordingly, a provincial deputy stated during a press interview that the governor, Raúl Jalil, "confuses the role of the State," and that "in Catamarca, the interests of the companies are being defended instead of the interests of the people." (Catamarca te informa, 2022).

The aforementioned issues highlight significant challenges faced by local populations and illustrate unequal power relations. Yet, it needs to be acknowledged that the scope of local struggles goes far beyond these examples. Additionally, despite the myriad of highly conflictive issues around lithium extraction in Catamarca, collective opposition to the mining projects has been avoided or overlooked so far.

6. Results

General posture toward industry

The arrival of mining companies in Antofagasta de la Sierra goes far back in time. However, as several of the participants explain, the presence of the lithium companies went unnoticed at first. Only after one decade of lithium exportation from Catamarca did the local population enter into contact with FMC Corporation. They were invited to visit the lithium plant and were taught about the environment and the company's "sustainable" working methods. The interviews revealed that due to limited access to information, particularly the lack of internet connectivity at that time, the local population had few alternatives besides relying on the information provided by FMC. According to a municipal worker, the industry directly employed only about 7 people from the area over the first 20

years. The spin-off from FMC to Livent Corporation and the expansion of the Fénix project substantially increased the company's presence. The overwhelming number of companies that began to establish a presence in recent years, altered the perceptions of the local population towards the industry.

Considering the popularity of the companies' merchandise (e.g. caps, jackets,..) among the local population, it seems that, at least on a surface level Antafagasteños hold a favorable view of the companies. The insights shared by the local population indicated a relationship of trust between them and some of the companies, especially the ones who promote their social development investments throughout the villages. At the same time, due to the lack of information and transparency, the more recently arrived foreign companies face more skepticism or have not been perceived at all yet.

When examining more specifically the posture of the indigenous Kolla Atacameña community the following emerges. Outside of Antofalla, where the community resides, the community has a reputation for being pro-mining. Indeed, an interview with the cacique confirmed the community's collaboration with some companies. However, my time with the community revealed that not everyone is in favor of the mining projects on their territory. In fact, during the community consultation process with the Chilean mega-mining company, Albermale, more than half of the presented pumping wells were rejected by the community. A division within the community can be noted. Some members of the community described a good relationship with the company, claiming that, "they [Albermale] are not like the yankees [meaning North American, in this case referring to the US company Livent] as they have experience with working with indigenous people from Chile." In contrast, others expressed frustration over not being heard and respected. It became evident that, often, the pro-mining reactions originated from mine workers or people running a business (e.g. catering) at the service of the mining companies.

Moreover, when comparing previous research with the findings of the local population survey conducted by Catamarcan geologists in Antofagasta de la Sierra in March 2023 (see Appendix), some contrasts emerge. In the case of Salinas Grandes, the reported opposition and protests were linked to the finding that people perceive mining as uncontrollable (Dorn, 2021a). This stands in stark contrast with the survey finding that a large majority of Antafagasteños think that lithium mining can be responsible and can generate sustainable development for their communities.

More than four-fifths of the respondents stated that they agree with the mining activities in the area. This is in line with the posture of the communities in Huancar which prioritize employment and economic opportunities offered by the mining industry (Dorn, 2021a). While respondents shared the economic hopes they attach to the development of the industry, they also mentioned their worries about negative externalities, such as water scarcity and contamination. Nonetheless,

according to the findings of the survey conducted by the geologists, there is an overarching agreement to the development of lithium exploitation projects.

Although personal observations and conversations with local people also largely indicated agreement, the survey data needs to be scrutinized. Considering the local context, some survey answers raise suspicion about the validity of this data. For instance, agriculture was mentioned as the main economic activity of the area and deforestation was one of the most stated worries. This does not align with the realities faced in the locality of AS. Hence, these inconsistencies could be explained by the claim of some interviewees that consultation and capacitation meetings are often attended by people from the outside, who participate to favor the interests of the lithium industry. This would mean that the power of local communities is further restricted, and outcomes are distorted. Alternatively, the geologists directly altered research findings through data falsification. Besides, the sample is inadequate, in terms of size but also representability, which compromises the reliability and generalizability of the findings. Yet, regardless of the reliability and validity of this survey, the findings are indicative. In the case it is violated, it provides evidence of how far the state is willing to go to overshadow criticism and impose consent. In case the findings accurately reflect the state of the affairs it indicates that the domination mechanisms were successful.

Finally, the binary response options (e.g., agree/disagree) in the survey lack nuance and fail to capture the complexity of the experiences of the local population facing the domination of the lithium industry. As emphasized by Lorca et al. (2022), it is important to avoid oversimplifying and instead leave space for ambivalence. Therefore, the use of qualitative methods is crucial to capture the full diversity of perspectives and take both variation across and within communities into account. Hence, conducting interviews and applying ethnographic methods allows for a more nuanced understanding of the perceptions of people and the underlying various process leading to them.

6.1. Domination Mechanisms

This section elaborates on different mechanisms and strategies to overcome resistance to mega-mining projects and dominate territories, resources, and local populations. Techniques applied are targeted toward controlling the territory, starting new extractivist projects, and upscaling existing ones. Dominance is exerted on different levels, meaning that these tactics ‘from above’ can be subtle and manipulative without being visibly conflictive while they can also be overtly coercive and violent. Before elaborating on the various domination mechanisms and techniques, the main actors involved in the process of establishing consent for mining operations are outlined. The different actors, their roles, and the ways in which they contribute to the expansion of the lithium frontier will be uncovered. Thereby, I aim to elucidate what is meant by ‘from above’.

Public institutions

In theory, the role of public institutions is to serve the public interest, promote the well-being of society, and provide essential services and governance. However, the research at hand is situated in a weak institutional context in which not the interests of the public but rather the companies seem to be prioritized. In practice, the institutional capacity to fulfill their expected duties is limited. For instance, the government does not appear to comply with its role as the provider of essential public services and basic infrastructure. Instead, mining companies are increasingly taking over governmental duties and tasks, such as, for example, building schools.

The company-government coalition is not only limited to infrastructure but even extends to educational services. In the context of Argentina's Plan FinEs, an educational program nationally offered to adults who wish to complete their secondary education, the mining companies signed an agreement with the minister of education. Accordingly, companies can now offer an educational service to their employees. This implies that people who have quit school to work at the mines can now take the tests, required to graduate, at the SHM mining site. The school director from AS explained to me that the school is now forced to award graduation diplomas although they can no longer certify the students' knowledge acquirement. This further illustrates how the role of the mining companies expands and demonstrates the increasing power they are given.

Meanwhile, the provincial government is very clear on its main concern. Governor Raúl Jalil clarified, during an interview with Bloomberg Línea, that Catamarca's top priority is to continue growing. He further explained, "we are very flexible and investor-friendly" (Espina, 2021). According to the people in the village, he personally invested a lot of money in mining companies. Political corruption is also a recurring topic. Given that individuals have the right to vote from the age of 16, they become manipulation targets from an early age onward. A schoolteacher told me that now approximately is the time during which the youth start thinking about what to put on their "wish list". As the elections are approaching, the politicians will soon take orders. The technique was explained to me as follows: "*They give you a TV and only if they win you get the remote.*" or "*You get one shoe and in case of a win, the second*".

Moreover, the mining secretary office was inaugurated approximately one year ago. The recency illustrates that, at least during the first 25 years of lithium extraction, overseeing and regulating the mining industry has not been a priority. Lacking accountability prevents protecting both the environment and local communities.

Apart from failing to comply with governmental responsibilities, various strategies are applied to assure local support and avoid the emergence of conflict. Key complicit actors in this context are the professors of Catamarca's Association of Geologists. Within the Program on Mining Development

in Communities in Catamarca, they offered a training course to the local community of AS. Contracted by the provincial government, the geologists presented data in a distorted way, not accurately reflecting the regional situation. For instance, national figures for water consumption were shown to convey the message that the mining industry is responsible for only a minimal share in comparison to agriculture. Participants were not only misled but also blamed for their irresponsible water use. The scientists further explained that water from the salt flats is in fact not even considered water due to its high salt content. Moreover, they justified that saline water is anyway not suitable for consumption and that the freshwater involved in the lithium mining process is returned to the source after use. The hydrogeological changes and the fact that most of this water evaporates on the surface due to the high solar radiation were obscured. On top of that, the drying up of the Trapiche River which the mining company used as their main water source was said to be due to climate change. Undoubtedly, their expert appearance facilitated the acceptance of the provided information.

