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Planning the Extraction of Lithium in Bolivia

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This book is dedicated to my mentor,
Daisaku Ikeda

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List of Abbreviations

BRICS	Brasil, Russia, India, China, and South Africa
COMCIPO	*Comité Cívico de Potosí*, Civic Committee of Potosí
COMIBOL	*Cooperación Minera de Bolivia*, Mining Cooperation of Bolivia
COP21	21st Conference of the Parties
CSR	Corporate Social Responsability
ENTEL	*Empresa Nacional de Telecomunicaciones*, National Company of Telecomunications
EV	Electric Vehicles
FRUTCAS	*Federación Regional Única de Trabajadores Campesinos del Altiplano Sur de Bolivia*, Regional Unique Federation of Peasant Workers of the South Altiplano of Bolivia
GEI	Global Environmental Institute
GDP	Gross Domestic Product
IISD	International Institute for Sustainable Development
ILO	International Labour Organization
IMF	International Monetary Fund
INE	*Instituto Nacional de Estadística de Bolivia*, National Institute of Statistics of Bolivia
LITHCO	Lithium Corporation of America
LMyM	*Ley de Minería y Metalurgia*, Law on Mining and Metallurgy
MAS	*Movimiento al Socialismo*, Movement for Socialism
NGO	Non-Governmental Organization
OECD	Organisation for Economic Co-operation and Development

PPP	Public-Private Partnership
SMQ	*Sociedad Química y Minera de Chile S.A.*, Chemical and Mining Society of Chile
TCO	*Tierra Comunitaria de Origen*, Original Communal Lands
TIPNIS	*Territorio Indígena y Parque Nacional Isiboro Sécure*, Indigenous Territory and National Park Isiboro Sécure
ULB	*Universidad del Litio Boliviana*, Bolivian University of Lithium
UN	United Nations
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
YLB	*Empresa Pública Nacional Estratégica de Yacimientos de Litio Bolivianos*, Public Strategic National Company of the Bolivian Lithium Resources

Map of Bolivia. Source: worldometers, https://www.worldometers.info/maps/bolivia-map/

Introduction

La Paz is still the first image that comes to my mind when I think about Bolivia and its many contradictions. As a matter of fact, La Paz, the de facto capital and the country's political centre[1], is a maze of contradictions. Coming from its highest point, the city of El Alto is considered the poorest part of the capital but also the heart of the indigenous Aymara culture. It amazes one with the sight of this enormous city that took its space in one of the most unwelcoming part of the world, on the dry, desertic highland Andean plateau at 4000m a.s.l. surrounded by mountains. What immediately strikes is its vibrant restlessness: perpetual market activities on the streets, honking, traffic, daily street parades and protests, thousands of orange brick houses that pop up inordinately from every corner, and most of all the newest *Teleférico*, a 10-lines aerial urban cable-car transportation system. The *Teleférico* together with the modern presidential tower built right behind the historical colonial presidential building in the main square in La Paz, are just the most visible of the many contrasts present in the city. These contrasts were especially evident for an outsider like me. Nevertheless, I soon gave up the idea of trying to explain them with my own criteria, as too often local people while looking at my puzzled face, said to me with a smile, "This is Bolivia!".

While La Paz was my first encounter with the Bolivian reality, I then spent nearly two months in the three main Andean cities, namely Oruro, Potosí, and Uyuni. I went to Bolivia with the intention of understanding the newest lithium industry and the social impacts it has caused among local people. Nevertheless, before analysing this recent extractive activity, I wanted to grasp what the extraction of metals and minerals in general, which has a profound significance in the country, symbolizes for Bolivians and the repercussion that those activities still have on their way of living and their environment. I, therefore, chose these three cities for what they represent regarding underground mining and the extraction of lithium. Potosí and Oruro are the two most important mining cities of Bolivia, as in fact most of their inhabitants still make a living from the extraction of metals like zinc, tin, and lead. While Potosí was the most important city during the Spanish colonization, due the rich mountain silver-mine (Cerro Rico), Oruro

[1] Sucre is Bolivia's constitutional capital, while Santa Cruz de la Sierra is the economic centre of the country.

became later the country's mining centre due to its many tin mines, which favoured also the origination of Bolivia's most important folkloric festivity, the Oruro's Carnival. Instead, Uyuni – located in the department of Potosí – only recently became an important urban hub due to its vicinity with the Uyuni salt flat, one of the most visited landscape in Bolivia and the lithium extraction point. The whole Andean Mountain Range is, very rich in metals and minerals, which have largely affected the history of the populations that were inhabiting those lands. Especially during the Spanish colonial times, many of the local indigenous populations died working to extract these precious metals. The most famous case is to be found in Bolivia, that is the Cero Rico silver mine of Potosí, that supplied the Spanish Crown with so much silver that one could have built a bridge until Madrid. This long and dramatic mining legacy that Bolivia carries, is also very well documented in the ethnography by June Nash (1973) on Bolivian tin mines. Nowadays, the country is still economically dependent on the extraction of raw minerals which continues to have a strong impact on the people and their environment, for whom mining means more than just an economic activity and a form of sustainment. It is embedded in people's identity, rituals, festivities and its effects are visible on people's way of life, such as daily conversations and routines.

While taking into consideration the impacts that underground mining has in Bolivia, this study focuses on the extraction of a particular metal, lithium, which could be considered in our days as precious as silver was for the Spanish Crown in the 16th Century. Lithium is present in large quantity in Bolivia, and more than other metals in the past decades has become of a central interest in the context of contemporary global ecological problematics and technological developments. Lithium, in this context, has become an essential resource for the construction of the current battery systems for smartphones and electric vehicles (EV), which means a more sustainable alternative to fossil fuels dependency, one major problem of our century. Therefore, its demand on the global market has been increasing together with investigations to discover new lithium reserves. The major world's known lithium reserves are concentrated in the so called 'lithium-triangle' on an isolated and desertic area in the Andean highland plateau, between Bolivia, Chile, and Argentina. In Bolivia especially, we can find the biggest lithium-reserve in the world which are in the Uyuni salt flat (*Salar de Uyuni*) (10'500 km²).

Bolivia, since its colonial time has always been at the centre of interest for being one of the richest countries in natural resources in South America, although it remains one of the poorest

in economic terms. In order to break this vicious circle, known also as the 'resource curse'[2] and to take advantage of this favourable high global demand, the former Bolivian government started a development project in 2008 that sought to nationalize the extraction of lithium carbonate in the southern part of the Uyuni salt flat, with the intention of creating revenues that served to industrialize a country, which still lacks of basic infrastructures (i.e. paved streets, electricity, potable water). Evo Morales, the first indigenous president in South America, was elected in 2006 and represented a radical political and cultural shift in a country, where elites and transnational firms had been empowered by twenty years of neoliberal policies. One of the most crucial point of the Morales's agenda was, in fact, the nationalization of natural resources extraction, by renegotiating contracts with international firms and by (re)creating state-run companies. Lithium, among other natural resources, became of a strategic importance, as it was placed at the forefront of a nationalist discourse, known also as 'resource nationalism', which legitimized economic development based on *extractivism*[3]. Moreover, the extraction of lithium was also of a political importance, as it represented the actual proof of the very first resource that the government managed to completely nationalize through the state-run company YLB (*Yacimiento de Litio Boliviano*, Bolivian Lithium Resources) created in 2017. Finally, lithium and the consequent production of batteries, embeds a long-lasting dream of industrialization of the country, which relates to ideas of progress, modernity, and economic development, that at the local level shapes people's understandings, meanings, expectations and aspirations. Concretely these local understandings translate into a way out of poverty and backwardness, which are however never homogeneous and straightforward.

In this context, this thesis tries to answer to these two main questions: How local interpretations of the extraction of lithium in the main urban areas of the Bolivian highlands diverge from local interpretations of underground mining activities, which have long affected the same areas? And how the local interpretations in these urban areas influence the emergence, the type, and the nature of potential social conflict in relation to the lithium industry?

This study, hence, aims in the first part, at understanding local interpretations of the extraction

[2] According to Acosta (2013) the resource curse happens to, "Countries that are rich in natural resources, find it more difficult to develop. In particular, those that have an abundance of one or just a few primary commodities seem to be condemned to underdevelopment. The situation becomes even more complicated for those economies that are dependent on oil and minerals for their income. These countries appear to be trapped in a perverse state of affairs known in the specialist literature as "the paradox of plenty" or "the resource curse" (Acosta, 2013: 61).

[3] *Extractivism* makes references to, "[…] activities that remove large quantities of natural resources that are not processed (or processed only to a limited degree), especially for export." (Acosta, 2013: 62).

of lithium in the main urban areas of the Bolivian highlands in relation to underground mining activities, which have been present since colonial time. By starting from these local interpretations, this thesis aims in the second part, at understanding the central role that they play in detecting the emergence, the type, and the nature of potential social conflict in relation to the extraction of natural resources.

Throughout this study I argue that lithium extraction in Bolivia embodies a new mining discourse promoted by the Morales' government, that is inherently future-oriented and optimistic, and far from being just 'another' extractive project as seen in the past. With this project in fact, the Bolivian state tried to portray itself as modern and advanced while propelling itself into the future. In this context, I argue that lithium-extraction embodies rather a more complex assemblage of discourses, practices, and strategies that converge into a planning activity, which envisions a better future outcome by acting upon the present condition. Central to planning is the notion of a promise of a 'better future', which in the case of lithium-extraction is presented as a promise of development. Nevertheless, how this promise is locally interpreted and envisioned highly depends on the many and often contradictory wants and needs of the local people. These different interpretations of the future promised by the plan can create discrepancies and disappointments, which in turn can lead to contestations and social conflict.

I continue in the following chapter, by explicating the methodology employed in this study and analysing my role as a researcher in collecting qualitative data and in the analysis. I will also elucidate my field work and how I had access to it, while considering the inconveniences and difficulties that I faced while collecting empirical data in Bolivia. In order to sustain my analysis that follows, I dedicate chapter 3 to a theoretical foundation by situating the main issues at stake in this study according to contemporary debates in the social sciences. These issues revolve around the concepts of natural resources and the consequent idea of wealth attached to them, collective memory, planning, and social conflict. Their interconnection will serve as a theoretical framework on which to base my analysis on the case study of the extraction of lithium in Bolivia, which will be the focus of the following three chapters. In chapter 4, I explore the historical and social process that enabled underground mining to become part of the Bolivian national identity. In order to do so, I introduce the concept of collective memory. I then, dedicate chapter 5, for the analysis of the process that made lithium a valuable resource in Bolivia, in the first part, while the second one is dedicated to the analysis of lithium extraction through the lens of an anthropology of planning. By looking at lithium extraction as a planning activity, I explore the notion of the promise for a 'better future' which

is the key to understand local expectations and aspirations. I then, turn in chapter 6, to the analysis of these local expectations, which I argue have been disappointed. I will show that these disappointed expectations are pivotal in understanding potential social conflict in relation to the extraction of lithium.

- Chapter 2 -

METHODOLOGY

"…the interpretative study of culture represents an attempt to come to terms with the diversity of the ways human beings construct their lives in the act of leading them."

(Clifford Geertz, 1983)

My research interest was directed to grasp how in the main urban areas of the Bolivian highlands, people thought about and understood the extraction of lithium, in comparison to long present underground mining activities in those areas. In order to answer my question, I decided to conduct a qualitative research in Bolivia, as it is also considered to be the best strategy to understand the research problem from the perspective of the local population under study (Mack et al., 2005: 1). The ethnographic field work I conducted in Bolivia, served to collect a considerable quantity of first-hand empirical data, mostly verbal and visual materials, that together with other secondary sources of information, constituted the backbone upon which I based my argument. Moreover, ethnographic fieldwork in a far away, unfamiliar place is the most common strategy in order to secure a certain level of objectivity between the researcher and the informants. The methods that I used were, however, manifold. The primary fieldwork methods I used were participant observation, informal conversations, visual methods, and interviews. I stress here also the centrality of secondary research methods before, during, and after my travel to Bolivia. The secondary sources of information I used included, scholarly literatures, videos, newspapers, websites, and films, which were central in understanding the political and social context, and to gather more specific information on certain matters, which I could not obtain through conversations and interviews alone (Konopinski, 2014: 57). Before discussing in more depth, the methods, their applications, and limitations, I want to elucidate my research site, the time period I spent there, and who my informants were.

I collected my empirical data during February and March 2019 in the cities of Oruro, Potosí, and Uyuni, all located in the Bolivian *Altiplano* (highlands), which is characterized by cold

temperatures, high altitude, intense solar radiation, saline soils, and a dry climate. In these semi-desertic areas, agriculture is very challenging (mainly quinoa and potatoes) due to the soil composition and water scarcity. On the other hand, these areas are very rich in minerals and metals which guarantee the main source of employment and economic sustainment in the regions. The Uyuni salt flat, from where the lithium is extracted, is located in the Potosí department. Uyuni is the closest city to it, from which it takes its name. Oruro, the capital of the Oruro department, is located north of the Uyuni salt flat, which confines with another smaller salt flat (Coipasa salt flat) and are divided only by a dormant volcano, Tunupa. Among these there are other twenty-two smaller salt flats in the area (e.g. Empexa, Chalviri, de Pastos Grandes, Surire), which are now under investigation as potential reserves of lithium and other minerals (interview, 27.03.2019).

I spent two weeks in every city, while I needed nearly two more weeks for traveling time, solving practical issues, and including short stays in La Paz and Sucre (155 km from Potosí) due to further interviews. In total, I wrote two field diaries in Italian (my mother tongue), where I recorded daily, observations – especially what was written on walls[4], signs, people's behaviours, and their activities –, small conversations, and first thoughts or questions. Moreover, I collected 19 interviews, 26 informal conversations, and other 10 other shorter conversations, all of them in Spanish and later fully transcribed for facilitating the analysis. To maintain the anonymity of my informants, all the names of the people who appear in this study have been changed, except for Mr. Lérida[5] (one of my closest informant) who preferred to be mentioned and with whom I continue to exchange phone calls, videos, articles, and text messages. Mr. Lérida was not the only one with whom I continued to have contact, although he was the most regular and closest one, which made me sporadically return to the field even if I was not physically in Bolivia. The interviews were all voice recorded and lasted at least one hour each. Although, not all of them were pre-arranged, I often returned to visit the same person in order to deepen our first conversation. The informal conversations happened in very random and unplanned settings (e.g. local restaurants, on the street, hostels), therefore some were partly voice-reordered (when allowed), while for the rest I relied on my short-memory and jot notes. I found my smartphone extremely useful in writing notes, as sometimes writing

[4] In Bolivia walls can literally talk, as people have the habit to write on them what they think, especially when it comes to political opinions. This aspect caught my attention from the very beginning, and I remembered a humoristic Bolivian film (*¿quien mató a la llamita blanca?*, who killed the little white lama?, 2007), where the narrator explains this as a typical Bolivian habit.

[5] Mr. Lérida's personal website: http://miltonlerida.com/

in front of informants can risk creating suspicions (Musante, 2014: 276), while using the phone has become a more accepted, ordinary act. These informal conversations included also three group interviews (no more than three people and myself), for example, on one occasion I was invited for lunch to an informant's house. The short conversations lasted only five to fifteen minutes and were very focused on one specific topic of personal interest. Among my informants there were only urban dwellers I encountered while staying in those cities, and the YLB (*Yacimiento de Litio Boliviano*, Bolivian Lithium Resources; the company that carries out the extraction of lithium) workers I talked to while visiting the lithium's plant. However, I was aware that the group 'urban dwellers' was a too generic of a source, and I often asked myself who I should talk to and for what reason. Most importantly, I asked myself if my informants could be considered relevant enough, or if I should have included more people. Those were all legitimate questions, nevertheless, I concluded that mine was a qualitative rather than quantitative study. Therefore, from the beginning I never intended to collect a general opinion of most of the city dwellers (as if it were even possible), not only because that would have required a longer period, but I would have needed a different methodological toolkit (e.g. surveys, questionnaires). My sample criteria were 'urban dwellers', meaning that anybody who lived in the city, regardless of age, gender, or social class, could have been a possible informant. Yet, I prioritized some groups among others depending on what I was trying to find out. For example, in Oruro and Potosí, I intentionally looked for miners and former miners, as that was a central part of my investigation. Moreover, I need to clarify that the cities of Oruro, Potosí, and Uyuni, are mostly inhabited by low and middle working classes – mostly miners and people from indigenous heritage – and are very different from the biggest and more social stratified cities like La Paz, Cochabamba, and Santa Cruz de la Sierra. Among others, the most relevant informants included: miners, former miners, tourist guides, local hostels' owners, engineers, drivers, one local anthropologist, market sellers, cooks, a social environmentalist, a member of the town committee, lawyers, housewives, local NGO employees, political activists, a former government employee, and university students.

2.1 Field work

The primary methodological strategy I employed in the two months I spent in Bolivia was participant observation and informal conversations. According to Musante (2014), "Participant observation is a method in which a researcher takes part in the daily activities, rituals,

interactions, and events of a group of people as one of the means of learning both the explicit and tacit aspects of their life routines and culture. Participant observation is considered almost universally as the central and defining method of ethnographic research and foundation in cultural anthropology […]" (Musante, 2014: 251). Participant observation was certainly one of the most important method I employed, especially in the first period when I spent a great deal of time writing about my surroundings, the reactions of the people I was spending time with, and any sort of activities I was observing. However, participant observation is a very time-consuming activity, it requires constant efforts in keeping a certain distance or objectivity – as it is an inherently subjective method –, and it subjects the researcher to a level of stress as the research is always 'on' (Mack et al., 2005: 15). Through participant observation I was able to gain a special insight and to better understand the context in which my informants were living, more precisely, to better understand what they were talking about, or what they were referring to. I did not however, 'participate' equally in every city. In Oruro I managed to live and work in a family-run hostel for the two weeks before Carnival, therefore I favoured participant observations over interviews, while in Uyuni, already rich with my previous experiences, I concentrated mostly on conducting interviews, considering also that my focus was very specific. Especially, because, I did not have much time available and I had a precise research focus, I relied heavily on interviews and informal conversations as the richest sources of information. On the other hand, interviews need a careful interpretation, therefore it is vital to understand the context in which they are carried out (Musante, 2014: 262). To sum up, I concluded that a mixed-methods' strategy was the most appropriate one, as participant observation is central to ethnographic fieldwork, but it can never be considered as the only relevant method. Nevertheless, as Gingrich (2013) argued, a minimum amount of participant observation is necessary as it provides the quality control which socio-cultural anthropology should maintain. The strategy of conducting field work on different sites, as it was in my case, was developed by George Marcus (1995), who defined as "multi-sided ethnography" and now it is also known as multi-sided field work. Following this model, the ethnographer spends relatively shorter periods on different sites, in order to grasp local, regional, and global flows of people and things (Gingrich, 2013). As any model it has its advantages and disadvantages, which highly depend on the research focus and questions. Nevertheless, as Gingrich argued (2013), multi-sided field work is the single most influential element in anthropology's new methodological diversity for ethnography. As in fact, Ulf Hannerz (2004) argued, this strategy is effective in situations where the ethnographer must address larger issues on the basis of wider empirical insights, while he/she is constrained by time because he/she can focus only on specific issues or research

interests, therefore preventing a "deeper immersion" into broader social settings (Gingrich, 2013).

Doing fieldwork is never objective or neutral (Eriksen, 2015 [1995]: 44), it rather highly depends on the context and on the ethnographer (e.g. skills, personality, gender, age). Both my personal characteristics as ethnographer and the context, that in my case was greatly influenced by the presidential elections that happened later in the same year, shaped how I collected and interpreted my data. Musante (2014) views ethnographic fieldwork as an iterative process, meaning that qualitative methods (i.e. participant observation) serve as both collecting data and as an analytical tool, considering that every person brings to the field his/her personal characteristics and different theoretical approaches (Musante, 2014: 262). It is a process in which we, as researchers, interpret what we observe by trying to comprehend the informant's point of view that becomes more and more familiar as our understanding of the context expands. As a matter of fact, during this iterative process my research aim and questions started to take a more refined and analytical form, as I was conducting my field work and during the analysis of my empirical data. In fact, along the way I came to realize that some questions were irrelevant, while others, which I did not take in consideration at the beginning, were more pressing. For example, the greatest issue that became evident while conducting my field work, was the serious water crisis on the Bolivian highlands and its connection or missing connection with extractive activities. In the same way, I naturally abandoned questions that I noticed not be as relevant for my research as I had previously thought. Moreover, through the qualitative research and the process of analysis, during which by constantly re-reading my field notes searching for things I did not previously understand, I was able to gain an even deeper insight by challenging old ideas, reformulating them, and asking new questions (Musante, 2014). This is a grounded theory approach I employed in my analysis as a way, according to Charmaz (2006), "[…] to learn about the worlds we study and a method for developing theories to understand them." (Charmaz, 2006: 10). In this view, the ethnographer is part of the world she/he studies and the data she/he collects. I was, therefore, the person who created 'the field', which following the debate on the nature of the field in cultural anthropology (Gupta and Ferguson, 1997), is not conceived as an apparent site, fixed in a physical location, but rather a construction, which is also subjugated by transnational flows and increasing tendencies of de-territorialisation, which characterize globalization (Appadurai, 1996; Gingrich, 2013).

2.2 Access to the Field

Before traveling to Bolivia, I prepared myself by reading a large amount of scholarly literature both on Bolivia and on my research focus (i.e. extractive industries, lithium), while I also deepened my geographical knowledge and socio-political understanding of the country through scholarly literature, websites, videos, and news. Nevertheless, this was my first time visiting the country, therefore, I was conscious about possible complications, unexpected occurrences, and accidents (e.g. weather condition, visa), which, indeed, happened. In any case, I had a clear plan and route in my head, although I was flexible enough to realize that inconveniences were part of the field work which, in actuality, contributed positively to the success of my research (e.g. a short stay in Sucre). Before leaving, I had the contact of a trusted person who lives in Bolivia, which in the end I did not need, as I found other ways to have access to the field. As I previously argued I did not participate equally in every city. My first stop was in Oruro, where I lived and worked in the only hostel of the city, run by a local family. I managed to be part of a staff of five young volunteers (all from South America) through a website called "WorkAway[6]", that is a platform which enables young backpackers to look for usually short-term volunteer services while they travel, without service charges. Oruro is not a touristic city and many backpackers usually avoid passing through it. Nevertheless, during and before Carnival it becomes the busiest city in the country, attracting mainly national tourists. In fact, in the two weeks I spent there only few non-Bolivian guests came to the hostel, while in the whole staff I was the only one speaking other languages than Spanish. While working there (only four hours per day) I was able to gain a great insight into Bolivian customs, beliefs, ways of thinking, habits, and of course the great importance that Carnival represents for them. This first experience also served to gain access to some local people in the other two cities, although, in a different way. Both in Potosí and Uyuni I could create a relationship based on mutual trust with at least one or two people, who I was introduced to by friends I had previously met in Oruro. Although, in both cities I was living on my own – always in small family-run hostels – I decided to visit those people frequently in order to build an even deeper relationship. My first experience in Oruro was crucial also for learning how to successfully engage in conversations with people with whom I did not have any previous contact. Although urban dwellers were acquainted with foreign tourists and my presence there was never questioned, they were less comfortable discussing in depth about their social and political situation. A few times, I was in fact asked, "Why do you want to know this?", but as soon as I explained that I was an

[6] https://www.workaway.info/

anthropology student, they looked at me as though everything finally made sense. As a man once told me, "Ah you are studying us!" (interview, 18.02.2019). It is quite common, in fact, to see museums of anthropology in many Andean cities, which serve to remember their pre-Colombian history and to contain ancient artefacts. My whole field work was a stimulating, learning-by-doing process, through which I discovered much about Bolivian society, as well as myself, as Eriksen (2015 [1995]: 402) also argued.

Despite being my first experience in Bolivia, I was confident in my own communicational skills and personality, as I already had previous experiences of living for a long period of time with a foreign local community. Although at that time I was not trained in anthropology, I knew the level of adaptability that was required for conducting field work. Due to my personality, I usually gained the trust of people easily, as in fact, happened in Bolivia where my informants quickly, sometimes unexpectedly, opened up to me. The process of active observing and listening, however, is something that must be trained, as it happened for me while re-listening to my audio recordings on the same day. This act helped me in correcting my attitude while asking questions and acquiring a better understanding of my informant's opinions. Moreover, I must admit that finding interviewees was not always an easy task, but it required many attempts, constant efforts, and, most of all, patience.

Finally, I gained access to specific places and information, because in those cases, I was 'studying down'. According to Gingrich (2013), 'studying down' means usually having a better access to people who belong to upper classes of the local hierarchy. This is the case of my interactions with a member of the town committee in Potosí (and Uyuni) and my visit to the lithium-extraction plant in Llipi. Moreover, I was also proposed to have a direct interview with Alberto Echazú, the Vice-minister of High Energy and Technology, who personally planned the extraction of lithium (unfortunately I did not have enough time to schedule the interview, as he was abroad). In both cases, I obtained easy access because they saw me as an opportunity to portray their struggles or visions to the international, outside, world (interview, 29.03.2019). Even though obtaining the written permit to enter in Llipi was not an easy task, which required the help of a friend in the headquarter of the YLB in La Paz, once inside, I was treated as a distinguished guest, although my knowledge of chemical reactions (i.e. separation of lithium from magnesium) were almost zero. In these cases, I became aware that the relationships I established with them was subjected to a relation of power that has its roots in the long colonial and post-colonial history.

2.3 My Role as a Researcher

Doing research on my own, as a young woman in a foreign country, was sometimes a thought that worried me. As a matter of fact, my time in Bolivia provoked in myself many kinds of different and strong emotions, from the anxiety for trying to record 'everything' (there is never an actual stop to it), or for having too little time, the fear of potential dangerous situations, or of not being able to talk with local people, as much as the overwhelming joy while I participated at a sacrificial rite of a lama inside a mine. As in this latter situation, participation or being accepted to participate, means sometimes doing things that we find unpleasant, dangerous, or disgusting (Musante, 2014: 262). I do not refer here to the slaughter of the lama (I myself grew up on a farm), but rather to the two hours before spent with the miners drinking pure alcohol and smoking cigarettes in a very small and dusty cave with poor ventilation. Nevertheless, all of these were legitimate emotions and a part as well of my field work, which, as I previously argued, were influenced by my being white, Italian, young, and a woman, among other characteristics. In some cases, I felt a kind of sympathy towards myself, as for Bolivians to see a young woman on her own was unusual, while in others, I was even asked, in a playful way, to get married so that I would have remained in Bolivia.

Regarding my language competences, being fluent in Spanish played undoubtedly a decisive role in successfully conducting my research, as any ethnographer would argue. In my case, I realized that not only my language competencies but my nationality, as well (as often both were strictly related while talking with local people), was decisive for getting the other person to talk. In Bolivia, the colonial and the neoliberal periods are still felt as 'open wounds', where the former is connected with Spain and the latter with the USA[7]. Therefore, I noticed that some people may not have wanted or have been apprehensive to speak in depth, especially when it came to political issues, with someone who had a strong Castilian accent from Spain. I differently – depending if my interlocutor wanted to get closer to me or not – was often associated as a white European but somehow closer than a, so to say girl from Northern Europe, as our languages were very similar. In the Bolivian highlands however, there are two other main spoken languages, Quechua (imported during the Inca colonization) and Aymara, which is mainly spoken in the areas south to the Titicaca Lake (La Paz and Oruro regions). Although, the majority of the population identified as being indigenous or of indigenous heritage, in the

[7] Bolivia was the only country in South America to charge a visa fee for US citizens, which until December 2019, amounted of $160. https://www.worldtravelguide.net/guides/south-america/bolivia/passport-visa/

cities Spanish is widely spoken, because before 2009 – when indigenous languages became nationally recognized –, markers of indigenous culture were used to discriminate people, especially those who emigrated to the cities from rural areas (interview, 14.02.2019).

Another issue I often encountered while trying to talk with local people, was a gender problem. I say problem, because machismo in Bolivia is evident even more in the countryside, where very young girls are commonly forced into marriage from their mothers, and where more than fifty percent of the women are affected by home violence[8]. I thought that by myself being a woman, women would have felt more comfortable to talk, however, the answer I was often given was a simple, "I don't know". Fortunately, I was able to participate in discussion meetings with women, through the international laic Buddhist organisation (*Soka Gakkai International*), of which I am a member. The Soka Gakkai International is registered as a non-governmental organization with the United Nations[9]. It engages with education, culture, and peace by empowering individuals toward positive global change. Although, it was born in Japan during the period of national militarism of the second world war, aiming at establishing a peaceful and harmonious society, it became currently an international organization, present in 192 countries. This international expansion was possible, because it is not bound to a specific society and has freed its religious practices from formalisms, giving rather more importance to the Buddhist philosophy. The Soka Gakkai counts many members also in Bolivia, and because discussion meetings are open to anybody, I could easily join and participate in La Paz, Oruro, and Sucre. One of the goals of the organization is also the empowerment of women. I went to Sucre because I was invited to participate to the first feminist meeting of the city, organised by a fellow member, a lawyer who has been fighting for women rights in Sucre. The meeting was a film forum and opened to any woman, to which around forty women from different social classes and of all ages attended and engaged in discussions, while condemning the discriminations and injustices they had been feeling. At that time, I felt extremely fortunate for being able to participate, as well as hearing their outraged voices, which made me understand in more depth the gender issues present in Bolivia.

[8] *Violence Results from Patriarchal Attitudes*, 2015. "D+C Development and Cooperation". https://www.dandc.eu/en/article/latin-america-bolivia-reports-most-cases-violence-against-women

[9] Source: Soka Gakkai International's website: https://www.sgi.org/

2.4 Why Bolivia?

While studying socio cultural anthropology I started to realize that every situation is always more complex and complicated as compared to how it is portrayed (i.e. media), and that the roots of social problems may not be immediate or apparent, if not through careful investigation and analysis. This study served me, in the first stance, to verify this, to challenge myself not to think in dualistic terms, as if there would always be a 'good' and a 'bad' side as perhaps a Hollywood movie might portray. When it comes to indigenous populations and extractive industries, this is often the case (nevertheless, legitimate as indigenous people are often the most marginalised groups), where especially media portraying events of faraway places, have the tendency to romanticize those stories in order to create a greater impact on the public. The oppositions created are often, 'state' versus 'citizen', 'extractive company' versus 'indigenous people', or 'crude oil' versus 'renewable energies'. This was at least my feeling, but what happens if the resource at stake serves to decrease CO_2 emissions; the state claims to be indigenous; and the extractive company is neither foreign nor private? This is precisely why I found the current Bolivian lithium industry so interesting. I do not think that Bolivia is a unique example, but rather one that could offer a great insight into the complex situation that appears when a counter-neoliberal, developing state tries to nationalize the extraction of a global valuable resource, while promising to have only the best intentions in mind for its citizens. Moreover, I believe, following Anlauf's (2016) argument on lithium extraction in northern Argentina, that we should think more carefully and critically, especially in the West, to the consequences that lithium extraction has on the local environment and populations. According to him and other scholars, too little attention is given internationally on this matter, as lithium batteries are labelled as a green source of energy, and therefore environmentally friendly and sustainable. However, in history, every new technological discovery has triggered the necessity to use one specific resource over another, as it happened with coal during the industrial revolution and then gradually replaced by oil. Have the times now come for a new replacement? Is lithium truly that different? Is the potential destruction of the Uyuni salt flat a reasonable price to pay in order to combat global warming? These were the questions that stimulated my curiosity, at first, and made me want to undertake this journey that has lasted for nearly two years.

- Chapter 3 -

THEORETICAL FOUNDATION

"Resources are not; they become".

(Zimmermann, 1933)

In this chapter I aim to outline a theoretical framework that will serve as a grounding base on which structure my empirical data. The aim of this study is to analyse local interpretations of lithium extraction in the urban areas of the Bolivian highlands, in relation to mining activities, which have long affected those areas. Moreover, I am interested in understanding how local interpretations of the lithium extraction plan are pivotal in grasping the emergence, the type, and the nature of potential social conflict in relation to lithium extraction. In order to achieve this, I need first to identify and situate the main theoretical concepts at stake in this study according to contemporary debates in the social sciences. The main issues in this study revolve around the concepts of natural resources, planning, and social conflict. I introduce then, my analytical framework based on their interconnection, which I will need in order to analyse the case study of the lithium extraction in Bolivia. First, I introduce the concept of natural resources and look at how they are defined and understood in the social sciences. Successively, I analyse the symbolic and material process of wealth creation regarding a particular resource like lithium, to understand the effects that has on the Bolivian society. In this respect, I introduce the concept of collective memory in relation to underground mining on the Bolivian highlands, in order to demonstrate that local interpretations of lithium greatly diverge from those of any other mining activity present in Bolivia. In this context, the idea of value attached to lithium is what triggered the previous Bolivian government to undertake an ambitious development path based on the planning of lithium-extraction, at the core of which was a promise for a 'better future'. Planning by expressing something that does not yet exists, has the potential to shape future outcomes and envisioning present changes. Yet, contestations and potential conflicts emerge when the promise has been disappointed. Therefore, I will contextualize the concept of social conflict in relation to natural resources in the social sciences, in order to analyse the contestations made to the lithium industry and social mobilizations happened in the city of

Potosí in 2019. In this context, local interpretations of the promise of planning are pivotal in order to grasp people's frustrations, which can lead to forms of collective actions. Moreover, by analysing local frustrations it is possible to identify the emergence, the type, and the nature of potential social and environmental conflicts in a specific area.

3.1 The Process of Natural Resource Wealth Creation

3.1.1 Natural Resources and Resource Materialties

Natural resources have always played a central role in shaping the human conditions as they have provided solutions to human needs and wants throughout history (Zimmermann, 1933; Bridge, 2009; Richardson and Weszkalnys, 2014). Nevertheless, they do not exist per se in nature and outside the human world, as the term 'natural' may erroneously suggest. Instead, the word 'resource' implies an idea of utility, which is symbolically produced in each society and has exchange value (Baviskar, 2003: 5053). Natural resources appear natural given and ready for human use, because they are subjected to a process of abstraction and simplification on both conceptual and material levels (Richardson and Weszkalnys, 2014). Yet, the key to their very existence is a result of more complex processes of extraction and exploitation, which completely depend on human intervention: labour, technology, knowledge, infrastructures, and institutions (Baviskar, 2003; Richardson and Weszkalnys, 2014). In capitalist societies, resources are frequently referred in economic terms as commodities – marketable goods – (Romero Valenzuela, 2019: 32), which value depends on their capacity to be exchanged on the global market. However, by looking at their commodity status, as a reification process (Kopytoff, 1986), its symbolic meanings are neglected, namely what else they may signify at a point in time for a specific society (Richardson and Weszkalnys, 2014: 7). As Richardson and Weszkalnys (2014) argued, resources exist beyond their essential physical qualities as they are part of a more, "[…] complex arrangements of physical stuff, extractive infrastructures, calculative devices, discourses of the market and development, the nation and the corporation, everyday practices and so on, that allow those substances to exist as resources." (Richardson and Weszkalnys, 2014: 7). Natural resources are in this context, not fixed nor finite but rather part of a dynamic process of becoming which is both material and symbolic (De Gregori, 1987: 1241). The famous quote from resource economist Erich Zimmermann (1933) is still valid, as it states, "Resources are not; they become." (Zimmermann, 1933: 3). In this process of becoming, how and why nature is transformed into a resource is linked to a historical process

of social construction, in which boundaries between nature and culture are constantly re-worked over time (Zimmermann, 1933; Bridge, 2009; Richardson and Weszkalnys, 2014; Sanchez-Lopez, 2019a). Resources, then, come to matter beyond their commodified form (Miller, 1997), as people at a given point in time and space, attach meaning to them, considering them valuable. In this context, resources are necessarily social (Bridge, 2009; Richardson and Weszkalnys, 2014).

This resource-making process is at the core of the creation of value and wealth which is, therefore, a social and historical construct. A clear example in history, is given by the advent of the Spanish *conquistadores* to South America, whose gold and silver's greed – at the basis of their monetary value – radically changed local populations' understanding of natural resources linked to economic value (Taussig, 1980: 199). In this perspective, the different cosmologies linked to silver, to which for example the Inca attributed limited exchange value, clashed, resulting with an ontological conflict more than just a physical or economic one (Richardson and Weszkalnys, 2014: 13). Lithium likewise became a valuable and a highly profitable resource only in the past two decades, as the effects of peak oil prices and climate change started to matter on a global context. Therefore, the process of lithium-making as a valuable resource, depended on the investments and policies made from international organizations, international companies, and states on technological innovations, which were directed toward finding solutions and alternatives to fossil fuel dependency. In this context, as Bridge (2009) argued, "Social and technological change can create, or destroy, resources as components of the non-human world come to acquire, or lose, social value." (Bridge, 2009: 1220). On this basis, recent social and technological changes in respect to e-mobility (EV) – based on lithium ion-batteries – have created lithium as an indispensable global resource. The rising prices of lithium consequently, triggered the former Bolivian government to plan the exploitation of their vast reserves, no matter the many challenges (e.g. geographical, infrastructural, economic, and environmental) that the extraction of lithium entailed. As a result, the public opinion linked to lithium and to the Uyuni salt flat, from which it is extracted, has also changed among local people, as Sanchez-Lopez (2019a) demonstrated in her study. She argued that the Uyuni salt flat used to be considered locally as a non-fertile and therefore non-valuable land, while currently the same land is at the centre of many local and national disputes. Her study showed therefore, how and why the symbolic and material meanings of the Uyuni salt flat has changed over time. Moreover, lithium in this context, possesses specific characteristics and capacities, which play a central role in the Bolivian state efforts to become

modern (Richardson and Weszkalnys, 2014: 6). In this study, in fact, I will show that the peculiar material facets of lithium and of its extraction helped to create a new future-oriented perspective of natural resources extraction in Bolivia, that is inherently different from interpretations and discourses on other extractive activities, especially underground mining. Thereby, I draw on the concept of 'resource materialities' from Richardson and Weszkalnys (2014), to argue that natural resources are more than just matter with specific physical and chemical properties, but rather they are "relational assemblages", meaning that, "[…] matters, knowledges, infrastructures, and experiences […] come together in the appreciation, extraction, processing, and consumption of natural resources." (Richardson and Weszkalnys, 2014: 8). This approach shows the multiple ways in which the particular materialities of natural resources are constituted, according to them, "[…] within arrangements of substances, technologies, discourses, and the practices deployed by different kinds of actors." (Richardson and Weszkalnys, 2014: 16). Based on this understanding, I aim to demonstrate in this study that the peculiar materialities of lithium, of the Uyuni salt flat, and of its extractive process are entangled and that they contribute to producing a particular local interpretation of lithium and its extraction that diverges from any other extractive activities experienced by the local population so far, which consequently unfold new social relations. With materialities of lithium, I mean the physical qualities and capacities of the metal and of the brine and the crust of the Uyuni salt flat. I identify the material characteristics of them as follows: lithium is the lightest metal on Earth, it is white as the crust of the salt flat, its extractive process happens in the open-air (process of solar evaporation on the salt flat's surface), it is found in a brine, and it never occurs freely in nature but only in compounds. These material and spatial characteristics determined lithium's extraction strategy and influenced technological and state's decisions, which had consequential effects on an environmental and social level.

3.1.2 Collective Memory on Natural Resources Extraction

In order to demonstrate that lithium embodies a new future-oriented perspective of natural resources extraction, I need to first examine how mining is entangled in the Bolivian history. Therefore, I introduce the notion of collective memory to analyse how underground mining – as the major extractive activity in Bolivia – is remembered, experienced, and conceptualize at the local level. Among natural resources, metals and minerals in Bolivia had and still have a great impact on the peoples and the places, as they have been not just the main sources of

economic value but have been central to more complex social relations. The entanglement between natural resources, identity, and economic value in Bolivia is the result of a historical process, which finds its roots in its colonial history, that is collectively remembered through the plunder of the richest silver mine of South America, that of Cerro Rico in Potosí.

However, how and what people remember both individually and collectively about past events and experiences, and how they are interpreted in present situations, is the result of social, political, and historical processes, which have been long studied in the social sciences. Memory, in fact, has been a focus of enquiry not only in anthropology but in other subjects, as well. Subjects such as history, philosophy, and psychology. In anthropology in the first half of the 20th century, memory was analysed in relation to the concept of culture, with the understanding that what people remembered was filtered by how they saw things, and therefore created by their 'culture', which was understood as a homogenous construct (Bloch, 1996: 460). Emile Durkheim was the first to introduce the notions of collective consciousness and collective representations, which were later revived by his student Maurice Halbwachs (1950) in his book *La memoire collective* (the collective memory), where he stressed the social character of memories, as the process in which they are interpreted, recalled, and understood has to be socially approved. He referred to as 'collective framework', as he argued that:

> "The past is not preserved but is reconstructed on the basis of the present […]. Collective frameworks are […] precisely the instruments used by the collective memory to reconstruct an image of the past which is in accord, in each epoch, with the predominant thoughts of the society." (Halbwachs, 1992 [1950]: 40)

In this sense, memory is a social process that fosters group cohesion and a sense of belonging by sharing the same past experiences. Memory is then, connected to a collective identity, that in addition of being social, are necessary, fluid, dynamic, and change in time and space. Thus, the way we remember certain events, are through the viewpoint of the group, and are therefore defined as collective. Nevertheless, we experience many important events, in which more than one group is involved. In Bolivia, this can be detached in how the plunder of the Cerro Rico in Potosí is remembered. In this study I will demonstrate that Potosí is used as a common benchmark for natural wealth and it is central to Bolivians' understanding of economic wealth linked to natural resources. Moreover, the Cerro Rico represents also the proof of the land's richness, which is a source of pride and it is understood in almost magical terms where natural resources are precious gifts from the Mother Earth, who gives them to the people for their sustainment. As it used to be in the past, so it continues to be in the present and in the future.

Nevertheless, collective remembering, as much as forgetting, is not only a social and historical process that fosters group's cohesion, but it is also a political one. While some events are collectively remembered, some others are inevitably excluded. Why then? According to Legg (2007) remembering, as much as forgetting, are not only dependent to the individual capacity to recall past events but are also a product of institutional memories. This means that collective memory is a particular narrative that often sustains the position of powerful groups (Legg, 2007: 459). According to Legg (2007), collective memory holds the potential to be political, when he argued that, "[…] particular elites, groups, or institutions have attempted to dictate which values, facts, or historical events are recalled, how this information is remembered, and the types of emotions attached to these memories." (Legg, 2007: 459). History, then, must be understood as a particular group's perception of the past, rather than being simply the collection of information concerning documented events (Thomas, 1996: 347). How past is constructed, or better the historical perception of past events, depends on hegemonic forces, which especially in the context of the nation-state, make possible the perception of the past as being the only possible one, where the viewpoint of the group becomes, in this case, that of the citizens. Moreover, representing the past in a precise way, is of a pivotal importance for the state, because it justifies the present order (Molden, 2016: 127). He argued that ideology can be promoted through institutional channels (e.g. education, mass media, political system), although education is the best channel through which the existing condition can be standardized (Althusser, 2014 [1970]: 242). In this light, the case of lithium extraction in Bolivia presented in this study, shows that the nationalization of its extraction as much as of mass media, created a particular narrative on lithium, which was perceived by the Bolivian citizens in a particular manner and as the only possible one. In this context, national media became the only source of information, which deliberately stressed some aspects while ignoring others. I demonstrate in this study that the lithium industry was used as a tool of national propaganda, through which the state presented itself as modern and advanced. This distribution of information through national media, together with global discourses on Green Economy, is what Appadurai (1996) called *mediascapes* and *ideoscapes*, where the flow of images and ideas, in which the worlds of commodities, news, and politics are profoundly mixed, and blur the lines between realistic and the fictional landscapes (Appadurai, 1996: 35). In this context, imagination became a powerful social force which enabled more persons in different parts of the world to contemplate possible 'better' lives and future outcomes, which never happened before (Appadurai, 1996: 53). This role of imagination in social life, according to him, has a split character, if one side

has the capacity for a collective action, it is also due to the imagination that modern citizens can be disciplined and controlled (Appadurai, 2000: 6).

Following this hegemonic theory – proposed first by Gramsci (1947) and later by Althusser (1970), Foucault (1998), Laclau and Mouffe (2001) –, Molden (2006) stressed the importance of power relations, or better the hegemony, in the creation of collective memory, where he referred to hegemony as, "[…] the ability of a dominant group or class to impose their interpretations of reality – or the interpretation that support their interests – as the only thinkable way to view the world." (Molden, 2006: 126). Collective memory becomes therefore, a dominant narrative, constructed effectively through influential political channels, media, and other institutions (Molden, 2016: 140). Especially by analysing the media discourse, is it possible to detect manipulations or omissions during important significant events (Molden, 2016: 133). Moreover, as Assmann and Conrad (2010: 9) argued, the study of collective memory must also take into account the global arena, in which transnational forces and discourses generate, as they have the power to influence and shape memory production beyond the national borders (see also Appadurai, 2000).

Another central aspect in the construction of the collective memory is through the material dimension of it, like war memorials, monuments, statues, and street names. These sites have a profound symbolic, functional, and material meaning, as they are made precisely so that an event or a person will not be forgotten. They seek to produce a collective history by consolidating a national identity by materializing some events, as crucial dowels in the creation of the transmitted national history. Memorials are literally 'places of memory', as in fact the French historian Nora (1989) showed how they have become part of the French national identity. In chapter 4, I will show this aspect, which is highly visible in how a common history and identity of Oruro was built around mining and miners, which are materialized in monuments and memorials (Perreault, 2017a). According to Perreault (2017a) mining in Bolivia is positively displayed publicly through monuments, statues, and murals – often commissioned by local authorities – which reflect a common accepted view of miners as heroes, who are central to national history. Moreover, he demonstrated that these murals and statues forged a collective imagination of mining that does not reflect reality. First, it promoted a populist vision of resource nationalism – supporting the nationalization's discourse promoted by the Morales' government. Second, they portray a highly gendered form of resource nationalism, where men are represented heroically, shirtless, manfully, while women are feminine and in harmony with nature. And third, these monuments and mural explicitly portray

miners as strong political actors who fought and won their liberation from capitalist exploitation during the National Revolution in 1952, with the consequent emergence of the modern Bolivian nation. Perreault (2017a) therefore, showed that the construction of a sense of shared history built a collective local identity based on mining, which however did not take into consideration the memory of everyday experience of environmental contamination and social exploitation. In fact, as Bebbington (2013) argued, in Latin America collective memories of exploitation and marginalisation in a context of natural resources extraction, influenced the politics of extraction, especially at the local level. As I will show in chapter 4, underground mining in Bolivia has long affected the environment and has become part of the everyday language and meaning making in the present as well as how it is collectively remembered and experienced (e.g. water shortage, water contamination). By looking at the collective memory and local interpretations of underground mining in Bolivia, then, I demonstrate that the extraction of lithium is perceived differently. Even if lithium has been extracted only since recently, it still does not re-enter in the way people perceive extractive activities, in general. On one hand, meanings and beliefs associated to underground mining, even when it comes to modern extractive projects, are somehow always linked with a sense of resignation toward environmental destruction and social exploitation – as it is the only means for employment. On the other, I show that the way lithium extraction is understood and locally conceptualized is immersed into an optimistic future dimension that is fundamentally better than the present one. In fact, a study carried out by Revette (2014) in the area around the Uyuni salt flat, showed that locally the lithium industry encountered little oppositions and it was rather welcomed and supported, as it enabled people to hope and to assume that their future will improve. Moreover, she stressed the relevance of memories in respect to present interpretations of extractive activities, as she argued, "[…] present day understandings of resource extraction are not based solely in existing realities. Local interpretations of current resource extraction are partially shaped by how the past is remembered and framed, and how the potential future is envisioned." (Revette, 2014: 154).

In this section, I showed that value linked to natural resources is constructed through historical, social, and political processes which are constantly in the making. The idea of wealth linked to lithium, generated through international discourses and local understanding of land's richness, created the basis for the extraction of lithium, which was conceived by both Evo Morales' government and the majority of the Bolivian population to be an unquestionable source of potential value from which the country could benefit. In this context, lithium-extraction

embodies therefore, a more complex assemblage of discourses, practices, and strategies that converge into a planning activity, which envisions a better future outcome by acting upon the present condition. At the heart of planning there is a promise of a better future, which in the case of lithium-extraction is presented as a promise of development. I will, hence, explore in the following section the notions of development and planning in the social sciences, in order to further analyse local and national interpretations of them. Moreover, looking at lithium extraction through the lens of an anthropology of planning, I can bring together in a conceptual framework the many issues involved: the state, development, and local expectations. Moreover, by analysing lithium extraction through the lens of planning, I aim to show that local interpretations of it are central in understanding the future expectations and aspirations generated by the plan, which are at the core of social mobilizations and conflicts, when these expectations are disappointed.

3.2 A Development Plan Based on Natural Resources Extraction

3.2.1 Development and *Neo-extractivism*

In this section I start by introducing the notion of development, which is a crucial concept that has shaped the global political economy of our times. In the context of the planning of lithium-extraction, the Morales government conceived nature as external and as an obstacle to capitalistic accumulation, where resources were framed only in terms of political and economic gains (Sanchez-Lopez, 2019a: 6). Lithium, in fact, was promoted by Morales only in economic terms, as a means of achieving development. This understanding of development comes from Western studies, which see development as the science of the future to which correspond future-oriented activities or strategies (i.e. plans, goals, targets) (Appadurai, 2004: 60). Yet, the way development is interpreted in different contexts is not always the same, if not contradictory. Since 1990s, development has been studied also in the field of anthropology (Escobar, 1995; Ferguson, 1990), that provided a critique of development understood as a historical Western product that sought to standardize and normalize global economy, by exporting promises of modernity, progress, and industrialization, which are key to development (Escobar, 1995). Moreover, Escobar (1995) showed how development, as a historically produced discourse, constructed the Third World as an ‘under-developed’ category, which still influences the way local people conceive themselves and their country. Although, first analyses on development have proven useful, they also represented it as homogeneous, monolithic, and simplifying the

inherent complexities of the locally present discourses and practices (Perreault, 2003: 583). Escobar (1995), in fact, called for ethnographies of development, in order to understand in which ways development – understood as specific sets of discourses, practices, and ideas – is mediated and contested by specific actors (Perreault, 2003: 585). Nevertheless, even if development was imposed as a normal course of evolution and progress, it does not mean that people do not want or desire it, as Gow (2008) has shown in his ethnography among indigenous communities in Cauca, Colombia. The ways in which development is desired and awaited, reflects a local expression of desire, which in the case of Latin America, as Escobar (1995) argued, has to be analysed within the colonial and postcolonial historical context, which reflects hundred years of exploitation, discrimination, and never fulfilled promises.

In the case of Bolivia, the Morales government first promised a kind of development that was different from the one imposed by Western countries, mainly the USA. Therefore, indigenous values were proposed as 'alternatives' to Western development, which criticized an economy that privileges growth, regardless environmental and social costs (Farthing and Kohl, 2014: 5). This strategy used a very compelling ideology known as 'resource nationalism', which Haslam and Heidrich (2016) defined as, "[…] a wide range of actions and policies through which the state seeks to enhance its influence over the development of the resource sector." (Haslam and Heidrich, 2016: 1). Gudynas (2016b) argued that in this perspective, natural resources are conceived, "[…] to be the property of the people, the nation, or the state – and the state acts as their governor, administrator and the authority responsible for managing them, and taking advantage of their development potential." (Gudynas, 2016b: 105). Moreover, past and present experiences of loss and exploitation in Bolivia, as I will show in chapter 4, have contributed to a deep public perception that natural resources have always been exploited for the benefits of foreigners (Molina, 2009; Kohl and Farthing, 2012), which has shaped people's present understanding of justice and injustice related to extraction of natural resources (Perreault, 2017a: 238).

However, during Evo Morales' second mandate (2010-2014), it became evident that the state tended less and less toward finding alternatives to development, as the Bolivian economy became even more dependent on schemes of capitalistic accumulation based on *extarctivism* than before. E*xtractivism* is a term, that has been used in Latin America academia and social movements, to describe, following Acosta's (2013) definition, "[…] those activities that remove large quantities of natural resources that are not processed (or processed only to a

limited degree), especially for export." (Acosta, 2013: 62). While an extraction-based development strategy in a context of counter-neoliberal reforms, like the case of Bolivia under Evo Morales, is identified as *neo-extractivism* (see Gudynas, 2009; Acosta, 2013; Kaup, 2014; Svampa, 2015). Moreover, Gudynas (2009; 2016a; 2016b) pointed out, that regardless the creation of this new type of *extractivism* (*neo-extractivism*) by the South American progressive governments, the structure of accumulation did not change. Despite the initial positive changes – favoured also by a high commodities boom –, Bolivia still suffers from boom and bust cycles, which are typical of extractive economies (Andreucci and Radhuber, 2015: 286). These schemes of accumulation based on the dependency of particular resources' export contribute to the creation of vicious circles that are identified in the literature as the 'Dutch Disease', meaning that peaks in commodity prices increase the value of the currency, reducing the competitiveness of other exports (Andreucci and Radhuber, 2015: 286; see also Acosta, 2013; Arellano-Yanguas, 2014; Hilson and Laing, 2017). Consequently, there is a global tendency in resource-rich countries – especially those with minerals and oil – to diversify their economies because of their difficulties in development (Hilson and Laing, 2017: 230). In this scenario, Gudynas (2016b) argued that, despite the initial criticisms against capitalism and Western development, Evo Morales contributed to maintain old patterns of exploitations, as Bolivia remained a global supplier of raw materials (Gudynas, 2016b: 24). In this light, economic development, seen as the science of the future, tend to create models of abstractions, which in reality hardly consider the specific and sometimes contradictory wants, needs, expectations, and aspirations of local people (Appadurai, 2004: 60). Therefore, in this study by analysing ethnographically local interpretations of the lithium-extraction plan and of the development promised by it, I intend to show that they are essential in order to properly understand frustrations and potential social mobilization that can oppose the project. I now turn to examine planning through an anthropological perspective.

3.2.2 Anthropology of Planning

Planning is an activity that is commonly employed by market organizations and that state and has become an indispensable activity in our contemporary world. Institutions and organizations, both private and public, constantly set targets and budgets, envision future outcomes, and lay out models at different levels: regional, national, and international. Planning involves a set of strategies, tactics, practices, technologies, and institutions that seek to control time and space.

However, before a plan comes to exist within institutions, it begins as an image among images, which is not abstract but rather tangible, as Braxstrom (2013: 141) argued, it exists as 'potential', between the reality and the virtual. Following the analysis of Abram and Weszkalnys (2013) – who criticized the little interest given by anthropologists in the study of planning so far –, by studying planning ethnographically, it is possible to shift the focus of analysis from abstract concepts like the state, development, and politics, to planning as an activity fostered, in their cases, primarily within the democratic capitalistic state. As a result, it is possible to grasp how a state's involvement is locally experienced and mediated (Abram and Weszkalnys, 2013: 2). In this way, an anthropology of planning is able to bring together within a conceptual framework the many issues involved: the state, development, and the local interpretations and expectations (Abram and Weszkalnys, 2013: 1). Abram and Weszkalnys (2013) compiled case studies of planning activities around the world, and conceive planning as:

> "[…] an assemblage of activities, instruments, ideologies, models and regulations aimed at ordering society through a set of social and spatial techniques." (Abram and Weszkalnys, 2013: 3).

Planning in their view, is then, an optimistic and future-oriented activity, as it imagines the future and seeks to act upon it. In Escobar's (1995: 86) historical analysis of development, he argued that institutionalized planning took root outside the national border during the post-war after WWII, as a means of achieving economic growth and secure development. The state played a crucial role in this process and in the creation of new institutions – bureaucracy – aiming at coordinating and implementing planning. Following the analysis of Abram and Weszkalnys (2013), different forms of planning have emerged in modern capitalist states, as a response to four major problems. First, it aimed at mediating some tensions and contradictions between welfare, capital, and labour that are inherent to capitalism. It was especially visible in the urban planning of industrial cities in the USA and in the UK in the late nineteenth century, where it was implemented to improve and maximize the space and to create a more organized and productive society (Abram and Weszkalnys, 2013: 6). Second, in a colonial context it was implemented to generate economic development often based on the extraction of natural resources. This form of improvement through planning, was intended only for the colonizers, which caused the segregation of the natives in settlements in the outskirts of cities, usually closed to the mines (Abram and Weszkalnys, 2013: 7). Moreover, it accelerated the urbanization process, as people were forced to leave their lives as peasants to work for the

extractive industries, as is the case of Bolivian miners outlined in chapter 4 (Nash, 1979; Taussig, 1980). In a more recent, post-colonial context, this form of planning is still visible with extractive industries with the concept of CSR, corporate social responsibility (Abram and Weszkalnys, 2013: 7; see also Rajak, 2011). Third, it concerns the effective control that the state exercises over the citizens and the national territory. The urban planning has in fact, developed not only to ameliorate the social condition and hygiene, but its design created over centuries racial and class segregation (urban poor) (Abram and Weszkalnys, 2013: 7). And fourth, it concerns an idea of "comprehensive holistic planning" (Abram and Weszkalnys, 2013: 8) that integrates welfare, economic, and spatial organization, aimed at ameliorating social inequalities and secure a standard quality of life for the whole population (Abram and Weszkalnys, 2013: 8). An example is the Scandinavian scheme of planning born in the 1950s and 1960s (see Vike, 2013).

At the core of planning there is the idea of improving the present condition by imagining a better future outcome. Although envisioning a better future is at the heart of every planning activity, its true efficiency can only be in the present, as planning aims to control it (Baxstrom, 2013: 142-3). Planning is in this context, an instrument of power that operates through institutions and discourses and is directed concretely into people's everyday lives (Baxstrom, 2013: 140). However, as Abram and Weszkalnys (2013) pointed out, they only recognized the spatial dimension of these processes of ordering and controlling society, while neglecting the different temporalities involved in different forms of planning. In fact, the authors emphasized the concept of the promise for a better future, as being the entry point for understanding planning as something in between the current and a desired state, between the present and the future (Abram and Weszkalnys, 2013: 3).

By looking at the notion of the promise, we can understand planning not as something passively imposed from above and a mere economic scheme upon which people cannot act, but rather it includes in the analyses the complex and often contradictory net of desires, dreams, dilemmas, and expectations that belong to both planners and actual workers, as much as to the local population (Abram and Weszkalnys, 2013). In the case of Bolivia, this is even more emphasized as the plan of lithium extraction itself justifies its very existence for the 'good' of all Bolivians. Every planning activity in fact, generates hopes and aspirations, but how people envision them and engage with their futures is not coherent and straightforward. The promise for a better future is also central to the literature that deals with anthropology of modern infrastructures (Harvey and Knox, 2012; Harvey, 2018; Appel et al., 2018). While I rather

conceive the lithium-extraction as a planning activity, mostly due to its inaccessibility and the consequent impossibility to make a direct experience with the whole project, I can still recognize many important parallelisms between the two literatures, especially regarding the concept of the promise. I draw my understanding from Harvey (2018), who approaches infrastructures also as, "[…] assemblages of multiple differences within the materials, institutions, regulations, aspirations, and skills through which they are constructed." (Harvey, 2018: 90). In both cases, time and space are intended to be open to human intervention, having the potentiality for change and improvement (Harvey, 2018). Infrastructures are in this context interesting due to their capacity to 'enchant', as Harvey and Knox (2012) argued, as even before their actualization they succeed in creating different and controversial kind of hopes and future expectations, and thus become meaningful for what they represent about the future. In fact, contemporary infrastructure's projects are configured in relation to modern understanding of the future, where the state often builds them not to meet felt needs, but rather to demonstrate that it is modern and advanced (Appel et al., 2018: 19). They further argue that this future-modern vision of infrastructure is what justifies their great expense. According to Abram and Weszkalnys (2013), central to the effectiveness of the promise is its performance. Promises are not only statements, they express intentions which have effects – expectations, aspirations – and obligations on the part of the promisor (Abram and Weszkalnys, 2013: 9). This performance depends on both context and actions, creating a set of relations and a moral obligation between the promisor and the promisee, which should last through time (Abram and Weszkalnys, 2013: 10). This strategy was intended to capture certain emotions and feelings undertood to be shared by the vast public. In fact, the promise of planning itself create a highly abstract understanding of the public, as much as of the state, as it would be a homogenous entity on its own (Abram and Weszkalnys, 2013: 13). The authors referred to this process of abstraction as the production of 'corporate body' that acts as an individual without taking into consideration the complexities and the specificities of modern societies. According to Robertson (2006) corporations or corporate bodies act as single entities, like for examples institutions, and are central principle on which governments and enterprises are constructed (Abram and Weszkalnys, 2013: 12). In fact, the public in this view is produced within the specific planning moment with the important function of legitimizing the project (Abram and Weszkalnys, 2013: 13). As Baviskar (2003: 5051) also pointed out, constructing stable regimes of extraction need more than just brute force, but rather consensus, meaning that people are willing to participate. Anthropological studies, therefore, have shown that planning strategies

rarely considers the variety of wants and needs of individuals and the complexities present in societies.

Nevertheless, the promise has several constraints which determine the success of the plan in the long run. First, it must maintain this unformal contract between the state and the citizens through time. No matter how meaningful and convincing the promise is perceived by the public, and how enchanting the plan is, one of the most difficult aspect for the promisor to fulfil, is maintaining this performance through a long period of time. Many modern plans and infrastructures in fact, fail to deliver in time what they had promised, and while they change in time so do their promises (Appel et al., 2018: 27). Second, the plan, needs to produce concrete and measurable effects in order to remain effective in people's imagination. As Abram and Weszkalnys (2013) argued, "[…] if the plan does not observe specific procedural niceties, it lays itself open to challenge." (Abram and Weszkalnys, 2013: 14). Problems in believing in the effectiveness of the plan arise when the sincerity of the promisor is at stake, and the efforts to fulfil the promise are not seen as relevant. And third, the promise has an inherent conceptual contradiction, as it comes into being due to ideas and ideologies applied through the planning activity, that are not 'just' locally bounded, but rather have become global *ideoscapes* (Appadurai, 1996), which are part of a broader new world of ideas and images that flow and transcend national borders, creating new relations between multinational organizations and national states (Abram and Weszkalnys, 2013: 19). In the context of lithium extraction, it refers to international discourses linked to climate change and scarcity of crude oil, which made lithium the resource of future source of energy.

Finally, by looking at planning activities only through the arenas where they are most visible, like the state and development, we cannot grasp the actual material practices that involve different actors (planners, citizens, expertise, victims of planning) and all of those experience the planning practice on their daily life (Abram and Weszkalnys, 2013). In fact, plans all over the world are often characterized by unexpected and inexplicable things, such as delays, additional costs, and local oppositions, which remain external factors unless we see them through the notion of the promise, which tries however, to control only one specific future outcome. These unplanned things become then, visible only through people's interventions who have a different interpretation on how to achieve their better future. These tensions and gaps, between what is promised and the interpretations of it, are in this light part of the planning activity and belong to the modality of planning. As Abram and Weszkalnys (2013) argued, "The gaps between ideal, ideology, and practice fill themselves with things unplanned,

unexpected, and inexplicable, and with things that get overlooked and forgotten." (Abram and Weszkalnys, 2013: 23).

In this section, I analysed and contextualized the notions of development and planning in the social sciences, in order to examine the case of lithium extraction in Bolivia. Lithium, in fact, more than any other natural resource in the country, has been central to national discourses of achieving development and industrialization, which has been long awaited by the local population. Planning the lithium extraction, in fact, sought to control this potential future outcome by acting upon a present condition. At the core of planning there is a promise for a better future, which can be differently interpreted among different social levels, no matter the ideology at stake that tries to homogenate the majority of Bolivian society. This study, in fact, demonstrates that the promise of development carried by the lithium-extraction plan, is interpreted in the main urban areas of the highlands, as a means to achieve economic benefits and employment opportunities. Through my empirical research, however, I will show that this promise after more than a decade has been disappointed, which in turn created major frustrations and discontents. Understanding these frustrations is, therefore, the starting point in the analysis of potential social conflict, which is the focus of the following section.

3.3 Social Mobilization and Conflict

Social conflict has been extensively studied in the social sciences concerning its nature and its origin. As Romero Valenzuela (2019: 37) pointed out, it has been produced a great amount of literature on the analysis of social conflict, nevertheless without agreeing on one definition. According to Kriesberg and Dyton (2012), social conflict is generated when different interests and needs of two groups of people clash. They argue, "A social conflict arises when two or more persons or groups manifest the belief that they have incompatible objectives." (Kriesberg and Dyton, 2012: 2). In this definition, they argue that social conflicts are: dynamic – as they develop in stages –, they highly depend on the social context – namely on the set of values, beliefs, and perspectives of the groups and on power imbalances among the groups –, they can be transformed, and they can be beneficial (Kriesberg and Dyton, 2012: 2). The term 'conflict', in fact, is generally interpreted as something negative and troublesome, as violence often arises from conflicts. Nevertheless, many authors (Kriesberg and Dyton, 2012; Bebbington, 2012) agree that conflicts are drivers for social change, and therefore are indispensable for bringing about necessary changes in a society. Moreover, most conflicts are and can be resolved within

institutional means without erupting into violence (Kriesberg and Dyton, 2012: 48). In other words, social conflict always involves different actors (individuals, groups, or institutions) who perceive different interests or goals between them, which are incompatible. In the context of natural resources extraction, these interests or goals often refer to their accessibility and control (Romero Valenzuela, 2019: 38). In this context, Le Billon and Duffy (2018), following a political ecology perspective, argued that conflicts over resources and environmental change are always socially mediated and are the causes and consequences of uneven power relations, which are historically grounded (Le Billon and Duffy, 2018: 242).

Bebbington (2012), who extensively studied resource conflicts on the Andean regions, argued that throughout history they have created patterns of distrust which are difficult to reverse (Bebbington, 2012: 4). Furthermore, they have generated memories which created forms of collective action, which in some case have lead to changes in the political situation (Bebbington, 2012: 4). In this context, miners' unions in Bolivia, as I outline in chapter 4, have been central political actors, who played an important role during the National Revolution in 1952, and still nowadays are able to influence political decisions. Further below, I will show that social conflict linked to underground mining activities in Bolivia is collectively associated with violent conflicts, as miners often relied on violence to obtain ameliorations of their working conditions. Miners in fact, represent the largest and the most exploited segment of the Bolivian working class, whose struggles have led to the above-mentioned National Revolution. In this context, miners' struggles and conflicts for recognition are imprinted in the collective memory of local people, as mining became a national symbol of liberation from oppression and part of the Bolivians identity and their shared history. Underground mining and its successively social conflict, are therefore, of a central importance in order to understand the contestations and the potential conflicts that any extractive activity may generate in Bolivia, like the lithium one. This study by analysing local interpretations of the lithium-extraction plan and of its promise, aims to understand the type and the nature of potential conflict and social mobilization. In this regard, Bebbington (2012: 223) argued, that local perceptions are essential in understanding the emergence of conflicts, as well as whether what is truly happening is what different actors believe is happening. He stressed then, the fact that even more than local perceptions, what is relevant is the relative (uneven) power of these perceptions, which determine how the extraction proceeds and with what effects (Bebbington, 2012: 223; see Le Billon and Duffy, 2018). In the case of lithium extraction, the (uneven) power of perceptions refers to the nationalization of the project and of the means of communication which leave the Bolivian

population with only one possible source of information, that comes directly from the owner of the project, the state itself. Moreover, local interpretations of the project, namely the perception of the natural resource wealth, has influenced the level of local expectations (e.g. economic benefits, employment opportunities), which resulted in greater frustration when these expectations have not been fulfilled (Arellano-Yanguas, 2012). In this context, Le Billon and Duffy (2018) argued that conflicts over natural resources do not only depend on the access, control, and use of them, but also from changes in imaginaries over the environment and resource users (Le Billon and Duffy, 2018: 243). In other words, conflicts arise as a means to regain control on one side, as much as a way to redefine self-subjectivities. As a result of this complex interplay between social structures, resource-stakeholders, and the environment, conflicts arise as much as a new wide range of social relations (Le Billon and Duffy, 2018: 244).

Coming back to the case of Bolivia, in the main urban areas of the highlands the promise carried by the lithium extraction plan translated into a possibility of improvement of the precarious economic situation, namely more economic benefits and employment opportunities. Nevertheless, I will show in chapter 6, that the shared colonial history of the region and the collective memory of exploitation of silver and gold (e.g. plunder of the Cerro Rico in Potosí), have affected how local people interpreted present situations and their perception of justice and injustice in regard to exploitation and governance of natural resources. In this context, Revette (2017) in her study on lithium in Bolivia, argued that, "Local interpretations of current resource extraction are partially shaped by how the past is remembered and framed, and how the potential future is envisioned." (Revette, 2017: 154). When it comes to justice – although any system of justice is governed by institutions – the perception of it is highly contingent. Drawing from Raza's (2017) analysis of justice in relation to natural resources extraction, he raises the question of 'why' of justice (Raza, 2017: 58). In fact, justice and fairness in economic terms, are perceived differently by different actors in a specific context, which in turn must be understood on various territorial scales (i.e. local, national, international). I draw from Raza (2017) in order to understand the question of resource fairness in the context of lithium extraction, who in turn drew from Fraser (2010)'s theory of justice, where he conceptualized justice linked to the extraction of natural resources, based on three dimensions: *redistribution*, *representation*, and *recognition.* At the local level, fairness in regard to resource exploitation usually deals with the distribution of social and environmental costs and benefits, which are charged by the extractive company or owner of the project to local communities and the

department, as a form of compensation and for the right to exploit in that territory (Romero Valenzuela, 2019: 35). In the case of lithium, the Bolivian government is responsible for the redistribution of economic compensation, royalties (*regalias*) in the department of Potosí and its municipalities. The second dimension is representation, that in relation to extractive activities, refers to the affected people being unable to participate in respective decision-making processes (Raza, 2017: 58). The nationalization and high centralization of the lithium project and the chemical complexities of its extraction prevent the de facto participation of local communities in any phase of the project. Moreover, frustrations showed by city dwellers in Potosí revealed that their present perception of 'being treated like a mere reserve of natural resources' is influenced by past sentiment of injustice and exploitation related to access, use, control, and distribution of natural resources in their territory (Bebbington, 2012: 223). Ultimately, the third dimension of justice that Fraser (2010) identifies is recognition, that is the question whether economic, ethnic, religious, or gender status lead to discrimination. In the context of natural resources extraction, Raza (2017: 58) identified this dimension in the rights of local communities with regards to the recognition of rights in society. In chapter 6, I will show that this dimension refers to episodes of discrimination happened at the expense of the Potosí dwellers by the central government. Moreover, in this context of natural resources extraction in South America, Arellano-Yanguas (2012) and Humphreys Bebbington (2012) argued that, "Many protestors are not against extraction per se, but rather want a form of extraction that respects them, their cultures, their livelihoods, and their territorial claims." (Bebbington, 2012: 224). In fact, despite mistrust on the management of lithium-extraction and disputes among local communities in the department of Potosí, local people were not opposed to the exploitation and industrialization of the evaporitic resources of the Uyuni salt flat, while none of the contestations made were of a violent nature (Ströbele-Gregor, 2012; Revette, 2017; Romero Valenzuela, 2019). Finally, this study demonstrates that lithium generated a new perception of mining, which in turn created different kind of oppositions and contestations based on specific expectations. How lithium is locally interpreted, in fact, derives from a completely new experience of mining, which in turn generated different type of social conflict compared to those related to underground mining. The lithium-extraction plan created particular expectations, which have been disappointed due to the government's failed to address people's concerns and requests properly. Therefore, the type of conflict generated due to the extraction of lithium is one that, according to Arellano-Yanguas (2012), "Was motivated by the desire to capture a greater share of project benefits, whether through employment opportunities or the distribution of revenues and royalties." (Kirsch, 2012: 202-3). He argued

that the nature and the outcome of conflicts depend very much on the type of conflict, of which he identified other two: those where the local communities oppose the project as they fear for their environmental destruction; and conflicts which relate to a distributional dilemmas of division of royalties, where the groups involved are many in numbers, and therefore the amount destined to each of them appear to be inferior than the initial expectation (Kirsch, 2012: 202-3). In this context, the conflict and potential one generated by the lithium extraction plan diverges from those generated by underground mining, as local interpretations and expectations of the two activities are fundamentally different. In this light, environmental claims were only superficial and secondary in comparison with the expectations of greater economic benefits and job opportunities in the department of Potosí.

In this chapter, I analysed theoretically and contextualize the concepts of natural resources and their material and symbolic value, of development, of planning and the promise of the better future it carries, and of social conflict. All these concepts are entwined and play an important role in the context of lithium extraction in Bolivia, as I will show in the following three chapters, which are dedicated to the analysis of my empirical data. I start in the next chapter, by exploring the importance that underground mining has in Bolivia.

- Chapter 4 -

UNDERGROUND MINING

National Identity, Collective Memory, and Environmental Suffering

"Our defeat was always implicit in the victory of others; our wealth has always generated our poverty by nourishing the prosperity of others - the empires and their native overseers. In the colonial and neocolonial alchemy, gold changes into scrap metal and food into poison."

(Eduardo Galeano, 1971)

Visiting a Bolivian mine is not a pleasant experience and I happened to visit two of them in very different occasions. I had previously heard so many stories about mines and miners as much while I was there, that I came to associate them with unsafe places. Even beyond that, the thing I was most afraid of was their size. I was afraid of not being able to pass through them as I am quite tall. Yet I convinced myself to participate to a guided tour inside a mine in the Cerro Rico in Potosí, only after talking to a man who was taller than me. Nevertheless, I ended up spending two hours without being able to stand erectly in dark and pure ventilated cuniculus, being careful not to touch toxic chemicals or not to lose the sight of the person in front of me. The interesting thing is that in the past decade, visiting the mines in Potosí has become the most requested tourist activity of the city. In my case, although visiting the mine had no attraction for me, I resolved to do it after the conversations I had with Alfio, a former miner, who now works independently as a tour operator. He was introduced to me from a friend, and soon after talking to him I came to realize the social dilemmas that pervade every miner and the city of Potosí itself. His only goal with his tours was to re-humanize and dignify the role of the miner, rather than commiserate them, by rising the awareness that the resources that we all consume through the consumption of electronical devices for instance, could cost a person's life. A person that does not have many other possibilities other than risking his life daily for making a living.

This chapter is dedicated to analysing the relationship between mining, memory, the environment, and identity on the Bolivian highlands, based on previous ethnographies (Nash, 1979; Taussig, 1980; Perreault, 2017a) as much as on my own empirical materials, that I collected in the mining cities of Oruro and Potosí. Bolivia's economy has always been

dependent on the extraction of non-processed natural resources (metals and minerals, and recently natural gas) oriented toward primary commodity export. From a political economic perspective, this development strategy known as *extractivism* (Acosta, 2013) is very common among Latin American countries, and is usually supported by neoliberal policies, which empowered transitional firms while undermining state authority (Kohl and Rosalind, 2010). A shift in these political dimensions happened in 2006, when the newly elected Bolivian government implemented new strategies based on the nationalization of the extraction of natural resources – 'post-neoliberalism' or 'counter-neoliberalism' (see Brand and Sekler, 2009; Kaup, 2014; Escobar, 2010; Svampa, 2015; Gudynas, 2016) – to gain control over extractive industries, and in order to diversify the national economy and to strengthen communitarian forms of production (Andreucci and Radhuber, 2015). Despite this 'counter-neoliberal' shift, Bolivia's resource governance did not result in a reduction of *extractivism*, but rather in its expansion (Adreucci and Radhuber, 2015), which was also driven by an increased global demand (BRICS[10]). After more than ten years, Bolivia's economy was even more dependent on primary exports than before, where in 2015 the primary sector (i.e. mining) contributed 24,5% to Bolivian GDP with a growth of 3% since 2005 (Andreucci and Radhuber, 2015: 281). In this period, mining registered a considerable expansion, especially regarding transnational investments (the most important is the San Cristobal open-pit silver mine in the department of Potosí, operated by the Japanese corporation *Sumitomo*). Bolivian mining sector can be divided into three categories: state mining that operates through the national mining company COMIBOL (*Coperación Minera de Bolivia*, Bolivian Mining Corporation), private mining, and cooperative mining that is the category of self-employed miners cooperatives (small-scale, artisanal mining) that represent the majority of the workforce in the Bolivian mining sector (Andreucci and Radhuber, 2015). The figures (1 and 2) show, that despite in 2011 cooperative mining employed 60,067 workers, they only contributed 31% of the national production and 8,5% of tax revenues, while the private sector with only 4,650 workers, produced 60% of minerals in Bolivia, contributing 89.5% of tax revenue (Arellano-Yanguas,

[10] BRICS is the acronym coined for an association of five major emerging national economies: Brazil, Russia, India, China, and South Africa.

2013). Moreover, in 2017 Bolivia exported $8.08B[11], making it the ninety-third largest exporter in the world[12], where minerals and metals counted for approximately thirty percent of exports[13].

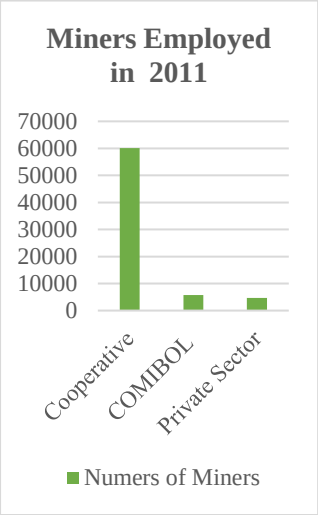

Fig.1. *Number of miners employed in the three sectors in 2011[14].*

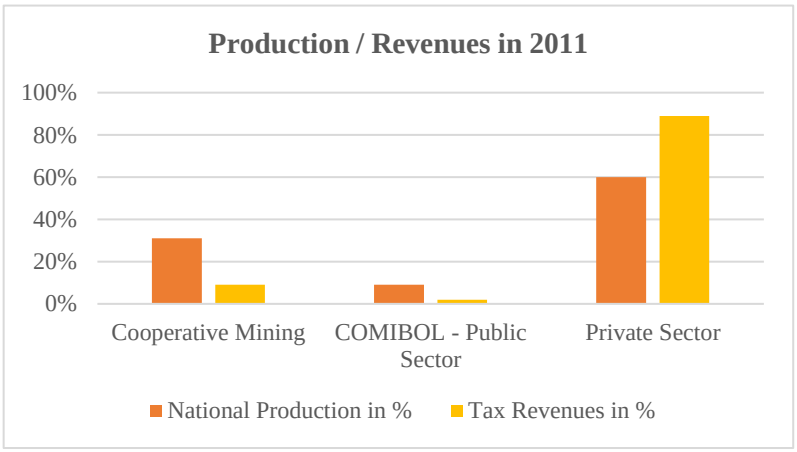

Fig.2. *National production of minerals in comparison with tax revenues in the three sectors in 2011.*

Nevertheless, the importance of mining goes beyond economic reasons, as it is inscribed in the history and lives of the people that inhabit the Andean regions. In the next paragraph, I will show that miners and mining activities are an important part of the national identity, in fact, it is no coincidence that the Cerro Rico mountain-mine of Potosí is a national symbol portrayed on the Bolivian flag.

4.1 Mining Legacy

"Bolivians die with rotted lungs so that the world may consume cheap tin."

(Eduardo Galeano, 1971)

Bolivia is known to be a mining country (*país minero*), where even in the pre-colonial era the Incas showed mastery in the extraction and crafting of gold and silver, although on a small-scale and for religious purposes. During colonial times, mining became the keystone of colonial

[11] Approximately €7.00B.

[12] OEC, 2017. https://oec.world/en/visualize/tree_map/hs92/export/bol/all/show/2017/

[13] Bolivia Country Commercial Guide, 7.12.2019. https://www.export.gov/apex/article2?id=Bolivia-Mining.

Banco Mundial. 2018. *Exportaciones de minerales y metales*. https://datos.bancomundial.org/indicador/TX.VAL.MMTL.ZS.UN?end=2018&start=2018&view=map&year=2015

[14] Source fig. 1 and 2: Arellano-Yanguas, 2013.

economy (Taussig, 1980: 201) and gold and silver mines became important urban hubs, that reconfigured regional economies by drawing in people, goods, and agricultural products (Perreault, 2017a: 233). Especially during the sixteenth century, Potosí became the biggest and most important city in South America and one of the largest in the world – with a population of nearly 200,000 people (Brown, 2012). Later, in the eighteenth, nineteenth, and twentieth centuries, Bolivia's economic centre shifted to Oruro due to its rich deposits of tin, which made the fortune of the so-called Bolivian 'tin barons' (see Céspedes, 2018) – among them Simon Patiño was the most important one, able to establish in the 1940s one of the world leading tin empire. Bolivian mining history is, however, engraved with the blood of millions of people who worked and died in those mines, as even the Spaniards were referring to Potosí as the "mouth of hell" (Taussig, 1980: 202). Taussig (1980: 201) stated that during the colonial period some eight million people, the majority of them Aymara speakers, died working in the mines. This paradox of Bolivia, that afflicts all South American countries, continued even after the independence of the country and is visible even today, although, in a different context. Nash (1979) expressed this as follows:

> "The penetration of foreign capital in the twentieth century has fostered one of the most exploited working-class populations along with one of the richest millionaires of the century […]. This Bolivian paradox is the most extreme case in South America of nations incompletely integrated in a world market on which they have become completely dependent" (Nash, 1979: 1).