The habitants were also told that their worries are unjustified and that in case of doubts information about lithium mining would be freely available on the internet. The barriers to accessing information, such as lacking internet connectivity and/or understanding of scientific jargon are disregarded.

Finally, after being taught how to take water samples and measure the level of contamination, a participant remarked that it should not be the people's but the companies' responsibility to make sure that their water is not contaminated.

The strategy of using scientists to validate mining operations was also mentioned during my talk with a lithium expert and researcher from the CONICET. According to him, the Argentinian research council is nationally highly valued. Hence, companies seek endorsement from these researchers. A similar claim regarding corruption emerged during a conversation with a professor from the Universidad Nacional de Catamarca, who added that companies sponsor universities and research centers that support their interests.

Lithium mining companies

As explained in Section 5.2., there are a myriad of lithium companies present on the SHM, however this research will primarily focus on those with projects in an advanced stage. Furthermore, it is important to take temporal dynamics into account when studying changes occurring around extraction sites. While domination techniques, such as the deployment of the development discourse and propaganda, can be applied and identified early on, it is challenging to capture the full scope of companies' practices when its project is only at the prospecting and exploration stage. Considering

the long-term presence of Livent in the SHM, local communities' perceptions, experiences, and reactions towards the project Fénix are most indicative of the changes over time.

The project is operated through Minera del Altiplano S.A. a local Argentinian operating subsidiary of Livent. Already in 2020, with a production capacity of 22,500 t of LCE (lithium carbonate equivalent), Livent counted as one of the world's biggest lithium companies (Heredia et al., 2022; Quinteros-Condoretty et al., 2020).

A press release issued on May 10th, 2023, presented the agreement between Livent Corporation and Allkem to combine companies (Livent Corporation, 2023). By vertically integrating the Australian lithium giant operating on the Salar de Olaroz (Jujuy) and creating the merger company NewCo, the mega-mining companies accelerate their growth and improve competitiveness in the lithium world market. Such developments exacerbate unequal power relations and strengthen corporate dominance in AS. Thereby also more assets become available to the consolidated company to dissipate conflicts and maintain its accumulation strategy. Consequently, a deepening of existing issues experienced in the NOA, where extractive mining takes place, can be anticipated.

In addition, the lithium companies' power is not only determined by their size but also by their importance for Argentinian's national economy. The most recent figures published by the National Institute of Statistics and Census (INDEC) reveal that mineral exploitation is, with 11.1%, the economic activity with the highest interannual increase (Instituto Nacional de Estadística y Censos, 2023). The sector also accounts for the largest increase (13.5%) in terms of contribution to the gross domestic product (GDP). Hence, the relative importance of the mining sector further enhances the companies' power position.

Finally, by offering local employment and financing local infrastructure projects the companies aim to legitimate the process of accumulation by dispossession through which they gain power. Due to a quota, at least 70% of the company's workforce needs to be local. On the one hand, this regulation increases employment opportunities in the region. On the other hand, it increases the prevalence of unskilled and unqualified labor and does not incentivize adolescents to finish school. Yet, as noted by a local secondary school teacher "*they [the companies] comply with the rules and regulations*", he continued "*that we have disastrous laws is not their fault*.".

The domination of lithium companies is based on and facilitated by their practice to hire so-called 'contratistas', which are companies offering services to the mining companies. Often the outsourced services are unskilled, such as cleaning, maintenance, catering, and transportation. Motivations for this include reduced costs, transfer of legal responsibilities to the contractors, and flexibility to adapt to changing market needs and conditions. For instance, several interviewees told me that they had worked on the SHM in the past, but when I interrogated them about the reason for

this not being the case anymore, they explained that they were laid off once the construction period was over. Likewise, lithium companies ensure that their responsibilities towards workers are kept to a minimum. For instance, during the COVID-19 pandemic, they secured themselves a favorable position in which they managed to lay off their workers without further constraints by labor laws. These unilateral dependencies are the foundation of the subsequent domination techniques.

Fundación EcoConciencia

EcoConciencia is a non-governmental organization that works as a peacemaker between companies, the State, and communities to avoid potential conflicts in the area (Fundación Econconciencia, 2023). They focus on the families living closest to the SHM and the localities of Los Nacimientos and Antofalla where they implement workshops and activities, to preserve traditions and foster community engagement. Residents who participated in the dancing and handicraft classes, for instance, expressed gratitude for these initiatives. Besides, the restoration project the organization engaged in after the Livent Corporation was found guilty of the dried-up Trapiche River is another example of their activities (Livent, 2022).

According to some individuals residing around the SHM, the organization operates in collaboration with and in the service of the lithium mining companies. Regardless of the organizations underlying motivation or intention, having peacebuilding as one of its core missions is contentious because it implies that the goal is to suppress conflict. Thereby, this actor may contribute to pacification efforts, a domination mechanism elaborated in the sections below.

Engaging in dialogue with affected communities is certainly a necessity but whether they mitigate the negative impacts of the mining companies around the SHM or just ensure smooth operations and acceptance of the extractive activities is unclear.

During an interview, a representative of the organization claimed that most of the anti-mining voices arise out of convenience. According to him, many strategically go against the mining companies to enhance their role as protagonists in the resistance to the projects with the objective to benefit from the compensations offered to them consequently. Thereby, he claims that opposition is less a reaction to the impacts of mining companies and much more a strategy for personal gains. Thus, one might well wonder if this actor is not overlooking or undermining genuine concerns and grievances while contributing to the efforts to silence dissent. Lastly, using SDGs to support mining companies' actions and emphasizing their social responsibility can be considered as subtle neo-colonial strategies that uphold hegemony and curb criticism.

Domination Mechansims

What becomes apparent is that the actors are complicit in the domination of human and natural resources. A general pattern that can be observed among the above-mentioned actors is that they minimize their accountability while creating unilateral dependencies. After exploring *who* is involved in the process of establishing consent, the following section will discuss *how* this consent is established. Hence, the main tactics 'from above' and the intricate ways conflict is suppressed will be outlined next.

Mechanisms do not solely refer to the tactics and techniques but also include the overarching logics they rely on, as well as colonial, capitalist, neoliberal and 'green' extractivist logics. Therefore, this section first introduces the political climate enabling the counterinsurgency mechanisms.

Argentina's political climate is mainly marked by Peronism. In Peronist politics, the progress and development discourses are very prominent to address people's aspirations. Moreover, closely associated with populist politics, the Peronist leaders tend to promote social welfare programs. Whether this results in political loyalty and economic dependency is disputed but it is safe to say that this political framework and its populist features create a rather acquiescent atmosphere and dampen critical evaluations.

While Peronist politics has been the leading force in Argentina, the country has witnessed many political transitions and faced instability due to corruption scandals, social unrest, and political polarization. Despite the frequent political shifts, the political posture towards some topics has been consistent across governments. An overarching agreement regarding the importance of lithium mining for Argentina's development can be noted. The political landscape has been largely marked by a neoliberal and neoextractivist approach. In addition to widely spreading the development discourse, Argentinian politics also successfully managed to avoid national opposition to mining operations. Here it is important to mention the constitutional reform of 1994 which gave the provinces ownership of the mineral resources within their territory (Perotti & Coviello, 2015). This implies that the provincial government is given the role to manage and control their lithium reserves. Whether this provincial distribution leads to a loss in negotiating power or is actually beneficial to protect local interests is beyond the scope of this research. But as a federal republic, Argentina stands in stark contrast to the other countries of the lithium triangle in which lithium is discussed at the national level.

Extractive sites are characterized by accelerating processes of dispossession. Local communities do not only face territorial dispossession but also the resources these contain (e.g. minerals and water) are expropriated. In addition, Bebbington and colleagues (2008) state that "Dispossession might also be understood as loss of a way of life, and a certain set of taken-for-granted assumptions about livelihood and development.".

An underlying mechanism on which extractivism relies is discursive legitimization. This refers to the deployment of narratives and discourses to make dispossession seem acceptable or even beneficial. While on an international level, lithium exploitation is considered a remedy for our environmental ills, it is, on a national level, justified by the social development it claims to drive.

Another way of "disciplining, enchanting and engineering 'hearts' and 'minds'" is through propaganda (Verweijen & Dunlap, 2021). While discursive legitimization may be more subtle, propaganda is a more direct and targeted technique. Propaganda is likely to be more effective in shaping the opinions of the target population, given their limited exposure to the international green discourse surrounding lithium and that they probably do not prioritize, for instance, the electrification of the automotive industry on their local agendas. Thus, countless billboards are placed throughout the department of AS, displaying the company logo, the emblem of the provincial government, and the investment amount. Apart from further spreading the development myth, the billboards are also used to emphasize corporate social responsibility (CSR) and distract from any negative impacts on society. Thereby, the aim is to enhance public support and improve the company's reputation. The intent to obstruct their profit-making goal is also clearly illustrated by Livent's repeated quote "Seguimos trabajando para contribuir al desarrollo de las comunidades", which translates to "We continue working to contribute to the development of the communities." (see Figure 12).

Figure 12

Livent Propaganda Billboard (photo by the author, April 2023).

Another way companies seek to gain in popularity is through their promotional merchandise, including clothing, bags, caps, and even the emblematic Argentine mate (see Figure 13).

Figure 13

Mate with Livent Logo (photo by the author, April 2023).

Another, closely related, 'soft' tactic of domination is the enchantment of consumerism. Like one interviewee said, "*There are more TVs and smartphones here than people who have domestic heating and sewage systems*". By providing the local population with these consumer goods, ideologies of modernization are spread. Furthermore, the capitalist cycle of perpetual consumption is launched, and overconsumption and resource depletion are normalized. The idea is to promote materialistic desires and divert away from non-materialistic, traditional aspects of life. This is essentially, what Bebbington refers to as the "colonization of lifeworlds" (2008). How that manifests itself among Antafagasteños will be discussed in Section 6.3.

The suppression of conflict and engineering of consent to extractive goals is also enabled by the hegemonic alliance between the companies and the government. This implies that the companies and the government and the lithium companies interact to co-construct "a new repressive regime of authoritarianism and intolerance to confront social resistances and sustain, at any cost, the extractive model of development." (Misoczky & Böhm, 2013). This complicity of the government, for instance, allows the mining companies to carry out their operations without further objections. Making sure that opposition is repressed is beneficial for both parties of the pact and helps advance mutual interests.

Moreover, the statement "to go against mining companies is to go against the interests of the provincial government itself," made by Machado Aráoz (2012), was supported by many participants of the current research. In that same light, Camilo Condorí highlighted that the governmental bodies do not protect the inhabitants of AS but rather acts as a defender of mining companies. This led him to conclude that "*talking to the municipality is like talking to the company.*".

Furthermore, during an in-depth interview, a local police officer confirmed the complicity of the police force. Due to the anticipation of upheaval following the construction of an aqueduct, Livent will be using to supply their lithium plant with fresh water, the company had convocated the police. For over a month, the police had been at the service of the mining corporation Livent. According to the police officer, their task was to, *"ensure that they [Livent] can continue their work without the interference of protestors*".

That the government and corporations work in tandem is also reflected in the weakly regulated lithium market. As concluded by one interviewee, *"We can't even blame the companies, they work and play by the rules but it's our incapable government and the inadequate laws of this country which are the problem*." For instance, failing to control the quantities of extracted and exported lithium illustrates the lacking regulation of the lithium market in Catamarca. In that way, the government further enhances the increasing power of transnational companies.

As explained earlier, this is also linked to the weak governmental institutions and the consequential transfer of tasks to the companies. In the department of AS, nearly the entirety of the basic infrastructures, allowing for the functioning of the community (e.g. schools, medical center, etc.), were built or at least renovated with investment funds and in the name of mining companies. By satisfying immediate necessities, the mining companies gain local recognition and corporate power is further increased.

On top of that, by joining the coalition also other actors reinforce this domination mechanism. An example of this is Catamarca's previously mentioned Association of Geologists, who was send by the provincial government to "*show that mining is not that bad*". Furthermore, accusing local populations of their irresponsible water use and lack of knowledge on hydrogeological matters exemplifies another prominent strategy, namely victim blaming.

Similarly, this company sign reminding the shared responsibility to protect the cultural and natural heritage illustrates how big corporations hold 'victims' accountable for the consequences of their actions (Figure 14).

Figure 14

Livent Corp. Sign Reminding a Cultural Heritage Protection Law (photo by the author, March 2023)

Another way to further entrench the power imbalances is by portraying indigenous people as "as primitive and ignorant people who are unable to improve their position in life without outside assistance" (Becker, 1995). This is, for instance, also reflected in the condescending manner in which the Albermale representatives talked about the community members. After denying the majority of the company's requests for lithium explorations, one of the representatives claimed that the communities' mistrust is completely unjustified as the planned operations are not intrusive. He

continued saying that, "*they don't understand anything of our work*". Moreover, he explained to me that voting against mining operations means missing a huge an opportunity for development.

Hence, while mining is intrinsically exploitative, different actors aim to spread the belief that mining operations can be sustainable. Besides, shaping beliefs, however, also 'harder' techniques are applied to engineer acceptance and suppress social unrest. The time in the field revealed that regardless of whether your 'heart was molded' or not, many are, at least in some way, dependent on the lithium industry.

This high degree of dependency is due to a strategy that consists of undermining other economic activities and development strategies. This is noticeable across various areas. First, besides the mining industry, Antofagasta's main source of income is tourism. A young local tourist graduate explained to me *"People come here to go back in time and find a place free of human intervention.*". She continued "*But what used to be a virgin land, an untouched natural landscape, is no longer the same.*". What she refers to is the human alteration of nature and the visual contamination of lithium mining projects. Thus, mining infrastructure compromises the potential of AS as a tourist destination.

This tactic is furthermore reflected in the limited academic opportunities for Antofagasteños. The only degree you can follow in AS "Tecnicatura Universitaria de Salmuera de Litio". Those who do not want to dedicate their career to the lithium industry, yet want to study, need to move. The closest option is Belén, a small town 200 km away from AS, or further to San Fernando del Valle (capital of Catamarca) or Salta, both more than 500 km away. For many, this is financially not feasible as on top of the travel costs also housing costs would need to be covered.

Moreover, at the start of the academic year, in March, I met University teachers in Belén. They had built up an information and inscription booth at the village square to promote certain university degrees which due to a lack of inscriptions risk being shut down. They told me that in recent years people started choosing tertiary education over university. They explained that instead of studying for 5 years to get a university degree, people now have the option to graduate from a mining career which in contrast takes only 4 years and ensures work later on. Apart from the good job prospects, the mining companies also provide scholarships for students from careers considered useful to the company. The fact that only mining careers are incentivized further prevents the diversification of the economy.

Leaving no alternatives not only increases the local population's vulnerability but also allows the companies to appear as saviours. "*If it weren't for the mining companies these villages would all be empty by now, there are no employment opportunities, and we offer them honourable, well-paid work.*", told me the Albermale country representative. He continued saying, "*In a region with a poverty rate above 40%, mining is a huge opportunity*".

A young female community member aptly captures this tactic with her words: "*They create a problem and then solve a small part of the problem, thinking they are the saviors and we are supposed to say thank you?".* She also referred to the example of the road pavement, a highly promoted development project by Livent. Considering the absence of a sewage system and other basic services, none of the residents claims to have voted for the paving of the streets as an investment priority. Hence, she said, "*They paved our roads because it's better for them, and they expect us to show gratitude.".* While primarily serving their own interests, such as facilitating mining truck transport, companies justify their development investments under the guise of corporate philanthropy. Another notable case of this practice can be seen in the "donation" of wooden pallets to AS residents. These individuals, in need of wood for heating due to the lack of electricity, expressed appreciation towards Livent, while in reality the company merely got rid of their residues.

Another factor facilitating the domination and control of the human and natural resources is the isolation, touched upon in the geographical framework (Section 5.1.). Reflecting upon their situation, a community member used the analogy of a prison and explained that the remoteness, isolation and poverty limits the freedom of the local population. The lack of alternatives creates favorable conditions for dominating through the mechanism of dependency. Considering that before the arrival of the lithium industry, the majority of the population was economically self-sufficient, it is mainly through the processes of neoliberal globalization and due to the increasing dependencies on the capitalist economic system that their isolation is exacerbated. How local livelihoods rely on the industry will be elaborated in the next section, yet the corporate intention is that people become hesitant to engage in actions or protests that could jeopardize their jobs or well-being. Hence, by limiting alternatives and fostering dependency the lithium companies ensure that social unrest and dissent is kept under control.