On the other hand, Bolivian tin miners became one of the most revolutionary segments of the working class. It is, in fact, because of their shared struggles as the most exploited working class, and the rituals (*ch'alla*) they perform together every week in the mines, that enabled them to become a unified group with a strong identity (Nash, 1979: 2; Taussig, 1980: 232), who were able to lead the National Revolution in 1952, with the consequent nationalization of the largest mines and the creation of the COMIBOL (Brown, 2012: 150-151). I will, however, return to this point in the last section of this chapter, while I turn now to examine the cosmologies and beliefs within the mines.

4.2 Cooperative Miners' Cosmologies

A central aspect to cooperatives miners' life is the cosmology inherent of their life within the mines. Rafael[15], a miner in Oruro explained to me that they have two lives: one outside with their families and the other inside the mine with their *compañeros* (comrades), to which corresponds two different cosmologies that are not in opposition with each other[16]. The former is devoted to the Virgin of the Mineshaft (*Virgen del Socavón*) – identified also with the *Pachamama* – who is found on the top of the hill in the chapel of Oruro, while in the mine the ruler is the *Tío* (uncle). The *Tío* is the spirit and owner of the mine and of the minerals[17], which is represented with statues that resemble the figure of a devil[18]. Although the idea of the devil was imported by the Spanish, the *Tío* has always been present inside the mountain and he is not considered to be evil, but rather as a powerful ally that looks after the miners, if correctly pleased. The relationship between the miners and the *Tío* is based on a gift-exchange: the miners decorate and give coca leaves, cigarettes, and alcohol to the statues of the *Tío* in exchange for metals and minerals. Ultimately, miners' labour serves as mediation in a commodity exchange chain between the *Tío* and the state (Taussig, 1980: 224). Moreover, two times a year – the Friday before Carnival (Friday of *ch'alla*), and the second of August, the day of the *Pachamama* – miners adorn him with serpentines (see fig. 3) and prepare a table or altar for their offerings, where in addition to coca leaves, cigarettes, and alcohol, they give him the blood and the heart of a lama (*Wilancha*) (see Guerra Gutiérrez, 1993). By

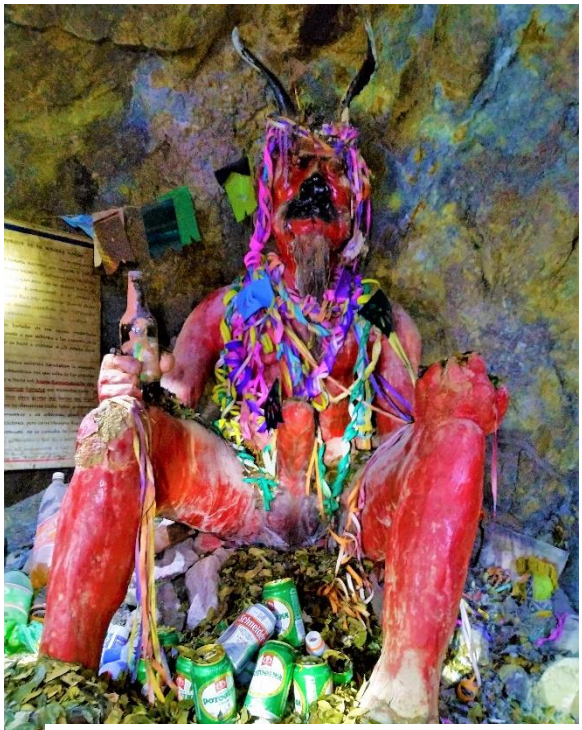

Fig. 3. *El Tío. Photograph taken by the author inside the mine of San José, Oruro (28.02.2019).*

[15] All the names in this and in the following chapters are pseudonyms.

[16] Nash (1979: 122) affirms: "Indigenous thought is capable of entertaining coexistent and apparently contradictory world views".

[17] Before the Spanish's arrival he was referred to as *Supay* or *Huari*, the spirit of the mountain (Nash, 1979).

[18] Taussig (1980: 143) describes the statues of the *Tío* as follows, "His body is sculptured from mineral. The hands, face, and legs are made from clay. Often, bright pieces of metal or light bulbs from the miners' helmets form his eyes. The teeth may be of glass or of crystal sharpened like nails, and the mouth gapes, awaiting offerings of coca and cigarettes. The hands stretch out for liquor. In the Siglo XX mine the icon has an enormous erect penis".

doing so, the *Tío* will not ask for their blood instead during the year. Rafael, before performing the ritual of *Wilancha*, explained to me in these terms what the *Tío* meant for them:

> "He is the owner of the mine, let's say the God of darkness. He takes care and guides us. He gives us minerals and for this reason when we enter in the mine, we have to ask for his permission. Why do we give these offerings? Today (on the Friday of *ch'alla*) we adorn his altar, so we will have no problems during the whole year, we will have no accidents, we will keep working, and the mine will never be closed. If we don't do things right, his altar and so on, the *Tío* will punish us! He also has feelings. Sometimes he gets angry, so what do we have to do? Give him gifts with faith. The altar, the serpentines and all of this. […] Everything depends on the *Tío*, if he is angry because someone is not working, let's say, he is sitting or sleeping, the *Tío* gets angry. And if the *Tío* gets angry we cannot find anything! […] He takes care of us, there underneath. It is not permitted to walk in alone, if the *Tío* haunts someone, or he leads him somewhere else…that is to take that person's life. Therefore, we cannot enter alone, we have to be two, three or four persons at a time. But If someone wants to enter alone, he must have faith. Without doubts he has to enter in the mine, without fear…and if he is scared, it's better to turn around, go home, and rest…this is the life of a miner!" (interview, 28.02.2019)

This shows how important the role of the *Tío* is for the miners, and how much they believe that their lives depend on his benevolence. Moreover, this shows the magical properties that are believed to be possessed by natural resources in the popular imagination. In this regard, Molina (2009: 9) argued, that Bolivians see natural resources as a part of nature that goes beyond physical materiality, which create a sense of national pride and expectations in solving the country's economic problems. The ritual performed in the mine during the night between Thursday and Friday is the starting point of the Oruro's Carnival, that from that point onwards is performed vividly on the streets.

Carnival is the most important and awaited national festivity, with Oruro at its centre, that draws crowds – mostly national – of up to 400,000 people annually[19]. Lucio, a self-claimed guide in Oruro, explained to me its importance in this way:

> "Chile invaded our coast on the most important festivity day for Bolivians[20]. We do not celebrate the Independence Day as the most important, we do not celebrate Christmas, we do

[19] Bolivian Life. Carnival in Oruro. https://www.bolivianlife.com/carnival-in-oruro/

[20] Lucio referred to the Pacific War (1879-1883), when Chile without a declaration of war, invaded and deprived Bolivia of its coast. This

> not celebrate the New Year, we celebrate Carnival. Together with Brazil we are the two countries in South America that live Carnival to its fullest. Carnival is celebrated in the whole country, but here in Oruro there is the most important and the most representative one. So, the Chileans entered [in Bolivia] right on the last and most important day of the Carnival. There is an anecdote that says that the president was dancing in the government palace in La Paz celebrating Carnival, when a messenger arrived and said, "Mr. President we just received the message that Chile invaded the coast of Antofagasta". And the president answered, "Ok, but we can deal with this tomorrow, today is Carnival!". We Bolivians think a lot in this way". (interview, 23.02.2019)

The Bolivian Carnival was born in Oruro precisely because of its mines and their history of exploitation, resulting in a syncretic, apparently contradictory, festivity that entangles indigenous and colonial traditions with modern beliefs (Nash, 1979: 121). In the two days of the parade (Saturday and Sunday), the dancers with gorgeous and heavy costumes – 18 different styles of dances[21] – perform along the streets of Oruro in order to reach the square of the chapel of the Mineshaft, where the Virgin is ensconced, and to pay her their respects. The first and most important character at the forefront of the parade is the devil (*Supay*). The devils, with their dace of *Diablada*, represents nothing less than the miners who descend from the mountain-mine; while the second most important character is represented by the *Morenada*'s dancers, who resemble the movements of the slaves brought from Africa to work in the mines, where most of them died of exhaustion. Taussig (1980: 208) described the week of Carnival as "a macrocosmic drama of salvation" (Taussig, 1980: 208), to argue that the dances and the parade resemble the same ritual that is enacted inside the mines, that is the antagonism resulted from the structure of caste and class oppression, created by the European conquest between the salvation from the benevolent Virgin (mother Earth) and the persistent threat of destruction from the male devil inside the mine (Taussig, 1980: 208).

I continue in the next section with the notion of collective memory, to show how mining's past experiences became central to the national Bolivian history, which helped to create a national identity as a mining country (*país minero*).

is still an open wound for all Bolivians, who celebrate every year on the 23rd of March the "Say of the Sea", as they believe that they have the right to access the sea.

[21] The two most important dances are the *Diablada* and *Morenada* (see Nash, 1979: 128-137).

4.3 Collective Memory and Popular Imaginary

In this paragraph, I use the notion of collective memory (Perreault, 2017a; Kohl and Farthing, 2012; Legg, 2007; Molden, 2016) to argue that, mining in Bolivia is perceived as central to nation's history and identity, which is a result of a historical, social, and political process that connects mining with: a sense of dignity of its national resource-wealth (see Molina, 2009), of unfair exploitation – mostly due to foreigners intervention –, and a sense of loss. This sense of dignity and pride in the country's natural richness, as I previously argued, derives from the idea that they are imbued with supernatural properties, and thus have the potential to solve the country's economic problems, however creating often unrealistic expectations (Kohl and Farthing, 2012; Molina, 2009). The following comments from four urban dwellers with different backgrounds in La Paz, Oruro, and Uyuni, show clearly the connection between the richness of the country and a sense of national pride, where often the silver-wealth of Potosí is used as a touchstone:

> "We are rich in natural resources. Potosí financed the World War in Europe." (interview, 12.02.2019)

> "We have many natural resources, but this time we can manage them from within the country and use them for development." (interview, 14.02.2019)

> "Bolivia is a very rich country in natural resources, yet the majority of the population live in poverty […] we could live like Arabs!" (interview, 18.02.2019)

> "Potosí was the biggest city in South America. No, of the world. It had 100,000 inhabitants, not even Paris or London had so many." (interview, 30.03.2019)

Nevertheless, this sense of pride is often accompanied with a sense of frustration, as the country has been repeatedly exploited for the profits of outsiders – Spanish colonizers, national elites, neighbouring countries, or foreign multinational corporations –, and not for the Bolivian population that still remain economically poor. An often-mentioned example in the areas where I conducted my research, regarded the silver mine of San Cristobal[22], exploited by the Japanese company *Sumitomo*. Carlos an engineer student in Oruro explained to me the matter in these terms:

> "[…] It [San Cristobal] is the most monstrous [mine] of Bolivia, in my opinion. It is owned by the Japanese, *Sumitomo*. All the process terminates there, they put everything on a train, and

[22] San Cristobal was mentioned in 13 different interviews.

> then to Chile and (he makes a gesture to say "it's all gone"). The mine is very big, and they extract a lot, it's all very controlled. Not like here [in Oruro], let's say. […] In San Vicente for example, there is an American [company] […], it's another mine, smaller, but owned by the same of this mine [San Cristobal], who first started this project. Then, they sold it to Sumitomo […] and they are now there extracting silver, but I don't know how much they leave in the country. Out of 100% they probably leave 20%, it's not much. Out of 150 tonnes per day, they may gain 100 million of dollars in a day, or per hour! But I don't know for sure. […] For this mine [San Cristobal] they completely moved a whole village. […] They started in 2006. […] They employed the people of the village, who benefited, although, it took 10-15 years for the negotiations. […] 15 years to convince the community members. […] They say that they have always lived from mining extraction, but very archaic, or to say with their beliefs. Then, companies were looking here and there with the permission of the government. […] The first were the Americans, *Panamerican Silver* was the name of the company, those who started […] then they went to another mine […] and they sold the project to the Japanese. […] I have no idea how they contracted with the government, it should have been with the government of Gonzalo Sanchez de Lozada in 2004 […], the ex-president who is exiled in the USA and is the owner of many mines in Potosí, still he is. He is millionaire, he must have intermediated to ensure the negotiation."

Author, "How could he still be the owner, if he is exiled?"

> "*¡Bolivia es así!* (Bolivia is like this!)" (interview, 20.02.2019)

In another interview I had in Uyuni with Mr. Lérida[23], a member of the town committee of Potosí, he commented the situation with these words:

> "The exploitation of the resources in San Cristobal is something terrible. It is terrible. They use almost every day 50,000 cubic meters of water. They use it, dirt it, and give it back. It affects here as well. There are many things…yes, they have excellent reports, everything is very well done, but ask how? And if **I** want to verify it? I cannot because I don't have the equipment. […] For example, they say that they are exploiting from San Cristobal, approximately 3,000 tons per day of silver, zinc and lead. Then it all arrives at the border and they pay royalties for zinc, silver and lead, but how? Who cheeks it? […] To say, 500 are of lead, 500 more are zinc, and the rest 1,000 of silver, to say…Who checks [the quantities]? How? Of course, the Sumitomo, but we don't. This is the problem. […] Another example, we had three men who dedicated themselves to the exploitation of tin, in Bolivia. And we called them 'tin barons' or 'tin kings'. And with this they dominated the world not only in Bolivia.

[23] Mr. Lérida is not a pseudonym.

> In the world. Therefore, why did they nationalize it [the mines]? They were paying 3% of royalties……uuuuh they became rich! Simon Patiño dominated the United States, England, and Indonesia. The technicians he had were Bolivians. So, it was nationalized, it was one of the biggest mistakes, and it appears that after years, this government that is of the poor, of *campesinos*, all of this is a…. (sentence left unfinished). Look, Patiño was exporting tin, 30,000 tons of tin per year, and this one [San Cristobal] every day 3,000 tons, can you imagine that 3,000 in 10 days would be 30,000, and in one month would be almost 100,000. So, 100,000 tons, and in one year would be almost 1,200,000 tons. It is not comparable with Patiño, and they also pay the 3% of royalties. He [Simon Patiño] 30,000 and the others [Sumitomo] 1,200,000 tons, so this government is a misfortune […]. They didn't want to nationalize." (interview, 28.03.2019)

These interviews show that foreign intervention in resources extraction in Bolivia are very well historically remembered, but they are also reflected in present's activities, that seem to follow the same patterns of exploitations in people's perceptions, creating therefore, a sense of frustration and injustice. Moreover, a present growing Chinese presence in the country was often connected with this sense of foreign interventions felt as dangerous, and connected with the previous government of Evo Morales, especially when it came to lithium-extraction, as I will show in the next chapter. As Kohl and Farthing (2012: 229) argued, these popular imaginaries have a profound significance for the Bolivian population, as they reflect past experiences of social exploitation due to foreign intervention, which have deeply shaped the national identity. Moreover, typically labour unions – of which Evo Morales used to be a leader – have directed their discourses towards a rhetoric based on the 'defence' (see chapter 6) of natural resources, which lead to a collective sense of loss, that is a historical process signed by the loss of the seacoast during the Pacific War (1879-1883), the loss of part of the Chaco region during the Chaco War (1932-35), and the fight against the privatization of water during the Water War (2000). All of these episodes, which some are nationally remembered through parades (see chapter 6), are still felt as "open wounds" (Kohl and Farthing, 2012: 229), where the recovery of national resources and territory have become also an important part of the national pride (Kohl and Farthing, 2012; Molina, 2009). These strong emotions are reinforced and repeatedly instrumentalized in a 'resource nationalist' rhetoric (Kohl and Farthing, 2012; Haslam and Heidrich, 2016) and employed both by the Morales' government (2006-2019) as much as by social movement leaders, in order to legitimize an economy based on *extractivism* in the former case, while in the latter to promote social mobilization (Kohl and Farthing, 2012: 229). Social movements and their demands are fuelled by these perceptions, that create a

certain understanding of justice as a consequence of this social, historical process. I focus in this paragraph on the construction of this process, while I analyse social mobilizations in relation to natural resources extraction in chapter 6.

Underground mining is part of the Bolivian national identity. It is in fact, positively memorialized and displayed publicly through monuments, statues, and murals, which reflect a common accepted view of miners as heroes and central to Bolivia's national history (Perreault, 2017a: 233-234). The questions that Perreault (2017a) raised in his analysis of collective memory in Bolivia are, how and what we remember individually as much as collectively, and how they are potentially political. Memories are not just connected with relevant past experiences, but the way certain things are remembered reflects the contemporary realities, which, in turn, may play a potential role in envisioning futures (Perreault, 2017a: 230). Memory, according to Canessa (2012), is a social act where also individual memories must be analysed within a context of collective forms of representations. In this perspective, collective memory filters and gives meanings to individual memories, which then help construct, what Halbwachs (1992 [1950]) referred to as, "collective frameworks" (Perreault, 2017a: 231). Memory is then, a social process that fosters group cohesion and a sense of belonging by sharing the same past experiences. Memory, moreover, is connected to a collective identity, that in addition of being social, are necessary, fluid, dynamic, and change in time and space. Thus, the way we remember certain events, are through the viewpoint of the group, therefore are defined as collective. This collective and social nature of individual memory frames collective memory, that are constructed in several ways. First, within the nationalist rhetoric that is seen as a central sense of shared past and common territory (homeland), which are important to produce collective memory (Legg, 2007; Molden, 2016). Moreover, Legg (2007) argued that remembering, as much as forgetting, are not only dependent to the individual capacity to remember past events but are also a product of institutional memories. This means that collective memory is a specific narrative that often supports the position of powerful groups and elites (Legg, 2007: 459). Secondly, the role that monuments and memorials play in producing a collective history, which must be understood within their physical, material, and symbolic meanings (Perreault, 2017a: 231).

As I mentioned above, on the Bolivian highlands numerous of murals and statues were often commissioned by local governments, to portray a commonly accepted view of miners as heroes, who are central to national history (Perreault, 2017a: 234). Moreover, since the vast majority of Bolivia's miners come from a poor and working class, – of indigenous descendent, mostly

Aymara and Quechua speakers – these monuments fortify the perception of a generalized and often idealized sense of an Andean indigenous history (Perreault, 2017a: 233). Yet, this process of construction of official national narratives took into consideration only some aspects, the most relevant of past events (selective remembering and selective forgetting). In fact, during my field work, I observed that some past events were remembered in a certain manner by many different people with different backgrounds. Particularly evident was, when they talked about the plunder of the Cerro Rico of Potosí during the colonial time, which exploitation was often used as a benchmark for present extractive experiences, usually to blame foreigners' companies for Bolivia's poor development performances. Moreover, mining on the highlands' urban areas was often associated with heroic and positive events, like the memorials suggest, and only successively associated with environmental degradation and water contamination.

Furthermore, Perreault (2017a) showed, that these murals and statues forged a collective perception of mining that does not reflect reality. First, it promoted a populist vision of resource nationalism (supporting the nationalization's discourse promoted by the Morales' government), although most of mines' owners (e.g. Simon Patiño) in past and present history have served foreign interests. Second, they portray a highly gendered form of resource nationalism, where men are represented heroically, shirtless, manfully, while women are feminine and in harmony with nature. And third, these monuments and mural explicitly portray miners as strong political actors who fought and won their liberation from capitalist exploitation during the National Revolution in 1952, with the consequent emergence of the modern Bolivian nation. In fact, they are often portrayed with broken chains on their wrists, like the statue of a miner in the main square, near the chapel of the Virgin of the Mineshaft in Oruro (Perreault, 2107a: 235). This shows how the construction of a sense of shared historical experience built a regional identity based on mining, which however did not take into consideration the memory of everyday experience of environmental contamination and social exploitation. Despite, the social and economic dependence that mining has on the lives of people who inhabit the regions of Oruro and Potosí, mining has considerably damaged the environment and the water on which their lives depend. This contradiction is the focus of the next section.

4.4 Mining Effects

In this section, I intend to elucidate the negative effects that mining activities has been having on the environment and on the people whose lives depend upon it. Nevertheless, I noticed that environmental and water contamination related to mining activities were not the primary concerns among urban dwellers on the highlands, although they were aware of its negative effects. I will show therefore here, the major paradox present in the Bolivian urban areas of the highlands, where their inhabitants highly depend on underground mining for their economic sustainment at the great cost of their environment and water supplies.

Entrance to the extractive site, underneath the Cerro Rico. The sign says, "Bolivian Mining Corporation, unified mining company, 4160m.a.s.l.". (author's photograph, 10.03.2019).

Environmental contamination was indeed a current theme that I have come across during my whole field work on the highlands, especially when it came to water contamination and scarcity. Mining's toxic legacy in Bolivia – as much as in the whole Andean regions – is a well-known reality that affected its inhabitants since colonial time, when forced labour (Indian and African) was employed for the affination of silver, which needs a high percentage of mercury[24] (Robins and Hagan, 2012: 1). Especially in Potosí, 39,000 metric tons of mercury vapor were released

[24] Robins and Hagan (2012) explained further that, "Between 1500 and 1800, miners and refiners produced approximately 136,000 metric tons of silver in Latin America, or about 80% of global production during this time, releasing up to 196,000 metric tons of mercury as a result of amalgamation (Nriagu, 1993)." (Robins and Hagan, 2012: 1).

between 1574 and 1810, which caused the deaths of millions of workers in the refining mills – many died after three months of work[25] – as much as of the surrounding dwellers, due to toxic vapours caused by the employment of mercury for the refinement of silver (Robins and Hagan, 2012: 4). Beside mercury pollution, mining was the cause of other irreversible damages, especially on the local flora and fauna (modification of the environment, including deforestation, changes in the alkalinity of the soil, and water sources) (Brown, 2012: 175).

Even in modern mining the situation has not changed, if not worsened. Contamination and water exigency are still two major problems, especially in the regions of Oruro and Potosí, where agriculture was already difficult due to the cold temperatures, high altitude (3,800 m a.s.l.), saline soil, and the dry climate that characterized the highlands. Despite the challenging geological and weather conditions, the inhabitants of these regions had to face an increasing scarcity of water in the past ten years. In fact, as also Perrault (2017b) argued, the main contradiction present in the Bolivian highlands between mining and agriculture activities depends on the access and consumption of water (Perreault, 2017b: 112-114). Underground mining requires larger quantities of water per day than the semi-arid agriculture practiced on those areas. For instance, the two biggest Bolivian mines are Huanuni – in the Oruro region and nationalized in 2006 – that consumes over 28 million litres of water per day (Andreucci and Radhuber, 2015: 286), and the transnational San Cristobal mine that consumes over 45 million litres per day (Perreault, 2017a: 232). This high-water exigency leaves communities without the quantity of water they need to irrigate their crops. Consequently, the two biggest lakes, Uru-Uru and Poopó, downstream from Huanuni, have also been heavily affected (Perreault, 2013), with the consequent complete desertification of the Lake Poopó in 2016[26]. In fact, in Uyuni – the closest city to the San Cristobal mine – many of my informants blamed the mine for extinguishing and contaminating their water resources.

More than anything else, mining polluted water, as modern mining techniques rely on chemicals in processing ore that are directly released into rivers. Such is the case of the Huanuni river. In this respect Perreault (2017a) argued, "Heavy metals such as lead, arsenic, cadmium, iron and zinc have been recorded in rivers throughout the broader Lake Poopó […]" (Perreault, 2017a: 232; see also Perreault, 2013). These heavy metals thus, have been causing health

[25] Interview, 10.03.2019, with a guide of the National Mint in Potosí.

[26] Nacla.org. 30.06.2017. *Dying and Drying: The Case of Bolivia's Lake Poopó.* https://nacla.org/news/2017/06/30/dying-and-drying-case-bolivia%e2%80%99s-lake-poop%c3%b3

problems to the population[27]. Maria, a local anthropologist who worked in an NGO in Oruro (*Colectivo CASA*)[28], explained to me the situation among local communities who live around the Huanuni mine. She said:

> "It is about the national mine of Huanuni that employs more than 4,000 miners, and it is the most important national mine, although, it doesn't even have one single tailing (*diques de cola*). It has been already 10 years since they have promised us the construction of a tailing, which is a kind of dump where the minerals' waste goes, in order not to release them into the water and the surrounding environment. But this mine doesn't have even a single one of them. A project of this size needs at least three. Therefore, it has already been many years since they have been dumping literally 'everything' into the Huanuni river, where on its shores there are many communities. We are working primarily with two of them, *Realenga* and *Sora-Sora*, that have been strongly affected. In fact, they had to move the whole village on another side of the river. They are already demanding the government for a solution…but the situation is very pathetic, because they are demanding now the construction of a wall, at least to protect their crops and animals from the contaminated water that invades their fields.[…] The mine has been active for centuries, from the colonial time, but it's been 10 years since it became nationalized, and that they promised the construction of the tailings. We are worried about the health of the people, because the cases of cancer are increasing, especially among children and women. The thing is, that the contamination is evident! If you go there you can smell the *copajira*[29], it's the smell of a mineral inside the mine, and moreover the dust, as well, is brought by the wind. They are all mineral waste. Therefore, people are getting sick a lot, the children have diarrhea, and what is even worse is that there is no institution, private or national, that is doing research on the health of those people, to know the quantity of metals they have in their blood. We weren't even able to convince the university to do it. The people know that they are sick, they are literally dying! For example, they showed us the stomach of their animals, and it's yellow. And those are the animals they eat; therefore, we don't know with precision what is infected and what not. The situation is very serious, and we are impotent, there is something so urgent that needs to be attended to, but there is nobody who is willing to do it. And it is because we don't have concrete data." (interview, 06.03.2019)

[27] In Oruro, for example, gastrointestinal illnesses caused high mortality rates, particularly among children, largely because of polluted water, and mining bore significant responsibility for the pollution (Brown, 2012: 177).

[28] *Colectivo CASA* is an organization based in Oruro for women, that fights to defend their right off access to potable water and a clean environment.

[29] The *copajira* is acidulated water coming from a mine or an excavation.

Although Maria was talking about the situation among the most affected communities who live in villages close to the Huanuni mine, in the cities people were also very much aware of the water contamination. During my conversations with urban dwellers in Potosí, I noticed that people were conscious about not drinking tap water. In fact, when I was underneath the Cerro Rico looking at the tiny yellow river flowing down toward the city, a miner next to me told me:

> "The water here is poison, don't drink it! […] The mine has existed since the colonial time, but it's only in the past few years that the situation got worse. Now we cannot drink tap water anymore, because the potable water contained in those pools[30] made by the Spanish, pass now through the mine before reaching the city." (interview, 10.03.2019)

These two interviews show also how mine-related water contamination is experienced in many different ways, and as Perreault (2017a) argued, " Profound environmental deterioration frames peoples' everyday conversations, and provides a touchstone by which people come to understand their lives." (Perreault, 2017a: 235). This is because, the everyday experience of water scarcity and contamination provokes different emotions – sense of loss, nostalgia, powerlessness, scepticism – that are registered in the memory narratives. Perreault (2017a) referred to this physical as well as emotional sense of loss associated with environmental degradation, with "environmental suffering" (Perreault, 2017a: 232). These emotions connected with the everyday physical reality, construct people's discourses, resulting into a shared experience of mining. I was able to observe this 'shared experience' during the many conversations I had with dwellers, miners included, in Oruro and Potosí where they always connected mining with contamination and water scarcity. Nevertheless, the overall emotions resulting from my interviews was a sense of resignation as they were also aware that the environment's degradation was the price to pay in order to extract minerals and metals from the earth, which was an indispensable and unquestionable activity. This is the paradox I mentioned above, as the highlands' urban dwellers do not have solutions, but rather have learnt how to adjust their lives to it. With the following episode, I show this connection and sense of forbearance I encountered in people's discourses.

I was at the shore of the lake Uru-Uru, in Chusa'queri (15 km south from Oruro), and I was looking at the low level of the water of the lake, which looked to me more like a pond, although it was during the rainy season. I already knew that the water was contaminated, because Lucio had previously told me, and he added that it was already too late to do anything about it

[30] He refers here to the Kari-Kari hydraulic system. See interview at page 49.

(interview, 19.02.2019). I saw then, a fisherman walking in my same direction, so I asked him if he was not worried to fish in the lake. He answered:

> "Of course, the lake is contaminated. That's why I walk up toward the river. There should be fine!" (interview, 26.02.2019).

In another conversation I had with an ex-miner in Potosí, he showed me his concerns about water in these terms:

> "The situation here is very critical. The most important resource that we have is water. One day we will fight again for water[31]. Here in Potosí we have a very good hydraulic system built from the Spanish, that is made with 32 artificial lagoons, the Kari-Kari, that supply water to the city. The national water company didn't build anything, we already had a functional system. But now some of them are getting dry. The same thing that happened to the Lake Poopó." (interview, 10.03.2019)

These interviews show once more the biggest paradox that emerges while talking with urban dwellers. Although they were aware of the worsening of the water condition and contamination in their regions, they believed that their cities will not exist without the mines. This relation of dependency, which is also a big part of the identities of these two cities, as outlined above, is what in part generates this sense of resignation I encountered while talking with local people (see Perreault, 2017a: 238). The crude reality is that the hegemony of the mining economy in Bolivia, is what makes the most affected people, the same who rely on them the most for their sustainment, as Maria explained to me:

> "It is a very complex situation. It's hard to fight against mining, because one thing is to fight against the extractive process – the state, the companies – and another is against the workers. But in real life, these two actors are mixed and it's hard to distinguish them. For example, we encourage women to fight against mining activities, but most of their husbands are miners, and thus their lives depend also on mining." (interview, 06.03.2019)

In Potosí, miners' cooperatives are still extracting minerals from within the Cerro Rico, being the biggest source of employment for its dwellers. Victor, a young man who works in the tourist

[31] He referred to the Cochabamba Water War in 2001, when people fought on the streets against the privatization of water, imposed to the Bolivian government from the World Bank. See de la Fuente, Manuel. 2003. "A Personal View: The Water War in Cochabamba, Bolivia: Privatizing Triggers an Uprising". In *Mountain Research and Development*, Vol. 23, No. 1, pp. 98-100.

industry and thus does not directly depend on mining, still saw the situation in his city in this way:

> "Potosí was born as a mining city (*ciudad minera*) and so it remained. There are no other ways! If there wasn't the Cerro Rico, Potosí would be nothing. […] Potosí lives from mining; it doesn't have fields or agriculture." (interview, 9.03.2019)

Here, the way Victor personified Potosí, shows also the strong identity of the city's connection with the Cerro Rico, which for the people means more than just an economic source. This strong mining legacy that these two cities maintain in the collective perception of the Bolivian population, is the reason for attracting many people from the countryside, who are looking for an employment in the mines (interviews in Oruro, 20.02.2019; in Potosí, 10.03.2019; see also Brown, 2012: 181). Yet, the risk of the mountain to collapse due to the continuous small-scale extractive activities, to the point that in 2012 the UNESCO inscribed the city of Potosí on the List of World Heritage in Danger[32].

To conclude this section, I want to illuminate another aspect that distinguished the mining sector in the years under the Evo Morales administrations, which was characterized by the willingness of the government to favour the cooperative sector. In this sense, the situation did not significantly change from the previous neoliberal policies, where mining remained of a strategic economic importance and cooperative miners and miners' unions were seen as political allies (Andreucci and Radhuber, 2015: 286). Not to mention, that cooperatives employ twelve times more miners than the public and private sector (fig.1), and therefore helped lowering the unemployment rate. The empowerment of the mining actors was especially evident during the stipulation of the Mining Law N° 535 of 2014 (*Ley de Minería y Metalurgia*), when they had the power to influence its approval (Andreucci and Radhuber, 2015: 288). The Mining Law N° 535 has a contradictory character, as I will also show in chapter 6, because supported mining activities over communities' and indigenous demands. The new law in practice, condemned the right to protest while restrained the de facto participation in the benefits of extraction by limiting the indigenous right to 'free, prior and informed consent' as outlined in the ILO-Convention 169 (ILO 169; Andreucci and Radhuber, 2015: 288; interview, 6.03.2019). In addition, small-scale, artisanal, and illegal mining, widespread in these areas, often has caused more environmental damages than large transnational companies, as usually

[32] UNESCO. 2012. City of Potosí. https://whc.unesco.org/en/soc/143

small-scale operations (cooperatives), as Brown (2012) argued, "[…] lacked the technical expertise and financial resources to store tailings and prevent acid rock water discharge." (Brown, 2012: 179). I now turn to the final section of this chapter, where I focus on miners' unions and the process that lead them to become such important political actors.

4.5 Social Movements and Miners' Unions

Miners on the Bolivian highlands are not just the majority of the overall employed population, but as I outlined in this chapter, their transformation from the most exploited working-class to influential political actors happened in the mines, where they built a strong identity and awareness as a social group (Nash, 1979: 2), by sharing their life struggles with their *compañeros* (comrades). Taussig (1980) explained it as follows:

> "In this communion, both as intense human inter-experience and as a pointed statement about injustice and the actual political situation, critical consciousness acquires its form and vigour. There they give voice to all the problems they have, and there is born a new generation so revolutionary that the workers begin thinking of making structural change. This is their university". (Taussig, 1980: 232)

Since 1945 miners' unions have, in fact, controlled the entire Bolivian labour movement, becoming an example throughout Latin America. Moreover, according to Taussig (1980), the rites they perform inside the mines represent the same clash of the class struggle outside the mines (Taussig, 1980: 231). The National Revolution of 1952 led to the nationalization of the biggest mines, the creation of COMIBOL (Bolivian Mining Corporation), and the stabilization of miners' wages and working conditions, that created a permanent social and cultural rupture between peasantry and the miners, the new urban working-class (Brown, 2012: 158). In fact, COMIBOLS's close ties to the government, enabled its employees to become a labour elite, the best organized and most politically influential. Despite the promise of the revolution, the economy could not support the miners for too long – as the production decreased, while the miners employed and their wages increased – and in 1964 General René Barrientos overthrew the former president, repressed the militant miners while favouring the peasantry. Hence, the miners' conditions were once again more aggravated, Barrientos outlawed their unions, prohibited strikes, and fired six thousand miners. Despite the revolution's failure and the poor conditions, mines continued to attract people, who could not find work elsewhere, due to the lack of employment in other sectors (Brown, 2012: 158-160). Nevertheless, miners never lost

their sense of personal worth and their revolutionary spirit. A decisive shift happened in 2006, when social struggles and protests led once more by miners' unions, resulted with the election of the MAS (president Evo Morales' party), which put an end to the exploitation of the country's natural resources from transnational firms, during twenty years of neoliberalism. Once more, the COMIBOL was empowered and the biggest mines – Huanuni, Colquiri – were nationalized. In this context, a change in the balance of power relations happened, where miners' unions and coca growers (*cocaleros*) became the two most important social forces able to influence the state's decisions over of resource governance, while the state mediated this process. Consequently, miners' unions were empowered at the expenses of the peasant-indigenous forces (Andreucci and Radhuber, 2015: 289). Maria, the anthropologist I previously mentioned, expressed the situation of cooperatives mining as follows:

> "Another thing that is very complex when talking about mining is the topic of 'cooperative mining'. In reality, cooperative mining should be the system of organization of artisan producers, who in their local municipality extract minerals on a small-scale. However, it converted legally in a system, where companies make themselves legally denominate cooperatives, so that they can exploit without environmental obligations, and in totally irresponsible ways. Thus, we have companies that work as cooperatives. 'Cooperatives' that employ up to 2,000 workers. This is illegal, cooperatives should not have so many employees, but it happens. And environmentally speaking, they don't require anything. This happens because of a political alliance between two sectors and the government: *cocaleros y cooperativistas mineros* (coca growers and cooperative miners). Therefore, it is even more complex! Moreover, two years ago cooperative miners killed a vice minister of the state. It was related to an issue of the mining sector. They were protesting to achieve more rights and for more mining concessions with less environmental rules[33]. They have political power! It's very complex because in Bolivia one of the most popular and combative sector is that of miners". (interview, 6.03.2016)

All these aspects of the mining sector in Bolivia are part of a very complex reality that does not have straightforward solutions, as also Maria pointed out. In this context, even the most democratic government would have been trapped in one way, or another, between national power asymmetries and international forces.

[33] 26.08.2016. *Bolivian Minister Rodolfo Illanes' killed by miners'*. https://www.aljazeera.com/news/2016/08/bolivian-minister-rodolfo-illanes-killed-miners-160826040046637.html

In conclusion, in this chapter, I analysed the social and historical process that constructed mining as a central aspect to the country's economy, as much as its identity. This process resulted with a specific collective perception of mining that connects with a sense of national pride, liberation from exploitative forces, as much as environmental contamination and water scarcity. In the following chapter, I turn to the main focus of this thesis, where I analyse the new extractive experience of lithium, while keeping in mind the issues related to mining in order to see to what extent, the two experiences diverge in people's perceptions.

View from above the Cerro Rico in Potosí (author's photograph, 10.03.2019).

- Chapter 5 -

A NEW MINING EXPERIENCE

The Lithium-Extraction Development Plan

"An Inclusive Green Economy is an alternative to today's dominant economic model, which generates widespread environmental and health risks, encourages wasteful consumption and production, drives ecological and resource scarcities and results in inequality. It is an opportunity to advance both sustainability and social equity as functions of a stable and prosperous financial system within the contours of a finite and fragile planet. It is a pathway towards achieving the 2030 Agenda for Sustainable Development, eradicating poverty while safeguarding the ecological thresholds, which underpin human health, well-being, and development."

(UN Environment's Green Economy Initiative - GEI)

Visiting the lithium plant in Llipi was an adventurous and totally unplanned experience. I spent almost the whole day before the visit, in the office of Mr. Lérida in Uyuni, who repeatedly called the headquarters of the YLB in La Paz to know if I could gain the permission to enter the day after. At around 3 pm a woman at the phone told me that I had to present myself at the front gate the day after at 9 am. Since that moment onwards I recall spending the next 24 hours feeling my heart in my ears. I ran to the hostel packed some things and then ran to the bus station in order to catch the only bus that could have brought me to the village of Rio Grande, the closest village to Llipi. I also tried to buy for the third time a SIM card before leaving, in case I needed to call or contact someone, especially Mr. Lérida who was worried about me. Unfortunately, my third attempt resulted in another failure. I had to accept the fact that my phone did not work in Bolivia. The bus ride lasted two hours, in which I was lost in my thoughts while looking at the beautiful desertic landscape outside the window. There was no paved road or anything whatsoever on the horizon, except for the vastness of the deep blue sky touching the dark brown line of the desert. As I imagined, I was the only foreigner in the bus and although I felt all the eyes pointed at me, nobody dared to talk. By the time I arrived in Rio Grande it was already dark. I can still clearly picture this moment in my head. The bus left me on the outskirt of the village, where I found myself in the middle of a dry desert, with the noise of the wind in my ears, without telephone coverage, and any idea of where to stay the night or how to reach the plant the day after, which was another 8 km away from there. The houses in the

village were a little bit higher than those we passed during the bus ride. Still the village did not appear welcoming, but rather desolate, dark, and empty. After walking inside on what I presumed to be the main road, I saw a sign that said, "Lithium Hostel" and I immediately knew it was worth coming all the way there. I felt that I was on the right track. The day after at 6 am I kindly got a ride from a group of workers who were also heading to Llipi. I noticed that we were getting closer to the salt flat as the ground was gradually turning from brown into white. Once there, the first two things that struck me were the presence of the military and the excessive security control at the entrance – considering the remoteness of that place –, and the usual sign portraying Evo Morales, in this case wearing a YLB helmet. The big sign at the front gate seemed to make clear who the owner and the promoter of the project was. Before visiting the plant, I was instructed about what I was allowed and not allowed to do, as taking pictures, filming, or hunting wild animals. I was also instructed on how to separate properly my rubbish and the kind of questions I was not supposed to ask. Finally, the visit went well. Quite surprisingly, I was treated as a distinguished guest, although my minimal competences in chemical reactions and the separation processes. Nevertheless, I came to realize that the process of extraction of lithium, especially in the Uyuni salt flat, is extremely complex, even for someone who comprehends chemical reactions.

In this chapter, I look at the extraction of lithium in Bolivia as a planning practice fostered by the modern Bolivian state to argue that differently from other extracting experiences, lithium-extraction alone is perceived as a future-oriented and optimistic activity. The key to this perception is a promise for a better future, where the public good is invoked as a legitimization strategy. Due to the importance that lithium has acquired for a transition to renewable energy, its global demand increased in the past decade, which triggered the Bolivian desire to take advantage of its rich lithium-deposit. The project was started in 2008 with the aim of seeking to nationalize the extraction of lithium carbonate in the southern part of the Uyuni salt flat, declared a strategic resource and a national priority. To legitimize this extraction's plan, the government promised its citizens to devolve lithium's revenues to the industrialization of the country that still lacks basic infrastructures, especially in the poorest department of Potosí, where the salt flat is located. Moreover, the lithium-extraction plan served as an actual proof of the concrete change from previous extracting experience, since lithium became the very first nationalized resource. In this chapter, I analyse local interpretations of the lithium-extraction plan, which, as I will argue in chapter 6, are the key to understanding the emergence and the types of social mobilizations over natural resources extraction in the area. I start my analysis

by exploring the process that made lithium conceivable as a source of wealth in Bolivia, which in turn determined the government's decision in choosing lithium as a national development path. Consequently, I argue that the extraction of lithium in this context, is perceived as inherently different from any other extractive experience in the country. Before starting with the analysis of my empirical data, I intend to provide the reader with some background information about the development of the lithium industry, both globally and in Bolivia.