Another way counterinsurgency strategy employed by those in power is divide-and-conquer. The aim is to create conflict between and within the communities such that social cohesion is undermined. Thereby, the emergence of opposition is minimized, and resistance movements are weakened. For instance, by providing incentives to certain individuals or groups to align with the interests of the mining companies you largely avoid that they unite and fight the exploitation in solidarity. This is also closely linked to the practice of corruption, for instance during times of elections, as mentioned earlier.

Structural violence is also a common domination mechanism. For instance, by limiting access to information, excluding local populations from decision-making processes, and marginalizing local voices power imbalances are further perpetuated. In line with this, a recurringly stated concern among Antofagasteños is the lack of education. However, as limited knowledge and critical thinking skills

make it easier to influence public opinion, it may not be in the government's interest to address this issue. As noted by a female municipal worker "*The government wants you uneducated and ignorant, this means less resistance, less confrontation. It just makes you easy prey for manipulation and exploitation, with just one of their technical words, they kill you.".* Thus, by using jargon to assert control and selectively presenting information in favor of mining operations, the shaping of 'minds' is facilitated.

Furthermore, institutional violence also plays a significant role in this context. It mainly manifests through bureaucratic hurdles and inaction. One of the few remaining anti-mining activists shared with me her frustration explaining that the mining control center and secretary of mining are often closed making it hard to rely on them. Furthermore, processes that would grant the local community some protection and/or recognition are extremely slow, discouraging many people.

To further suppress resistance, anti-mining activist are marginalized. Hence, according to the accounts of several participants a schoolteacher from AS, who was known too openly speak up against the mining industry, was relocated to another town. Consequently, she abruptly ended her teaching career and even beyond that her activist pursuits, as her voice was silenced.

Lastly, as conflicts are typically prevented from even emerging in the first place, the resort to physical violence is rare. Yet, instances such as the reported use of brutal police force, in October 2019 when community members were detained in their own houses, show that also overt domination mechanisms can be applied to ensure that the lithium companies do not face any opposition (Environmental Justice Atlas, n.d.). Likewise, the complicity of the police, illustrated earlier by the controversial case around the newly build aqueduct, shows that police brutality cannot be excluded.

To conclude, there are a myriad of ways in which the dominance of the lithium industry is exerted. These mechanisms mutually reinforce themselves and together shape the trajectory of lithium extraction. It is important to note that although the above-mentioned mechanisms uncover the main ways AS is dominated by the extractive lithium industry, they do not capture the entirety of strategies applied by the companies, the government, and other actors.

6.2. Coping strategies

It is crucial to move beyond the victimization narrative and acknowledge the capacity of local populations to adapt and shape their own destinies within the constraints they encounter. Hence, examining the coping strategies of local populations in the face of the domination of the lithium industry highlights their agency. In contrast to previous research focusing on a limited set of reactions, such as resistance, this section aims to provide a comprehensive overview of the different ways this agency can be articulated.

A frequently observed approach for dealing with external pressures, commonly documented in other extraction zones, is resistance. Although the various domination mechanisms in the current study area seem to largely keep resistance under control, also in the case of the SHM, instances of opposition and vocal dissent can be identified. There are some anti-mining activists among the local population. However, due to the domination mechanisms outlined above and the resulting social fragmentation, elaborated in Section. 6.3., activists only represent a small minority. During an interview with a local activist, she conveyed fatigue and exhaustion and expressed that it is very hard to maintain motivation in the face of adversity, especially if you are fighting alone. She further explained that not even from her own family she receives full support. Her teenage daughter namely claims that her parents' resistance to the mines prevents her from progressing. The activist's sister-in-law also admits that her support for the opposition is limited as she otherwise fears losing the welfare aid, she depends on. Thus, criticism is curbed through repression and intimidation enabled by the dependency established 'from above'. One of the leading activists explained to me, "*You can't say anything against the mining companies, not at school, nor at church."* The fear of consequences, lack of social support, and dependency on the lithium industry lead to the resignation of most, resulting in the pacification of social unrest. This is also illustrated by the case of the schoolteacher who after repeatedly speaking up against the mining industry got relocated to another town, is now is no longer willing to share her point of view in an interview. Finally, the lack of collective mobilization is also linked to a feeling of powerlessness, reflected in recurring statements such as "*the mining projects are already installed, we should just* make the best of the situation".

Thus, the most common reaction 'from below' is acquiescence due to economic convenience or necessity. An overwhelming majority of the local population directly or indirectly depends on the lithium industry. Only few are directly employed by a mining company, most work for suppliers or contracting firms. Others provide accommodation for mine workers. And those who have no link to the mining industry often have at least one family member who does. In addition to the dependency created through employment, many also receive some kind of aid (scholarship, grant) from a mining company. Consequently, many local livelihoods are, at least in economic terms, strongly dependent on the lithium industry. This leads some to react in favor of the development of lithium projects as they intend to improve their livelihoods economically. However, not all individuals may be in favor of mining, but they may consent to it due to a lack of viable alternatives. In this case, people's anti-mining beliefs and values contradict their economic dependency. Hence, to reduce the cognitive dissonance, individuals adjust their attitudes or behaviors, leading to a reduced opposition to mining or a seemingly indifferent stance. As a result, some community members, for instance, choose not to participate in consultation processes.

Consequently, this illustrates that the domination mechanism “successfully” creates dependencies and undermines other economic activities, leading to a largely consensual reaction to lithium mining projects. In some cases, individuals go beyond mere consent and actively advocate in favor of mining operations, demonstrating a positive stance toward the industry. For instance, in the WhatsApp group of the region’s livestock breeders, people shared their despair over the lack of water and the drying up of one of the rivers. As a response, one of the group members then advocated in favor of the mining companies and claimed that also before no water was running in this river. A closer look at the origin of this pro-mining comment revealed that the author’s livelihood is closely linked to the mining industry. She offers accommodation to mine workers and has a son working at the SHM.

Hence, regardless of peoples ‘internal reaction’, most are economically bounded to agree to the mining projects. One interviewee claimed, "*People are silent out of convenience, not out of ignorance.*". Being in favour of the mining projects, although one is aware of the negative externatities is what Arsel, Pellegrini, and Mena (2019) came to describe as “Maria’s paradox”. In line with this, a community member, who recently graduated with a Higher Technical Degree in Mining Processes, explained to me, *“There actually are methods to extract lithium that consume way less water, but because that would cost them more, they obviously don’t want that and won’t do that.”.* Yet, despite her awareness and knowledge on the companies' extensive use of water and the compromised the quality and quantity of water in the region, she views her career path and the growth of the mining industry as the most viable means to escape poverty. Hence, this illustrates that the anticipated economic benefits can overshadow the awareness of the social and environmental consequences of lithium mining.

To conclude, some express discontent, others are indifferent, and few advocate for mining companies. Yet, regardless of people’s awareness and inner posture, most prioritize economic development over social or environmental welfare.

Lastly, a coping strategy that is especially common among the younger population is the internalization of modern values. The dominance of transnational corporations is accompanied by the introduction, if not imposition, of new values. Internalization refers to the process of accepting and integrating external values or beliefs into one's own belief system. Which values are contested, and which are created will be elaborated on in Section 6.4. Yet, the essence of this coping strategy consists of reducing the cognitive dissonance, a discomfort that arises due to the discrepancy between the imposed modern, capitalist values and the rather traditional, local values and behaviors. Adapting and aligning own beliefs with the dominant values is especially among young people a way to cope with external forces. In fact, those who grew up with the presence of lithium mining companies possibly

internalized these values without requiring a fundamental shift in their own values, desires and beliefs.

In conclusion, it's important to emphasize that the categorization provided above should by no means obscure the ambivalence of actors (Pragier, 2019; Pause, L. 2022). Conflicting interests, such as employment and environmental protection, are common among the research population. Furthermore, by examining their coping strategies in the face of the domination of the lithium industry, their agency is highlighted. Subsequently, the ways in which this agency and decision-making processes relate to their values, identity, and livelihoods will be discussed in the following section.

6.3. Livelihoods

How individuals and communities cope with the domination of the lithium industry can be understood through an analysis of their livelihoods. By examining local livelihoods, I aim to explore how individuals and communities navigate the socio-cultural, economic, and environmental changes brought about by the domination of the lithium industry. While various coping strategies may result in distinct changes in livelihoods, people's livelihoods, in turn, can also influence their approach to coping. In this section, different dimensions of the livelihood concept, namely the economic, cultural, and social, will be touched upon.

Before delving into the ethnographic qualitative research findings, this section first reviews the secondary data sourced from a population census obtained through the municipality of Antofagasta de la Sierra. Regarding local livelihoods, a significant majority of Antafagasteños are either mine workers or public employees. Among the public employees, notable sectors include administration, education, healthcare, and law enforcement. There exists a minority whose livelihood is not directly dependent on either the government or the lithium industry as they gain a living from agriculture, animal husbandry, or handicrafts. The remaining part of the local population is involved in commerce.

The emerging trend shows that local livelihoods have undergone significant commodification, leading to a decline in subsistence activities. However, despite this shift, it is noteworthy that many individuals still engage in pastoralism (predominantly llamas and sheep). Although these activities may no longer serve primary subsistence purposes, they continue to hold various important roles within the community. Llamas and sheep are valuable resources as they provide food in the form of meat, milk, and other animal products, and they also serve as sources of materials for handicrafts, such as wool and leather (Figure 15). Additionally, these animals are considered assets and can function as a means of accumulating wealth or savings for households, contributing to the resilience and stability of their livelihoods.

Figure 15

Wool Handicraft made by Elderly Woman from AS (photo by the author, April 2023).

When describing local livelihoods, it is important to mention that most of the local residents are house owners. Renting a house is more common among young individuals and newcomers to the area. Those who are drawn by job prospects and the opportunities brought about by the lithium rush tend to rent, as they seek temporary residence while spending most of their time at the mining camp.

Yet, despite the majority of the local population being houseowners, many residents experience precarious land tenure. This means that while they may own their houses, they may not have secure or stable ownership rights to the land on which their houses are built. This is largely due to the lack of formal property titles which can lead to insecurity and potential risk of eviction. This situation further enables domination, as it facilitates expropriating land for other purposes favoring the development of the lithium industry.

Figure 16

Local Resident and her Sheep in a Stone Corral, Livestock Enclosure (photo by the author, April 2023).

The situation in Antofagasta de la Sierra sharply diverges from the concept of neoextractivism, which emerged as a blending of liberal extractivist ambitions with social redistributive considerations in Latin American politics during the 1990s. Although extractivist operations have been framed as a pathway to modernization and development, the local livelihoods in the research area have seen minimal improvements. Consequently, while lithium companies have been present for over 25 years and endless development promises have been made, most people still do not have access to basic services, such as energy and health care. The majority face unreliable and limited electricity supply, meaning that at night when it's dark and the temperatures fall many do neither have light nor heaters. Paradoxically, due to a lack of lithium-ion energy-storing batteries in these mining villages, the solar panels, financed by Livent's investment funds (*fideicomiso*), are not sufficient to power the homes (Figure 17). Additionally, while the mining camps and operations at the SHM are alimented by natural gas, the pipes do not reach the village of AS. Due to the climatic conditions, wood is also not an accessible heating option. Therefore, a 36-year-old male respondent came to conclude: "*Well you've been here for a while so I'm sure you noticed nothing is developed here. They have been here for over two decades, and they have barely done anything, just enough to keep our hopes up*". Hence, by selling the development myth mining companies seek support for expanding the extraction frontier while curbing criticism and scrutiny.

Figure 17

Livent Infrastructure Project in AS: Photovoltaic Solar Park (photo by the author, April 2023).

Considering the structural poverty and systemic inequalities faced by the communities around the SHM, the notion of 'improvements' of livelihoods becomes doubtful. Livelihoods, referring to the means by which individuals or households secure their basic needs and resources, including income, and social well-being, are significantly constrained by the challenges outlined above. Therefore, it becomes crucial to address the various ways in which livelihoods have undergone changes, taking into account the diverse dimensions of the livelihood concept.

Before delving into the broader trends and observed reconstructions in local livelihoods, a compelling case that vividly illustrates the consequences of the lithium mining industry is presented. The Condorí Family, introduced earlier (Section 5.2.), experienced a significant loss rather than a mere reshaping of livelihoods. Camilo (64), one of the sons, explained to me that due to Livent's occupation of their territory, they have been displaced. None of their cattle has survived the displacement and the Trapiche River, which was their main source of water, is now dry (see *Figure 4*). As "compensation" for the complete loss of livelihood, they receive one bag of groceries and 6500 pesos per month, which is approximately equivalent to 15 euros.

Figure 18

Interview with the Condorí Family, Mother and two Sons (Photo taken by Guillermo Aybar during an interview conducted by the author on March 6, 2023)

On top of failing to adequately compensate for the losses, compensations, as demonstrated by Otsuki (2023) result in the "commodification of livelihoods by reducing the original, largely social and cultural meaning of the livelihood to predominantly an economic one". In line with this, when analyzing the changes in local livelihoods around the SHM, it becomes evident that the predominant trend is the commodification of livelihoods.

The local population in Antofagasta de la Sierra is experiencing an increasing dependency on the capitalist economic system, with individual livelihood outcomes directly tied to their income. A general transition from traditional subsistence activities, such as pastoralism and agriculture, to monetary activities can be observed. According to the locals, this transition is mainly driven by water scarcity and decreasing soil productivity in the area, leading to declines in both crop yields and the health of animals. The deterioration of the flora and fauna in AS has also been shown by national researchers who predict the extinction of the flamingo in the area (Izquierdo et al., 2022). Hence, contradicting the "clean energy" narratives, these changes are widely perceived to be consequences of the dominant lithium industry in the territory. In addition, wage-based employment is appealing due to the increased financial stability and reduced climate vulnerability, as expressed by the secretary of mining who rhetorically questioned, "*Why expose yourself to the risks and uncertainties of livestock and agriculture if you can have a high and steady income working at the mine?*". He continued, "*You work the whole year and end up with a locust infestation or your whole crop is damaged by frost, or instead, you can choose to work in something that actually helps you progress*". Although the vulnerability linked to self-sufficient activities certainly needs to be acknowledged, the dependency

on the global market also comes at a cost. What will happen once the lithium mining companies leave, the demand for lithium drops, or the deposits will be exhausted remains unclear.

Yet, the majority of Antofagasteños transitioned away from their economic self-sufficiency, and now have a source of income related to the mining industry. This means that most work in a lithium mine, have a family member working in one, or have an income at least partly linked to the industry (through other services, such as catering, accommodation, transportation, etc.). This dependence is not limited to the working population alone, as even individuals who are not actively engaged in the labor force due to full-time education or retirement often find themselves economically reliant on the companies. An illustrative example is the provision of scholarships to students who may potentially become future employees of the lithium companies. Even retirees may feel the economic pressure as they can be indirectly influenced by the industry. For instance, a retired woman shared her experience of feeling compelled to conform to the industry's interests, even though her financial aid (pension) did not originate from the companies, she claimed to still face repercussions if she were to express opposition to the mayor, who is perceived to be associated with the companies. These instances demonstrate how economic dependencies can extend beyond direct employment and have the potential to influence people's attitudes and actions concerning the lithium industry. Such circumstances may prevent individuals from openly opposing the industry, as their livelihoods are at stake and could be jeopardized if they were to voice dissenting views.

Apart from mining, tourism is another growing industry that aligns with the neoliberal model and the narratives of development and progress. The tourist industry in AS also has an extractivist facet as it is dependent on natural resources. The commodification of the area’s unique landscapes and endemic wildlife attracts a growing number of visitors and, thus, presents an additional source of income for the local population. While the mining industry facilitates the tourist sector through improved accessibility due to route constructions for mining trucks, the extensive water use, environmental contamination, and visual pollution caused by lithium plant constructions impede the full potential of the tourism sector. This is in line with the lithium industry’s domination strategy of undermining other economic activities and development strategies, as explained in Section 6. 1.. Consequently, local livelihoods in Antofagasta de la Sierra are significantly commodified, and a substantial portion of the population is economically reliant on either the mining or tourist industry. Solely building on the economic dimension of livelihood changes, the commodification of livelihoods poses a significant concern. The growth of the lithium industry has brought about significant economic displacement among the local communities. As more livelihoods become entangled with the industry, traditional subsistence practices are sidelined, often leading to the loss of cultural heritage associated with these activities.