5.1 The Development of The Lithium Industry

5.1.1 Lithium in a Global Context

Lithium is endowed with some unique properties – lightest metal on Earth and high energy density ability for storage – that has made it an attractive resource and key to a global transition toward renewable energy. Investments and employment of cleaner technologies, especially in industrialized countries, has become a necessity and a responsibility in order to find solutions for two major problems of our century: climate change and fossil fuels dependency (UN Sustainable Development Goals and UN Climate Change Conferences). Nevertheless, there is little emphasis on the fact that lithium, like crude oil, is a non-renewable resource, which means that even if lithium comes to completely replace fossil fuels, it is, yet, unsure for how long its supplies could fuel this future vision (Hollender and Schultz, 2010: 18). Lithium has many applications, according to Maxwell (2014), it can be found in the applications of, "[..] glass and ceramics manufacturing, specialist lubricants, pharmaceuticals, air conditioning and dehumidification, aluminium smelting, polymers, continuous casting, alloys, industrial bleaching, and sanitation." (Maxwell, 2014: 97). Most of all lithium has become essential to produce the current ion-battery systems used mostly for electronic devices and electric vehicles (EV) that are currently fuelling the discourse about reducing pollution. Its demand on the global market in the past decade has therefore increased together with the investigations to discover new lithium reserves. Global consumption and production rose from 28,000 tonnes per year in 2010 to 77,000 tonnes in 2019, with a peak of 95,000 tonnes in 2019[34]. Especially, the massive drop of the oil prices in 2005 boosted vehicles producers to invest in the production of pure electric and hybrid electric motor vehicles (Maxwell, 2014: 97). Although, prices have dropped

[34] Statista. 14.02.2020. *Global Lithium Mine Production from 2010 to 2019*. https://www.statista.com/statistics/606684/world-production-of-lithium/

in 2018, EVs purchases have rocketed, with over 2 million vehicles sold in the same year[35], which fuelled lithium demand. Over 2018, China took the world's lead in the production of lithium with *Tianqi Lithium*, *Ganfeng Lithium*, *Sichuan Yahua Lithium*, and *Shandong Ruifi*, that developed a new technology able to rapid converse lithium concentrate from hard rock. In Australia there is the largest world-known reserve of lithium concentrate from hard rock, which became China's major source of raw materials for the production of lithium carbonate and hydroxide[36]. The other source of lithium is found in continental brines, where the most valuable deposits are in northern Chile, with other potentially profitable ones in northern Argentina and Bolivia (Maxwell, 2014: 98). The other four major lithium producers in the world are: *Albemarle Corporation*, a US company that operates in Antofagasta, Chile and in Nevada, USA; *SMQ*, the second largest lithium producer, is a Chilean company that operates in Atacama, Chile; *Livent* is a US company that operates in northern Argentina (Salar del Hombre Muerto); and *Orocobre* that operates in Australia. Nevertheless, the major world's known lithium reserves are concentrated in the so called 'lithium-triangle' in the Andean highland plateau, between Bolivia, Chile, and Argentina. In Bolivia, especially we can find the largest lithium-reserve located in the Uyuni salt flat, the biggest in the world (10,500 km²).

5.1.2 The Bolivian Project

The investigations in the Uyuni salt flat started in 1984 with the University of Freiburg, which found the highest concentration of lithium in the southern part of the salt flat. In 1985 during neoliberalism, the government wanted to sign a concession to LITHCO, a US company, for the extraction of lithium. Due to violent local protests with the town committee of Potosí and the local organization of peasant's workers, the state abandoned the project and broke the negotiations with LITHCO. The project was recovered after the election of Evo Morales, who declared on the 1st of April 2008, that the resources of the Uyuni salt flat were strategic, and their extraction was a national priority (Calla Ortega et al., 2014: 5). The government started in the same year the project for the production of lithium carbonate and potassium chloride – a

[35] S&P Global. 24.10.2019. *Lithium supply is set to triple by 2025. Will it be enough?* https://www.spglobal.com/en/research-insights/articles/lithium-supply-is-set-to-triple-by-2025-will-it-be-enough

[36] Fastmarkets. 11.04.2019. *Global lithium supply developing at accelerating pace on growing demand.* https://www.metalbulletin.com/Article/3868440/Global-lithium-supply-developing-at-accelerating-pace-on-growing-demand.html?ArticleId=3868440

fertilizer – in the hands of the national mining company COMIBOL, investing US$ 5.7 million for the development of a pilot plan in Llipi, in the southern part of the department of Potosí (fig. 4). Successively in 2017, the project was passed to a new national company YLB (*Yacimiento de Litio Boliviano*; Bolivian Lithium Resources) and lithium together with the other minerals in the salt flat were re-categorized as 'evaporitic resources[37]' under the directives of the Ministry of Energy and Technology and no more the Ministry for Mining and Metals.

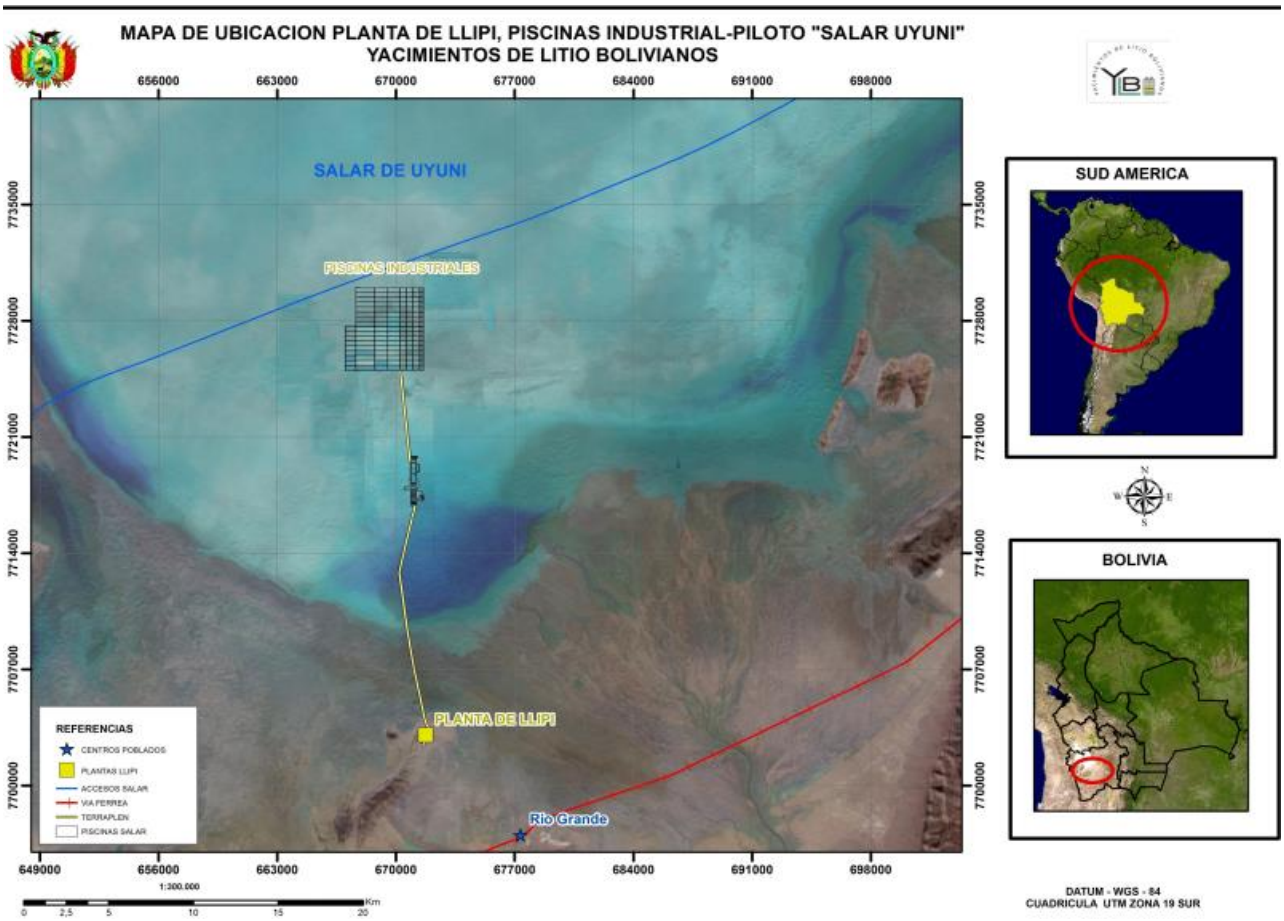

Fig.4. *Location of the Llipi pilot plant and the evaporation pools in the Uyuni salt flat. Source:* https://www.ylb.gob.bo/inicio/mapas

Lithium in Bolivia is extracted from within the brines of the Uyuni salt flat, which is sucked from 50 meters of depth and poured out in pools, constructed on the surface of the salt flat. At the time of my field work, there were eight lines of pools in a row, to which corresponded eight other pools[38]. In the first row, the brine was deposited to let it evaporate (first separation of

[37] 'Evaporitic resources' mean that they are contained in the brine, and therefore are extracted through a process of solar evaporation.

[38] At the time of my field work, 15 lines were planned by the end of 2019 (interview, 29.03.2019).

minerals), while it was consequently pumped in other pools, gradually smaller, to achieve a purer compound of minerals with a higher concentration of lithium chloride. The project had three phases, the first was the pilot plant – producing 30 metric tons of lithium carbonate and 1,000 tons of potassium chloride per month – that was intended to test drive the step in getting the lithium-rich brine out from the salt flat's crust and separating it into distinct parts (interview, 29.03.2019). The second phase is based on the experience of this pilot plant, and it consisted of the construction of a much larger industrial-scale plant, capable of producing up to 30,000 metric tons per month of lithium carbonate and 700,000 tons per month of potassium chloride. In the third phase, it is planned to build a plant in La Palca, in the Potosí department, for the production of batteries. Only within this last phase, foreign investors would be contracted (Hollender and Schultz, 2010: 4). Bolivia is currently at the second and third stages, for which the government has planned to invest 485 million US$ for the second phase, as well as 400 million US$ for the third phase (Ströbele-Gregor, 2012: 31). According to the information I received when I visited the plant, the industrial plant should be ready in the next couple of years (interview, 29.03.2019). Meanwhile, the previous government had forged relationships with the University of Freiburg, Germany, private investors in China, South Korea, Japan, and the governments of Iran, Brazil, South Korea, and Russia (Ströbele-Gregor, 2012: 37) for the development the adequate infrastructure and to acquire the necessary technical information to raffinate the mineral and producing batteries. A first symbolic shipment of 10 tons of lithium carbonate was exported to China in August 2016 (Hancock, 2017a: 555).

However, developing an adequate technology in the case of Bolivia is not a simple task as there are many limitations and challenges that make the extraction of lithium more complex than in other neighbouring salt flats – Chile and Argentina – and therefore, increasing the costs of production. First, the high altitude, the remote geographical location, the lack of proper infrastructures, and no access to the sea, make this lithium deposit more difficult to access. Second, in the Uyuni salt flat's brine is present a high level of magnesium, which reduce commercial viability as the magnesium must be removed using an expensive chemical process (Hancock et al., 2017b: 2), also causing also high quantities of waste[39]. According to the information I received, the concentration of magnesium in relation to lithium in different salt flats are not the same everywhere: the Salar del Hombre Muerto in Argentina has the purest

[39] There are still no precise data about the waste produced and its disposal (see Calla Ortega, 2014).

concentration of 1 gram magnesium per 1 gram of lithium; in Atacama it is of 6 grams per 1 gram; and in the Uyuni salt flat it is of 18 grams of magnesium per 1 gram of lithium (interview, 28.03.2019). Third, in the area it rains heavily from January to March – unlike in the desert of Atacama where it rarely rains – slowing down the process of evaporation in the pools and decreasing the production for nearly three months a year. In addition to this, the area has limited water resources, there are potential negative environmental impacts, and the country lacks technological expertise in evaporative mining (Hancock, 2017a: 552).

Finally, after more than a decade from the project's beginning, the activity has also attracted negative public attention. Doubts have arisen about its transparency due to massive delays and the direct intervention of foreign companies – Chinese in particular – which also overlooked the possible social and environmental impacts, the future redistribution of economic benefits, and employment opportunities on the local level (Sanchez-Lopez, 2019a: 9). In the next paragraph I turn to the analysis of my empirical material in order to identify the key features that ensured the planification of the extraction of lithium in the first place, which created a new collective perception of lithium that diverges from other mining activities.

5.2 A New Mining Discourse

In this section I explore, to say it in Miller's (1997) terms, "why some things matter", in order to analyse how lithium comes to matter in Bolivia. The process that made lithium become a valuable resource – worth to invest such a large amount of capital –, is a dynamic and relational process that changes over time and space, linked to technology, culture, and political constructs (Bridge, 2009). In this context, lithium is not only a commodity, intended as a marketable good in economic terms, but it is rather attributed with significance by the society, which makes it a marketable commodity (Romero Valenzuela, 2019: 33). How and why nature is transformed into a resource is linked to a historical process of social construction, in which boundaries between nature and culture are constantly re-worked over time, as they do not exist per se, but rather become (Zimmermann, 1933; Richardson and Weszkalnys, 2014; Sanchez-Lopez, 2019a). Here, I explore this resource-making process, where its exploitation – through technical invention and physical production – is key to its very existence and is the core of the creation of wealth. Lithium, in this light, is inevitably social as people attach meanings to it, considering it valuable (Bridge, 2009; Richardson and Weszkalnys, 2014). This idea of value attached to lithium as a resource, which is constantly in the making, is what triggered the Bolivian state to

choose lithium-extraction as a national development path. In this context, lithium possesses specific characteristic and capacities, which play a central role in the state's attempts in becoming modern (Richardson and Weszkalnys, 2104: 6). I argue that the peculiar material facets of lithium and of its extraction created a new future-oriented perspective of natural-resources extraction in Bolivia, that is inherently different from other perceptions or discourses associated with extractive activities, especially mining, which have long affected the areas closed to where lithium has been extracted. In the following paragraphs, I will present ethnographically what local people think about lithium in order to demonstrate that its extraction is not perceived to be a mining activity, and therefore also not associated with human nor environmental suffering. I will show that the lithium industry is rather associated with ideas of 'new technology', 'modern', and 'clean', which are in fact, in strong opposition to underground mining's collective perception, as outlined in the previous chapter. Two direct examples are given by the state's recategorization of lithium as an 'evaporitic resource', which definition comes from the process of extraction of lithium through solar evaporation. And the decision of completely restructure the governance of lithium by creating in 2017 the YLB, which is under the Ministry of Energy and Technology, while before the project was carried out by the historical national mining company COMIBOL.

In this section, I draw out four factors that I identified as central in the promotion of this new mining discourse related to lithium, while conducting my field work. First, an international effort to find cleaner sources of energy, and shifts in the global distribution of capital, technologies, and expertise, that see China having a leading role. Second, the historical circumstances that constructed a collectively shared idea that Bolivia has large quantity of valuable natural resources that could supply a global demand (silver, tin, and now lithium). Third, the strong involvement of the state in the nationalization of its extraction and of mass media. And finally, the particular materialities – characteristics and capacities – of lithium, of the Uyuni salt flat, and of its extractive process. I conclude that these four factors constructed a new vision of natural resources extraction in Bolivia.

5.2.1 Carbon Emissions, Pollution, and Climate Change: Toward 'Greener' Alternatives

In the past decades, the term 'green' associated to economy and development, has started to mean a global effort in the promotion of a more sustainable and environmentally friendly way of living, in a context of climate change and peak oil. The key aspect within the Green

Economy's discourse is the promotion of, "[…] public and private investments to reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services." (UNEP, 2011: 76-77). UNEP defines a green economy as:

> "'One that results in "improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities'. In its simplest expression, a green economy is low-carbon, resource efficient, and socially inclusive." (UNEP, 2011: 76)

The transition to a green economy, hence, means to permit economic growth while focusing also on the environmental and social impacts (UNEP, 2011: 76). In a context of natural resources extraction, it means that their production and consumption must happen in a more environmentally sustainable way (UNEP, 2011: 74). Nevertheless, the Green Economy strategy is not the only possible one, as in fact, in recent debates two contrasting poles have emerged, in how to reconcile economic development and environmental protection (Raza, 2017: 52). One strategy calls for a radical socio-ecological transformation toward a degrowth society, which emphasizes the need for reduction in global consumption and production, in order to achieve a socially just and ecologically sustainable society, with well-being as indicator of prosperity instead of GDP[40] (see also Escobar, 2015). The other strategy – under discussion in this study – believes in a 'greening' capitalism, where technological innovation is believed to solve ecological problems, thus, without abandoning economic growth. Under this approach, socio-ecological conflicts are understood as temporary and solvable via monetary compensation, in which political leadership is crucial in determining a positive outcome (Raza, 2017; UNEP, 2011). As a result, governments of developing countries have also underlined their right to develop, which entails their giving priority to economic growth instead of environmental protection (Raza, 2017: 53). This latter strategy is internationally the most credited, which is in fact, sustained by the United Nations (UNEP). Following this strategy, EVs have a pivotal role as they are associated with environmentally friendly technologies (Anlauf, 2016: 164), in a context where most of the current transportations system is agreed to be unsustainable (UNEP, 2011). Especially, the world economic crisis in 2008 has created opportunities to invest in more 'green' strategies in different sectors, where the strongest emphasis was on reducing fossil fuel dependence with investments in alternative sources of energy and technologies (Anlauf, 2016: 165). The most privileged sector has been

[40] Research and Degrowth, 2020. https://degrowth.org/

the automotive industry, especially among the OECD[41] countries, that has seen an increasing production and consumption of hybrid vehicles, while full EVs have yet not become popular due to their low kilometre range and long charging times (Anlauf, 2016: 165). Nevertheless, Anlauf (2016) in his study of the lithium extractive industry in Argentina, argued that, "Green economy strategies might promote sustainability with regard to fossil fuel dependence and CO_2 emissions, but they are far from promoting socio-ecological justice as self-determination and equality in the access to and control over nature and natural resources." (Anlauf, 2016: 176). Moreover, he raised issues of power and democracy, where the biggest transport companies (e.g. Toyota Motors, Tesla) dominate the global market and have the power to influence the extractive processes on the local and national level.

In the case of Bolivia, Evo Morales often referred to lithium as an environmentally friendly resource in his public discourses, by stressing the importance that lithium has in fighting climate change. Already in 2009, he strongly called for climate justice during the UN Copenhagen Climate Change Summit, where he urged developed countries to take responsibilities for the impact that climate change has on the world's poorest countries like Bolivia (Hancock, 2017a: 552). Subsequently, he repeated his stance at the Paris 2015 COP21 (21st Conference of Parties) and later in the 2017 Bonn UN Climate Change Conference COP23 (Hancock, 2017a: 552; IISD, 2017). During my field work in fact, I often heard people connecting lithium with climate change, although I came to realize only afterwards – through a phone conversation with one of my closest informant in Uyuni, Mr. Lérida – that extracting lithium, as it is an indispensable resource for the whole world, was hardly ever questioned by local people in Bolivia. In this light, Morales' emphasis on the global importance of lithium entered in the public discourses and became part of how people understand the resource's value and utility. Mr. Lérida, who was the president of the defence committee of the evaporitic resources of the COMCIPO (*Comité Cívico de Potosí*, the Potosí Civic Committee), was a critical political voice – anti-governmental – and the first I heard questioning this aspect. He said:

> "[…] they extracted tin [in Bolivia], which was important in Europe for armaments, especially during the first and second world wars. It was a European necessity. And now lithium. What have we got to do we the environment? We don't produce cars, for us it is not a priority, while

[41] OECD stand for The Organisation for Economic Co-operation and Development and is an intergovernmental economic organisation with 36 member countries, founded in 1961 to stimulate economic progress and world trade. https://www.oecd.org/about/members-and-partners/

> in Europe it is. For us sulphur was a priority and chlorine to fertilize our arid lands and grow quinoa. Lithium is needed by companies that make electric cars. It is not our problem. Why do we have to sacrifice ourselves? People here do not realize this. It is like a blind person who doesn't know where he is working." (interview, 25. 06.2019)

Although, Mr. Lérida was not against the extraction of lithium per se, he was critical in the way the extraction was planned and managed by the MAS government, as in his opinion Bolivia had to prioritize the extraction of other minerals, also present in the Uyuni salt flat, which were more important than lithium for the local population. He himself was of *campesino* origin, born in a village north of the Uyuni salt flat (Llica), who during the time of the military dictatorship had to flee to Switzerland in his 20s, where he studied economics. Soon after, he came back to Bolivia to fight for the interests of his department and his province. Nevertheless, he showed to me his growing frustrations, as his intensions and way of thinking were often misunderstood by his fellow villagers.

Bolivia, moreover, planned to produce lithium ion-batteries in the country, which future outcome is still very questionable, as I will show further below. The country, in fact, lacks expertise, technologies, and important components in order to produce batteries on an industrial level. This aspect brings me back to Anlauf (2016)'s argument, when he stated that transnational companies have the power to dominate the market and to influence the extractive process at the national and local level. When it comes to the lithium industry in Bolivia, China became the main foreign actor and a strategic trade's partner, due to a shift in the global distribution of capital, technologies, and expertise with regards to lithium's production. In fact, in the past couple of years, five Chinese companies have become the world's major lithium producers, while Chinese presence in Bolivia has become highly evident, not only concerning the lithium industry, but also in many other different sectors. The most visible one is, however, to be seen in many local markets, where Chinese products took over a big part of the local production. A young man once told me in Oruro, "Here everything is Chinese!" (conversation, 20.02.2019). I observed that this rising Chinese influence in the country has also strongly affected the public's opinion regarding the nationalization of the lithium-extraction, hence, jeopardizing the YLB's credibility and questioning the company's governance capabilities. Even if the extraction of lithium was the biggest national project, with which Morales sought to overcome for once this recurrent perception of the country being exploited for the benefits of foreigners, I noticed that this aspect was far from being overcome. In the case of lithium, almost all the people with whom I talked during my field work, believed in a direct involvement

of the Chinese in the project. All my informants showed a sentiment of uncertainty and mistrust in the nationalization of the lithium-extraction.

In this section, I showed that both the global discourses on Green Economy and the national rhetoric of Morales, which emphasized the global necessity to employ lithium batteries for a cleaner mobility (EV) in order to fight climate change, had the power to influence the public opinion in Bolivia. Moreover, the shift in global distribution of capital, technology, and expertise in relation to lithium-extraction, that saw China as the leading actor, reinforced the already existing opinion, that natural resources in Bolivia are being extracted for the benefits of others. I turn now to a historical digression of the strong impact that some natural resources have had on the perception of wealth in Bolivia.

5.2.2 Silver, Tin, Lithium: A Historical Rooted Process of Natural Wealth

Natural resources in Bolivia had and still have a great impact on the peoples and the places, as they have been not just the main source of economic value but have been central to more complex social relations. This entanglement between natural resources, identity, and economic value, as outlined in the previous chapter, is the result of a historical process. The expression "*Vale un Potosí*" (it is worth a Potosí) is a common expression used in all Spanish-speaking countries to indicate that something is worth a lot, and became popularized due to the *Don Quixote* (1605), the most famous Spanish novel written by Cervantes during the same time that the Cerro Rico of Potosí was discovered. This expression shows the impact that Bolivian silver had in Spain, which before the advent of the *conquistadores*, it was attributed by the Inca with limited exchange value and used almost exclusively for ornaments. Only through the Spanish silver and gold's greed – in whose cosmology gold and silver represented as items of wealth and the basis of monetary value –, Bolivians' understanding of natural resources linked to economic value profoundly changed (Taussig, 1980: 199). Eduardo Galeano (1970), in his famous book *Open Veins of Latin America*, described the 'silver rush' and the splendour of Potosí in these terms:

> "They say that even the horses were shod with silver in the great days of the city of Potosi, The church altars and the wings of cherubim in processions for the Corpus Christi celebration in 1658, were made of silver: the streets from the cathedral to the church of Recoletos were completely resurfaced with silver bars. In Potosi, silver built temples and palaces, monasteries

> and gambling dens; it prompted tragedies and fiestas, led to the spilling of blood and wine, fired avarice, and unleashed extravagance and adventure." (Galeano, 1970: 20).

The words of Galeano (1970) express vividly the wealth of Potosí, which stimulated or better made possible the economic development of Europe, where between 1503 and 1660, 16 million kilograms of silver were shipped to Spain, which exceeded three times the total European reserves – considering that these figures were not complete (Galeano, 1970: 23). The wealth of Potosí is, in fact, often taken as a point of reference in Bolivia, with the meaning that a specific resource has the potential to boost the country's economic development. In fact, more than 20 people during my interviews and conversations, regarded Bolivia as a very rich country in natural resources, and that their poverty – in economic terms – depended rather on their erroneous and exploitative governance (e.g. previous governments, neoliberalism, Spanish colonialism). In this context, lithium is one of these resources, which once more attracted the international attention and, hence, has the potential to develop the country. This is what Evo Morales stated, when he expressed his plan to industrialize the extraction of lithium in an official interview during his first visit to Spain in 2009:

> "We have other interests and investments regarding other non-metallic natural resources like lithium. The brine. What we do not want is that another Potosí is repeated. The plunder during the colony, of silver, gold. And it will not be like Potosí. Neither with lithium, nor with oil, or with iron. I am still surprised of this Mother Earth, who gave us so many natural resources. Natural resources continue to appear from the earth. […] And they have the same importance as silver or gold. Thus, how can we not take advantage [of them]. […] We have a firm politics of having partners not masters." (TVZL, 20.10.2009[42])

In this interview, Morales expressed what I previously argued, that Potosí is a common benchmark for natural wealth, which is understood in almost magical terms where natural resources are precious gifts from the Mother Earth, who gives them to the people for their sustainment, and as it used to be in the past so continuous to be in the present and in the future. As Nash (1979: 5) argued, Bolivians consider their natural right to use and benefit from natural resources. I observed this aspect while I had a conversation with a cooperative miner in Oruro, where he complained about having to pay 1,8% of taxes to the government – which is the smallest amount of taxes in comparison to national or private companies – while getting

[42] Source: https://www.youtube.com/watch?v=6IZ1fjWHOF0

nothing in return (interview, 28.02.2019). He stressed the fact that everything they find inside the mountain is for them to sell, and it depends on their relationship with the *Tío*, rather than with the government. This confirms Nash's (1979) argument, as cooperative independent miners believe that it is their right, as they have always done, to extract and use the minerals. Moreover, Morales pointed out that while taking advantage of this natural richness, he, in the name of all Bolivians, has the duty to defend them from outsiders, without repeating what has already happened in the past. He marked their national sovereignty and sense of pride which is connected to a nationalized management of resources (resource nationalism). Therefore, lithium is perceived to be the chance to invert a historical process of exploitation, but even more it was due to this historical construction of value linked to natural resources, that made the state want to bet and invest a great deal of money for the extraction of lithium in the first place.

Expressions like, "We could live like the Arabs" (conversation, 18.02.2019) or, "We have the future of the world assured" (conversation, 29.03.2019), are some of the many sayings I heard while observing Bolivians talking about lithium. Both these informants expressed in their view a logical connection between lithium and potential wealth – like the explicit connection with the Middle Est and crude oil – that could be turned into economic development if correctly used for people's benefits. Moreover, all my informants showed a sense of national pride linked to the land's richness. A conversation I had with a middle-aged woman in Sucre shows this aspect, when she expressed her sense of pride by telling me that 'they' – although she did not directly participate – fought to defend the Uyuni salt flat in the 1980s. At that time the national economic strategy was based on neoliberal policies, as in fact Bolivian politicians were trying to sell their lithium reserve to foreign companies (LITHCO). Then, to reinforce the Uyuni salt flat's importance, she explained to me that its international popularity goes back to the time when Neil Armstrong put foot on the Moon and as he looked down to the Earth, he saw a big white spot. Once he went back, he tried to localize it on a map, and in this way, he discovered the Uyuni salt flat. She said, "He was the first tourist" (interview, 14.03.2019). I heard a similar story in Oruro when I talked to an former miner, who also connected Neil Armstrong to the international discovery of the salt flat, which popularity grew so much that it became the set for the shootings of the latter Star Wars saga; while in 2016 it was also chosen for the 38th

Dakar Rally edition, a two week off-roading race, where cars, trucks, motorcycles, and quadbikes drove through Argentina and Bolivia[43] (interview, 10.03.2019).

In this section, I showed that the plunder of the Cerro Rico of Potosí during the colonial time was central in the Bolivians' understanding of economic wealth linked to their natural resources. This historical construction of value, together with the belief that the earth is rich and will always provide for the people, created the basis for the extraction of lithium. Lithium in this context, was conceived by both the government and the Bolivian population to be an unquestionable source of potential value from which the country could benefit. Moreover, the land's richness generates a sense of national pride which is collectively shared. I turn now to the third aspect that made possible a new perception of a mining activity, which concerns the strong state's presence in the extraction of lithium and in the divulgation of its information through national media.

5.2.3 YLB, ENTEL, and TKSat 1: Nationalization of Lithium-Extraction and Mass Media

The state played a fundamental role not only in the creation of the lithium-extractive industry, but also in the promotion of a specific interpretation around it, through the nationalization of the means of communications. ENTEL is the national telecommunications company in Bolivia that founded in 1965, partly privatised in 1995, and re-nationalized in 2008[44]. Another important step in the nationalization of media, was achieved in December 2013, when Bolivia launched into orbit the *Túpac Katari 1* (TKSat 1) communications satellite, after signing a contract with *China Great Wall Industry Corporation*. Since 2014, the satellite has provided broadcasting services and communications in the whole country, facilitating also the implementation of social projects, like remote education[45]. The satellite was named after the national hero, who fought and died during a rebellion against the Spanish colonization in 1781, and during the Morales' administration became the emblem of a regained national pride – public representations, statues, murals – that stands against suppression and for self-determination (interview, 23.02.2019). A tourist guide in the historical site of Tiwanaku[46]

[43] The Atlantic. 13.01.2016. *The 2016 Dakar Rally*.https://www.theatlantic.com/photo/2016/01/the-2016-dakar-rally/423993/

[44] La Prensa. 8.10.2009. *Entel adquirió radiobases de $US 120 millones por invitación*. https://web.archive.org/web/20091012034634/http://www.laprensa.com.bo/noticias/08-10-09/noticias.php?nota=08_10_09_nego1.php

[45] SpaceNews. 28.12.2015. *Bolivia's TKSAT-1 Expected to Generate $500 Million*. https://spacenews.com/bolivias-tksat-1-expected-to-generate-500-million/

[46] See reference 68, p. 99.

(closed to La Paz) expressed to me her joy about the satellite, by saying that before 2014 smartphones and consequently internet, were only a privilege of rich people, while afterwards they became accessible to everybody (conversation, 16.02.2019). This national pride was expressed publicly by the Vice-President García Linera on the launching ceremony in La Paz, where he stated:

> "Starting from today Bolivia stomps in the world and no more will we be a small pitiful and beggar country. We are a country prepared to be big, to have science and technology, to construct a big continent and a big civilization of brotherhood[47]."

Despite the big enthusiasm and the benefits that these investments in the telecommunications system have undoubtedly brought to the population, they also worked, on the other hand, as a powerful tool for national propaganda. This aspect was expressed in a conversation I had with Mauricio a man, who worked in an NGO in El Alto, where he complained about the lack of proper and critical information in the country. He said that the nationalization of mass media (e.g. ENTEL, the national paper *Cambio*) made him feel controlled by the state. He added that this was especially visible during political campaigns – which continued even after the elections – where he could realize that many political debates were strategically made in a way that at the end, the MAS representatives always came out as winners (conversation, 15.02.2019). I myself bought regularly different newspapers or paid attention to television channels, therefore I was able to confirm what Mauricio had told me. Among all newspapers, the most visible in any local stand was always *Cambio*[48], which was also, in my opinion, the most politicized and biased. In *Cambio* Evo Morales was always portrayed in a positive light wearing indigenous clothes or with the colours of the indigenous flag (*Wiphala*), while his political opponents were often negatively criticized[49]. Furthermore, I noticed that especially in La Paz and El Alto the face of Evo Morales was often portrayed on big boards on the margins of the main streets, with some recurrent and very direct slogans like, "*Con Evo, + obras, + salud, + progreso*" (with Evo, more public works, more health care, more progress), or like in the picture below (fig. 5) that I took while driving along the main highway that connects El

[47] Semana. 20.12.2013. *"Túpac Katari" el satélite boliviano*. https://www.semana.com/mundo/articulo/bolivia-lanzo-su-primer-satelite/369048-3

[48] *Cambio* (change) was the official newspaper of the plurinational state of Bolivia. It was founded in the 22nd of January 2009 by the Morales government and replaced with a newspaper called *Bolivia* after the resignation of Evo Morales in November 2019. https://www.paginasiete.bo/nacional/2019/11/17/el-periodico-cambio-cambio-ahora-se-llama-bolivia-237645.html

[49] My whole field work was influenced by the political campaign for the presidential elections of the 20th of October 2019.

Alto with La Paz. The picture portrays the construction of the new highway road, while Morales watches. On top of it, it is written, "*La nueva autopista La Paz/El Alto. Construimos Mejores Cambios*" (new highway El Alto/La Paz. We build better changes) (see Farthing and Kohl, 2014: 98).

Fig. 5. *Board on the side street on the highway that connects El Alto with La Paz (author's photograph, 13.02.2019).*

This was relevant also for the information that the state broadcasted about the lithium-extraction's project. This information was first only in the hand of the state, and secondly, they were broadcasted only in a certain manner, with a precise rhetoric. In fact, while hearing people talking about lithium, I observed that most of the time they referred to their national reserve as the biggest in the world with a sense of pride attached to it, while they hardly never mentioned the challenges and the technical constraints involved in the process of extraction and separation, which I previously outlined. I realized that this lack of connection between lithium-extraction and its complex process of extraction, came from the discourses broadcasted through the national media, which deliberately stressed one aspect while ignoring another. Maria, the anthropologist I interviewed, agreed as well that lithium is part of a bigger strategy of national propaganda. She stated:

> "They don't need to hide anything, they don't need to disguise anything, because it is presented as a propaganda of how Bolivia can be converted as a lithium producer and has to take advantage of its resources." (interview, 6.03.2019)

These observations and comments demonstrate that through national channels, people constructed a specific interpretation of the project, that deliberately sought to be modern and advanced. This distribution of information through national media is what Appadurai (1996) called *mediascapes*, where the flow of images, in which the worlds of commodities, news, and politics are profoundly mixed, and blur the lines between realistic and the fictional landscapes

(Appadurai, 1996: 35). This role of imagination in social life, according to him, has a split character, if one side has the capacity for a collective action, it is also due to the imagination that modern citizens can be disciplined and controlled (Appadurai, 2000: 6).

Additionally, in many of my conversations, interviews, and observations people often associated as the first thing, the lithium-extraction with the employment of new, high-tech technology, and big machineries. When I asked a woman in Sucre to tell me what she knew about lithium, she answered that she did not know much, but for her it was incredible to see on television such huge machineries and advanced technology (conversation, 13.03.2019). She seemed very stunned to see these kinds of modern infrastructures in Bolivia, especially because it had been promoted by a state's company, rather than from a foreign one. This aspect was confirmed by other three conversations in Uyuni, where all of them agreed to the fact that the state, or better the YLB, was using a very advanced technology never seen in the country before (conversations, 25-26.03.2019). This also shows the efforts of the Bolivian state in promoting modern infrastructures and technologies in order to demonstrate to the citizens that the country was projected toward progress and industrialization (Appel et al., 2018: 19).

Finally, another aspect that confirmed for me that the national media were promoting only some aspects of the lithium projects, while avoiding others, was the confusion and lack of proper information I encountered when I talked with urban dwellers in Uyuni, especially when it came to the ubication of the plant. Even less than half of the people I talked to, – not even a police officer – knew in which part of the salt flat the plant was located (conversations, 25-26.03.2019). It was, indeed, very hard at the beginning to even understand if the extractive point was in the northern or southern part of the salt flat, as I was given many contradictory answers. At the end, I reached the YLB office in Uyuni – also hard to find as it located like a normal building without signs outside –, where I was told by the only person in the office, in a very dismissal and rough way, that the plant was located in Llipi, in the municipality of Colcha K, near the village of Rio Grande in the southern-east part of the salt flat. Nevertheless, she stressed the fact that I could not have access to it, unless I had a written permission. In fact, Llipi is not accessible to anybody unless properly permitted by the main office in La Paz, while the whole surrounding area is fenced and guarded by the military, which makes it impossible for local communities to have a direct contact with the plant, nor with the YLB employees who live inside the area in Llipi. I, however, was able to visit the plant thanks only to the help of Mr. Lérida who had a contact in the office in La Paz, and because I presented my university documentations, which provided a reasonable explanation for my visit. On the contrary, when

I talked to local people in Uyuni, I understood that they had either no interest or an inadequate justification to visit the plant in Llipi.

With this section, I conclude that the nationalization of mass media played a central role in the promotion of a specific perception related to the lithium industry. In fact, Llipi being a restricted and inaccessible area prevented local people from obtaining precise information about the project. In this context, national media became the only source of information, which deliberately stressed some aspects while ignoring others. I showed that the lithium industry was used as a tool of national propaganda, through which the state presented itself as modern and advanced. In the next section, I conclude my analysis of the lithium-making process in Bolivia with my final point that is the materialities of lithium, its extractive process, and the salt flat, which were central factors in the construction of a new mining discourse in Bolivia.

5.2.4 Light, White, and Water-rich: The Materialities of Lithium

Only recently, lithium has become a strategic resource in Bolivia, because of a specific temporal and spatial context and its material specificities, which differ from a simple perspective of resources as "culturally reworked nature" (Richardson and Weszkalnys, 2104: 8), meaning that the domains of nature and culture would remain intact. In fact, in the notion of 'natural resources' is contained the term 'natural', suggesting an existence outside culture, something that is not human-made, and 'resource' that invokes utility, which is culturally produced, used and has exchange value; something that can be managed (Baviskar, 2003: 5053). Nevertheless, this idea is misleading, as the symbolic and material dimensions of natural resources are inseparable (Bridge, 2009; Richardson and Weszkalnys, 2104). I draw on the concept of 'resource materialities' from Richardson and Weszkalnys (2014), to argue that natural resources are more than just matter with specific physical and chemical properties, but rather they are "relational assemblages", meaning that, "[…] matters, knowledges, infrastructures, and experiences […] come together in the appreciation, extraction, processing, and consumption of natural resources." (Richardson and Weszkalnys, 2014: 8) . This approach shows the multiple ways in which the particular materialities of natural resources play an important role in constructing social relations.

In Sanchez-Lopez's (2019a) analysis of the materialities of the Uyuni salt flat, she argued that the values and the symbolic meanings of the salt flat have changed over time, from a 'worthless' desert to a rich deposit of lithium. She argued, that the different materialities of the Uyuni salt

flat played a central role in the creation of new social relations in the communities of the southwest region of Potosí. This shift in the symbolic meanings of the landscape, show the temporal and spatial contingency of nature, conceived not as a single indivisible entity, but rather as a socio-cultural construct of reification to become a commodity (Kopytoff, 1986). In her study, she showed how each materiality of the salt flat – landscape[50], lithium, ulexite[51] – produces different meanings for different stakeholders – communities, mining actors, and the government –, and that those different meanings in turn, produce different forms of contestation on how managing and controlling the resources (Sanchez-Lopez, 2019a: 18). Drawing from her analysis and my empirical materials, I argue that the peculiar materialities of lithium, of the Uyuni salt flat, and of its extractive process are entangled and produce a particular perception of lithium and of its extraction, that diverges from any other extractive activities experienced by the local population so far, which consequently unfold new social relations. With 'materialities' I mean the physical qualities and capacities of the metal, of the brine and the crust of the salt flat, and the evaporitic pools. Their material characteristics are: lithium is the lightest metal on Earth, it is white as the crust of the salt flat, its extractive process happens in the open-air (process of solar evaporation on the salt flat's surface), it is found in a brine, and it never occurs freely in nature but only in compounds. These material and spatial characteristics determine its extraction strategy and influence technological and state's decisions, which have consequential effects on an environmental and social level.

First, lithium, as I previously argued, is the lightest metal on Earth and has a high energy-density ability for storage. These physical and chemical qualities were key to the new technology of batteries, which made it an attractive resource on an international level and consequently triggered the Bolivian state's aspiration to invest in this resource. Moreover, its lightness and its being almost imperceptible to the human eye are two important physical aspects that determined its extractive technology, which employs sophisticated machineries

[50]With 'landscape' Sanchez-Lopez meant the commodification of the landscape used for tourist activities. Tourism has become a major activity in the southwest region, that contain the most visited ecotourism attractions in the country: the Uyuni salt flat and the Eduardo Abaroa Natural Reserve (Sanchez-Lopez, 2019: 10-11).

[51] Ulexite is a mining activity operated by the communities that live around the Uyuni salt flat since decades. Sanchez-Lopez (2019a) described its extractive process as follows, "Ulexite extraction comprises the removal of the salt crust in the surrounding area of the salt flat. Next it is dried, powdered and mixed with sulphuric acid to remove impurities; then the boric acid is crystallised by cooling, separating and drying with hot air to obtain a 99% degree of purity. […] Ulexite is used in agricultural fertilisers, ceramics, glass, fibreglass and also is an input for casting of metals (foundry)." (Sanchez-Lopez, 2019: 12).

and needs a more skilled labour to follow the process than common cooperative mining that still relies on sticks and hammers. Second, the lithium carbonate produced in Llipi is a white powder which, even if only few people in Bolivia have concretely seen it, is understood to be white. In fact, during my conversations and interviews, I heard people connecting the crust of the salt flat with lithium, which it was conceived to be one of the many kinds of salts (*sales*), all white, of which the salt flat is composed. This aspect was especially evident when I talked to a man in his seventies, who runs one of the first hotels opened in the city of Uyuni. He told me that, although he spent his whole life there, he did not know much about lithium rather for what he had seen on television, like the evaporitic pools, in which the minerals are extracted after the evaporation of the water contained in the brine. In his opinion, the extraction of lithium was not like other mining activities, because lithium was cleaner than other minerals, as it was contained in water and it was extracted on the open-air, and not from within a mountain. In the conversation we had, his primary concern was regarding an increasing water scarcity in the region, as I also heard him later talking to his son about not having enough water for all the showers. He blamed the mine of San Cristobal, not far from the city of Uyuni, draining all their water resources[52]. Nevertheless, he knew that people in the region need to work from mining to make a living, as minerals and metals are the only resource that the region has to offer. While he still believed in the future development's potential that lithium can bring to the region, he acknowledged that the tourist industry is what saved Uyuni. He said, "Tourism brought jobs and money, before there was nothing". This shows once more, the biggest contradiction present in the highlands, where a vast majority of its inhabitants are dependent on mining activities, although they are aware that they are the cause for the environmental degradation. He later stated that the village of San Cristobal would die when the mine could not be exploited anymore, as it happened in Potosí. Nevertheless, one aspect that I did not expect, was lack of concern for the water exigency of the lithium industry, nor about possible environmental consequences (conversation, 25.03.2019).

At this point I need to give some clarifications about Uyuni and the tourist industry in the surrounding area. Uyuni is a small, isolated town in the southwest of Bolivia, and it is the closest to the salt flat, which was renamed due to this proximity, although many local people still calls it *Salar de Tunupa* (Tunupa salt flat), according to the local legend[53]. The population

[52] See chapter 4, p. 47.

[53] Tunupa is the volcano in the northern part of the Uyuni salt flat, and the legend tells that Tunupa was a beautiful woman, who fall in love with another mountain-volcano and they had a child. Tunupa's husband was jealous of her suitors, so one they had a fight and he took with

in the area around Uyuni can grow little agriculture, mainly quinoa, due to the rigid temperatures and the salinity of water supplies. According to the stories I heard from local informants, the communities around the salt flat used to live from the trade of the salt and the breeding of lamas, which were indispensable for the transportation of the salt until La Paz. Uyuni was founded only in 1889 by the Bolivian president Aniceto Arce (1824-1906), due to its strategic position, and became a trading post for commerce and traffic with Chile. The town became a distribution hub for the trains – although since 1980s the railroad stopped functioning and became a tourist attraction –, which transported metals and minerals until the Pacific coast[54]. While underground mining remains an important economic activity, tourism has become in the past twenty years the major source of income and employment. In this context, Uyuni's dwellers, although they might not work directly for the tourism industry, they depend very much on the influx of foreign tourists. In fact, the town that has less than 30,000 inhabitants, counts more than 100 tourist agencies, some of which do not have a legal license and thus, offer more competitive tours. I heard many stories about illegal tours in Uyuni, some from a close informant who works in a tourist agency in Potosí, who told me to be careful once there, because those tours completely devaluate the salt flat and what it represents to local people. He expressed to me his frustrations as those agencies try to gain a quick income by only bringing people inside the salt flat without telling them anything about it. My conversation with him, made me first realize what Sanchez-Lopez (2019a) meant with the 'commodification of the landscape' through tourist activities. In this context nature became objectified and economically valuable, as more and more people started to pay in order to gaze upon the landscape, what Urry (1990) called "the tourist gaze". Sanchez-Lopez (2019a) argued that for the communities around the salt flat the white desert was considered to be a worthless land – not cultivable – while since the advent of the tourist industry, the same land became valuable, and the reason for the increasing tensions and claims over the ownership of the territory. Moreover, the local perception of the white desert became a source of pride in their land, as I often heard them referring to it as a 'pure, natural beauty'. This short diversion served to the reader to better understand that people in Uyuni are to some greater or lesser extent concerned for the situation inside the salt flat, as their jobs, economic sustainment, and recovered pride in their land depend on the preservation of salt flat's natural integrity.

him their infant child. Tunupa started to cry and her sorrow was so great that her breasts overflowed with milk and created the salt flat. Before that, it is said that the land used to be very fertile (interview, 23.03.2019).

[54] Encyclopedia Britannica. https://www.britannica.com/place/Uyuni

During my entirety field work, the group of people who was the most concern about the ruination of the salt flat due to the extraction of lithium, was among the tourist agencies in Uyuni. While talking with them I, however, deduced that they mostly connected the ruination of the salt flat's crust only with the construction of the evaporitic pools on its surface, as they distort the white and pure landscape, which is the reason why tourists gaze upon it. They never mentioned any other kind of possible environmental risk (e.g. alteration of the soil alkalinity, waste, pollution, water contamination). Although they were also worried, as the man I previously mentioned, about the scarcity of water in the region due to mining activities, they did not associate lithium-extraction with water-exigency or water contamination. When I asked, in fact, about the usage of water for the lithium plant they answered:

> "Yes, we don't have much water here. I don't know (silence). Mm…from where are they getting the water?" (interview, 25.03.2019)

> "I have no idea." (interview, 25.03.2019)

These comments and their confused reactions showed me that despite their concerns, it seemed that they had not previously thought about the actual or future water demands of the lithium plant. Moreover, their environmental concerns did not translate into actions as visible effects have not yet affected the tourism industry, as the following interviews show:

> "It could be that for the economy of the country is good, but not for us. We live from tourism and we are worried that the salt flat could be ruined. They [state representatives] said that they will only extract in the southern part, that lithium is contained only there and not in the whole salt flat. That is what they told us, but there isn't exact info. […] We speak about this [possible salt flat's destruction] only between us, not outside. It is more a concern." (interview, 25.03.2019)

> "Of course, we are worried with what will happen of the salt flat. We must know how far they will go. We are uninformed. How much they think to exploit and until where, and if this will affect tourism. But for now, no, we are working as always, normally. We don't know what will happen. We don't know how it is planned, the extraction." (interview, 25.03.2019)

These comments, as other conversations I had in few more agencies, show how people who work in the tourist sector in Uyuni, despite worrying about the landscape's ruination, are concerned mostly about the geographical expansion of the project on the salt flat's surface. They all complained about not knowing enough about the future vision of the extraction and expressed mistrust of the government, as they feared that the project will eventually expand,

limiting therefore, their possibility to work. This concern derives from the technical process of the extraction and separation of lithium, which employs evaporitic pools constructed on the surface – open-air – of the salt flat. Nevertheless, they all believed in the economic potential of the lithium industry, even regardless their negative attitude toward it. Thus, I deduced that their discontent generated more from the lack of transparency on how the project is carried out, rather than on concrete and visible environmental issues. Moreover, as the project is still at the beginning and has not yet affected tourism, their preoccupations have not turned into any forms of action.

Lastly, I argue that another chemical characteristic of lithium is that it never occurs freely in nature, but only in compounds, which determines the materiality of the brine of the Uyuni salt flat, and consequently plays a decisive role in the type of technology, the cost of production, and the environmental effects that these decisions cause (Sanchez-Lopez, 2019a: 16). Lithium in the Uyuni salt flat was described by Kaup (2010) as an 'uncooperative commodity', due to the several challenges in the process of extraction, previously outlined, where the quantity of magnesium in the brine surpasses three times the concentration of lithium, which made its separation more complicated, while increasing the cost of production. Bolivia decided to adopt the technology used already in Chile and Argentina – evaporitic pools – for the process of separation, although the composition of the brine of the Uyuni salt flat is different, hence, it should require a 'new' Bolivian approach as Calla Ortega (2014) pointed out. Nevertheless, the YLB decided to follow the easiest strategy, both in economic as well as technological terms, to separate lithium from its high quantity of magnesium – technology of chlorides –, which however, requires the addition of large amounts of quicklime, resulting with a high quantity of residuals (magnesium hydroxide and calcium sulphate) (Sanchez-Lopez, 2019a: 16). As Calla Ortega (2014) described in a study of the possible environmental effects, he recognized that this specific technology, in the first phase of evaporation, could produce four times the quantity of residuals in relation to quantity of lithium carbonate. He stated that this sludge produced during the process, has a high quantity of magnesium, and it is very toxic for the flora and fauna of the area, as it would change the alkalinity of the soil, and therefore it could negatively affect the quinoa producers and the biodiversity of the region (Calla Ortega, 2014: 29; Sanchez-Lopez, 2019a: 16). I was, indeed, puzzled when a young engineer in Llipi defined the process of separation as "natural" (interview, 29.03.2019), referring only to the solar evaporation, avoiding the induced chemical reaction needed for the separation. In fact, as Romero Valenzuela (2019) argued, that the residuals cannot be reintroduced in the salt flat, while the

whole process is not fully transparent. In this context, it is therefore hard to estimate the actual environmental impacts. This lack of transparency was stressed also during a conversation I had in Uyuni with a socio-environmentalist who worked for a private company that dealt with the disposal of residuals in Llipi. He told me that the project did not cause major environmental impacts and that the main issues were social rather than environmental. Nevertheless, he confessed to me that he raised some environmental questions to some YLB engineers regarding an insufficient number of pits for the disposal of the residuals, to which he did not receive any answer. He told me, "I cannot make any observation otherwise they kick me out! Do you understand me?" (conversation, 27.03.2019). He added that there was some deficiency regarding the geomembrane that separates the residual from the ground, but that despite that the contamination was minimal.

The inconsistent and contradictory statements of the government and the consequent confusion among local people in relation to environmental impacts, show what also Sanchez-Lopez (2019a) highlighted, that there is a clear lack of serious debate and proper scientific analysis about the environmental consequences of lithium extraction in the Uyuni salt flat. Moreover, the project, as being national, was classified as a minor mining activity and its license followed an administrative procedure, even without proper scientific analysis (Sanchez-Lopez, 2019a). In this context, I argue that nature – in the process of lithium-making as a resource – was conceived by the MAS government as external and an obstacle to capitalistic accumulation, where resources were seen in terms of economic benefits (Sanchez-Lopez, 2019a: 6). Lithium, in fact, was promoted by Evo Morales only in economic terms, as a means to achieve development. The very notion of development employed by the MAS government, as I will show further above, first, did not take into account the specific understandings at the local level of the concept – which are highly contextual – and second, it was incompatible with the discourses for the preservation of the environment, also promoted by the MAS government. This discrepancy in the discourses on development, as Escobar (1995) also argued, is the key to understanding the contradiction inherent to the Morales' rhetoric about the protection of the Mother Earth. This following conversation I had with a man in a tourist agency in Uyuni, shows exactly this point, that the concerns come from the perceived contradictions of the government's rhetoric about extraction of natural resources and environmental protection. He stated:

> "This is a contradiction of the government who says that we need to protect nature, but on the contrary it is destroyed in many places, not only here in the salt flat. In the whole country.

> Therefore, the plans of the government are contradictory. They themselves are [contradictory]. For example, according to the information [we have], in Llipi there aren't Bolivian employees. Those who command is Chinese, foreigners, and they don't care about the country." (interview, 26.03.2019)

While talking with local people this issue emerged quite often. I perceived a strong sense of mistrust in the government's intentions, of which my informants were all conscious and quite open in talking about it. I sensed a kind of liberating pleasure in complaining about the government, as they never tried to hide it, but rather they were encouraged and supported by others with whom they shared the same opinion. I believe that this sentiment of mistrust was not equally distributed in the whole country, as the MAS counted with vast support among the population, nevertheless, I felt it quite strong in the cities of Oruro, Potosí, and Uyuni, while hearing complains about the government became a common discourse to which I accustomed. The man stressed also another important issue – previously raised – that there was a common connection between Chinese and lithium extraction. In this light, environmental degradation becomes a concern because foreigners have constantly extracted natural resources from Bolivia, without caring of local communities and of preserving the surrounding environment, as Bolivia is not their country, as the man above clearly stated. He further on expressed this aspect even more clearly when he said:

> "Most of the people always don't want that our lands would be touched, especially by foreigners, who don't leave benefits to the communities. Because even if money circulates, nothing remains in the territory. They don't invest in the communities. They extract and the communities remain with nothing like before. This is like plunder!" (interview, 26.03.2019)

Here the man, moreover, refers to "plunder", which was used in my other conversations with reference to the plunder of Potosí, which is still very much perceived as a historical injustice.

Ultimately, I argue that the little concern for the quantity of water necessary for the industrialization of lithium and the lack of proper information released by the YLB, could aggravate the water crisis already present in the area. In this regard, Hollender and Schultz (2010) argued:

> "The region already suffers from a serious water shortage, impacting quinoa farmers, llama herders, the region's vital tourism industry, and drinking water sources. While Bolivian officials contend that the lithium project's water requirements will be minimal, their estimates are based on very limited and incomplete information. […] Public institutions, such as Bolivia's Ministry of the Environment and Water, which are responsible for ensuring

> compliance with environmental requirements, clearly lack the capacity or authority to intervene in an effective way." (Hollender and Schultz, 2010: 5-6)

The lack of proper scientific analysis and information regarding the environmental impacts and water demand of the project, has clearly caused the absence of a proper debate both in Bolivia as internationally. In this context, the international discourses on a 'greener' capitalism and EVs do not take into account local perspectives of the extraction of lithium in Bolivia, highlighting only the assumption that environmental issues can be solved through technological innovations. Consequently, these international discourses inevitably influence the public opinion in Bolivia, as once Mr. Lérida told me that, according to him, the Morales' government should have striven to find the best technology following the example of developed countries, like Germany or the United States, instead of following an ideology (interview, 30.03.2019).

I concluded this first part of my analysis showing local people's interpretations of lithium in relation to underground mining in the three main highlands' cities, which have been long affected by the extraction of minerals and metals. I argued that lithium-extraction is perceived to be a different mining activity, or rather not even as a mining activity at all. This perception depended on the strong intervention of the state through national media in creating a new idea of *extractivism*, and on the different experiences that local people have in relation to the lithium industry. I argued that lithium-extraction is associated with new technologies, which are linked to ideas of modern and advancement that are in stark contrast with the collective memory of underground mining in the highlands, as outlined in the previous chapter. Moreover, I showed that this divergence is perceived also when it comes to water consumption, while mining is understood to be the main cause of water crisis, the exigency of the lithium's plant is not even questioned. Regardless of local people's anxieties and lack of proper information, many still believe that lithium – as it happened with silver or tin – has the capacity to bring future economic benefits. These considerations showed that particular materialities in a given temporal and spatial context create new social relations and discursive practices (Sanchez-Lopez, 2019a: 3). In fact, I argued that lithium-extraction embodies a new mining discourse promoted by the Morales' government, that is inherently future-oriented and optimistic, and far from being just 'another' extractive project as seen in the past.

In the following part, I will show that lithium-extraction is rather a more complex assemblage of discourses, practices, and strategies that converge into a planning activity, which envisions a better future outcome by acting upon the present condition. At the heart of planning there is

in fact, a promise of a better future, which in the case of lithium-extraction is presented as a promise of development. I will, hence, explore how this promise of development is interpreted by the government and by local people. In order to do so, I analyse it through the lens of an anthropology of planning, which is able to bring together in a conceptual framework the issues involved: the state, development, and expectations (Abram and Weszkalnys, 2013). With the following analysis I aim to show that local interpretations of the lithium-extraction plan are central in understanding the expectations and aspirations, which could lead to social conflict if disappointed.

5.3 Lithium-Extraction as a Development Plan

Previously I argued that lithium, as a natural resource, was framed in the Morales' discourses only in economic terms, which consider nature as an obstacle to capitalistic accumulation. This understanding of development is seen in Western studies as the science of the future, to which correspond future-oriented activities or strategies, like plans, goals, and targets (Appadurai, 2004: 60). Nevertheless, this understanding of development neglects people's interpretations of it, which are highly contingent and locally bounded. As in fact, Appadurai (2004: 60) argued, economics tend to create models of abstraction, which often neglect the specific and sometimes contradictory wants, needs, expectations, and aspirations of the local people. Therefore, by studying ethnographically local interpretations of the lithium-extraction plan and of the development promised by it, I will demonstrate that they are essential in order to properly understand frustrations and potential social mobilization or conflict that can oppose the project. I will start, in the following section, by exploring the inherent contradiction in the Morales' rhetoric – that simultaneously promote *extractivism* and indigenous and environmental rights – which was discernible through my conversations and observations with local people. Successively in this study, I will demonstrate that this contradiction can enhance local tensions. Firstly, however, I intend to contextualize the concepts of development and *extractivism* in Bolivia.

5.3.1 Alternatives to Development under Morales

The word 'development' is a crucial concept that has shaped the global political economy of our times. Yet the way it is interpreted in different contexts is not always the same, if not

contradictory. Since 1990s, development has been studied also in the field of anthropology (Escobar, 1995; Ferguson, 1990), that provided a critique of development understood as an historical Western product that sought to standardize and normalize global economy, by exporting promises of modernity, progress, and industrialization, which are key to development (Escobar, 1995). Moreover, Escobar (1995) showed how development, as a historically produced discourse, constructed the Third World as an 'under-developed' category, which still influence the way local people conceive themselves and their country. During my conversations and observations in Bolivia, I often noticed that Bolivians did not consider their country to be poor, but they rather blamed external factors – political elites, the United States, foreign institutions (World Bank, IMF) – as the cause of their inability to develop. Although, first analyses on development have proven useful, they also represented it as homogeneous, monolithic, and simplifying the inherent complexities of the locally present discourses and practices (Perreault, 2003: 583). Escobar (1995), in fact, called for ethnographies of development, in order to understand in which ways development – understood as specific sets of discourses, practices, and ideas – is mediated and contested by specific actors (Perreault, 2003: 585). Nevertheless, even if development was imposed as a normal course of evolution and progress, it does not mean that people do not want or desire it, as Gow (2008) has shown in his ethnography among indigenous communities in Cauca, Colombia. The ways in which development is desired and awaited, reflects a local expression of desire, which in the case of Latin America, as Escobar (1995) argued, has to be analysed within the colonial and postcolonial historical background, which reflects hundred years of exploitation, discrimination, and never fulfilled promises. In the case of Bolivia, I observed that development is locally interpreted and desired mostly with physical public works (e.g. paved streets, hospitals, potable water, electricity). In this context, Nicolás, a young man originally from the southern-west region of Potosí, expressed to me his joy while remembering the day his village received electricity, while before they had to rely on kerosene (conversation, 20.03.2019).

After the elections of Evo Morales (2006), the kind of development that entered in the political national discourses changed from previous ones, and became part of a political transformation (*proceso de cambio*, process of change) that had also occurred in other several South American countries, which saw themselves in opposition to conservative, neoliberal governments. More precisely, this progressive, 'left-turn' – Hugo Chavez in Venezuela, Evo Morales with the MAS in Bolivia, Rafael Correa in Ecuador, 'Lula' de Silva in Brazil, and Peronism in Argentina –

rejected the idea that development is just a by-product of market capitalism, arguing instead that development should be implemented by the state and oriented only towards improving the citizen's quality of life and reducing poverty (Gudynas, 2009; Escobar, 2010; Svampa, 2015; Veltmeyer, 2015, 2018). These strategies have been labelled as *neo-developmentalist* (Gudynas, 2016b: 104). In Bolivia, the debate over 'alternatives to development' took shape with a new constitution, stipulated in 2009, in which Bolivia was redefined as a pluri-national state and indigenous cosmologies were recognized and valorised together with their original territories, TCOs (*Tierras Comunitaria de Origen,* Communal Lands of Origin). In this context, the state promoted and prioritized indigenous values, which included a harmonious relationship with nature and the idea of *Suma Qamaña* (*vivir bien*, living well[55]), where a communitarian, simple life was favoured over ideas of accumulation and profit, which were connected with the Western logic of capitalism and egoism (Pellegrini, 2106: 193). I encountered, in fact, this idea of restoring pure, indigenous values over widespread egoism that infected society, in several conversations I had with urban dwellers. Mr. Gómez, a political activist in Oruro, put it in these terms:

> "People do not have knowledge, this make them vulnerable, especially *campesinos* (peasants), they are slow to wake up […]. Everything is related to this capitalist system in which we live. You give me something and I give you something in return, but if you don't give me something? This is what is happening in this society, it's more egoistic, more individualistic." (interview, 18.02.2019)

Indigenous values were proposed, hence, as 'alternatives' to Western development, where environmental and social costs were not seen as irrelevant (Farthing and Kohl, 2014: 5). This strategy used a very compelling ideology known as 'resource nationalism'[56], which, according to Gudynas (2016b), in this perspective natural resources are conceived, "[…] to be the property of the people, the nation, or the state – and the state acts as their governor, administrator and the authority responsible for managing them, and taking advantage of their development potential." (Gudynas, 2016b: 105; see also Haslam and Heidrich, 2016)). Especially, past and present experiences of loss and exploitation in Bolivia, as outlined in chapter 4, have contributed to a deep public perception that natural resources have always been

[55] *Suma Qamaña* refers to the Andean vision of living in harmony with nature, as alternative to Western conception of development. (Acosta, 2014; Gudynas, 2016b).

[56] With the term 'resource nationalism', I intend, "[…] a wide range of actions and policies through which the state seeks to enhance its influence over the development of the resource sector." (Haslam and Heidrich, 2016: 1).

exploited for the benefits of others, usually foreigners (Molina, 2009; Kohl and Farthing, 2012), which has shaped people's present understanding of justice and injustice related to extraction of natural resources (Perreault, 2017a: 238).

In the first Morales' administration (2006-2010), the Bolivian government undertook substantial changes, such as attaining direct or partially direct control of extractive sectors – oil, natural gas, lithium, and some mining activities –, reforming the state , promulgating a new constitution, stabilizing macroeconomic parameters, and improving many social indicators. The most significative one, was the reduction of extreme poverty from 37,1% of the population in 2002 to 22.4% in 2009 (Gudynas, 2016a: 23). These achievements generated a widespread support among the masses, especially among previously discriminated groups who saw an opportunity for more inclusion and participation in the extractive processes. This was the case of the village of Rio Grande, in the municipality of Colcha K, province of Nor Lipez, which is located only 7 km from the lithium-extraction pilot plant in Llipi. Rio Grande was very frequently mentioned during my conversations in Uyuni, often with hard feelings, as the village was the one who benefited the most from the lithium extraction in the area. Due to its geographical proximity to the plant, the villagers started to supply provision of services and transportations, which became the economic support for the community, that previously used to live in poor conditions as most of the villages around the Uyuni salt flat (Romero Valenzuela, 2019: 214). Juan, an engineer, who worked for the Ministry of Energy and Technology in La Paz, told me that the dwellers of Rio Grande together with the peasant's organization of the municipality of Nor Lipez (FRUTCAS – *Federación Regional Única de Trabajadores Campesinos del Altiplano Sur de Bolivia*, Regional Unique Federation of Peasant Workers of the South Altiplano of Bolivia), were those who supported the project most, in exchange for a direct involvement in the project. I met him in Uyuni the day he was supposed to dismantling a machinery, which he said being the monopoly of the village of Rio Grande. He told me with frustration that he could not do anything without their permission, otherwise they would have started to oppose the project. He argued that the situation was very complex as it depended on many different economic interests in the region (interview, 27.03.2019).

The conversation I had with him, as several others, show concretely that the Morales' rhetoric of promoting a communitarian, simple life over economic benefits and personal interests is contradictory. In fact, I observed that local people envisioned and desired development in many different and incoherent ways. A socio-environmentalist, who worked with Jorge that day, complained to me, that the main issue related to the lithium-extraction project was a social

rather than an environmental one. He stressed the fact that even environmental claims in Bolivia often were used to express social issues related to economic benefits rather than real environmental concerns. He stated that the project was initially very well accepted among local communities and that consequently some started to oppose it, as they wanted to gain more economic benefits. He told me then, with a sense of resignation:

> "We couldn't stop it in time. Why? Because we didn't see the social part as the central part of the whole project." (interview, 27.03.2019)

He later, justified his position , as in his whole career, while mediating between indigenous or peasants' communities and the extractive companies during the processes of consultations (*Consulta y Participation*, *Consulta Publica*; Consultation and Participation, Public Consultation), he saw many cases of corruption, where the percentage of compensation was often discussed among two people: the indigenous leader and the representative of the extractive company. In this way, he said that the communities too often did not receive anything (interview, 27.03.2019).

Nevertheless, in his second administration (2010-2014), Morales' discourses tended less and less toward finding alternatives to development, as the Bolivian economy became even more dependent on strategies based *extractivism* than before. Despite the initial positive amelioration – favoured also by a high commodities boom –, Bolivia still suffers from boom and bust cycles, which are typical of extractive economies (Andreucci and Radhuber, 2015: 226). These schemes of accumulation based on the dependency of particular resources' export contribute to the creation of vicious circles that are identified in the literature as the 'Dutch Disease', meaning that peaks in commodity prices increase the value of the currency, reducing the competitiveness of other exports (Andreucci and Radhuber, 2015: 226; see also Acosta, 2013; Arellano-Yanguas, 2014; Hilson and Laing, 2017). Consequently, there is a global tendency in resource-rich countries – especially in minerals and oil – to diversify their economies and to underperform in economic growth having difficulties to develop (Hilson and Laing, 2017: 230). According to Acosta (2013), "These countries appear to be trapped in a perverse state of affairs known in the specialist literature as 'the paradox of plenty' or 'the resource curse'." (Acosta, 2013: 61). Moreover, Gudynas (2009; 2016a; 2016b) pointed out, that regardless the creation of this new type of *extractivism* (*neo-extractivism*) by the South American progressive governments, the structure of accumulation did not change. The only substantial difference was a greater state's presence, who justified its strategy as necessary, in order to reduce poverty and ensure development (Gudynas, 2016b: 107). Following this strategy, the extraction of natural

resources is not criticized by the state, but rather its control by transnational organizations (Acosta, 2013: 72).

Bolivia falls into this scenario, where although the government initially criticized capitalism and Western development, Evo Morales contributed to maintain old patterns of exploitations, as Bolivia remained a global supplier of raw materials (Gudynas, 2016a: 24). Furthermore, I became aware while talking with local people in urban areas, that the government started to justify this strategy intended as the only possible one. In the cities of Oruro and Potosí, as I previously outlined, their dwellers depend primarily on the employment in the extractive sector, and therefore did not see many other opportunities, apart from emigrating. Once a former miner in Potosí told me with resignation that the government should find economic alternatives in the region instead of relying only on mining, because too many young people are forced to emigrate to bigger cities like La Paz, Cochabamba, Santa Cruz, or to Argentina[57]. He added that the life of a cooperative miner is so tough that many die of silicosis, therefore young people do not wish to follow this path (conversation, 11.03.2019). Furthermore, the vice president García Linera published a book in 2012, where he justified *extractivism*, intended as the only way for a small country like Bolivia to achieve development and industrialization. With this publication, he finally distanced himself from the concepts of *vivir bien*, while even criticizing citizens and indigenous organizations who opposed this process (Gudynas, 2016a: 25). Thus, the government was able to promote and justify *extractivism*, conceived as its national right, while convincing its supporters that the environmental and social impacts were an inevitable price to pay for developing the country. Kohl and Farthing (2012) called this skilful rhetoric a 'double discourse' that took into considerations different actors demands, while trying not to fall into contradictions. On the other hand, as Kaup (2010) argued, the Morales administration had to face several constraints, typical of a resource-rich peripheral country (i.e. lack of capital, limited transport infrastructure, previous contrast agreements, inflexible tax and royalties distribution, inability to redirect their material resource flows toward internal use) which hindered Bolivia's possibility to overcome its dependency on the primary sectors and to change its development path. Moreover, according to Gudynas (2016b), by following this strategy, "The state is always caught up between contradictions and tensions: to promote economic growth, and to regulate the market; to accept the conditions set by foreign investors, and to

[57] According to Farthing and Kohl (2014: 94), estimated 2.5 million Bolivians emigrated to Argentina since the 1980s. Bolivia in fact, has long supplied low-cost, mostly unskilled labour to the global market.

attend to the demand of local citizens; and to sell natural resources on global markets, but to question the capitalist system" (Gudynas, 2016b: 108).

Finally, the MAS's facade started to crumble after 2010, when more and more Bolivians became frustrated, as I will outline further below, because the promises of economic compensations were never fulfilled and contradictions became evident (Kohl and Farthing, 2012: 233). Indeed, as Gudynas (2016b) argued, to successfully maintain this resource nationalist rhetoric, the state needs the support of its citizens, who must acknowledge its role as administrator of those resources. Yet to maintain a certain equilibrium between different social groups' demands, the state is forced to listen only to some actors, while ignoring or sometimes even attacking others (Gudynas, 2016b: 114). Moreover, as Escobar (2015: 456) critically argued, this form of *extractivism* promoted by 'counter-neoliberal' states, does not lead to *buen vivir*, but rather the opposite, as it is a highly destructive model.

With this section I explored the discourses on development that entered in the political discourses since the elections of Evo Morales in Bolivia. I argued that although the development proposed by the MAS government was intended to ameliorate people's quality of life, in the end, there were no substantive intentions to change the economic structure. In fact, Bolivian economy became more dependent of *extractivism* than before, justified by the political actors as the only possible way for a small South American country like Bolivia to develop. In this context, despite Morales' discourses on strengthening indigenous values and environmental protection – promoted as an alternative to the Western logic of capitalistic accumulation –, they were, in practice, disregarded. Moreover, by promoting a communitarian, simple life as the most appropriate, the government neglected local people's desires on how they want to live their life. In fact, I showed that this contradiction created confusion and mistrust in the government on the local level, especially in urban areas, where the capitalistic mentality had already shaped the way people live their lives (see also Nash 1979; Taussig, 1980). I will, however, show further below that tensions related to natural resources' governance and extraction, are also consequences of this logic. I continue in the next section to the analysis of the national development plan of lithium-extraction.

5.3.2 Planning the Lithium-Extraction

Lithium is not like any other natural resource that has been extracted in Bolivia so far. In a country where people are aware of the richness and the importance of their natural resources, and the destructive consequences that their extraction has caused to the environment and the population, lithium alone seems not to fall into this scenario. Previously, I have accounted for the negative effects that underground mining has provoked on the highlands, and that even modern extractive practices, which employ high-tech technologies – the Huanuni and San Cristobal mines – fall back into recurring patterns of contamination and exploitation in people's everyday experiences and discourses. Bolivia, especially in the past decade, has been mostly dependent on the extraction of another lucrative resource, natural gas, in the Chaco region, in the southern-east part of the country. The nationalization of the hydrocarbon sector was one of Morels' first priority, as he was able to redirect its revenues to directly finance social programmes aimed at reducing extreme poverty, education, health care, and basic infrastructures (Kaup, 2010: 131-2). Nevertheless, gas and oil extractions have encountered lots of opposition from local people, who feared the destruction of their environment. Even at the time when I was in Bolivia, media were reporting fervent protests from local people to a new extractive project in the National Reserve of Tariquía[58]. Yet lithium-extraction's plan encountered very little opposition among the civil society, while it rather generated a specific national perception opposed to underground mining, and big expectations based on the belief that the lithium industry will provide to the industrialization of the country, as also Revette (2017) showed with her study. A concrete example is given by the usage of the English word 'lithium' to name small business activities like hostels or tourist agencies close to the Uyuni salt flat. The most visible example was the only hostel in Rio Grande – the closest village to the extractive point of lithium I mentioned above – which was named 'Hostel Lithium' with the expectations of welcoming visitors, as the landlady told me (conversation, 28.03.2019). Moreover, I noticed only successively, when I had already come back to Europe, that the hostel's owner inserted it on Google Maps, with a cover image (fig. 6) that shows the Uyuni salt flat with the name of the hostel, while underneath it is written "portal to the future" (*portal al futuro*). Not only the name is left intentionally in English, but the image clearly shows the future expectations that the extraction of lithium generated locally.

[58] 27.02.2019. *Bolivia: la defensa de Tariquía enfrenta a comunidades campesinas con el Gobierno.* https://es.mongabay.com/2019/02/bolivia-tariquia-comunidades-hidrocarburos/

Fig.6. *Cover photo of 'Hostel Lithium' in Google Maps. The 'Hostel Lithium' is located in Rio Grande, municipality of Colcaha K, province of Nor Lipez, only at 7 km from the lithium-extraction pilot plant in Llipi.*
Source:
https://www.google.com/maps/place/Hotel+Lithium/@-20.821672,-67.3042417,16z/data=!4m13!1m7!3m6!1s0x93ffe35d600d463f:0xbbdf1f48d8f41f97!2sRio+Grande,+Bolivia!3b1!8m2!3d-20.8222902!4d-67.2981952!3m4!1s0x0:0x4bf7544622766b26!8m2!3d-20.8229795!4d-67.2979277

Then, why is lithium perceived differently? Or better, what makes lithium so different, or so important in the public perception? To answer these questions, I intend to look at the development of the lithium industry through the lens of planning, which I believe help to bring together in a conceptual framework the many issues involved. I draw my understanding of an anthropology of planning from Abram and Weszkalnys (2013: 3), who conceive planning as:

> "[…] an assemblage of activities, instruments, ideologies, models and regulations aimed at ordering society through a set of social and spatial techniques." (Abram and Weszkalnys, 2013: 3).

The key to my analysis is an emphasis on the temporalities and materialities involved in planning, which are specific to the local context and the state. I argue that the lithium-extraction plan is an optimistic and future-oriented activity, where not only the state, but local people as well came to desire a specific future outcome that the plan tries to control. In practice, this translates into a desirable better future, although this can mean different things for different social groups. This optimistic and future-oriented vision was especially evident when I visited the lithium plant in Llipi. José a young employee, who managed the public relations between the YLB and external visitors, explained to me his or the company's vision in these terms:

> "We are currently in the third phase of the project. The final goal is to achieve a full industrialization. […] I assure you in 5 years, no longer!"

In a later conversation at the question, "Was this the biggest national project?", he answered:

> "Exactly, yes, it is like this. It started to become visible on a global level; its full development. Give yourself 5 more years or maximum 10 and then you will come back here, and you will see how much it will have changed. It is planned for 2025[59], this whole plant, the second one. […] Make it to that point, it is possible; reaching industrialization." (interview, 29.03.2019)

These statements show the big expectations for the projects and its future outcome, and a sense of confidence in its success, which is envisioned in a broader picture, where Bolivia not only becomes a global producer of lithium but achieves development. As I previously argued, the development intended by the government has at its core an understanding of natural resources as being the property of the people, while the state has the role to manage and defend them. This discourse leverages on a widespread emotional sense of injustice toward foreigners, which reinforces and legitimizes this resource nationalism rhetoric. In the following interview, José shows it in this way:

> "The lithium is ours; we industrialize it on our own. […] [In 1992] there was a foreigner intromission [USA]. They always consider themselves owners of the natural resources of the planet. They consider South America as it would be theirs. But it is not like this, every country is sovereign and autonomous." (interview, 29.03.2019)

This is visible also in another interview I had in Uyuni with Juan, the engineer mentioned above, who worked directly for the Vice-Minister of Energy and Technology Luis Alberto Echazú. He said:

> "12 years ago, I brought here the Samsung, the Koreans, who were interested in the salt flat, and they wanted to export everything. It was the first year of Evo Morales as president, in 2007. So, I brought the Koreans and I reported to Echazú their proposal, and he sent them away saying, "You want to plunder me! This lithium is for us.". So, 12 years later, I came with the Chinese. That's why I tell you this, I'm one of those who started this thing. So, the Vice-Minister said, "Yes but, on my terms.". They are responsible for the construction, and we employ them. […] In the case of lithium, there is a new company, which is 100% of the Bolivian state." (interview, 27.03.2019)

The future that the state tried to control, is one where Bolivia has demonstrated not only to its citizens but to the whole world, that a small, developing country in South America is able to

[59] 2025 is a national target set by the government, as it will be the 200 years anniversary of the independence of the country, and the last year of the next presidential term. Morales' political motto for last year's elections was "*Evo 20-25*".

overcome its 'curse' and proving that an alternative path to neoliberalism exists. In the speech given by Evo Morales on the Independence Day on the 6th of August 2019, he stated:

> "I want to tell you brothers and sisters, that in all the departments we have achieved those big dreams we had years ago, today more than ever, it is urgent to consolidate and protect what we have achieved. We are now in a position to project an ambitious future and with great hope I want to tell you, brothers and sisters, I do not want to be the best President of Bolivia, but I want to be the President of the best Bolivia of our history." (author's translation).

Later he claimed that lithium plays a decisive role in realizing this ambitious future, and that it is central to the 'new Bolivian economic model', as he called it at the beginning of his speech. He continued saying:

> "I want to tell you sisters and brothers, only by giving to our natural resources, renewable and not renewable, their added value, we will assure more employment for the new generations, and you cannot even imagine what we have regarding lithium (*ni se imaginan todavía lo que temenos con el tema del litio*)." (author's translation).

The targets for the lithium industry set by the government were indeed very ambitious, considering that the pilot plant started to produce, on a small level, lithium carbonate only in 2017, with a first symbolic shipment to China of almost 10 tons (Hancock et al., 2017a: 555). He went further saying:

> "Regarding lithium, we planned 41 plants, the majority in the department of Potosí and others in the department of Oruro, 14 plants for the lithium industry, 20 for input-products, and 7 for sub-products; we designed a beautiful plan not only in view of 2025, but far beyond it; this will move the national and international economy." (author's translation[60])

But still, why such an emphasis on lithium? For example, why not concentrate in the development of an industry to extract other minerals present in the Uyuni salt flat? In fact, in its brine, magnesium is largely more present than lithium (18 grams magnesium per 1 gram of lithium), as also Hancock et al. noted (2017a: 553). Then, why not focus instead on the exploitation of magnesium? Although, there are local studies that are trying to implement magnesium as much as other minerals along the development's chain, their exploitation and commercialization is not a priority, as I was told while visiting the Llipi's plant (interview,

[60] Ministerio Relaciones Exteriores. 6.08.2019. *Discurso del presidente del estado plurinacional de Bolivia, Evo Morales, en la sesión de honor por los 194 años de Independencia de Bolivia*. http://www.cancilleria.gob.bo/webmre/discurso/3511

29.03.2019). Another observation on this matter regards the other product that has been industrialized alongside with lithium carbonate during these years, potassium chloride. Potassium chloride is a sub-product also found in the brine and is used as fertilizer, which is mostly sold to Brazil. Although, the two projects started in parallel, the development of the potassium chloride's industry was faster and it has already started to produce on an industrial level, while its production is planned to increase. The industrial plant of lithium, however, is still under construction and it will take two or more years before starting to produce the quantity needed for the industrial export. The potassium chloride's plant on the other hand, started to export in 2019 and produces around 50 tonnes per day (interview, 29.03.2019). This was an important step forward for the whole plan, especially for the workers who live in Llipi, as they have finally started to see concrete results. When I talked to the security officer in Llipi, she expressed her hopes in this way:

> "We had many phases, however during this time we weren't producing. From this year we are producing, while in the previous years we only had *egresos, egresos, egresos* (expenses), there were no *ingresos* (incomes). It's recent, only from this year, since we had the plant. Then we started to export and after we had *ingresos*. […] We are now in an implementation's stage, we lack some tools, but with all we have got right now, thank God, we can work." (interview, 29.03.2019)

This shows that the potassium chloride's industry is also very important, at least for the employees in Llipi, who started to feel rewarded after ten years of struggles, which moreover helped to believe in the future success of the project. In the president's speech, he referred to the flourishing potassium chloride's industry, but it was not entangled with such future expectations as the lithium contained. In another press conference in Potosí on the 4th of June 2019, the Vice-Minister Echazú also stated that Bolivia's aim was to create added value to Bolivian lithium by incorporating into the industrial production, the manufacturing of lithium ion-batteries, and not selling only the raw material. He compared then their strategy with the extraction in Chile and Argentina, to argue that they were the only country who has given value to their resource, reversing the colonial exploitation [61].