Furthermore, as the modern ethos of material gain and capitalist pursuits takes center stage social and cultural meanings of livelihoods are reduced to a merely economic one. While not as immediately apparent as physical displacements caused by mega infrastructure projects such as land resettlement, it's crucial to recognize and address the equally profound but less visible forms of economic, cultural, and social displacement which are taking place around the SHM.

Cultural displacement can manifest itself, for instance, in a disruption or loss of cultural identity, traditions, and practices. This affects the ways in which communities sustain their daily lives and hence leads to local livelihood changes. Considering the research context, indigeneity, identification, and recognition need to be addressed. While in the past legal recognition might not have been central to the indigenous identity, today indigeneity has proven to be instrumental in both resisting and benefitting from mining companies. For instance, to secure tenure and be considered in the consultation process the indigenous communities need to be registered in the INAI. Accordingly, a current trend of forming new communities and requesting legal recognition of existing ones can be observed. Hence, indigeneity evolved into a concept way beyond the ancestral link to a territory. Furthermore, distorted modern perceptions of the concept of indigeneity were pointed out to me by a community leader: "*I defend the flag [wiphala flag of the indigenous Andean people] and I descend from an indigenous population, but I am not an Indian chief wearing feathers and I am not willing to act nor dress up.*"

In addition, indigeneity is a self-identification that carries the notion of pre-existence or at least independence from the state. Yet paradoxically, it also relies on state recognition. The politics of recognition surrounding indigeneity are subject to ongoing debate; nonetheless, it can be argued that they are counterintuitive and highlight once again the unequal power relations at play.

Most importantly, however, it needs to be mentioned that the present findings are not aligned with previous research showing indigenous cosmologies and their interconnectedness and harmony with nature (Jenkins, 2015). Among the interviewees only a very small minority expressed a personal connection to their land, histories, and cultural practices. It appears that the domination of the mega-mining companies has largely overshadowed indigenous cosmologies. Apart from indigeneity also territorial and cultural identification in general seems to be limited. While traditions may have been expected to contribute to a sense of belonging among the people living around the SHM, it occurs that their role in shaping Antofagasteño's identity is marginal. This is also illustrated by this young man who started describing, "*Before, this was a community of believers, people used to perform rituals, but yeah I don't do that anymore, and I don't know anything about it, what is it called, umm...*" and whose girlfriend who needed to complete the sentence, *"...corpachada*". Especially among young people, this loss or change of traditions and indigenous identity is particularly pronounced. This is likely to be

due to an interruption of intergenerational transmission of cultural and spiritual practices as well as the weakening of cultural bonds and solidarity among community members.

This leads us to the social dimension of the livelihood concept. Understanding local livelihoods not only involves examining economic activities and cultural practices but also recognizing the crucial role of social relationships in shaping and sustaining people's lives. Social interactions, networks, and support systems form an integral part of how individuals and communities cope with challenges, access resources, and navigate changes brought about by external forces, such as the domination of the mining industry.

The observations and interviews indicate that the co-existence of different communities and indigenous as well as non-indigenous people is accompanied by a missing common identity around the SHM. On top of that, the competitive environment and conflicts of interests trigger a detrimental cohesion among the local population. A habitant of Antofalla highlighted this issue by providing an example of these tensions within his community following the consultation with a mining company. He explained that those community members who have a catering service, directly dependent of the mining companies, basically vote in favour of all lithium mining projects. Consequently, those prioritizing individual gains clash with those who aim to protect their common land. Interpersonal conflicts also have been shown to emerge regarding the use of donated machinery, for weaving and cutting meat. Habitants of AS have repeatedly accused each other of not sharing these fairly.

Hence, the fieldwork revealed that the local population seems to be marked more by social fragmentation than social cohesion. Participation in decision-making processes also seems to be limited. A woman from the village store describes, "*people here*" as "*very conformist and silent, nobody talks, also not amongst each other*". The statement that the local population is conforming indicates a successful domination of the lithium companies. Yet, it could also be considered as a way to adapt in the face of the power dynamics at play, hence as a part of their coping strategy.

At the same time, the interviews indicate that many accuse or at least frown upon the cooperation of other locals with the companies. These dynamics also prevent the rapprochement and enhanced solidarity between the communities that was reported by Pragier (2019), following lithium mining protests in Jujuy.

To conclude, local livelihoods around the SHM appear to have undergone significant changes. The impact of the lithium mining industry has not only resulted in land displacements but also brought about economic, cultural and social displacements among the local population. The commodification of livelihoods has led to a reduction in the multifaceted nature of the concept, focusing predominantly on the economic dimension. As a consequence, traditional practices and cultural elements appear to have been largely lost or diminished.

6.4. Values

This section delves into the intricate realm of values and their pivotal role in shaping the lives of the local population around the SHM. While revisiting the concept of values, encompassing wants, likes, goals, interests, preferences, beliefs, and ideals, it is important to acknowledge their profound impact on guiding behavior and influencing decision-making processes. Hence, understanding these values is essential to gain deeper insights into how they, in turn, influence the coping strategies adopted by the community members. Moreover, exploring the change of local values is an integral part of uncovering what enables the domination of the lithium industry. By examining how values interplay with domination strategies, I aim to shed light on the intricacies of this complex social landscape.

The arrival of the lithium industry was not only accompanied by changes in landscapes and livelihoods, but also the underlying values seem to have undergone changes. As shown previously, the commodification of local livelihoods is based on an overemphasis of economic values. Consequently, as 'modern' values contest 'traditional' values, local populations' aspirations, and beliefs change. In the present research setting, this change is reflected in the prominence of the idea of progress. For instance, the preference for modernization to traditional subsistence livelihoods is is evident in the evolving ways of life in AS. As a mother of two argued, "*Today's youth have their heads in their cell phones, they are not interested in anything and do not want to devote themselves to work, nor planting, nor protecting the land that their fathers took care of for years. But yes, there is plenty of work here.*" Furthermore, while many basic needs remain unfulfilled, smartphones and big TV screens are in abundance. These symbols of progress seem to be at the heart of the material aspirations many appear to be guided by.

Consistent with this, the survey conducted by the geologists revealed that participants highlighted job opportunities and socio-economic development as positive outcomes associated with the presence of the lithium industry. This indicates that, in terms of goals, the local population around the SHM values economic advancement. This assumption was further supported by the claim of a 38-year-old community member, "*I think, at some point, we should all aim to progress*".

These economic aspirations are certainly also linked to the material desires induced through the enchantments of consumerism, touched upon earlier (Section 6.1.). During my interactions with high school students, it became clear that having a new smartphone is highly valued. Furthermore, watching TV was the most frequently mentioned response when asking about their interests and free time.

Also, in terms of values, the domination mechanisms seem to have successfully transformed their multifaceted nature into an exchangeable and one-dimensional economic value. Thus, social,

and cultural values seem to have been undermined around the SHM. This shift is especially pronounced among the younger population. As a recent high-school graduate from AS reflected, "*We are not given many alternatives other than valuing what the company offers*". On top of that, a 26-year-old male resident from the small locality of Los Nacimientos added," "*it is hard to value what mother earth gives us, as she just does not*". While the statement refers to the climatic unreliability and extreme conditions in the Argentine Puna it also reflects a common belief among the youth around the SHM; that self-sufficient activities are no longer sufficient to make a living or provide sustenance. He asserted that becoming a public employee, or even better, a mine worker, is the pathway to success in life. This also further illustrates the coping strategy of internalizing modern values.

Yet, during an interview, an elderly woman from the village of AS shared contrasting views regarding the recurring claim that the mining companies present the best job opportunity in a place with scarce opportunities. As one of the few remaining locals who continue to uphold the traditional way of life, engaging in pastoralism, agriculture, and handicrafts (see Figure 15), she expressed that there is an abundance of work in AS, but that the new generation prefers living from the state (financial support packages) and does not care about their people nor land. According to her, the portrayal of the mining industry as the savior of the scarce opportunities in the arid and remote area around the SHM is a mere narrative extractivism hides behind. Hence, she exclaimed in frustration, "*Here, we have everything, but values*" emphasizing that the predominant problem in the area is the lacking sense of community and values.