In fact, with the third phase of the plan, Bolivia aims to create an industry of lithium's batteries in the country, and by doing so finally moving away from a pre-industrial state in which

[61] *Conferencia de Prensa Yacimiento de Litio Boliviano*. 4.06.2019. https://www.facebook.com/GobiernoAutonomoDepartamentalDePotosi/videos/633269510433164/UzpfSTEwNTYyMjU4ODc4NzIzMDA6MTI2NTcxOTA1NjkyMjk4MQ/

development cannot occur (Escobar, 1995: 74). Ultimately, I deduce that lithium was invested with such an importance, because it was placed at the forefront of the Morales' resource nationalist discourse, and it represented the actual materialization of this industrialization process, which was embodied with the batteries' production. This was evident while talking with José:

> "Regarding batteries, we will produce them for the whole world, because Chile and Argentina don't have the same quantity [as we have]. Only in Bolivia we are promoting the industrialization, while in Chile and Argentina they are only exporting raw materials with private companies."

At the question, how long did he think they could extract lithium, he continued:

> "We have secured here the future of the world in terms of lithium. We are in the target of every country and investors." (interview, 29.03.2019)

José's statements show how the desirable future of becoming a world-leading producer of lithium is projected into the present state and presented not as an expectation but as a certainty. Moreover, his vision is highly optimistic, as he does not take into consideration possible risks, which may not depend on their development but on unpredictable global market's orientations or technological innovations. In fact, Hancock et al. (2017a: 558) noted that internationally the technological research on energy storage is so competitive, that new technologies in the future may take over lithium ion-batteries. While the final goal was to achieve development, industrialization was viewed as the first step in what seemed to be a natural course through the development line. As also Escobar (1995: 74) argued, that in this context, industrialization is seen as fundamental to development and its only solution. This point was also evident in a later conversation I had with a young engineer, who explained to me the evaporitic process of the pools. He asked me to compare the kind of development Italy – my country – has with the Bolivian one. Although, I did not know what to answer, he contested, "But it is an industrialized country. How many factories do you have? And what do you export?" (interview, 29.03.2019). Being developed means being industrialized, which implies moving away from exports of raw materials, as José mentioned also in an earlier statement, where he compared Bolivian modus operandi with the Chilean and Argentinian lithium-export oriented strategy. Once again, this shows the optimist, if not rather unrealistic scenario, as Abram and Weszkalnys (2013: 9) argued, which is usually an inherent contradiction of planning: between what is planned and what is concretized, which seems always unattainable. Although, the production of batteries was a big issue at the time I conducted my research – as a new industrial plant was under

construction (YLB *Memoria*, 2018) – I doubt that the production of ion-batteries in Bolivia will have the big impact that José was proposing. In fact, during the conversation I had with Juan, the engineer that works for the Ministry of Energy and Technology, he explained to me a more realistic target of Bolivian batteries' production. My question was if they were still planning on producing batteries in Bolivia. He answered:

> "Yes, yes…. mostly with the Germans. It would be complicated to produce them here and transport them there. Even more, because there aren't many components in Bolivia, we would have to import them, and they are very expensive. Therefore, it is better to produce them in Germany or in China. Bolivia wants to do something with batteries, but not much. The biggest part will be in Germany or in China, about factory of batteries. And there is a component especially not to found in Bolivia, that is really expensive to import. Colombia has a lot of it, but still it doesn't work." (interview, 27.03.2019)

Coming to the third phase, it is indeed the most ambitious one, especially considered that, as Hancock et al. (2017a) pointed out, Bolivia lacks of proper higher education and research in respect to renewable energy's technology, which made the country dependent upon foreign expertise and technology (Hancock et al., 2017a: 556). Therefore, the strategy that the Bolivian state implemented is a public-private partnership (PPP), where it maintained the majority of profits. Two pilot plants for cathode and battery assembly were built in La Palca, Potosí, by foreign companies (France's *ECM GreenTech* and China's *LinYi Dake*), and inaugurated in 2017, closing the circuit of Bolivian lithium industrialization[62] (Sanchez-Lopez, 2019b: 27). In 2018, the German company *ACI Systems GmbH* became a strategic partner for the further industrialization process, while opening up possible partnerships in the phases of extraction and industrialization, changing in this way, the initial strategy. The partnership with *ACI Systems GmbH*, as Sanchez-Lopez (2019b: 27) noted, was an important milestone, although, the future development of the PPP is still unsure.

I have explored in this section the discourses and the future expectations of the state, who tried to project itself into the future through this planning activity. These discourses were concretely discernible through Morales' public speeches and mostly through the conversations I had with the YLB's workers and state employees, who carried out the actual work. However, state's discourses and ideologies alone cannot legitimize among the citizens a long-lasting and high-

[62] Página Siete. 23.08.2017. *Morales inaugura la Planta Piloto de Mateiales Catodico*. https://www.paginasiete.bo/economia/2017/8/23/morales-inaugura-planta-piloto-materiales-catodicos-149393.html#!

priced plan, like the lithium-extraction's one. In order to achieve this, a promise for a 'better future' was invoked, which is the core of much planning activities (Abram and Weszkalnys, 2013), and provides a good starting point to analyse the different temporalities, materialities, and power involved in planning. I turn now to the next section, where I analyse this notion of promise in the lithium-extraction plan.

5.4 The Promise of Planning

5.4.1 For a 'Better Future'

The promise at stake here, is a promise of transformation, that seeks to delivery development, progress, and modernity, in other terms it aims at improving society. It is nothing less than a promise for a 'better future', which is central to both anthropology of planning as much as of infrastructure. I incorporate here the literature that deals with the promise of modern infrastructures, in order to better understand the Bolivian case. I draw my understanding from Harvey (2018), who approaches infrastructures also as, "[…] assemblages of multiple differences within the materials, institutions, regulations, aspirations, and skills through which they are constructed." (Harvey, 2018: 90). I rather conceive lithium-extraction as a planning activity, mostly because I could not analyse people's everyday experiences with the lithium's plant, as it is located in a remote and inaccessible area, while the industrial one is still under construction. Nevertheless, I can still recognize many important parallelisms between the two literatures. In both cases, time and space are intended to be open to human intervention, having the potentiality for change and improvement. Infrastructures are in this context interesting due to their capacity to enchant, as Harvey and Knox (2012) argued, and are important for what they represent about the future. In fact, contemporary infrastructure's projects are configured in relation to modern understanding of the future, where the state often builds them not to meet felt needs, but rather to demonstrate that it is modern and advanced (Appel et al., 2018: 19). They further argued that this future-modern vision of infrastructure is what justifies their great expense. I argue that this is the case of lithium-extraction, which, more than any other project in Bolivia, has sought to be modern and advanced, while also trying to catch international attention, as Morales stated in many public speeches[63]. At the same time following the same

[63] 03.04.2019. in Santa Cruz. https://www.youtube.com/watch?v=sRl7ew9zfTw
25.10.2010. National Chanel7. https://www.youtube.com/watch?v=EJPnHTBu1JM

promise, other more visible infrastructures were built around the country to show the citizens the 'process of change' (*proceso de cambio*) – as Morales called it – that he was trying to implement. The *Teleférico* in La Paz – a ten-line aerial urban cable-car transportation system – and the modern presidential tower, built right behind the historical colonial presidential building in the main square of La Paz, are two of these examples. Other works, like schools, hospitals, solar panels, football fields, have been built with often a sign that showed Morales' investments next to them (fig.5 and 7). They have been both highly appreciated, as I heard people calling them "*los regalos de Evo"* (Evo's gifts) (conversation, 20.03.2019), as much as criticized as "non-productive" or "money-waste" (conversation, 15.03.2019), as the following interviews show:

> "Mostly, the government built football fields. Those you can see them in every village. This shouldn't be the first thing, but rather schools, electricity, potable water." (interview with a man in Uyuni, 25.03.2019)

> "The government is wasting money, we already have so little. Instead of solving major problems, they built monumental works that are not so urgent, like the *Teleférico* in Oruro and the museum in Orinoca, that has now a huge street. But who uses it? In comparison, there are other places that need it more. There are so many isolated villages." (interview with a woman in Sucre, 15.03.2019)

In the second interview the woman was talking about two major works highly publicized in the media, one is another line of cable-cars built in Oruro, which differently from that in La Paz is not used for public transportation but only to reach a viewpoint, while the second referred to one of the biggest museum of the country (*Museo de la Revolución Democrática y Cultural*, Museum of the Democratic and Cultural Revolution) built in the isolated hometown of Morales, Orinoca, in the Oruro department, in which his life is presented and idealized[64]. In this regard, Farthing and Kohl (2014: 87) also argued that the government prioritized the construction of public buildings, infrastructures, or soccer fields, as they were more visible and easier to implement. All these public works had the function to enchant the publics and establish the idea that this process of change was actually happening. Nevertheless, how people engage with their future and envision it may be different from what is presented to them, as the interviews show. The lithium's plant on the other side, because it was not visible – if not only through

[64] Los Tiempos. *El lujoso museo construido en un pueblo con casas de adobe y calles de tierra*. https://lostiemposdigital.atavist.com/museo-orinoca

media – even for local people who cannot have a direct experience with it, helped creating the idea that this future promised is always far away.

Fig.7. *This photograph was taken by the author in a small village closed to San Pablo de Lipez, in the southern part of the region of Potosí. The sign portrays on the right, Morales with his right hand on his heart, and on the left, the explanation of the project of a building financed by the state. It shows also those responsible for the project and the money invested. (20.03.2019).*

Another aspect, which according to Abram and Weszkalnys (2013: 9), is important in consolidating the seductive power of the promise, is its performance. Promises are not only statements, they express intentions which have effects – expectations, aspirations – and obligations on the part of the promisor. This performance depends on both context and actions, creating a set of relations and a moral obligation between the promisor and the promisee, which should last through time (Abram and Weszkalnys, 2013: 10). While I have already described the context in which this plan has been created, I identify the actions that served to convince the publics of its effectivness as follows: the public works mentioned above; Morales' public manifestations and his behaviour in accordance with the promise; and the results generated by the lithium plant, which however, have been slow in materlializing. Morales's public performances were always filled with symbolism, where he usually wore 'traditional' (Aymara) clothing, used particular gestures, like the hand on the heart in the above picture (fig.7), and referred to the listeners as "brothers and sisters"[65].

This strategy was intended to capture certain emotions and feelings, undertood to be shared by the vast public (Kohl and Bresnahan, 2010: 16). In fact, the promise of planning itself create a highly abstract understanding of the public, as much as of the state, as it would be a

[65] See Morales' speech at p. 90.

homogenous entity on its own (Abram and Weszkalnys, 2013: 13). Abram and Weszkalnys (2013) referred to this as the production of 'corporate body' that acts as an individual without taking into consideration the complexities and the specificities of Bolivian modern society. Moreover, I argue that this process of abstraction was achieved through the concept of *indigeneity*, by which the public was understood as a single, coherent, indigenous category, primarly Aymara speaking. This concept, has by all means, many issues that can be detected through a qualitative investigation. This is the focus of the next section.

5.4.2 *Indigeneity* as a Tool of Statecraft

The concept of *indigeneity* is especially interesting in Bolivian due to its relationship with the state – self-proclaimed indigenous – during the Morales' administrations. The concept itself has some inherent contradictions and paradoxes, which can be detected in ongoing tensions and conflicts between different indigenous groups, especially when it comes to the management of natural resources' extraction. Canessa (2006; 2012; 2014) argued that the understanding of *indigeneity* in Bolivia as an anthropological concept, as much as an international law's tool – 2007 UN Declaration on the Rights of Indigenous People – proved to be inappropriate and insufficient in order to understand the complex realities of social conflicts between different indigenous groups within the nation-state, where they are not powerless minorities (see also Bowen, 2000; Kuper, 2003; Merlan, 2009; Albro, 2010). In fact, the 2009 Bolivian constitution was stipulated in order to empower the indigenous majority, which accounted for the sixty-seven per cent of the population (INE, 2001). Nevertheless, as Canessa (2014) argued, "[…] it is only in the past couple of decades that significant numbers of people have described *themselves* as indigenous and embraced an identity which had hitherto largely served to marginalise and dispossess." (Canessa, 2014: 155). This reflects what Daniel, a self-employed IT-engineer in his late thirties, told me in La Paz. His family was from El Alto, where he also grew up with his grandmother, a *chola*[66] who spoke the Aymaran language. Nevertheless, he never learnt the language, because his father prohibited him to learn it, as people who spoke it were often discriminated against, especially in schools (interview, 14.02.2019).

[66] *Chola* or *cholo* in Boliva and Peru means a person of indigenous origin who lives in a city.

The role of the Bolivian state was central in constructing a national culture based on *indigeneity*, understood however, as a homogeneous concept of indigenous identity that empowered some people, while served to exclude others. According to Tsing (2004), *indigeneity* is a 'universal concept' that can travel across national borders and interact with large numbers of different people, causing 'frictions' as they move, producing new social relations, new ideas, and new meanings (Canessa, 2014: 155). These frictions have created new hierarchies and power structures as the state tried to create a new unity in diversity – 'pluri-national' state – based on a shared sense of struggles and historical injustice (Canessa, 2014). Thus, Morales, since his first electoral campaign in 2005, was able to build around his own person this very concept, through which the people could relate and identify. Manuel, a man who worked with children for an NGO in El Alto, described Morales' political strategy that brought him to power as "brilliant." He argued that the political slogan for that year was, "*Yo soy Evo*" (I am Evo), by which a simple sentence enabled a vast part of the population, mostly of Aymara descendants – as he stated to be Aymara – to identify themselves with one person. He added, "This was very powerful!" (interview, 15.02.2019). Indeed, as I argued earlier, Morales' symbolism has always been very strong during his whole political career, like the slogan of the 2019 elections, "*Evo 20-25*", that represented the end of the next presidential terms, and the 200-year anniversary of the independence of the country. Nevertheless, in practice this strategy did not create a coherent idea of the indigenous person, but rather, it largely favoured only Aymara values (Albro, 2010; Canessa, 2014). In fact, in 2006 the inauguration ceremony of Morales took place in the most important Bolivian archaeological site of Tiwanaku[67], in the southern Lake Titicaca Basin. When I went to visit the site, the guide who said she was Aymaran, was proudly talking of Morales as the president of the "original population," meaning the Aymara population (interview, 15.02.2019). Moreover, many Aymara's rituals and festivities were restored or invented and nationalised, like the 'Aymara New Year' and the winter solstice on 21 June. Canessa (2014: 157-8) argued that this was an attempt to create a new national identity based on indigenous values, and where the nation itself was imagined as indigenous.

Bolivian indigenous groups' categorization could be divided, although in a too simplistic way, into highlands and lowlands, where the majority of indigenous groups that inhabit the highlands are of Aymara and Quechua descendants, who distinguish themselves according to the

[67] Tiwanaku is the ancient capital of the Tiwanaku Empire (550 – 1000 AD), from which Aymara heritage derives.

language they speak, while in the lowlands from Guarani and Chiquitano descendants. The Aymara language and culture were conceived as being 'original' to Bolivia (pre-Inca), especially among those – indigenous leaders, activists, philosophers like Felipe Quispe and Evo Morales – who reformed Bolivian society after 2005 (Albro, 2010). Although, indigenous identity was linked to language use, after the 2001 census (INE) it became evident that language was not an indicator of indigenous identity, as a majority of Bolivians has shifted to Spanish as their mother tongue, especially in the urban areas (Canessa, 2006: 256). An activist in Oruro, who had been fighting to preserve their traditions since before the advent of Evo Morales, told me that especially people who live in the cities, like himself, were "losing" their indigenous languages, seen as a normal process during globalization (interview, 17.02.2019). On the other hand, there were still people who associated indigenous languages to indigenous identity, as part also of the Bolivian identity and heritage, as Mr. Gomez, the political activist I already mentioned above, told me:

> "Many people here speak Quechua, it's a question of identity. A Bolivian who doesn't speak Quechua or Aymara is not a real Bolivian. This come from the school, the fact that many cannot speak. They lose their identity. It makes you hate your roots". (interview, 18.02.2019)

While in the 1970s-90s, urban centres attracted large quantity of people from rural areas, who rejected their indigenous identity – language, clothing, rituals – as they were exposed to racism and discrimination, after 2005, half of those who identified as indigenous lived in urban areas (Canessa, 2006: 256). This was a sign of the changing dynamics of the cities, especially in El Alto, that has been described as the epicentre of Aymaran culture and of indigenous social movements. This changing process is also called in some literatures as *cholification* (Albro, 2010), by which *cholo* or *chola* means an urbanized person of Indigenous heritage, that according to Nash (1979), "[…] it is a cultural rather than a racial category." (Nash, 1979: 2). This process was particularly evident in Oruro, among other cities, with the miners, as I explained in the previous chapter, that after being dislocated from rural life, created a new urban proletarian working class (Albro, 2010; Nash, 1979; Taussig, 1980). Morales through the concept of *indigeneity*, on one hand, created a globalized rhetoric of social justice and revendication of indigenous values, while on the other, simplified a much more complex reality. Especially in Bolivian urban areas, new urban classes of professionals and indigenous merchant – *burguesía chola*, chola bourgeois – have been rising (Canessa, 2006: 257). Maria, the anthropologist who worked for an NGO in Oruro, grew up and studied in La Paz, and explained to me this phenomenon in these terms:

> "There is a class, we have to recognize that here a large part of the population is Aymara, I'm also of Aymara descendent, […] so there is a class of Aymara traders, that has been enhanced economically, very much. They have the means to travel to China to buy [stuff]. For example, the *pollera* (typical skirt) of the *chola*, people say but I don't know for sure, has been brought from China. We have to recognize, that the Aymaras of some sectors, not that all the population is included, have become an enhanced class, that some calls it a "*burguesía chola"*, a small Aymara bourgeois [class]. They have a commercial alliance; therefore, one can see it, how to say it, in strategic terms that they can enhance this type of alliance. […] Moreover, there is a lot of money involved, so to say, for the Bolivian reality that is very precarious, they made a videoclip, that it was said to be the most expensive made in Bolivia, for a party here in the Hotel Presidente. This to say that, it's very interesting because they are all dressed like in these reggaeton videos, where they arrive with luxury cars and women. It's like these but with Aymara women, with *polleras*, it's like this. When has this happened in my country? There's a lot of things going on." (interview, 06.03.2019)

In another interview I had with two middle-aged women in Sucre, who did not identify themselves with any indigenous group, they told me:

> "Those in power now are indigenous, and they are the one who do these kind of things[68], because they are protected by Evo, for this reason they are not afraid. […] The situation is complicated, it's hard to understand. It could seem that the situation improved a lot, now that indigenous people have rights, but it's not easy to understand how the situation really is. There are good and bad people, like everybody. They are ordinary people with the same desires and aspirations."

The second woman continued:

> **"**The problem is that indigenous people are those who discriminate the most, among themselves. They reject their being indigenous. For example, I work in a hospital and there are many who work as assistants or technicians, and are of indigenous origin, and they are those who treat *campesinos* (peasants) the worst. Because they say that they are from the city […] and they don't want to speak Quechua, but they know how to speak it." (interview, 14.03.2019)

These interviews show what Canessa (2014) referred to the changing dynamics of the urban working classes in Bolivia, and the difficulties in understanding the real situation. This sustains my previous argument, as it shows the fundamental contradiction in Bolivian politics of

[68] She referred to a previous conversation about drug-trafficking, corruptions, and scandals during the Morales' administrations.

indigeneity, where a vast and rising part of the population sought economic growth and personal interests, while self-identifying indigenous, instead of sacrificing for a communal, humble life – *bien vivir* – that was at the centre of Morales' indigenous rhetoric (Canessa, 2014: 161). During the Morales' administrations, this growing middle class – among them: *cocaleros* (coca growers), urban indigenous bourgeois, miners' unions – became powerful political actors, able to influence political decisions – as outlined in chapter 4 –, while the most discriminated remained the small peasants' communities (Canessa, 2006: 259). Moreover, as Albro (2010) argued, Morales failed to address the concerns of the urban indigenous people, especially among the poorest, whose situation did not change. The urban poor in fact, have not seen the results they had expected or what had been promised to them, while they assisted a new wealthier social class emerging (Farthing and Kohl, 2014: 147). This sentiment was expressed by Mr. Gomez, who self-identified as Quechua. He argued:

> "The two biggest populations (among the 36 ethnic groups recognized in the constitution) are Quechua and Aymara. The Aymaras [have more power] because they are in the government. […] Look, for example the Aymaras regarding territories and population, go from here, Oruro to La Paz. These two departments, or one and a half. On the other hand, we Quechuas are in Oruro, Potosi, Cochabamba, Tarija, part of Santa Cruz, and part of Beni. However, for example, Sucre is the capital of Bolivia […] but they moved it to La Paz. Basically, La Paz is the political and economic epicentre of the country […] this is an internal fight between regions. […] We Quechuas are more in numbers, the Aymaras are less, but they have power, and this is what they are doing in La Paz. And this is what we are going to do, an internal fight. The next president will probably be […] Quechua." (interview, 18.02.2019)

In another interview I had with Juan, the engineer I interviewed in Uyuni, he expressed his vision of the Aymaras' growing political influence in these terms:

> "What you have to understand is that the Aymaras are the 80% of our population".

Author, "and Quechua?"

> "No, Aymara. The rest are Quechua or mixed Guaraní. […] It all goes back, I repeat, that they are Aymara, and the Aymaras are traders, and the first thing they are interested in is money. […] Therefore, because the Aymara is such a big tradesman, he is the one who sustains this country. El Alto is the biggest trading city of whole Bolivia. […] If Evo Morales touches their pocket, they suspend everything. Once, for example, [the government] tried to raise the price of the gasoline, and the whole El Alto protested, and the government had to revoke the decree the day after." (interview, 27.03.2019)

All these interviews, although from people with different perspectives, backgrounds, and interests, express the same point, that is this changing of power structures in Bolivian society. They all confirmed the inherent contradiction present in the concept of *indigeneity*, which more than anything else served as a tool to legitimize Evo Morales' rise to power and its extractive strategy. They also showed the political importance that new social classes acquired, like the rising Aymara middle-class, and their power to influence state's decisions. Moreover, they show how Morales' 'process of change' did not ameliorate inequalities, but it rather created new ones. In this section I demonstrated that the political discourses on *indigeneity* during the previous government, have shaped local interpretations of the Bolivian society and the state. What is, however, relevant for this study, is that these discourses have shaped local interpretations of the lithium-extraction project, as the promise inherent to the plan did not address local expectations, aspirations, and needs, which were in no way coherent. The promise for a better future in fact, as I will further argue, did not take into accounts the socio-economic inequalities and differences present in the modern Bolivian society. These inequalities are especially visible during protests or claims regarding redistribution of benefits and more job opportunities in the poorest region of Potosí. This will be the focus of the next chapter, while I turn now to the discussion of the promise carried by the lithium-extraction plan.

5.4.3 The Promise's Constraints

I previously showed the kind of relations and obligations that the performative promise creates between the promisor – state – and the promisee – public, homogenized mostly indigenous –, while now I explore its limitations. First, a central aspect in the maintenance of this informal contract between the state and the citizens is its enduring through time. No matter how meaningful and convincing the promise is perceived by the public and how enchanting is the plan, one of the most difficult aspects for the promisor to fulfil, is maintaining this performance through a long period of time. Many modern plans and infrastructures, in fact, need many years to be accomplished, and while they change in time so do their promises (Appel et al., 2018: 27). The lithium-extraction's plan was from the beginning very ambitious and had to face many challenges – lack of capital, of infrastructures, of technologies, of expertise, and of a benchmark on which to base the planning – which constrained its realization. Ten years after the starting point, the plan became the centre of huge criticisms, one of which regards the delays

in the different project phases (Sanchez-Lopez, 2019a: 18). A man who worked as a driver in Uyuni, expressed his frustrations in this way:

> "For seven years, we haven't seen any results from the extraction of lithium, it's ridiculous. This is very strange. In six years, let's say, we haven't had any results that could be economically commercialized. […] We haven't seen anything yet. Only destroying, destroying, excavations, land-scrapes…It'd be better that if there aren't result, they should leave nature (*naturaleza*) as it is, not, let's say, destroy it." (interview, 26.03.2019)

The plan in fact, needs to produce concrete and measurable effects in order to remain effective in people's expectations. As Abram and Weszkalnys (2013) argued, "[…] if the plan does not observe specific procedural niceties, it lays itself open to challenge." (Abram and Weszkalnys, 2013: 14). Talking with José, with whom I visited the plant in Llipi, this aspect emerged when he affirmed that the government was very exigent about results, and that they had a precise deadline by which everything must be accomplished. When I asked him until when, he first said in two years, but when I asked him later again, he answered, "It is planned for 2025, this whole plant, the second one[69]." (interview, 29.03.2019). The year 2025, as I previously argued, was very important and it represented the official endpoint of Morales' targets, expressed in the 2019 electoral campaign. In his rhetoric, he renewed his promises and postponed the concrete results to a very meaningful and symbolic year for the country, asking therefore, the population to endure a little bit longer. However, in light of the tremendous electoral disaster that happened in October 2019, I can state that this discourse did not have the desired effect[70], proving once more, how important the support of the public is in legitimizing such future-oriented, ambitious plans.

Problems in believing in the effectiveness of the plan arise also when the sincerity of the promisor is at stake, and the efforts to fulfil the promise are not seen as relevant (Abram and Weszkalnys, 2013: 10). Under the motto "*Bolivia cambia Evo, cumple*" (Bolivia changes Evo, fulfil) were built or implemented most of the social programmes, plans, and public works since 2007, as they all represented a step toward an idealized better future. The slogan served to demonstrate to the Bolivian population that the Morales' administration was maintaining his

[69] See interview at p. 89.

[70] The presidential elections happened on the 20th October 2019, with a first victory of Morales, who was later accused of electoral fraud by his opponents and a great part of the population, who protested for weeks and forced Evo Morales to step down and flee to Mexico. BBC News. 22.10.2019. *Bolivia election: Anger mounts over result confusion*. https://www.bbc.com/news/world-latin-america-50134451

promises. In fact, it was broadcasted a short TV commercial with the same name in 2013, where only the figures and money invested in these sectors: healthcare, education, sport, infrastructures, basic sanitation, were reported [71]. Despite the figures, I encountered a widespread sense of doubt and mistrust in government's capacities to accomplish its plans for the future, which was deepened by other factors besides the lack of concrete results, like scandals, corruption, mismanagement of resources, drug-trafficking, and foreign interventions. All these aspects helped to consolidate the idea that the changes happened until that moment were only superficial and not enough to create the too much idealized future promised. Moreover, they accentuated the idea that the government was not qualified to accomplish the targets set at the beginning of its first mandate. The following interviews show these sentiments of mistrust and idea of superficial changes. I asked Mr. Gomez, the political activist already mentioned, if he saw an improvement regarding poverty in the past years. He said:

> "No, it didn't change, it is not that I don't recognize that some things that were planned, have been done. […] It's 13 years that he [Evo Morales] is there, but more or less in the past 6-7 years there was a strong economic boom. Thanks to oil, minerals […] most of all was oil that gave us the biggest profits […]. Today for example, we are on the matter of lithium […] it's a reserve that we have in the Uyuni salt flat and the Chinese are targeting it […] but with the complicity of this government, that is anti-imperialist, more nationalist, socialist. And that had nothing to do with this. They are handing over [the natural resources] like the other previous governments *a precio de gallina muerta* [expression that means "for a cheap price"]. In no ways are they giving added value to lithium, nor to minerals, nor to oil, nor to agriculture, I could tell you. But when they [MAS government] arrived, they made use of them [natural resources]. Nobody for example, in the parliament can use reason, or knowledge or have an academic preparation, the majority is […] as it was written in the Bible 'money and pleasure's lovers'."

His resentment for the previous government was justified by the fact that he used to work in the public sector, as he later explained to me:

> "I was one year, from June 2010 until July 2011. I saw the irregularities. […] I was more or less a coordinator, a planner in the municipality, in a jurisdiction. […] So I didn't like it when they wanted to substitute me, not because I wasn't working well, but because they didn't like honest people […] they didn't like it and they removed me." (interview, 18.02.2019)

[71] Ministerio de Comunicación de Bolivia. 4.11.2013. *Programa Bolivia Cambia Evo, Cumple*. https://www.comunicacion.gob.bo/?q=20130903/12501

In another interview in Potosí with a former miner, he expressed his frustration for the current situation in these terms:

> "What Bolivia needs is only that people respect the constitution, respect the democracy, this is the only thing we need. People are not even asking Evo Morales to [make] great things, or that he reclaims the shore[72] (*recupere el mar*), or something like this. The only thing that they have asked and are asking right now, like organizations as *Movimiento Ciudadanos* (Citizens' Movement), they are asking that **he** respects the constitution. That he would be able to step aside and say that he will not do it. […] I tell you, if they let us have clean elections, and to say […] that he would not take part, then he would valorise and respect the population, and the person that will be elected would have 5 years, right? Then, in this case he could come back and candidate again and demonstrate to everybody that they had made a mistake. The passing of time and the experience will let him win even more, but as he is into his politics of serving the big Asian capitals like China, […] therefore, if he stays longer, more would be extracted from Bolivia without anyone saying a word. So, this is the problem […] the government is not respecting the democracy, and not even individual rights […] The biggest problem that the [people in the] government have, is that they must accept that they made mistakes in several things and are continuing to make them. The discourses that Evo Morales makes are… how I could say…too childish."

Later in the conversation I asked him about the situation in the Uyuni salt flat, and I understood that part of his frustrations derived from a perceived mismanagement of the resources in the region, most of all regarding lithium.

> "When Evo Morales rose to power, we have been fine for 5 years. Potosí didn't receive anything, because we said that during this time, he had to change many things, and one person cannot do it in one or two years, the things that had been done in decades. Therefore, the only vision was to give [him] an opportunity […] but from there to five years we saw that his vision has been worse, more oriented toward capitalism, not from USA, but rather toward the Asian capitalism that is the same monster and doesn't forgive anything. How many countries have found themselves without resources? This is the problem. I agree with the investments […] however, from all of these not even 1% goes back to Uyuni. Therefore, the plant of lithium, and the other… the processing one, should be here in Potosí. They are in La Paz, in El Alto, so this is the problem. I mean, that those are who benefit, not the region that is the owner of

[72] With "*recupere el mar*" he means the claims that Bolivia has made in decades to Chile to have access to the sea, lost during the Pacific War in 1884. Morales brought the issue in front of the International Court of Justice, raising expectations on the population, who still celebrate every year the "Day of the Sea", while Bolivia still has a small navy. See also footnote 20 at page 40. BBC. 1.10.2018. *Bolivia Sea dispute: UN rules in Chile's favour*.

> the resource. […] But let's see, if we realize [this], we can see what will happen in the future. What happened with other salt flats, why are some not exploited? For example, the one in Argentina, why they don't exploit it? […] Because they know the environmental consequences. […] It's sustainable in the sense that it is a business, that can be self-sustainable, for this reason they call it sustainable." (interview, 11.03.2019)

In this next interview I had in Uyuni with a man, who worked in a small family-run tourist agency, he expressed many similar concerns when I asked him to describe the problems in the area:

> "Now there is a Chinese company who has been adjudicated to extract lithium in the salt flat, in this whole southern part, how to put it…it's being destroyed to extract lithium. They are making pools, there are many machineries, then, I don't know, the project is to extract tonnes of mineral of lithium, so (silence). […] Now they have already started, this is another concern for tourism, because we, if the salt flat is going to be destroyed, cannot do tourism. […] I think that [they will destroy it] let's see, it depends on the government. For example, now they've started in the southern part, but I don't know in how many years they will start to advance."

I, then, asked him if it was not a national company extracting the lithium in the salt flat. He answered:

> "Yes, it's national. […] In this case there is also a foreign company […] they extract the raw mineral, not processed. […] I think the politic will change, because Bolivia is going to invest, but it needs a lot of money, it doesn't even have enough to extract the mineral, so no matter what, they need the help of a foreign company. […] I think they will do it [batteries] because the Chinese are involved. They are in the whole country; they have a strong relationship with our government. […] There are people who are not supporting that much the government […] the politic is going bad. There aren't any projects to hinder contraband. Yes, because the government (whispering) is the government that comes from the *cocaleros* (coca growers), and because they were those who supported the party, it cannot turn his back on them, therefore there aren't many laws to stop the production of the coca [leaves] and there are quantities of coca that are used for the drugs, cocaine. Therefore […] this area is a red zone. I recently saw news that in Chile was found a big cargo that came from this side of Bolivia. So, this is what is happening, and people are realizing this, and it's not right! When there was the other government from the right, they had agreements with the United States and there was more control, so people were working more, while now there are many who dedicated themselves to smuggling drugs or other things. This is very bad! (*Esto es muy malo*!). Unfortunately, it has increased […] every day I watch the news of Bolivians that are caught in Chile, and the

> cargos are Bolivians. […] In Chile there is more control. […] No, no it doesn't stay here [drugs], here it is only produced, but is consumed somewhere else, it goes to the USA or Europe, but it has to reach a port." (interview, 25.03.2019)

These interviews show a general sense of mistrust and frustration in how the situation appears, which was fundamentally different from what they had envisioned. At the beginning of Morales' mandate, they all had big expectations regarding the future, that did not materialize in the ways they expected as the years went by, while on the contrary they started to see irregularities and contradictions between Morales' discourses and what they experienced every day. This sentiment of mistrust in the government's doing, that I encountered in most of my interviews – especially in Uyuni and Potosí –, was fundamentally connected to the politics of natural resources. The historically rooted perception that natural resources' extraction is inevitably connected to foreigners or national elites' enrichment, seemed not to have changed no matter the attempts in transforming society, as also Kohl and Farthing (2012: 227) pointed out. Moreover, new phenomena in these regions like increasing drug-trafficking, smugglings, scandals of corruption, all linked to the MAS representatives, have deepened the perception that Morales was not maintaining his promises, but rather that the figures served to blur what was really happening.

In this chapter, while looking at the extraction of lithium in Bolivia through the lens of planning, I was able to first grasp the different interpretations of the future promised by the plan. The planning activity envisioned by the Morales government, on one side, was more complex than any other extractive project carried out in the country, because it was part of a broader set of discourses, practices, and strategies, which went beyond the extraction of lithium itself. I showed that lithium-extraction served as the actual proof and a concrete example of the process of change initiated by Evo Morales in 2006, which sought to transform the Bolivian society. In fact, Morales by developing the lithium industry from zero, tried on his own terms to inverse the curse that has seen Bolivia only as a supplier of raw materials for centuries. In this context, industrializing the country through a process of modernization – envisioned with the lithium industry – meant inverting the curse and achieve development. On the other side, I showed that no matter how the promise may be enchanting, there were several major obstacles that hindered the future outcome environed by Morales. In fact, the promise, through processes of abstraction and simplification (*indigeneity*), neglected the many differences and socio-economic inequalities present in the Bolivian societies. In this context, local people may interpret and envision their better future in many different non-coherent ways, which could be in opposition

to the one envisioned by the plan. In this regard, I showed that some urban dwellers, even if they may identify themselves as indigenous, sought economic benefits and rejected the vision proposed by Morales of a humble and communitarian life. Moreover, I showed that local people's opinions and understandings of this future vision proposed by the plan, have been changing over time and have been negatively affected by delays, scandals, corruptions, and drug-trafficking. In this regard, I want to highlight three episodes which were often referred as crucial during my interviews and conversations.

The three episodes that I will outline are: the TIPNIS case, the scandal of the *Fondo Indígena*, and the constitutional Referendum in 2016. The TIPNIS (*Territorio Indígena y Parque Nacional Isiboro Sécure*; Isiboro Sécure National Park and indigenous Territory) case referred to an accident happened in October 2011, when police forces resorted to violence in order to stop the protests and a march of several hundreds of indigenous people, who were trying to block the construction of a highway though their land, recognized by the constitution as an Indigenous Territory and a National Park. This event was particularly relevant, because the march of indigenous people trying to protect their environment, reached international attention, although it contributed to create an over-simplification of the intrigued map of overlapping and conflicting demands and interests of those involved in the march, as McNeish (2013) argued. Based on his ethnographic research during that time, he unravelled a more complex reality between the state, indigenous leaders, the coca-growers, and the communities that did not follow a clear abstraction. While the state failed in the first place, to provide proper information of the potential environmental, social, economic, and cultural impacts and granted the project to two Brazilian companies before a proper consultation with the indigenous leaders, the latter made use of environmental rights to obtain a more felt-priority, that was the defence of their territory and autonomy (McNeish, 2013: 229). Moreover, the area was rich in natural gas – exported in large quantity to Brazil – while another part of the territory was colonized in the 1970s by Aymara and Quechua *campesinos*, who started to cultivate those lands growing coca plants. They became a powerful social-class, known as 'coca-growers' (*cocaleros*), whose former leader was Evo Morales, and therefore became the main state's supporters, who in this situation had also direct links with the Brazilian companies in constructing the road. The unexpected international media coverage permitted also to indigenous leaders of the TIPNIS to add demands to the initial claims, granted at the end by the government with the intention of solving a dramatic national issue (McNeish, 2013: 229). This episode was the first to show with such an intensity that despite its rhetoric, the state failed to leave behind the country's

historic baggage of inequalities, that were also perceptible in the Potosí region in regard to lithium-extraction or in relation to mining activities and cooperative miners, as I previously argued.

The second episode regards one of the biggest scandals of corruption that occurred during the 13 years of Morales' administration. Despite the emphasis on the anti-corruption fight stressed by the MAS government, scandals remained a part of daily life, however considering that before 2005, Bolivia was already ranked as one of the most corrupt country in the world[73] (Farthing and Kohl, 2014: 63). The scandal of the *Fondo Indigena* occurred in 2015, and it was particularly relevant because it concerned more than 200 people, among them: MAS executives, ministers of indigenous affair, trade union leaders, and senators, where many of them were in the government since the first Morales' mandate. In this context, US$ 6,8 million[74] were stolen from the Indigenous Fund (*Fondo Indígena*), which was created by the state to finance development projects in rural areas. This ruined irreversibly the MAS reputation and its credibility in front of the Bolivian population[75], and gave free rein to racist discourses already present in the country, primarily from the right-wing opposition, like the following comment I heard from an informant, "Ah this is what happened when you let indigenous people govern" (interview, 6.03.2019).

The constitutional Referendum in 2016 was in a sense the 'straw that broke the camel's back.' Evo Morales tried to change the Art. 168 of the constitution, which prohibited him and the Vice-President to run again for a fourth mandate[76]. Although, the referendum was voted down by a 51% of the majority, in 2017 Morales applied to the Plurinational Constitutional Court to abolish the term limits. In November of the same year the Constitutional Court granted him the possibility to run again as it was his fundamental right as citizen, reinterpreting in this way the situation without changing the constitution[77]. This is what, in the previous interview with the former miner in Potosí, he meant when he said, "What Bolivia needs is only that people respect

[73] In 2011, Transparency International ranked Bolivia 118 of 183 countries (Farthing and Kohl, 2014: 174).

[74] Around €5,7 million.

[75] CNN. 11.12.2015. *Millonario escándalo de corrupción en Bolivia: investigan desfalco en el Fondo Indígena*. https://cnnespanol.cnn.com/2015/12/11/millonario-escandalo-de-corrupcion-en-bolivia-investigan-desfalco-en-el-fondo-indigena/

[76] According to the Constitution (Art. 168) the President and Vice-President can only be re-elected once after the first mandate, which started officially in the case of Morales in 2009, while his election in 2005 does not count as first mandate as it happened before the stipulation of the Constitution.

[77] The Guardian. 17.12.2016. *Bolivia's president Evo Morales to run again despite referendum ruling it out.* https://www.theguardian.com/world/2016/dec/18/bolivias-president-evo-morales-to-run-again-despite-referendum-ruling-it-out

the constitution, respect the democracy, this is the only thing we need." (interview, 11.03.2019). This episode demonstrated the resolution of the government to stay in power, but no matter the Morales' political discourse that justified this act as the only way to continue what he had started – where the promise 'for a better future' was still at stake –, an even bigger part of the population, despite their political stance, started to question his doings as legitimate. Especially in South America which already experienced many atrocious military dictatorships – Bolivia included –, the public good was not perceived anymore as a priority but rather as an episode of 'intoxication of power', during the many conversations I had with the local urban populations.

This leads me to my final point, that concerns the contradiction inherent the concept of the promise, which comes into being due to ideologies and planning activities that are not 'just' locally bounded, but rather have become global *ideoscapes* (Appadurai, 1990), which are part of a broader new world of ideas and images that flow and transcend national borders, creating new relations between multinational organizations and national states (Abram and Weszkalnys, 2013: 19). Nevertheless, by looking at planning activities only through the arenas where they are most visible (the state, politics, and development, expectations), we may lose sight of the material practices that involve planners, citizens, expertise, victims of planning, and all of those who come to experience the planning practice on their daily life. In fact, plans all over the world are often characterized by unexpected and inexplicable things, such as delays, additional costs, and local oppositions, which remain external factors unless we see them through the notion of the promise, which tries to control one specific future outcome. These unplanned things, however, become visible only through people's interventions who have a different interpretation on how to achieve their better future. These tensions and gaps, between what is promised and the interpretations of it, are in this light part of the planning activity and belong to the modality of planning. As Abram and Weszkalnys (2013) argued, "The 'gaps' between ideal, ideology, and practice fill themselves with things unplanned, unexpected, and inexplicable, and with things that get overlooked and forgotten." (Abram and Weszkalnys, 2013: 23).

In conclusion, I argue that studying planning ethnographically was effective in shedding light on the way the extraction of lithium is interpreted by different actors. Most importantly, by looking at the notion of the promise as a starting point of the analysis, I was able to uncover the different discourses and contradictions involved and their effects on the local level. In fact, as I initially argued planning must be conceived beyond economic terms, as embedded in a more complex social context, with the ability to generate great effects on the local level, like

high expectations. I argue that understanding local interpretations of the extraction is central in determine if the project will proceed and with what effects. In fact, if local people start to oppose it, as I will analyse in the following chapter, the project may not continue as planned, and therefore causing further delays, or in the worst case, even been stopped as it happened in the TIPNIS. In the next chapter, I argue that understanding if the promise of planning is contested and for what reasons, help to uncover the nature and the future outcomes of social conflicts. In fact, in this chapter I demonstrated that urban dwellers in Uyuni and Potosí showed their expectations and aspirations in relation to lithium-extraction according to their need, not homogeneously, but rather in many different and often messy ways. In the next chapter I will go further and present the last focus of this study, where I will use the analysis of local interpretations and perceptions of the extraction of lithium as a starting point to understand the potential and nature of conflicts in the region. I will, however, do not focus on the vast range of social and environmental conflicts in the area, but rather present one example happened in Potosí, to demonstrate that claims over access, control, use, and distribution of lithium as a resource are based on this understanding of planning outlined in this chapter.

Author's photograph of the evaporitic pools, while visiting the plant in Llipi (29.03.2019).

- Chapter 6 -

LITHIUM AS A TRIGGER FOR PEOPLE'S ASPIRATIONS

"We must take the side of ordinary people: a new page of history will be created by the passionate spirit that emerges from human solidarity. It does not exist a force more overwhelming than people themselves, neither a more solid foundation. Nothing is scarier than their longing for justice. In front of such power, authority, wealth, and fame are just smoke and mirrors".

(Daisaku Ikeda)

One of the least expected things that I happened to witness during my stay in Uyuni was the parade on the 23rd of March for the "Day of the Sea". As I previously mentioned[78], Bolivia lost the coastline during the Pacific War in 1884 and since then, they have been commemorating on this day their legitimate right of access to the sea. I was walking on the streets as I heard the marching band playing folkloric music. At first, I did not pay much attention to it, as I got quite accustomed to hearing this kind of music, but then groups of small children in neat rows and dressed in colourful sailor outfits caught my attention. They looked like little adults to me, waving to the crowd and carrying banners and flags with the colour of the Littoral Department – which is still recognized by the Bolivian state as its 10th department, although it is Chilean territory. After this episode I came to understand clearly how expectations can be built among the population, even when it comes to highly unrealistic issues. In fact, during my many conversations even when my informants were complaining about the previous government, they always expressed the hope that Morales would regain the coastline. In one occasion a middle-aged man in Uyuni told me, "All Bolivians carry hope. Hope is never lost!" (interview, 25.03.2019). While looking at those children marching, I understood that those words and this unrealistic hope did not only depend on the claim made by Morales to the International Court of Justice (2015-18), where Bolivia lost the case. It depended rather on this annual commemoration on the 23rd of March, which cyclically reconstructs and reinforce in people's imagination a feeling of injustice against Chile for invading the Bolivian coastline. Especially important was to see how this feeling is passed on with such a consideration to younger generations.

[78] See footnotes no. 20, p. 40 and no. 73, p. 107.

I concluded the previous chapter arguing that unplanned and unexpected things are part of the planning activity rather than being external factors, and they become visible when people start to contest the plan. Previously, I argued that the concept of the promise is key to understanding how people interpret the achievement of their better future and that these interpretations may differ among different actors – from promisor to promisee – or it may change over time. Moreover, I analysed the aspirations of the promisor (i.e. planners, workers), the constrains and contradictions that the promise carries, together with the difficulties to maintain such a promise over a long period of time. I also analysed local interpretations of lithium extraction and how lithium as a resource is understood to be a great source of economic wealth. In this chapter, I focus on how the promise for a better future is contested by urban dwellers in the main cities of the department of Potosí. I argue that this was especially visible in the city of Potosí, which regardless of its past splendour, remains the poorest departmental capital of the country (Romero Valenzuela, 2019: 210). In this chapter, I show that the expectations toward the lithium industry are connected to this critical economic situation and therefore, the promise carried by the plan translated into a promise of major economic benefits and employment opportunities. Moreover, the city of Potosí, as being the capital of the department, represents the highest political authority which can directly contest the plan. In the past 13 years, the extraction of lithium generated several hopes and aspirations on different levels – individual, single communities who live around the Uyuni salt flat, cities, departmental –, which were fundamentally different, if not sometimes opposed, and inevitably lead to disagreements and contestations (Hollender and Schultz, 2010; Ströbele-Gregor, 2012; Calla Ortega, 2014; Romero Velenzuela, 2019). My aim here, however, is not to analyse the vast and intrigued map of socioeconomic disputes that occurs on those levels – as it is a very complex panorama without a single point of view of local population – but rather to look at the dissatisfactions and frustrations among the city dwellers, as a starting point for understanding social mobilizations or potential conflicts. I will outline one episode, where the representatives of the city of Potosí, COMCIPO (*Comité Cívico de Potosí*, the Potosí Civic Committee), have contested the plan and generated forms of collective actions which, in one case, have converged into a political mobilisation. I take into examination the non-violent roadblocks and complete shutdown of the city of Potosí that lasted 72 hours, from the 30th of July until the 1st of August 2019, organized by the COMCIPO, to which participated the great majority of the city population (phone conversations, 30-31.07.2019). The blockage had three requests to the MAS government, all related to the exploitation and management of natural resources in the region: a greater

participation (royalties) in the extraction of lithium, the defence of the Silala water resource[79], and the protection of the Cerro Rico of Potosí[80]. Although, I did not personally participate at the blockage, as I had already returned to Vienna, I had a frequent exchange of information (which continues to this day) through phone calls, text messages, videos, and photos with Mr. Lérida, my closest informant in Uyuni, who is also a member of the COMCIPO and the president of the defence committee of the evaporitic resources and of the Silala water resource. Moreover, during my stay in Potosí, I was able to grasp this sense of frustration and feeling of injustice toward the MAS government in relation to the politics of natural resources among the city dwellers, which I argue, are the starting point for analysing political mobilizations and social conflicts.

6.1 Showing Dissatisfaction

During my field work in Potosí and Uyuni and after the many conversations I had with their dwellers, I noticed a visible and profound discontent with the actual socio-economic situation. I perceived that waiting and hoping for future benefits to come was not an option anymore, as the initial economic boom during the first Morales' mandate (2006-2010) had started to slow down, leaving the population of Potosí with the same economic problems. In fact, by looking at the percentage of poor population in the department of Potosí (59,7%) in comparison to the national percentage (44,9%), in which indicators of basic needs (water and sanitation services, energy suppliers, education, and health services) are taken into account, it becomes evident that not only Potosí is the poorest region in Bolivia, but that the municipalities around the Uyuni salt flat are among the poorest in the region[81] (INE, 2012).

Previously, I presented some of the reasons why people in Uyuni and Potosí showed dissatisfactions in relation to the MAS politics of natural resources. Firstly, I argued that the extraction of lithium was perceived to be carried out by foreign companies, mostly Chinese, regardless of the nationalization of the process of extraction and industrialization. I also argued that this perception was strengthened by a deep-rooted imagination of the country being

[79] International conflict between Bolivia and Chile for the right to use the Silala subterranean sweet water. https://ejatlas.org/conflict/aguas-del-silala-potosi-bolivia

[80] Los Tiempos. 01.08.2019. "*Paro de 72 horas en Potosí culmina con el bloqueo de las calles*". https://www.lostiempos.com/actualidad/pais/20190801/paro-72-horas-potosi-culmina-bloqueo-calles

[81] The data is based on the 2012 census and taken from the National Institute of Statistic of Bolivia (INE). https://www.ine.gob.bo/

exploited only by the benefits of foreigners. Secondly, I showed that many changes brought about by the MAS government, were felt like superficial, as they did not fundamentally solve the socio-economic problems in the long run, especially in urban areas (e.g. lack of employment, services, healthcare, education), as a man in Uyuni once told me:

> "There are many things lacking and much to do in the city, lack of hospitals for instance." (interview, 25.03.2019)

Thirdly, I showed that a great sentiment of mistrust and doubt in the government's doing was present during my conversations and observations, which I argued depended on many factors: delays of the lithium project and additional costs, scandals of corruption, drug-trafficking, smuggling, contradictions in the Morales' discourses of environmental protection. In this regard, I observed that during my stay in Uyuni there was a scandal of corruption in the area around the city, which involved an illegal sale of lands by some MAS representatives, most of all the mayor of Uyuni[82]. Mr. Lérida, who lives in Uyuni, explained to me the situation in these terms:

> "The mayors of Uyuni, Tahua, and Lica belong to the MAS. They are the most corrupted authorities. They pocketed almost 40 million BOB[83], which are more than US$ 6 million. […] The money was obtained from the sale of land plots. The municipality sold the lands but without entitlements, and now the mayor was taken, but those who paid [for the land plots] don't have the entitlement and don't know what to do. Now that they lost their money and their lands are getting organized. But why is he [the mayor of Uyuni] in prison? Not because the justice is good, or it works…No, the government knew that if they wouldn't put him in prison, the people would have revolted against the government. […] This is the corruption!" (interview, 28.03.2019)

What he told me was confirmed to me by the news I heard on television the day before, and by a sign I saw on the door of the townhall of San Cristobal, which stated that they were revisioning every claim of land entitlement until the end of April 2019.

As I outlined in the previous chapter, all these episodes were experienced by local people as irregularities, which according to my informants, increased in the past years. Most of them – especially during my conversations in Uyuni – evaluated these episodes as something "bad"

[82] El Deber. March, 2019. *Uyuni: procesan al alcalde del MAS por transferir terrenos a particulares.* https://eldeber.com.bo/65589_uyuni-procesan-a-alcalde-del-mas-por-transferir-terrenos-a-particulares

[83] 40 million BOB amounts to more than 5 million EUR.

and "not right" of which they were ashamed[84]. The discourses and the process that made lithium one of the most wanted and valuable resources on an international level and in Bolivia, produced great effects on the Bolivian society. As Arellano-Yanguas (2012) argued, the greatest is the natural resource wealth perceived, the highest are the expectations at the local level, which paradoxically, results in greater frustration when these expectations are not fulfilled. I argue that this is the case of lithium in Bolivia, where I observed that people's discontent and frustration developed in a sense of injustice in terms of access, control, and utilization of lithium. Additionally, I noticed that my informants did not perceive the 'public good' promised by the government as its priority anymore. This was expressed while I talked with a man in Uyuni, where he stated:

> "Yes, there could be someone opposing the government, who says that there is free expression to demonstrate, but it's not like this. No, we cannot do anything. There is no justice!" (interview, 26.03.2019)

In another conversation I had with a young man in Potosí, he did not seem disillusioned by the government's promise of a better future, but rather resigned, while he expressed to me his feelings, as nothing had really changed in Bolivia. He said: "It isn't something new, like every President and every government." (interview, 9.03.2019). As I previously outlined, local interpretations of the promise are central for the successful continuation of a project. In this regard, Bebbington (2012: 223) argued, that local perceptions are essential in understanding the emergence of conflicts, as well as weather what is actually happening is what different actors believe is happening. He stressed then, the fact that even more than local perceptions, what is relevant is the relative power of these perceptions, which determine how the extraction proceeds and with what effects (Bebbington, 2012: 223). In this regard, what both interviews highlight are what Bebbington (2012) referred to with the 'relative power of perceptions', where in fact, both men felt that their point of views were not relevant, or practically, that no matter what they do, it will not make any difference. In this context, I conclude that the greatest reason for causing people's frustration derived from a discrepancy between what they had envisioned (what is planned) and what they experienced (actual project), as often happens when such ambitious projects are carried out (Abram and Weszkalnys, 2013). I argue further that during my conversations and observations in Uyuni and Potosí, I came to understand that the promise for a better future was interpreted by the vast majority as a promise of more economic

[84] See interview p. 107, chapter 5.

benefits and job opportunities in the region. I will show that both expectations have been disappointed, which in turn generated the discontent I was referring at the beginning of this chapter. I will explore these two aspects in more depth further below, where I argue that they are essential in understanding the claims made by the COMCIPO to the MAS government in relation to the extraction of lithium.

6.2 Local Interpretations of the Promise for a 'Better Future'

6.2.1 Resource Fairness and Lithium Extraction

In this section, I analyse the expectations of more economic benefits in the cities of Uyuni and Potosí within a framework of social and distributive justice. Any system of justice is governed by institutions, nevertheless, the question that concerns this section is with the 'why' of justice in relation to natural resources extraction (Raza, 2017: 58). In fact, justice and fairness in economic terms, are perceived differently by different actors in a specific context, which in turn must be understood on various territorial scales (i.e. local, national, international). I draw from Raza (2017) in order to understand the question of resource fairness in the context of lithium extraction. She in turn drew from Fraser's (2010) theory of justice, where she conceptualized justice linked to the extraction of natural resources, based on three dimensions: *redistribution, representation,* and *recognition*. At the local level, fairness in regard to resource exploitation usually deals with the distribution of social and environmental costs and benefits, royalties (*regalias*), which are charged by the extractive company – in this case by the government – to local communities and the department as a form of compensation and for the right to exploit in that territory (Romero Valenzuela, 2019: 35). In Bolivia, the percentage of royalties of minerals and metals and their percentage of *redistribution* is defined by the Mining Law N° 535 issued in 2014 (*Ley de Minería y Metalurgia*), which stated that the 'evaporitic resources' – first of all lithium carbonate – amount to the 3% (LMyM N° 535, Art. 227). Moreover this 3% is distributed according to the Art. 229, which states that among this 3%, its 85% is destined to the department where the resources are located (department of Potosí) and the rest 15% to the municipalities affected by the extractive project. However, what Mr. Lérida stressed in many conversations we had, is that the redistribution of lithium's royalties is perceived by the local population as unfair, because it is the lowest percentage among all minerals and metals. He expressed this in these terms:

> "Why has lithium the lowest percentage regarding royalties in the Mining Law? With this royalty, that is a misery, the municipality of Tahua and the department of Potosí are condemned to live in misery and poverty." (phone interview, 22.06.2019)

In one of the first conversations we had in Uyuni, he showed me an estimate economic calculation he made – being himself an economist – in respect to the economic benefits that the department and the municipalities should receive due to the extraction of lithium. He said:

> "The department [Potosí] only gains the 85% of the 5,4%, which is only US$4 million[85] [of the initial estimate sum of US$180 million[86]]. To sum up, the point is that the state gains almost 90% after tax. Tahua receives only a 1,5%. This is a huge disgrace. How comes that we in our territory, where there is my home, we receive the 1,5% and the central state, Evo [receives] the 90%, and the department the 8,5%? All of this because the government is investing, but what they invest it belongs not only to the central government but to all Bolivians. Therefore, we are fighting. […] This is what I will say tomorrow in Potosí." (interview, 28.03.2019)

In this interview, Mr. Lérida clearly expressed a sense of unfair redistribution of benefits, where the government's intentions were not perceived to be directed toward the good of the people, but rather to its own interests. While talking to him, I came to understand that his perception of unfairness depended mostly on the fact that the whole department although being very rich in minerals and metals, has remained the poorest one in Bolivia both in economic and social terms, because the government never reinvested their economic value in their territory. I encountered this perception of unfairness connected to redistribution of benefits, in other conversations I had in Potosí. A young man and a former miner expressed it as follows:

> "The most important thing is that the investments [of any extractive project] remain in the department of Potosí, but this isn't always the case." (interview, 09.03.2019)

> "I agree that they [extractive companies] bring investments. But even if they would leave the 3% or 30%, everything at the end would go to the central government." (interview, 11.03.2019)

These comments show that this sense of unfair redistribution of benefits was perceived also in Potosí, as local people had experienced it already many times in the past. Moreover, Mr. Lérida blamed the government for not caring for the 'good' of his municipality (Tahua) and the

[85] US$4 million are equals about €3.4 million.

[86] US$180 million equals about €153 million.

department of Potosí, and therefore accused him to be a *mal administrador* (bad administrator). He said:

> "The point is that since it [lithium] is ours, the 90% should return here. We should have all the comforts. For example, here it's all ground, there aren't paved roads. Therefore, we say that the state is a *mal administrador*." (interview, 28.03.2019)

In this regard, another issue here is raised, in respect to the ownership and the entitlement of the land and of its natural resources. Mr. Lérida in this interview and the previous one, expressed a sentiment of injustice connected to their (department inhabitants) exclusion in participating in the extractive and decision-making processes in their territory. This was evident when he said that although his home was 'here', where the extraction of lithium is carried out, nothing had really changed. This aspect re-enters in the second dimension of *representation*, that in relation to extractive activities, refers to affected people being unable to participate in respective decision-making processes (Raza, 2017: 58). I noticed during my conversations that this sentiment was also generated by a contradiction present in the constitution and in the Mining Law N° 535. On one hand, the constitution declares that natural resources are of property of the Bolivian population and that the duty of the state is to govern their exploitation and industrialization in function of the collective good (Art. 349.1; Art. 351.1). Moreover, it also declares that peasants and indigenous communities have the right to participate in the benefits of the extraction of natural resources in their territories (Art. 30.16). On the other hand however, the Mining Law N° 535, – which regulates all processes of extraction, redistribution, and industrialization of lithium –, recategorizes the Uyuni salt flat together with other 22 salt flats, as 'strategic territories' in which only the state has the authority and the right to exploit their resources (Art. 23.1). In this context, lithium, re-categorized as a 'strategic resource' while its point of exploitation (Uyuni salt flat) a 'strategic territory', became a resource which could only been administered by the central government, that acted like the owner and the governor of the Uyuni salt flat and of its natural resources. Mr. Lérida expressed to me his discontent regarding to the Mining Law N° 535 in these terms:

> "Anyone who wants to work in the salt flat must submit to this law, and the law prohibits it. Therefore, from this the discontent is generated. […] Here you read (while reading the law out loud) that neither the municipality of Uyuni, nor Tahua, nor Llica, but neither at a departmental level, we can exploit the resources that are present in the salt flat. The central state does it."

He later expressed this point even more clearly when he said:

> "I ask myself, on what will we live? The district of Daniel Campos, its territory is composed of almost 90% by the salt flat, then, on what shall we live? We must necessarily live on the salt flat. We should become rich due to the salt flat." (interview, 28.03.2019)

Here, Mr. Lérida stressed the fact that the surrounding communities are excluded from any form of involvement and of decision-making in relation to the extraction of lithium, despite their right of exploitation of natural resources in their territories, as the constitution states. The problem here is that the state declared the salt flats as being property of the state, neglecting in this way not only the economic value that this land has for the surrounding communities, but also its symbolic meaning, as Sanchez-Lopez (2019a) also argued.

On the other hand, the project was highly supported by the communities' representatives of the southern part of the Uyuni salt flat, those who live the closest to Llipi, FRUTCAS (*Federación Regional Única de Trabajadores Campesinos del Altiplano Sur de Bolivia*, Regional Unique Federation of Peasant Workers of the South Altiplano of Bolivia), in exchange for some direct and indirect forms of economic benefits [87] (Revette, 2017; Romero Valenzuela, 2019). Nevertheless, I heard that there were some irregularities in the processes of consultation. Mr. Lérida, who was born in the northern part of the Uyuni salt flat (municipality of Tahua, district of Daniel Campos), argued that his municipality, among others, was never directedly consulted in any process of consultations between the municipality's and the YLP representatives. In this sense, he argued that the consultation (*Consulta Previa*, Prior Consultation) was a de facto "manipulation" (phone conversation, 25.06.2019). Although I did not investigate in depth into the matter, other studies in Bolivia demonstrated that irregularities and non-transparent strategies were employed during the processes of consultations in regard to other extractive projects (Bebbington H., 2012; Perreault, 2015; Schilling-Vacaflor, 2017). This aspect also emerged when I talked to a socio-environmentalist in Uyuni, who worked for a private company that dealt with the mediations in the process of consultations between extractive companies and local communities. He told me that previously the amount of the compensation in Bolivia was accorded between the community leader and the company representative, leaving, in most of the cases, the communities without real benefits. He said that since 2016 the MAS government implemented the Supreme Decree N° 2169, which established a fixed percentage of compensation (1% to 1,5% of the value of the project), without a process of consultation between the two parties. In this manner, he said that it served to reduce the

[87] See the example of the village of Rio Grande at pp. 83-4.

corruption and even if, according to him, the compensation was too low, at least some benefits could finally be directed towards the affected communities. Nevertheless, he admitted that no matter the positive intentions of the MAS government, there were serious legal problems which hindered the decree's applicability, as the bank accounts for the compensations were blocked and had not yet reached the communities (interview, 27.03.2019). In the context of the extraction of lithium, my informants in Uyuni and Potosí complained that they had not yet seen any concrete benefits. A man in Potosí told me as follows, "Potosí hasn't received anything!" (conversation, 11.03.2019). In a later phone conversation, I had with Mr. Lérida I asked him to explain to me how the royalties of lithium were supposed to be distributed in the department. He said:

> "There is an [bank] account in the department of Potosí for the royalties, it is called *Fondos en Custodia* (Funds in Custody). It is an account opened by the central government, but here we still haven't seen anything. I don't know if they kept everything in Potosí or if they [government] didn't send anything. Anyway, it is all centralised in Potosí."

He went further arguing.

> "Now, that I go back I will start a legal process *Acción Popular* (Popular Action) to force the Ministry of Energy. According to the Mining Law the royalties for lithium are the lowest among all minerals, 3%. People here know little about the project, that's why they agreed. Nevertheless, we never agreed with the only extraction of lithium. It would be again like the Spaniards did 500 years ago." (phone conversation, 25.06.2019)

These comments show clearly that the discontent is in part generated by a lack of transparency and a felt injustice regarding the redistribution of royalties, which have not yet reached the cities involved. Moreover, Mr. Lérida, as others comments outlined in previous chapters, used as a comparison the historical plunder happened during the colonial time, which shows not only that this memory is collectively still an open wound, but it affects present interpretations of the governance of natural resources and their exploitation.

In this second dimension of representation, I noticed another aspect that was often mentioned during my conversations. My informants felt that it was unjust that the main office of the YLB was located in La Paz rather than in Potosi or Uyuni. A former miner in Potosí expressed it as follows:

> "The processing plant of lithium should be here in Potosí and not in La Paz or El Alto. The benefits should go to the region that owns the goods, which is the most affected." (interview, 11.03.2019)

This comment demonstrates in part what I outlined in the previous chapter, when I argued that La Paz and El Alto are perceived to be the centre of the political and economic power of the country[88]. This perception has clearly influenced the way that local people in Potosí perceived fairness in relation to lithium extraction in their territory. This issue expressed here, however, was more than a concern. In fact, it was one of the critiques made by the COMCIPO during official meetings, like the one happened on the 22nd of June 2019 in Potosí, between the vice minister of Energy and Technology, the YLB director, FRUTCAS, and COMCIPO. The latter formulated some critiques about the low percentage of lithium royalties and about the location of the YLB headquarter. The document was later sent to me by Mr. Lérida, which stated:

> "Why is the YLB headquarter in La Paz, when the Article of the tax code and the Article 371.2 state, 'The legal domicile of mining companies are established in the local jurisdiction, where the major mining exportation is carried out'?" (document, 22.06.2019)

This critique was made, once more, based on a contradiction between the law and its application. This issue influenced the already present sentiment of injustice among the people in the city of Potosí, who felt even more excluded from the decision-making processes regarding the governance of natural resources in their territory. The decision to locate the headquarter of the YLB in La Paz, was worsened by some rumours that circulated in the media in May 2019, which declared that Evo Morales decided to set the centre for the distribution of lithium carbonate in Sucre. Sucre is the constitutional capital – although the political power is centred in La Paz – and it is located only at 150 km from city of Potosí, nevertheless, it is the capital of another department. Marco Pumari, the former president of the COMCIPO, in this regard stated on the 29th of May 2019:

> "We will never give up to the fact that lithium will be managed in the department of Potosí. Regarding the fact that Evo said that Sucre will become the centre of the distribution of lithium, what should indicate us in the department of Potosí? He is telling us that we from Potosí exist only as a reserve, that we don't have the right to industrialize ourselves, but not even selling what we could produce." (document sent by Mr. Lérida, 29.05.2019)

[88] See chapter 5, pp. 100-102.

This statement made by Pumari reflects in fact, the strong sentiment of injustice that I also felt while talking to the urban dwellers in Potosí. His allusion that the department of Potosí is treated only as a reserve of natural resources, shows once more that present perceptions of justice and injustice related to the access, use, control, and distribution of natural resources depend on the prior political history of that territory, as also Bebbington (2012: 223) demonstrated. Moreover, further below, I will show that this strong sentiment was used by the COMCIPO to mobilize the city of Potosí in three occasions. However, before, moving to the third dimension of justice, I want to clarify that Marco Pumari was the president of the COMCIPO from June 2018 until January 2020, when he decided to resign in order to run for the vice presidency of Bolivia in the next presidential election (postponed to October 2020) together with Luis Fernando Camacho for the presidency. Both despite the many political differences, formed a political alliance and a new party called CREEMOS [89], as they represented one of the strongest and most radical (right-wing) MAS opponent.

The third dimension of justice that Fraser (2010) identifies is *recognition,* explained by Raza (2017) as, "[…] that is, the question whether economic, ethnic, religious, or gender status lead to discrimination with regard to the recognition of rights in society." (Raza, 2017: 58). Raza (2017) identified this dimension in the rights of local communities with respect to the recognition of rights in society. As outlined in the previous chapter, inequalities in the modern Bolivian societies, especially in urban areas, are changing. During my observations and conversations in Potosí I noticed that many of its dwellers did not feel equally represented and neither recognized by the previous MAS government. Often, I heard people talking about their wounded pride and the need to defend what is theirs. Especially, one episode told to me by a young man in Potosí, Víctor, demonstrates this point very clearly. He said that many people in Potosí were afraid that the Cerro Rico would soon collapse (since 2012 Potosí is listed in the UNESCO World Heritage in Danger), which would cause not only a tragedy in economic terms, but in terms of the city's identity, as well. Therefore, in 2015 the dwellers of Potosí turned to the governments with some requests, one among them was the preservation of the Cerro Rico. He explained to me:

> "For three years Potosí asked several things to the government: to stabilize the economic situation of cooperative miners, the preservation of the Cerro Rico, infrastructures, healthcare,

[89] CREEMOS is a political alliance between two parties: UCS (*Unidad Cívica Solidaridad*, Solidarity Civic Unity) and PDC (*Partido Demócrata Cristiano*, Christian Democratic Party).

> and an airport. But they didn't answer to anything. The Vice-president told them, "Why do you need an international airport if you don't have money?". The people were outraged, and they marched until La Paz. Miners, students, they wanted to be heard. They wanted to talk with the President not with the Ministers. But the President, in order not to listen to them, flew to Brazil. We remained 29 days without salary, as a consequence. It was terrible! In the morning people were getting out early to go to the market to buy basic grocery, what they could find. Then, vehicles couldn't enter [in the city]. They didn't bring meat, vegetables, fruits. The food got rotten because people couldn't sell it [in the city]. Potosí lives from mining; it doesn't have fields or agriculture. Those who went to La Paz were beaten by the police. There were many videos that showed how they humiliated the people of Potosí. They yelled at them (apologizing for the inappropriate words), "*Carajo Potosino de mierda que ha venido a joder a La Paz. Aquí está tu pedida*! (Damn you, shitty person from Potosí who came here to screw up in La Paz. Here is your request!)". The police said these things, but they [Potosí dwellers] only asked for something fair, not excessive things. And until now, we are continuing with the same. Now, after all of this, they are building an airport, but it hurts still. The people here don't forget." (interview, 9.03.2019)

This story that Víctor told me was clearly still very fresh in his memory, despite it happening in July 2015. It is true that the COMCIPO, miners' unions, as well as many students, political activists, and many women (more than two thousand people in total) marched for 12 days until La Paz, where they protested for other 12 days. The protest was one of the most violent that the city saw since 2005, where miners employed dynamites while the police forces made use of violence and CS gas. The protest lasted for a long period of time because the people of Potosí wanted to speak directly with the president Evo Morales, who was obliged to attend to an international affair in Brazil. They presented 26 requests, made already in 2010, to which they claimed that none of them had been ever considered[90]. After hearing this story, among others, where people clearly expressed their frustrations and indignations for what they had experienced, I came to understand that the biggest issue was related to a disrespect and unjust recognition felt among the Potosi dwellers by the government and its representatives. I observed that this unjust recognition was perceived in relation to other cities or departments, as in Potosí the people felt like they had not been treated equally. Expressions like "they humiliated the people of Potosí" used by Víctor, or others I heard saying, "*Potosì de pie nunca de rodillas*" (Potosí on his feet never on his knees), and "*Potosí se levantó*" (Potosí woke up),

[90] BBC. 20.07.2015. *Protestas en Bolivia: 12 días de bloqueos y dinamita paralizan La Paz.* https://www.bbc.com/mundo/noticias/2015/07/150720_bolivia_protestas_la_paz_potosi_ao

are expressions that show the wounded pride and the felt disrespect I mentioned above. Consequently, I argue that these interviews and comments I have outlined until now, do not show only a felt unfair compensation in economic terms, they also demonstrate that local people's discontent came from a request for equal rights and treatment. In a context of natural resources extraction in South America, Arellano-Yanguas (2012) and Humphreys Bebbington (2012) argued that, "Many protestors are not against extraction per se, but rather want a form of extraction that respects them, their cultures, their livelihoods, and their territorial claims." (Bebbington, 2012: 224). I conclude that this is also the case of Potosí, as I will successively show that the COMCIPO made use of these sentiments to mobilize the city dwellers. Moreover, what is relevant for this study is that the COMCIPO's only success to the protests of 2015, inserted in their list of requests, major lithium royalties and a direct participation in the lithium-extraction project, and made them central points to its rhetoric of defence of the natural resources in their territory. This powerful rhetoric fuelled by the sentiments of frustration and discontent showed here, is the key to understand the episode I will outline further below. But before I analyse the second interpretation of the promise for a better future, that is intended as an expectation of more employment opportunities.

6.2.2 The Promise of More Employment's Opportunities

The rate of the economically inactive population in Bolivia, according to the 2012 census (INE), accounts for 32,1%, while the economically active population for 47,2%. Albeit the improvement of the employment rate compared to the previous census (2001), the unemployment situation in Bolivian urban areas is still very critical. Moreover, as Farthing and Kohl (2014) noted, nearly seventy percent of the urban population relays on what they called the "informal sector", meaning mostly the urban poor who make a marginal living working as street vendors or other similar activities (Farthing and Kohl, 2014: 95). As I previously argued, the department of Potosí is the poorest in the country and due to its geographical and physical characteristic relies greatly on the employment from the mining sector. In this context, every new mining projects in the region create expectations of job opportunities, as Kirsch (2012) argued, "An important selling point for a new mining project is the promise of employment." (Kirsch, 2012: 203). Nevertheless, 'modern mines', as Kirsch (2012: 203) further argued, "[…] are capital intensive and require relatively few unskilled or semi-skilled labourers." (Kirsch, 2012: 203). Precisely for the technical difficulties in extracting and refine lithium carbonate

from the Uyuni salt flat's brine, many of the labourers employed in the Llipi's plant have a university education and therefore come from bigger cities like La Paz and Cochabamba. When I visited the plant in fact, I observed and talked with some workers and I noticed that many of them, especially those with a qualified position, did not come from the department of Potosí, while those who did come from the surrounding area provided mostly basic services (i.e. transportation, cleaning, cooking). The driver who drove me around the plant, while I was accompanied by two young engineers, was the only person with whom I spoke, who came from the surrounding area, more precisely Uyuni. He told me how that place looked when they started 10 years before. He said that they had absolutely nothing, sometimes not even water to wash their faces. He continued saying that since two or three years before, more and more people started to be employed in Llipi (around 400 people in total) and that since the company got bigger, they received all the comforts and everything they needed. At one point we were waiting in the car for the two engineers to come back, so he told me:

> "Now we live like kings! We have showers, toilets, cars. The new ones (referring to the two engineers) don't have reasons to complain. […] Before we suffered enough!" (conversation, 29.03.2019)

Because of my visit in Llipi, I was able to confirm this point: that the YLB in Llipi did not provide a substantial enhancement of the employment situation in the department of Potosí. In this regard, I asked Alfio, a close informant in Potosí – a man who worked independently in the tourist sector – if the government generated more workplaces in the city. He answered:

> "According to the government, yes. But it is a lie. If there were so many workplaces, why bringing Chinese companies or Chinese people to work on roads contractions? There are many Chinese who come to Bolivia with a working visa. I met some of them." (interview, 11.03.2019)

Alfio in this interview clearly contested the promise of more job opportunities, as he did not see any substantial changes for 10 years. He also expressed a sense of injustice connected to the employment of Chinese workers in Llipi and for other infrastructural works. In fact, as José, the young engineer who accompanied me during my whole visit in Llipi, told me that a Chinese company with only Chinese workers was building the industrial plant of lithium carbonate and already built the one for potassium chloride (interview, 29.03.2019). On the other hand, the Chinese company was employed to build the plants, due to its technical competences and experiences in the lithium industry, which lacked in Bolivia. Alfio expressed then even further his frustration, about the unstable economic situation in the city. He said:

> "The country improves when the situation in which one lives improves, and not because a commercial on television says so. There isn't economic stability as they say on television. The government doesn't support you to open a private enterprise. If you want a credit, there isn't any plan of the government. I had to open my agency with the help of 30 friends. […] Every time there are more and more rules which don't benefit us but the government. Now we must pay an annual tax of 500 BOB[91] for all agencies, only because it is a business activity. But what is this money for? To improve the preservation of tourist sites? No! We don't know what it is for." (interview, 11.03.2019)

Alfio in this interview showed that his frustration was in part generated from a lack of support he needed from the government, despite the promises made. In this context, he started to question and contest the reasons behind the government's real intentions. Moreover, this interview shows once more, that the 'public good' was not perceived as the government's priority, but rather as a facade used to legitimize its real intentions. I perceived the lack of workplaces as a serious concern also among the dwellers in Uyuni. Not only through conversations with the its urban dwellers, but also through local media. Especially through radio and television, to which I was able to listen and watch freely on the street or in local restaurants, as street vendors' owners usually have one.

In the context of lithium extraction, Mr. Lérida expressed the problem of unemployment as follows:

> "Regarding the issue of human resources, Bolivia did not prepare the human resources to cope with this project. For example, I don't know how many people of the region work [in Llipi], 20, 30, or 50 persons, who nevertheless are simple assistants, who work with machines, as vigilant, or for small services like catering. They are not in the chemical laboratory, those people who come from our region don't know the exact [chemical] process, they saw it but only little, because there are restrictions. This is another negative factor, generated by the government, because there aren't ways to get to know what they do and how it proceeds. Therefore, local people are misinformed." (interview, 28.03.2019)

In this interview he expressed a feeling of injustice as local people have little opportunities to be included into the process of extraction and industrialization of lithium carbonate, not only legally, as outlined above, but also due to their lack of appropriate education. In fact, his

[91] 500 BOB are nearly 65 EUR.

solution to this problem was to implement a university in Uyuni, which could properly educate local people in the fields necessary for the extraction of lithium. He argued further:

> "Faced with this critique, I planned the creation of the *Universidad Boliviana del Litio* (UBL, Bolivian University of Lithium), […] where expertise would be correctly trained in regard to the evaporitic resources of the salt flat. We thought about it earlier but due to the lack of economic resources we didn't manage. The aim of this university is to educate young people about evaporitic resources. […] The human resources should be the first factor in front of others, because if human resources are not prepared, every project will tend to fail, or will have flaws, and at the end the result will be terrible." (interview, 28.03.2019)

He criticized the education system present in Bolivia, which according to him did not prepare young people for conducting proper scientific investigations. In conclusion, he blamed their education system and the incompetence of professors, especially in their department, for the unstable economic situation in their territory and their inability to take advantage of their resources. Therefore, he argued that many young people in the department of Potosí were left without any concrete options and were forced to emigrate to bigger urban areas or abroad. He said:

> "Unfortunately, our education doesn't lead us to this path [becoming rich], because our youth instead of learning about chemistry, physics, mathematics, essential for exploiting the resources that are in the salt flat, they don't have [competences]. Therefore, many inhabitants [of the department] are forced to emigrate within the country or abroad. The government should have taken this into account, but unfortunately, starting from the Ministries, this government never had a politic that could direct youth to stay in their region. Of course, they should get an education in accordance to the resources they have." (interview, 28.03.2019)

With this interview, Mr. Lérida identifies the cause of their economic poverty primarily in the deficiency of a proper higher education in accordance with their resources. According to him the inhabitants of Potosí will remain dependent on the government or on foreign companies for their employment, unless they develop local expertise for the extraction of lithium. He stressed this fact, also in later conversations we had, as the first and pivotal step to take in order to invert this dependency cycle, which left them unable to take advantage of their natural richness. Therefore, he criticized the government and the reform on the education system they made, which according to him, aggravated the level of instruction in the country rather than enhanced it. With respect to this topic, other informants agreed with the fact that the education system in Bolivia did not improve, as well as that the number of people who emigrate abroad looking for

job opportunities did not significantly decrease. According to a man in Potosí, the government did not give priority to the education system in order to keep the population unaware of what was actually happening (conversation, 9.03.2019). While in another conversation I had in La Paz with a young IT-engineer, he said that, although the illiteracy rate lowered, many only learnt how to write their names (conversation, 14.02.2019).

More concretely, the aim of the COMCIPO was to abrogate the law N° 070 of the education "Avelino Siñani - Elizardo Pérez" (20.12.2010), introduced by the MAS government in order to reform the Bolivian education system. According to them however, this law promoted the political indoctrination and hindered a training process toward emancipation (document sent by Mr. Lérida, 31.03.2019). Finally, the plan to create the ULB was officially proposed by the COMCIPO, together with the other requests outlined above, on the official meeting happened in Uyuni on the 22nd of June 2019. In summary the four requests were: abolishment of the Articles 23, 227, and 229 of the Mining Law N° 535 (2014); developing the lithium industry not for the interests of international companies and for the developed countries; creating jobs through the implementation of an industry directed toward the exploitation of all the evaporitic resources in the Uyuni salt flat; and the creation of the UBL with the aim to ensure workplaces for their children (document sent by Mr. Lérida, 22.06.2019). Especially the last two points, express concrete alternatives for the necessity to create workplaces in the region. Furthermore, they argued that they needed investments to create more plants for the exploitation and industrialization of other minerals also present in the Uyuni salt flat's brine, like sodium chloride, magnesium, potassium, and boron, while other resources like sulphur, boric acid, ulexite, and salt have been long extracted by local communities (Sanchez-Lopez, 2019a). In this context, the greatest obstacle came from the implementation of the Mining Law N° 535, in which the exploration, exploitation, commercialization and benefits of all strategic resources are reserved only to the central government, prohibiting in this way, the formation of local companies (municipal and departmental level) for the exploitation of those resources. In this light, the claims made by the COMCIPO referred to an issue of entitlement, where the resources are understood to be the propriety of the people who inhabit the region and not of the president of Bolivia (document sent by Mr. Lérida, 12.04.2019). Following this interpretation, the COMCIPO created a discourse based on a rhetoric of defence of their natural resources against the central government, which concretized in the social mobilization I will analyse in the next section.

In this section, I showed that the promise for a better future, carried by the lithium-extraction plan, was interpreted locally in the cities of Potosí and Uyuni as a promise of more economic benefits and more job opportunities. I argued that these expectations were inevitably connected with the critical economic situation that afflicted the department of Potosí. Nevertheless, I showed that this promise was disappointed which in turned created frustration and discontent. By looking at local frustrations I concluded that local perceptions of unfairness and injustice in regards to the governance of lithium extraction derived from the following factors: the lowest percentage of royalties of lithium, exclusion from process of extraction and decision making, present interpretations of exploitation of natural resources affected by the colonial history, the location of the YLB headquarter in another department, legal contradictions and legal irregularities in the distribution of benefits, perceived inequalities, perceived disrespect and unequal treatment, past violent episodes, perceived lack of recognition, lack of new workplaces, and exclusion from Llipi's workforce. These frustrations, however, did not prevent local people from holding out hope for a better future, which was, as I will argue further, at the root of social mobilizations.