This lacking collective identity and social fragmentation have already been touched upon in the previous section as they imply a change in local livelihoods. When analyzing the underlying local values, it appears that the degradation of social cohesion may be linked to differential value systems among the local population living around the SHM. For instance, those who value the lithium industry as a means to improve their livelihoods economically, may be in confrontation with those who intend to preserve the environment and traditional ways of life, both of which are threatened by the industry. Conflicting interests among as well as between communities can be traced back to their livelihoods depending on different natural resources. For instance, while for some lithium presents a source of income, others discard its value by reminding us that, "*we cannot eat batteries and I also doubt that we will one day drive electric cars*". Instead, they stress the value water on which essentially everything depends, as claimed by a 42-year-old indigenous man, "If there is no water, there is no life, no food, nothing.". As a result, the conflicting values among the local population might hinder the attainment of unity and solidarity in AS, which in turn makes it very difficult for collective resistance movements to emerge.

To conclude, local values seem to have changed as traditional values were contested and modern values imposed. Generally, the (monetary) improvement of life quality on an individual level is prioritized. Hence, the development of extractive lithium projects seems to be followed by the establishment of the capitalist mode of production and accompanying new, modern, capitalist value systems. Furthermore, what emerges is that socio-cultural values are fading away. This also became evident in a conversation with a local school teacher regarding the conservation/preservation of social and cultural values. She corrected me, stating that it would be more appropriate to say "*recuperate*" instead of "*preserve*", since there is, "*nothing left of what we would like to preserve*." Finally, these changes bring about revaluations of livelihoods which drive the contestation of traditional practices and enable domination mechanisms.

7. Discussion and Conclusion

Building upon the results presented in the previous sections, this discussion aims to provide a comprehensive analysis of the research findings and their implications within the broader context of the study. Then, upon acknowledging the limitations of this research, recommendations for future research are put forth. The paper concludes with a reflection on the key insights and general implications.

In the context of the energy transition and the pressing need to reduce greenhouse gas emissions, the intensification of the extractive industry and the lithium rush has become increasingly prominent. This growing demand for lithium has led to an expansion of the lithium frontier, prompting critical questions about its implications for local populations and the environment. As such, the Salar del Hombre Muerto stands as one of the major targets for lithium extraction. Hence, as explored in this study, understanding how these communities cope with the domination of the lithium industry is crucial to shedding light on broader dynamics surrounding resource extraction and its consequences for affected communities worldwide.

The case of the Salar del Hombre Muerto does not fit with the existing research on extractive areas, depicting resistance and active opposition as primary response and strategy against mining companies. Instead, the main reaction 'from below' is acquiescence. While the mechanisms and trajectories leading to this outcome may differ among people, the outcome is largely the same: consent. However, this research has also shown that silence and consent does not exempt the communities from experiencing the negative externalities and challenges linked to the development of extractive industries.

On the contrary, despite the overall acquiescence, the local populations living around the Salar del Hombre Muerto face a multitude of challenges. One of the most pressing issues is water

scarcity in the arid regions, which is exacerbated by the water-intensive lithium industry, further straining already limited water resources. Additionally, despite the over 25 years of lithium company presence in the area, the development promises have yet failed to materialize. The area still lacks access to basic services such as reliable electricity and healthcare, and the local populations suffer from the constraints of poor infrastructure. Beyond these visible challenges, more subtle issues have also been uncovered through this study, particularly socio-cultural displacements. The domination of the lithium industry and the commodification of local livelihoods have led to the erosion of traditional values and cultural practices among the communities. This loss of collective identity and sense of community cohesion further exacerbates the challenges faced by the local populations in the region.

This study aims to answer the question of why, considering these challenges, there is an overarching consent to extractive projects around the SHM. Thereby, a core aim of this research was to uncover why the Salar del Hombre Muerto, is considered a 'successful' case for mining companies. Therefore, the domination mechanisms contributing to the manufacturing of consent were analyzed.

Together neoliberal globalization and neoextractivism have been shown to enable the processes of dispossession observed around the SHM. Besides, various mechanisms are at play to suppress resistance and conflicts. There are more subtle, or 'softer', techniques to shape the 'hearts' and 'minds' of people and thereby pacify social unrest, such as, propaganda and discursive legitimization, which lithium mining companies use to gain support for their extractive activities.

It also appeared that the mining companies do not act alone. There are other actors who play a crucial role in dominating the natural and human resources around the SHM, including academics, an NGO, and the local police. Creating a hegemonic alliance with the government, allows lithium operations to be carried out without further objections. Tactics employed include institutional/structural violence, police intimidation, victim-blaming, and in rare cases, also physical violence. Ultimately, the weak governmental institutions translate into increased corporate power.

Moreover, the emergence of the lithium industry has brought about significant economic displacement among the local communities residing around the Salar del Hombre Muerto. This means that traditional subsistence activities are replaced, or at least accompanied, by monetary activities. Consequently, an increasing economic dependency can be observed as most either directly or indirectly rely on the lithium industry. This in turn makes contestations and protests very unlikely to emerge.

Moreover, as livelihoods have become intertwined with the demands of the capitalist economic system a shift towards individualistic and materialistic pursuits can be observed, which reinforces the prioritization of personal economic gains over collective well-being and shared cultural values. This commodification of local livelihoods is driven by the overemphasis on economic values.

This leads many, especially among the younger generation, to internalize modern values. Reducing values and livelihoods to its economic dimension certainly facilitates the domination of the local population living around the SHM. This is because the commodification process renders exchangeable something that used to be subjective and influenced by personal experiences, preferences, and perceptions. On top of that, the imposed ideas of progress and modernization as well as material aspirations and consumerism create hopes for development and eventually help curbing the criticism against the expansion of the lithium industry.

Moreover, in line with previous research showing the link between individual and collective identification and movements of resistance (Dorn, 2021a), this study showed that the detachment of local populations from their cultural and spiritual connections to the land may contribute to a decrease in resistance against its exploitation. Hence, the lack of identification may explain why in Catamarca, compared to other regions, mining companies have been especially successful at suppressing resistance. This could indicate that the changes in local livelihoods, including identity, and values, together enable the dominance of the lithium industry. Conversely, the processes of dispossession and exploitation may also have induced cultural and spiritual detachment from the land and its resources, indicating the success of the domination mechanisms.

As a result of these extractive processes, relationships between people and nature have been affected. In contrast to previous research showing indigenous cosmologies and their closeness to nature (Jenkins, 2015), most people around the SHM do not report a strong connection to their land and natural resources. Also social relationships appear disrupted, leading to a sense of social fragmentation rather than cohesion. The domination of the lithium industry has contributed to the erosion of collective identity and solidarity among the local population, as livelihoods have become intertwined with the demands of the capitalist economic system and the lithium extraction activities. These dynamics are all in favor of the powerful who successfully manage to avoid that the communities unite and form a resistance movement in solidarity.

However, it needs to be clarified again that the overarching consent and the lack of unity does not mean that there is no opposition at all to the mining industry. There are a handful of people, a clear minority, who dedicate both their time and energy to fighting for their territories. Yet, the processes and strategies outlined above largely control or weaken the anti-mining movement in AS and allow extractive activities to continue without drawing major societal or scientific attention.

Furthermore, this research emphasizes that silence and consent to extractive projects do not mean that local people and their environment are not experiencing impacts and problems. Statements such as Leanne Betasamosake Simpson saying that, “Actually, extracting is stealing. It is taking without consent” (Klein, 2013) show how this has previously been failed to acknowledge. To overcome the

problem more is needed than consent. It is of utmost importance to scrutinize how consent is obtained and what happens after consent is given, while always considering the underlying power imbalances. Hence, the study underscores the need for a nuanced understanding of consent and opposition in the context of extractive projects. Policy interventions should address these power imbalances and promote inclusive decision-making processes that genuinely involve and empower local communities.

Overall, this research reveals the complex interplay of forces that shape the local response to mining activities around the SHM. Thus, to gain a comprehensive understanding of how local communities cope with the domination of the lithium industry around the Salar del Hombre Muerto, this study delved into the analysis of livelihoods and local values. At the same time, however, it aimed to avoid the pitfalls of previous research that solely focused on outcomes while neglecting the underlying processes.

By examining livelihoods and values, this research was not intended to disregard the processes of domination; rather, it aimed to highlight them. It shed light on the actors involved and the mechanisms at play, which revealed the unequal power relations present in the region. The analysis also revealed that livelihoods and values cannot be viewed in isolation but instead are interconnected. Together they seem to enable the domination mechanisms to function. At the same time, they shape the way individuals and communities understand their situation and navigate the pressures from the lithium mining industry.