6.3 The Three-Day General Strike in Potosí

Despite mistrust of the management of lithium-extraction and disputes among local communities, local people were not opposed to the exploitation and industrialization of the evaporitic resources of the Uyuni salt flat. Moreover, none of the contestations and social conflict was of a violent nature (Ströbele-Gregor, 2012; Revette, 2017; Sanchez-Lopez, 2019; Romero Valenzuela, 2019). Bolivians have long experienced the effects of extractive activities (i.e. mining and natural gas) and their consequences both on the communities and on the environment. Nevertheless, as I demonstrated in this study, lithium generated a new perception of mining, which in turn created a different kind of oppositions and contestations based on specific expectations. How lithium is locally interpreted, in fact, derives from a completely new experience of mining. In this context, the COMCIPO represented a central political actor who was able to directly contest the lithium-extraction project, because it had a different vision on how the Bolivian government should manage its natural resources in the department of Potosí. While reading the local newspapers of Potosí (e.g. *Centella de la Libertad*, *el Potosí*) between June and July 2019, I noticed a strong rhetoric directed toward the defence of the natural resources – mostly lithium –, based on a perception of a historical injustice of

exploitation. At page 6 of the *Centella de Libertad* of the No.12, June-July issue, Claros Jiménez asked critically in his article if lithium and the Uyuni salt flat do not belong to the people of Potosí[92]. He claimed that the "proud" people of Potosí already fought and saved the Uyuni salt flat in the 1990s from the foreign companies LITHCO, which had signed an agreement with the Bolivian government for forty years of exploitation. Nevertheless, he continued arguing that the, quote, "unfortunate repetition of history itself" – referring to their colonial history – as they were facing the same unjust plunder of their natural resources, this time not from the colonizers or foreigners, but from the central government. Both Claros Jiménez and Peñaranda Medrano, in a later article on the same issue, revendicated major economic benefits from lithium and the right to develop for the 'good of the people' of the department of Potosí. These articles together with the discourses of the COMCIPO, as I will outline further below, show that the shared colonial history and the collective memory of exploitation of silver and gold, have affected how local people interpreted present situations and their perception of justice and injustice in regard to exploitation and management of natural resources.

Moreover, as I argued above, the revenues and job expectations from the extraction of lithium have been disappointed in the two urban areas of the department of Potosí. I will then show here that these disappointed expectations were central in fuelling the contestations made by the COMCIPO and were pivotal in understanding the nature of these contestations. In this context, I examine in this section, the three-day general strike in Potosí organized by the COMCIPO, lasted from the 30th of July until the 1st of August 2019. This social mobilisation was preceded by two prior similar episodes, a general strike of two days on the 1st and 2nd of July 2019, and a one-day strike on the 14th of June 2019. Although, disputes and social conflict on the local level (municipalities level) are of a more complex nature, as they are not homogeneous and without a single point of view (Romero Valenzuela, 2019), I decided to focus on the social mobilization organized by the COMCIPO, because it represented the maximum political action in regard to lithium-extraction in Bolivia. I argue that this 72-hours strike was relevant, because it saw the ninety percent of the population taking collective action, in order to revendicate their interests and what they perceived their 'common good' (phone conversation, 30.07.2019). In her study of the governance of lithium industry in Bolivia, Romero Valenzuela (2019) argued that the project was intentionally planned to exclude local actors. On the other hand, the

[92] The tile of the article states, "*¿El Salar de Uyuni y el litio, son potosinos?...''* (the Uyuni salt flat and lithium belong to the people of Potosí?).

strategy employed by the government to mitigate social oppositions on the local level, was one that put emphasis on economic benefits and of minimum environmental impact (Romero Valenzuela, 2019: 311). In this context, environmental impacts were perceived as superficial, while economic benefits, as they failed to arrive, became the major departmental concern. The project, therefore, appeared contradictory because its administration and the management of the revenues were highly centralized, which therefore did not prioritized a redistribution of benefits on the local level (Romero Valenzuela, 2019: 286).

I quote here the three requests made by the COMCIPO during the general strikes, from an official document sent me by Mr. Lérida, "Today we start the three-day general strike in Potosí in regard to the defence of our natural resources: lithium, Cerro Rico, and Silala water." (30.07.2019). Among the three requests, lithium especially was instrumentalized and emphasized in many articles and in the official statements made by Pumari or other members of the COMCIPO[93], as their strongest argument. During the general strike, in all three occasions, the city centre and the main streets were closed, without having to rely on violence. Mr. Lérida, during the three days of the strike, sent me many videos and photos, where I could see that many women and children also participated occupying the main streets. Many of them were wearing a T-shirt or waving a flag with the colours of the department of Potosí (white and red). From the conversations at the phone, and the visual material, I could perceive that the atmosphere during those three days was relaxed and that the people were engaging in conversations or peaceful marches on the streets. This showed to me that this protest and collective mobilization, made in the interest of lithium, was of a completely different nature in comparison with the violent protests made by the miners' unions of Potosí in 2010 and 2015, as outlined above. Although some of the requests of this general strike, like the preservation of the Cerro Rico, were used during previous protests, in this case the outcome and the way people expressed their frustration was completely different. First, they did not march to La Paz to reach the presidential building, but rather chose to block their own city; and second, they did

[93] El Potosí. 30.07.2019. *Cívicos inician paro de 72 horas por mayores beneficios del litio*. https://elpotosi.net/local/20190730_civicos-inician-paro-de-72-horas-por-mayores-beneficios-del-litio.html
Correo del Sur. 31.07.2019. *Potosí encara segundo día de paro en defensa de recursos naturales*. https://correodelsur.com/politica/20190731_potosi-encara-segundo-dia-de-paro-en-defensa-de-recursos-naturales.html
El Diario. 2.07.2019. *Paro cívico en Potosí por el litio*. https://www.eldiario.net/movil/index.php?n=66&a=2019&m=07&d=02

not employ dynamite or other forms of violence, which were often used by miners' unions during social protests.

Moreover, in a statement made by Pumari before the three strikes, he expressed his intention, which was his willingness to directly dialogue and negotiate with the Bolivian President, Evo Morales. He stated:

> "We are losing hope to live and remain on this land. We are condemning with our silence the future generations. To emigrate, to unemployment, and to poverty, to separations of families. Therefore, now the time has come to take to the streets. Therefore, the day 4th of June there will be a protest march against the central government, who exploits our resources of the department of Potosí. We will defend: the Silala, lithium, and the Cerro Rico. We determined also to talk with Evo and his ministers, who will have to give an explanation, with how much the department will benefit through the exploitation of his resources. [We will wait] Until the 5th of June, if not, we are organizing a general strike of 24, 36, and 72 hours." (audio message, 29.05.2019)

In this statement, Pumari clearly expressed that the COMCIPO's intention was seeking dialogue with Morales in order to renegotiate the royalties of lithium. The general strikes were, therefore, a means of drawing his attention preceding the 2019 presidential elections. As in fact some articles stated, the 72-hours strike was organized by the COMCIPO strategically before the presidential elections (20 October 2019) to obtain more benefits from the extraction of lithium in exchange for their support[94]. Nevertheless, as Mr. Lérida informed me, the dialogue between the COMCIPO and the Ministry of Energy and Technology, happened in Uyuni on the 3rd of August 2019, was disappointing and inconclusive. He stated:

> "The invitation of the Ministry of Energy to explain [the benefits] about lithium in the city of Uyuni was very late and irresponsible. This is a demonstration of the irresponsibility and incapacity by which the government mange a project of such a great importance as the one of lithium. The project of industrialization of lithium has a strong impact on the regional, departmental, national, and international level, because it will contribute to improve, mainly, the environment and it will generate financial resources." (phone interview, 3.08.2019)

This interview shows that the general strikes did not obtain a successful result and that the government failed to address properly their concerns. In fact, the royalties of lithium were not

[94] Qamasa. 1.07.2019. *Comcipo cumple paro por el litio: "Si Evo quieres votos, debrá atender a Potosí*". https://www.qamasa.com/2019/07/01/comcipo-cumple-paro-por-el-litio-si-evo-quiere-votos-debera-atender-a-potosi/

renegotiated, as the government did not intend to change its strategy or to accept the requests of the COMCIPO. As a matter of fact, the frustrations I perceived during my field work in Potosí, unleashed during the protests, and this time of a violent nature, happened successively the presidential elections of the 20th October 2019. The protests lasted for 21 days across the whole country as a result of a perceived electoral fraud from Evo Morales, who won at first, and only subsequently to the strong oppositions, was forced to renounce and flee the country[95]. In this occasion, Mr. Lérida also sent me many videos, photos, and audios, from which I could perceive the violent and aggressive nature of those protests. In Potosí, in fact, one of the first reaction to the perceived irregularities during the counting of the votes, happened on the 22nd of October, when people reversed their anger on the electoral court throwing stones and ultimately burning it [96]. Moreover, violent clashes with the police and government representatives were registered across the whole country, in cities as also in villages, which signed a dramatic moment of the Bolivian present history.

In this section, I showed that local interpretations and expectations of the lithium-extraction plan influenced the emergence of conflicts in the area, as these expectations were failed to be properly addressed. Moreover, these local interpretations were central in understanding the nature of the conflict, which in the case of lithium was directed only toward a request of more economic benefits in the department, without making use of violence. In this context, lithium was also employed by the COMCIPO in its discourses. In order to mobilize the vast majority of the urban dwellers of Potosí, discourses were leveraged on a shared feeling of injustice and on a collective memory of exploitation of their natural resources. As a result, they created a strong rhetoric based on the defence of lithium, which concretely translated into the defence of their common good, that concretized in a collective political action during the general strikes.

I turn now to a conclusive paragraph, where I will discuss and bring together my findings in relation to the type of conflict about lithium-extraction in Potosí and Uyuni.

[95] BBC. 7.11.2019. *Protestas en Bolivia tras la cuestionada victoria de Evo Morales: como se radicalizaron las manifestaciones y la violencia en el país.* https://www.bbc.com/mundo/noticias-america-latina-50333889

[96] Infobae. 22.10.2019. *Tensión en Bolivia: manifestantes quemaron oficinas electorales en Sucre y Potosí en medio de gritos de "¡fraude!".* https://www.infobae.com/america/america-latina/2019/10/22/tension-en-bolivia-manifestantes-quemaron-oficinas-electorales-en-sucre-y-potosi-en-medio-de-gritos-de-fraude/

6.4 Discussion on Final Results and Type of Conflict

In this chapter, I showed that conflicts and contestations made to the lithium-extraction project were of a different nature in comparison to any other mining activity in Bolivia. In fact, local people did not oppose to the exploitation and industrialization of lithium in the Uyuni salt flat, but rather they questioned the authority the central government exercised regarding its management and its redistribution of benefits. Locally, the plan created high expectations, which translated, especially in the poorest region of Potosí, into more economic benefits and more job opportunities. As I argued, these expectations have been disappointed because the government failed to address properly people's concerns and requests. In this context, the type of social conflict related to lithium is one that, according to Arellano-Yanguas (2012), "Was motivated by the desire to capture a greater share of project benefits, whether through employment opportunities or the distribution of revenues and royalties." (Kirsch, 2012: 202-3). As I outlined above, the promise of employment was disappointed, as the extraction of lithium required more skilled labour than other mines, while the promise of economic benefits did not manifest due to massive delays, legal irregularities, and the centralization of revenues distribution, which privileged the central government over local redistribution. Arellano-Yanguas (2012) moreover, identified other two types of mining conflicts: those where the local communities oppose to the project as they fear for their environmental destruction; and conflicts which relate to a distributional dilemmas of division of royalties, where the groups involved are many in number, and therefore the amount destined to each of them appear to be inferior than the initial expectation (Kirsch, 2012: 202-3). In this context, the nature and the outcome of conflicts depend very much on the type of conflict.

In addition to this, I argued that the nature of the conflict depended on the local interpretations of the mining project and on previous local histories. At the beginning of this study, I showed that Bolivia identifies itself as a mining country (*país minero*), especially in the cities where I conducted my research. Bolivians, therefore, share the idea that in order to make a living they must rely on the exploitation of natural resources given to them from their land. Especially in the department of Potosí, which is very rich in metals and minerals, mining has always been a pivotal and unquestionable activity for people's sustainment. In this context, many Bolivians believe that it is their natural right to extract minerals and that environmental and social costs are the unfortunate price to pay in order to survive on their lands. In this context, the extraction of lithium as well, was not questioned to be legitimate or not. In her study, Romero Valenzuela (2019) offered an interesting perspective on this aspect, as she compared the conflicts in

relation to lithium-extraction in northern Argentina and in Bolivia. She argued that in Argentina the conflicts over lithium were of a different nature, in part because local communities (of indigenous minorities) were not used to mining activities and, therefore, strongly opposed the project for fear of the destruction of their environment and the dispossession from their lands. She also showed, what I previously argued, that while mining is a strong component in Bolivians' identity, in Argentina, which economy relies mostly on large-scale agriculture (Romero Valenzuela, 2019: 375), local people have different expectations and concerns in relation to a mining project, like the lithium ones. This in turn, affected the type of conflict and oppositions made by local people. Moreover, as I argued throughout this study, local interpretations are central to the understanding of the outcome of the project, as also Revette (2017) argued, in her study on lithium in Bolivia, "Local interpretations of current resource extraction are partially shaped by how the past is remembered and framed, and how the potential future is envisioned." (Revette, 2017: 154).

Lastly, I argue that, also differently from the oppositions made by local communities in Argentina, in Bolivian environmental claims were only superficial and secondary. As I argued in chapter 4, local communities in Bolivia have long experienced the effects of mining on their environment – representing one of the biggest contradictions on the highlands. Moreover, lithium was portrayed by the government as much as on international discourses, as a 'cleaner' and 'environmentally friendly' resource. Furthermore, in chapter 5, I outlined that during my conversations in different tourist agencies in Uyuni, all of my informants complained about the environmental degradation of the Uyuni salt flat, while none of them were actually motivated to contest the project, as their concerns did not translate into concrete actions. However, further conversations in tourist agencies demonstrated that their complaints were only employed in relation to their business rather than on real environmental concerns. The following interview I had with a driver in a tourist agency in Uyuni, shows clearly this point, as he told me:

> "If there was a mineral resource that is not involved with the tourist sector, then it's all right. If the job is done quietly so that won't affect others." (interview, 26.03.2019)

This statement shows what I perceived after many conversations in Uyuni, that environmental concerns were only superficial in relation to economic benefits. In this light, I return to an argument raised in the previous chapter, that there is a lack of critical debate, both in Bolivia and internationally, on the environmental effects of the lithium industry. I seriously doubt that lithium is an 'environmentally friendly' resource and that it will not affect the precarious ecosystem of the Uyuni salt flat and the limited freshwater resources of the area. Moreover,

now more than ever, the Bolivian highlands are facing a dramatic water crisis, especially after the rapid desertification of the Lake Poopó happened in 2016. In this context, local communities are always those who are the most affected no matter how inclusive the project may appear, and those who will have to pay the highest price.

Photographs taken by Mr. Lérida in the city of Potosí during the 72-hours general strike (1.08.2019).

Conclusion

The future of the lithium industry in Bolivia is still uncertain and open to many speculations, especially after the political instability that the country was forced to face since the last presidential elections in October 2019. After more than 20 days of violent protests, Evo Morales and the Vice-President Álvaro García Linera, had to flee the country leaving a political vacuum in the Parliament, which was replenished by a transitional government until the next presidential elections, now postponed (October 2020) due to the COVID-19 crisis. Nevertheless, even if the greatest promoter of the lithium project, Evo Morales, is no longer in power, it seems that nobody is willing to take a step back after all that has been achieved. The unstable political situation that has lasted for almost a year, strengthened by the current global pandemic crisis, did not hinder the construction of the last of the three phases of the lithium project, which will ultimately conclude the lithium industrialization chain in Bolivia. This is what Juan, the engineer who works for the Ministry of Energy and Technology told me, when I asked him in May 2020 to describe the current situation. He said:

> "This is a transactional government […], but it is a temporary support to the continuation of the industrialization of lithium. The government we will elect must do the same: support unconditionally the lithium industry." (phone interview, 11.05.2020)

Regardless of the future uncertainties of the lithium industry, which has not yet started to contribute to the country's GDP, in his statement Juan manifested the indisputable importance which the resource has obtained in the country. This thesis demonstrates, in fact, that the production of lithium carbonate for the Bolivian population is unquestionable and goes beyond political or economic strategies. In a complex and intrigued mining panorama, this thesis can provide some relevant findings on a new mining phenomenon in Bolivia, which I address in this study as 'a new mining discourse'. The two objectives of this thesis have been to, first, understand local interpretations of the extraction of lithium in the main urban areas of the Bolivian highlands in relations to underground mining activities; and second, to understand the centrality of these interpretations in detecting the emergence, the type, and the nature of potential social conflict in relation to the extraction of lithium.

The findings demonstrate that lithium in Bolivia is perceived by a part of the population of the highlands – on both the state and the citizen's levels – as an optimistic and future-oriented activity and it highly diverges from any other extractive activities experienced by Bolivians so far. Yet, local opinions and interpretations of the project are not straightforward and may change over time. In fact, when the previous government lead by Evo Morales started in 2008 the project to extract lithium from the Uyuni salt flat, it received a positive acceptance among the population. After more than ten years since the beginning of the project, local people have started to contest it due to massive delays and scandals, who however, still believe in the resource economic potential. This study shows in fact, that local frustrations and contestations are generated due to discrepancies between the reality (what local people experience) and the government discourses. Finally, I demonstrate that the planning strategy employed by the MAS government for the extraction of lithium, is one that contributed in several ways to the emergence of local social conflict. In comparison, underground mining, among all extractive activities, is particularly relevant in Bolivia, because it is a central aspect of the country's national identity, as much of its economic. Nevertheless, for five hundred years underground mining has heavily contributed to social exploitation and environmental degradation, which are the two major problems affecting the highlands' population, who consider them as the inevitable price to pay in order to survive on those semi-arid lands. This study by comparing the two activities, aims at elucidating some aspects of the complex reality present in the highlands, where contestations made by local urban population, in respect to lithium-extraction, reflect a general mistrust in its governance, rather than on concrete and visible social and environmental issues. In this study, I come to deduce that the extraction of lithium in Bolivia is largely perceived to be a different mining activity, or rather not even as a mining activity at all. Lithium embodies a new idea of *extractivism* that is fundamentally modern, advanced, and environmentally friendly. In order to prove this argument, this study focuses on the local interpretations of the lithium project, seen as the entry point in understanding local aspirations, expectations as much as discontents and contestations, which are pivotal in the study of social conflict, which is the second and final objective of this study.

By analysing the local interpretations of the urban dwellers of the highlands, I discover that they highly depend on three factors. First, on the historically rooted collective perception of wealth attached to natural resources, second on the nationalization of the extraction of lithium and of the means of communication, and third, on the specific material facets of lithium, its extractive process, and the Uyuni salt flat. In order to properly contextualize these issues among

current debates in the social sciences, I introduce three different theoretical perspectives. Firstly, following the literature on materiality that deals with natural resources, I argue that the idea of wealth linked to lithium among the Bolivian population and the state is not universal, but rather contingent. It is the result of a historically rooted process of wealth creation that finds its basis during the colonial time. This study shows that the plunder in the 16th century of the Cerro Rico of Potosí, the richest silver mine of South America, constructed in Bolivia a shared interpretation of economic wealth linked to their natural resources that is different from before. Ethnographically, I demonstrate that Potosí is nowadays still used as a common benchmark for natural wealth and it is central to Bolivians' understanding of economic value linked to natural resources. Moreover, Potosí is also connected to a sense of historical injustice, as the country's natural resources have always been exploited for the benefits of others. Valuable metals and minerals in different historical periods (silver, tin, and now lithium), are in this context, believed to have the potential to boost the country's economic development. More than 20 interviews and conversations have showed that local people regard Bolivia as a rich country in natural resources, and that their poverty – in economic terms – depends rather on their erroneous and exploitative governance. Moreover, I show that natural resources in Bolivia are conceived almost in magical terms, where the relationship between local people and the Mother Earth (*Pachamama*), who provides for the natural resources, is maintained through an exchange of gifts. This idea in turn, justifies the extraction of natural resources , on both the state and the citizen's level, who believe that it is their right to extract them as the only means of sustainment, as also previous ethnographies have showed (Nash, 1979; Taussig, 1980; Molina, 2009). This historical construction of value, together with the belief that the earth is rich and will always provide for its inhabitants, creates the basis for the extraction of lithium. My findings show a logical connection between lithium and potential wealth among local people that could be turned into economic development if correctly used for people's benefits. Lithium, in this context, is conceived by both the government and the Bolivian population to be an unquestionable source of value from which the country could benefit.

Secondly, I demonstrate that the fully nationalization of the extraction of lithium and of the means of communications in broadcasting information related to it, play a decisive role in how Bolivians came to perceive the lithium industry. I demonstrate that Evo Morales government, as the promoter of the project, instrumentalized the extraction of lithium for political propaganda purposes and put it at the forefront of a nationalistic discourse; what can be coined as 'resource nationalism'. His rhetoric sought to redirect lithium revenues for the

implementation of social programs, legitimizing therefore, economic development based on *extractivism*. This study demonstrates that the lithium industry has been used as a tool of national propaganda by the way local people talk about it. The findings show that local people refer to lithium in a certain manner, stressing only certain aspects while ignoring others. Different interviewees refer to their national reserve as the biggest in the world with a sense of a national pride attached to it, while they hardly ever mention the challenges and the technical constraints involved in the process of extraction and separation. Further conversations and interviews show also that lithium is often connected with ideas of modern and advanced technology, which is in stark contrast with the collective perception of underground mining, as cooperative miners still rely on rudimentary tools. In this context, another aspect that emerged from my empirical material, is an overall confusion among Uyuni's dwellers about the exact location of the lithium extractive point. As I show in this study, the extractive point in Llipi is isolated and inaccessible for local people, as it is fenced and guarded by the military. Moreover, Uyuni's dwellers do not have contact with the YLB (the major operating company) employees because they live inside the area in Llipi. This signifies that the people who live the closest to the extractive point cannot have a direct experience with the lithium plant, which means that all the information comes inevitably through the national channels. In this regards, national media has portrayed only one version of the lithium project: that is substantially modern and advanced, that employs high-tech technology, that does not require much water, and that does not constitute a risk for the environment. This distribution of information through national media is what Appadurai (1996) called *mediascapes*, where the flow of images, in which the worlds of commodities, news, and politics are mixed, and blur the perception of reality.

Thirdly, this study shows that the particular materialities of lithium, its extractive process, and of the Uyuni salt flat, determine an interpretation of its extraction that highly diverges from underground mining. With materialities of lithium, I refer in this study to the physical qualities and capacities of the metal, the brine, and the crust of the Uyuni salt flat. Following the literature on resource materialities (Bridge, 2009; Richardson and Weszkalnys, 2104), natural resources are more than just matter with specific physical and chemical properties, but rather they are 'relational assemblages' (knowledges, infrastructures, strategies), which constitute an important role in constructing social relations. Lithium is endowed with some particular physical and chemical qualities, such as being the lightest metal on Earth and which never forms freely in nature but only in compounds, which have made it a necessary resource for the new technology of batteries, and therefore attractive on an international level. Its physical

aspects are crucial in determining its extractive technology that employs sophisticated machinery, which however, differs according to the physical and geographical characteristic of the place of extraction (e.g. the Atacama salt flat in Chile possesses different physical and geographical characteristics). This, in turn, also determines the kind of labour needed, that is a more skilled in comparison to underground miners. These material and spatial characteristics, moreover, determine lithium's extraction strategy and influence technological and state's decisions, which have consequential effects on an environmental and social levels. My findings show that these characteristics have specific effects on the local population. First, I have encountered a general discontent in the urban areas of the department of Potosí in respect of employment opportunities. The lithium project, like any other extractive activity, have created locally a general expectation for employment opportunities, which have not been satisfied as the extractive plant requires a highly specialised workforce that comes from other parts of the country. Second, I have found some associations with the white colour of the crust of the salt flat, the presence of water (brine), and the extractive process which happens in the open-air (process of solar evaporation) with an idea of environmentally friendly extractive activity. In this light, some urban dwellers refer to the extraction of lithium as a cleaner activity in relation to underground mining. Furthermore, despite the serious water crisis on the highlands associated with mining activities, my informants do not associate lithium-extraction with water-exigency or water contamination. In this context, the extractive process was defined as "natural" by a YLB engineer, who referred only to the solar evaporation, avoiding the induced chemical reaction needed for the separation. This confirms the claims made by some scholars (Hollender and Schultz, 2010; Calla Ortega, 2014; Romero Valenzuela, 2019) on the non-transparency of the whole process, while justifying the overall confusion and lack of information I encounter among local people. Third, I demonstrate that the concerns expressed by the tourist agency in Uyuni, where the tourist sector represents the most important source of income for the city dwellers, are directed only toward the ruination of the salt flat's crust due to the construction of the evaporitic pools on its surface. The ruination of its crust represents for them a distortion of the white and pure landscape, which is the reason why tourists come to see the Uyuni salt flat. They, however, do not express other kinds of possible environmental risks, while also believe in the economic potential of the lithium industry, even regardless their negative attitude toward it. Lastly, following scholars' analysis (Calla Ortega, 2014; Sanchez-Lopez, 2019; Romero Valenzuela, 2019), I argue that the project being national, was classified as a minor mining activity which obtained a license without proper scientific analysis. In this context, I come back to my previous argument of lithium-extraction being

instrumentalized by the MAS government for propaganda purposes, to argue further that nature in this scenario is conceived as external and an obstacle to capitalistic accumulation, where resources are framed in terms of political and economic benefits.

Lithium-extraction in Bolivia must be contextualized on three different levels. Nationally, lithium was promoted only in economic terms as a means to achieve development. The very notion of development employed by Evo Morales contains two contradictions, which consequently influenced local understandings of the lithium project. First, the development proposed at first by the MAS government was intended to ameliorate people's quality of life, by promoting indigenous values (*bien vivir*) as alternatives to the Western logic of capitalistic accumulation. In this context, Morales was able to justify *extractivism*, through a compelling ideology (resource nationalism) that intended natural resources as the property of the people and the state as its governor and administrator. Yet, by promoting a communitarian, simple life as the most appropriate, the government neglected local people's desires on how they want to live their life. I showed that this contradiction created confusion and mistrust in the government on the local level, especially in urban areas, where the capitalistic mentality had already shaped the way people live their lives. Second, Morales implemented rights for environmental protection while simultaneously promoting *extractivism*, which are inherently incompatible (Gudynas, 2009; Escobar, 2010; Svampa, 2015; Veltmeyer, 2015, 2018). The literature on *extractivism* in Bolivia (Andreucci and Radhuber, 2015; Gudynas, 2016b) has shown that by the beginning of the second Morales mandate (2010-2014), it was already evident that the country's economy was even more dependent on the extraction of natural resources than before. I deduce that despite the initial criticism, Evo Morales contributed to maintain old patterns of exploitations, as Bolivia remains a global supplier of raw materials. These contradictions, as I show in this study, are discernible in my empirical material when local people manifest a general sense of mistrust and doubt in the government's doing. This mistrust fuelled also by scandals of corruption, bureaucratic inefficiency, and increasing drug-trafficking, all linked to the MAS representatives, is discernible also on how people conceive the lithium-extraction project. This study shows in fact, what I outlined above, that there is a discrepancy between the reality (what local people experience) and the government discourses.

On a Latin American level, *extractivism* has always played an important role in the political, economic, and social processes of the continent. Bolivia after the elections of Evo Morales in 2006, became part of the progressive Latin American governments, which are in opposition to conservative, neoliberal governments. This 'left-turn' governments have all promoted an

extraction-based development in a context of counter-neoliberal reforms, which has been identified in the literature as *neo-extractivism* and *neo-developmentalist* (Gudynas, 2009; Escobar, 2010; Svampa, 2015; Veltmeyer, 2015, 2018). Yet, scholars (Gudynas, 2009; Escobar, 2010; Acosta, 2013) have argued that regardless of the creation of this new type of *extractivism*, the structure of accumulation did not change. Ultimately, as Escobar (2015) critically argued, this form of *extractivism* promoted by 'counter-neoliberal' states, does not lead to *buen vivir*, but rather the opposite, as it is a highly destructive model. By studying ethnographically the local interpretations of the lithium-extraction, this study provides a relevant example of a mining activity implemented in a context of counter-neoliberal and neo-extractivist reforms, which does not fulfil the initial promises of social and environmental inclusions. In the case of Bolivian *extractivism*, the greater influence of the state in extractive processes of natural resources, did not change how the resources have been extracted but rather their form of governance. In this context, what is actually criticized from the Bolivian government is a form of *extractivism* in the hands of transnational organizations.

On a global level, lithium must be contextualized on broader discourses on Green Economy, climate change, and electric mobility. I stress the fact that according to a Green Economy's strategy (UNEP), technological innovation is believed to solve ecological problems, thus, without abandoning economic growth. In the Bolivian context, I show that Evo Morales' discourses on the global importance of lithium to fight climate change, have entered in the public discourses and have become part of how people understand the resource's value and utility. Moreover, another important fact regards the shift in the global distribution of capital, technology, and expertise in relation to lithium-extraction, that sees China as the leading actor. In this study I show more than once that Chinese intervention in Bolivia has become visible, which reinforce the already existing opinion that natural resources are being extracted for the benefits of others, usually foreigners. Following this approach, socio-ecological conflicts are understood as temporary and solvable via monetary compensation, in which political leadership is crucial in determining a positive outcome.

This leads me to the second objective of this thesis, which is the understanding of social conflict in relation to lithium-extraction, where local interpretations of the project become the entry point in detecting the type and the nature of conflict. This study extensively demonstrates that the planning strategy employed by the MAS government for the extraction of lithium, is one that contributed in several ways to the emergence of local social conflict. First, both international discourses on 'greener' capitalism, as much as national neo-developmentalist

discourses, do not include local perspectives of the extraction of lithium in Bolivia. The state itself instrumentalized the concept of *indigeneity* in order to create a vast consensus among the population, that is of an indigenous majority. Nevertheless, this concept and the idea of development promoted by Morales creates a conception of the Bolivian population as a homogenous indigenous public, without considering the actual needs, desires, and expectations at the local level, which are never single, homogenous, or coherent. Second, the planning strategy employed is one that leave local communities with little room for any kind of participation and inclusion in the extractive processes. The lithium-extraction project, being promoted in such a magnitude, created high local expectations, which turned into great frustrations once these expectations were not satisfied. This study finds that the promise for a 'better future' carried by the planning activity has not been fulfilled in the main urban cities of the department of Potosí, where the promise translates as an opportunity for more economic benefits and employment. These two expectations depend on the critical economic situation that afflicts the poorest department of the country, which also have a high percentage of unemployment, especially in the urban areas. The study shows that frustrations developed into a sense of injustice, as local people started to feel discrepancies between what they experienced and what they had expected. I argue that this sense of injustice linked with the lithium-extraction project can be analysed in a three-fold dimension: redistribution, representation, and recognition. First, I demonstrate that for local people lithium royalties are perceived as the lowest among other metals and minerals (redistribution), which generate a sense of mistrust toward the government, whose intentions are perceived as egoistic and insincere. Second, the high centralization of the project and the ratification of a new Mining Law (2014), which leave de facto no space for any local participation in the extractive process. This generate a feeling of frustration, as local people do not feel represented within any decision-making processes. Moreover, this feeling is reinforced by the decision to place the headquarter of the YLB in La Paz instead of in the city of Potosí. Third, social and economic inequalities have been increasing in the urban areas with the consequent generation of new power imbalances in the modern Bolivian society (recognition). This study shows that this new power imbalances are felt by the dwellers of Potosí to be present in the cities of La Paz and El Alto, intended as the centres of political and economic power. In this regard, a new growing middle class (*cocaleros*, miners' unions, and indigenous merchant) became powerful political actors during the Morales' mandates, who have been able to influence political decisions. This phenomenon shows once more the contradictory character of the politics of *indigeneity* employed by Morales, where a rising part of the population seek economic growth while self-identifying indigenous.

Furthermore, this sense of injustice is reinforced not only by the increasing irregularities (scandals of corruption, delays, additional costs, smugglings, drug-trafficking) but also by the ambiguity between the laws and their applications. Regarding the expectations for more employments, this study shows that the sense of injustice is directed toward a poor education system present in the department. A higher education is felt as a privilege of the biggest cities, which leaves young generations in the department of Potosí with little future possibilities. In respect to lithium-extraction, a Bolivian Lithium University in Uyuni is proposed by the Civic Committee (COMCIPO) of Potosí – without however, any signs of agreement with the central government – in order to form local experts in accordance to the resources in their territory and therefore, breaking a circle of dependency with the government and/or foreign companies.

Lastly, this study can contribute to the analysis of social conflict related to the extraction of natural resources in Bolivia. By analysing the contestations made to the lithium industry, this thesis shows that the latter are of a different nature in respect to all other extractive activities seen in the past. I demonstrate that the nature of these contestations directly depends on the local interpretations of the extractive project, where the lithium-extraction is perceived as a modern, future-oriented, and environmentally friendly activity. In this context, the new mining discourse related to the lithium-extraction, creates different kind of oppositions and contestations based on specific expectations. Moreover, I conclude, that both the discourses employed by Evo Morales and by the COMCIPO are effective in creating a new perception of *extractivism*, because they both leverage on a shared feeling of injustice related to the exploitation of the country's natural resources. As a result, both sides formulate a rhetoric based on the defence of lithium, which concretely translates into the defence of their common good, which however, is intended differently. I draw my conclusion by stating that collective memory of underground mining is central to the Bolivian identity and is inevitably related to the discourses on the present governance of natural resources and development. In this context, how the past is remembered has the capacity to influence present perceptions as much as the way a future is envisioned. In this scenario, the Bolivian population is still very much dependent on extractive activities, regardless of the new rhetoric on development and *extractivism*. Moreover, this study shows that environmental and social costs in relation to extractive activities are perceived also by the local population as secondary in comparison to economic benefits, as other studies have also demonstrated (Romero Valenzuela, 2019).

Research Limitations and Further Research Possibilities

This case-study helps shed light on the complex reality that surrounds extractive activities in developing countries with a strong colonial history. This research, however, is constrained by time and understandable financial resources, which if expanded, could contribute even further to the pressing study of the social and ecological conflict in relation to the recent lithium industry in Bolivia. First, the intrigued and vast net of socioeconomic interests and stakeholders could be analysed from different perspectives and angles. The target group for this research have been urban dwellers of the highlands, which represents a good starting point for understanding the impacts of the lithium industry on the Bolivian population. Yet, with further resources it could be possible to explore the impacts on local communities around the Uyuni salt flat in a much broader perspective. Second, the lithium project continues to develop in time. My findings reflect the time of my investigation in Bolivia, between February and March 2019, while new conflict or contestations may emerge further in time. For instance, it would be interesting to explore how the development of the batteries production continues in Bolivia and with what effects. Moreover, the political situation has also changed several times in the past year, where the country was led by a transitional government after the resignation of President Evo Morales in November 2019. By the time I was writing this conclusion, Luis Arce, the former Minister of Economy under Morales, was elected as the new president of Bolivia – he will be officially nominated on November 8, 2020. Although the elections of Arce symbolize a continuity with the former Morales' political strategies, it does however, not necessarily mean that there would be no changes in the future development of the lithium industry. In this study, I outlined that during the third phase of the project, PPP (Public-Private Partnership) strategy was implemented, where a balance between public and private investments and involvement was guaranteed. Yet, this balance could be modified in the future as the development of this strategy itself is still unsure.

Finally, a comparative study between the lithium industry in Chile and Argentina, could benefit the literature on social and environmental impacts related to lithium extraction from salt flats' brine. As I mentioned before, in Bolivia and in Argentina, the extraction of lithium is planned to be expanded to other salt flats. In this light, a proper scientific investigation on the possible environmental risks is urgently needed, as it could influence the decision of states on the technological strategies to employ. I stress once more the fact that there is a lack of proper scientific debate, also internationally, on the consequences that the lithium industry could have on the already precarious highlands' ecosystem. I believe that it is not necessary to wait ten

more years to realize that the lithium industry could dramatically impact the surrounding area of the Uyuni salt flat (local communities, flora and fauna, water resources), and of other salt flats. Just by looking at the irreversible effects that the same industry generated in the desert of Atacama, in Chile (started in the late 1990s), it is possible to notice that the extraction of lithium intensified the desertification in one of the driest regions on Earth, where paradoxically water is being evaporated in a desert. In this respect, I return to an earlier argument (Raza, 2017) raised at the beginning of chapter 5, where the international strategy chosen as the only possible solution (UNEP, 2011) to solve ecological problems, is one that puts unconditional faith in science and technological innovations (e-mobility). In this respect, I rather believe that it is important to stress the fact that another, more sustainable path is possible, one, which emphasizes the need for reduction in global consumption and production, in order to achieve a socially just and ecologically sustainable society, with well-being as the indicator of prosperity instead of focusing solely on the GDP.

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Appendix

Abstract

Lithium in the past decades, has become an essential resource for the construction of the current battery systems for electric vehicles (EV). Its global importance is directly related to two major problems of our century: fossil fuel dependency and the contemporary global ecological crisis. In Bolivia lithium is largely present in the Uyuni salt flat, from where its extraction began at a pilot level in 2017, after ten years of planning. This study examines the impacts that the extraction of lithium caused on the collective interpretations of extractive activities among the urban dwellers who live close to the areas of extraction. The project, being national, was instrumentalized for political propaganda purposes from the Evo Morales government, who since his election in 2006, started a profound reformation of Bolivian society. By comparing local interpretations of the lithium-extraction with those related to underground mining, which have long been present in the same areas, this study aims at gaining a deeper insight of the complex nature of social conflict in relation to natural resources extraction. Moreover, this study demonstrates that lithium in Bolivia embodies a new idea of *extractivism* that is fundamentally modern, advanced, and environmentally friendly, and that this idea is the result of complex historical, social, economic, and political processes, which in turn created new social relations in the country. Consequently, the contestations made by local political organizations resulted in a different nature from already existing social conflict, which directly depended on this new interpretation of *extractivism*.

Keywords: natural resources, *extractivism*, lithium, underground mining, collective memory, development, planning, social conflict, Bolivia

Zusammenfassung

Lithium hat sich in den letzten Jahrzehnten zu einer wesentlichen Ressource für den Bau der aktuellen Batteriesysteme für Elektrofahrzeuge (EV) entwickelt. Seine globale Bedeutung steht in direktem Zusammenhang mit zwei großen Problemen unseres Jahrhunderts: der Abhängigkeit von fossilen Brennstoffen und der gegenwärtigen globalen ökologischen Krise. In Bolivien ist Lithium weitgehend in der Uyuni-Salzebene vorhanden, von wo aus seine Extraktion 2017 nach zehnjähriger Planung auf Pilotebene begann. Diese Studie untersucht die Auswirkungen, die die Extraktion von Lithium auf das kollektive Verständnis von mineralgewinnenden Aktivitäten unter den Stadtbewohnern verursachte, die in der Nähe der Gebiete der Extraktion leben. Das nationale Projekt wurde für politische Propagandazwecke von der Regierung Evo Morales instrumentalisiert, der seit seiner Wahl im Jahr 2006 eine tiefgreifende Reform der bolivianischen Gesellschaft ins Leben rief. Durch den Vergleich einheimischer Deutungen der Lithium-Extraktion mit denen im Zusammenhang mit dem Untertagebergbau, der seit langem in den gleichen Gebieten vorhanden ist, zielt diese Studie darauf ab, einen tieferen Einblick in die komplexe Natur sozialer Konflikte in Bezug auf die Gewinnung natürlicher Ressourcen zu gewinnen. Darüber hinaus zeigt diese Studie, dass Lithium in Bolivien eine neue Idee des *Extraktivismus* verkörpert, die grundsätzlich modern, fortschrittlich und umweltfreundlich ist, und dass diese Idee das Ergebnis komplexer historischer, sozialer, wirtschaftlicher und politischer Prozesse ist, die wiederum neue soziale Beziehungen im Land geschaffen haben. Folglich führten die Anfechtungen der lokalen

politischen Organisationen zu einer anderen Art eines bereits bestehenden sozialen Konflikts, der direkt von diesem neuen Verständnis des *Extraktivismus* abhing.

Schlagwörter: Rohstoffen, *Extraktivismus*, Lithium, Untertagebergbau, kollektives Gedächtnis, Entwicklung, Planung, soziale Konflikten, Bolivien