By taking a holistic approach that considers livelihoods, values, and the processes of domination together, this study provides a more nuanced and comprehensive analysis of the local communities' experiences and responses to the dominance of the lithium industry in the area around the Salar del Hombre Muerto. Understanding the complex dynamics of power, consent, and social fragmentation that shape the local response to mining activities around the SHM is crucial for designing more equitable and sustainable development policies in resource-rich regions.

Furthermore, the study emphasizes the importance of considering long-term development impacts beyond the operational phase of extractive projects. The short-term economic benefits and promises of progress associated with the lithium industry should be critically evaluated in relation to their long-term sustainability and the overall well-being of local communities. Policymakers should prioritize comprehensive and independent assessments that incorporate social, environmental, and cultural dimensions to ensure that development initiatives genuinely contribute to the betterment of local livelihoods and preserve the cultural heritage of indigenous communities.

It is important to critically reflect on the following. First, there is a tendency to romanticize indigenous communities, implying that they should remain unchanged. Yet, developments supplying

them with energy and infrastructure are essential. Hence, when assessing whether the development impacts of the mining companies serve only their own interests or could in fact be beneficial for local communities, many factors need to be considered. For instance, long-term studies would be adequate to assess the extent to which these developments are indeed sustainable and go beyond the operational phase of the extractive project.

Yet, this study does not aim to assess development nor evaluate whether livelihoods improve, but instead aims to emphasize that individuals should always remain free to choose the life they want to live. By uncovering the domination mechanisms, however, it appears that local livelihoods as well as values are being shaped in a way that aligns with corporate aspirations more than with the well-being and aspirations of the local population.

Moreover, the human ability to reflect their own experiences and imbue them with personal significance (Otsuki, 2016) implies that the values associated with livelihoods, lithium mining, and development inevitably change over time. Acknowledging the potential shifts in values, livelihoods and coping strategies can change over time, I aimed to capture these by comparing younger generations who were born in the presence of the mining industry with older generations whose livelihoods were previously not linked to mining. Besides researching cross-generational differences, participants were also asked about the past, their ways of living, values etc. Thereby, I aimed to gain insights into changes over time due to shifting circumstances. However, to capture the nuances and trajectories of change the same individuals could be studied over an extended period of time. To strengthen the robustness of findings and capture the long-term dynamics of the industry's impact on local communities, future research would greatly benefit from employing a longitudinal study design.

Lastly, the research shows that, in contrast to other mining areas where communities stood up together against the exploitation of their territories, collective action was largely prevented in AS. In this light, we are reminded of the timeless wisdom captured in the words of an old poem:

Los hermanos sean unidos
porque ésa es la ley primera,
tengan unión verdadera,
en cualquier tiempo que sea,
porque si entre ellos se pelean
los devoran los de ajuera.

(Source: “El Gaucho Martín Fierro”by Hernández, J., 1872)

Let brothers be united
for that is the first law,
have true unity,
in any time that may be,
for if they fight amongst themselves
they will be devoured by those from the outside.

(Source: "The Gaucho Martín Fierro" translated by Frank G. Carrino)

While Martin Fierro is a literary character from the 19th century, his words still hold relevance to this day. This excerpt written by the Argentine José Hernández highlights the importance of unity and social cohesion. Facing neocolonial pressures, the communities living around the SHM must stand in solidarity to collectively defend their rights, resources, and interests. Prioritizing short-term economic gains may come at the cost of losing communal values and traditional livelihoods. While local communities exposed to the "extractive imperative" are not the ones to blame, the takeaway message here is that internal division impairs a community's ability to resist and be resilient to external forces, such as the domination of the lithium industry. Hence, to work towards a more just and sustainable future for all, social cohesion must be fostered. Furthermore, to reduce communities' vulnerability to external exploitation, more efforts must be made to promote community building, strengthen local organizations and networks, foster intercultural dialogue, and support initiatives that empower community members.

Although it is important to emphasize the resilience and agency of frontline communities, it goes without saying that the neoextractive model, with its neocolonial practices and damaging consequences, is the underlying issue that needs to be addressed. Namely, to keep up with the "imperial mode of living", the capitalist resource frontier is expanded and colonial patterns of accumulation by dispossession are reinforced (Dorn, 2021c; Brand & Wissen, 2013). Essentially, consent is manufactured to relocate the impacts of the Global North's energy transition to remote communities in the periphery. To promote energy-intensive lifestyles while reducing greenhouse gas emissions, traditional ways of living and social autonomy are undermined and dependencies on the capitalist economic system are created. The continuation of these dynamics would result in further deepening of unequal power relations and eventually result in full external control of indigenous territories. Consequently, the energy transition and the existing extractive projects need to become more inclusive while the expansion of the lithium frontier needs to be halted.

It is also imperative to move beyond isolated considerations of individual steps in the battery production process. To correctly evaluate how sustainable and just battery technologies are, the entire life cycle of the battery needs to be examined (Marconi, Arengo, & Clark, 2022). This means that before misleadingly labeling energy as "green", not only the use of a battery but also the preceding stages of the production process, such as mining, and the end stages of disposal or recycling need to be considered. By adopting a holistic perspective, we can avoid exacerbating the decarbonization divide between the Global North and Global South. Instead of displacing the socio-ecological impacts of the lithium mining industry, they need to be addressed and minimized.

To conclude, more attention, and not only academic, should be given to areas where extractivism is not visibly and violently contested. Furthermore, the negative socio-environmental and

cultural consequences for local, not just indigenous but all affected communities need to be further acknowledged. The prioritization of resource exploitation over social, environmental, and cultural considerations not only needs to be called into question but needs to be actively challenged. Moving forward, further research is needed to explore alternative models of development that prioritize social and environmental justice, respect cultural diversity, and empower local communities. To transition away from, what Arsel, Hogenboom, and Pellengrini (2016) call, the "extractive imperative" a collaboration between academia, policymakers, civil society, and affected communities to advocate for policy changes, institutional reforms, and public awareness campaigns that prioritize the well-being of people and the planet over short-term gains is required. While working towards more equitable and sustainable development practices our reliance on extractive industries certainly needs to be reduced.

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Appendix

Secondary data: Survey conducted by Catamarca's Association of Geologists

PROGRAMA DESARROLLO DEL CONOCIMIENTO EN COMUNIDADES Y FORTALECIMIENTO DE LOS CENTROS DE CONTROL AMBIENTAL MINERO

Encuesta

1. **Género:** femenino___ masculino___
2. **Edad:**
3. **Profesión**:
4. **Nivel educativo:**
   Primaria: Completa __ Incompleta__
   Secundaria: Completa __ Incompleta ___
   Terciario: Completa __ Incompleta ___
   Universitario: Completa __ Incompleta ___

5. **¿Cuáles son las principales actividades para el desarrollo económico de su Localidad?**
   a) Agricultura
   b) Ganadería
   c) Minería
   d) Otra, cuál?

6. **¿Está de acuerdo con la actividad minera en su departamento?**

Si_____No_____ Por qué?_____

7. **Cree usted que la minería es una actividad que genera Desarrollo Sostenible para la comunidad?**

   Si___ No___ por qué?_____

8. **Según usted ¿puede haber minería responsable?**

   Si__ no__ por qué?`_____

9. **Que tanto cree usted, que la apertura y ejecución de proyectos mineros contribuye al desarrollo económico de su localidad y provincia?**

   Nada____ poco____ mucho____ no sabe, no responde____

10. **Según su opinión cual es el principal problema que tiene el ambiente en su departamento?**
    a) Ninguno
    b) Contaminación del aire y agua
    c) Deforestación
    d) Otros, cuáles?_____

11. ¿Cuál cree que es el impacto que genera la minería?

a) Ningún impacto
b) Contaminación y escases del agua
c) Deforestación
d) Contaminación visual
e) Problemas de salud
f) Ruido
g) Alteraciones ecológicas
h) Otros, Cuales_____

12. Conoce cuales son y que funciones tienen los organismos provinciales de control?

Sí____ No____

13. Que sugiere como habitante de la comunidad, para mejorar el control ambiental?

_____

14. ¿Cómo le gustaría que la autoridad minera comunique sus actividades?

- Reunión Vecinal___ Redes sociales ____
- Folletos ____ Medios Locales ____
- Visitas Individuales _____
- Otros _____

15. Cree que estas capacitaciones son útiles para la Comunidad?

Si___ No___ por qué?_____