PERIPHERIES OF EXTRACTION IN THE AMAZON OF ECUADOR: AN ANALYSIS OF INDIGENOUS TERRITORY, LIVELIHOODS AND VOICES

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DISSERTATION ABSTRACT

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In the last 15 years, Ecuador has expanded its mining frontier in the Amazon at a pace and scale not seen before; this expansion has required the state to modify legal frameworks and institutions to increase territorial control in areas where the state's presence was previously weak. For example, laws require a portion of mining profits to be invested in modernization and development of populated areas near extractive sites. Mining investments are used to persuade populations to agree to extractive activities and are utilized as a strategy to modernize rural/indigenous ways of life. Thus, state intervention and mining, and oil activity expansion affect the local ability to respond to changes taking place at a rapid pace while also causing a number of conflicts.

I use case studies of communities facing encroachment of mining in the Amazon of Ecuador to better understand: a) the ways in which affected people struggle to maintain control over territories, b) the ways in which people adapt and respond to the negative effects of state and oil expansion and c) the ways in which indigenous people understand and cope with conflicts and violence produced by mining and oil industry.

My findings show first that indigenous and peasant communities require access to ‘volumetric knowledge’ in order to increase their ability to participate in processes of negotiation

with the state. These processes define access to land and redistribution of oil extraction profits. Volumetric knowledge makes reference to understandings of oil volume, quality, infrastructure and environmental impacts in affected territories. Second, my findings show that communities affected by oil extraction respond ambivalently when adapting livelihood strategies to the expansion of oil extraction and increased state presence. Specifically, people partially reject and embrace state-imposed development and modernization programs. I focus on the process that informs families’ decision-making process, suggesting that ‘tactical subjectivity’ informs livelihood strategies at the household level. Third, state modernization and development programs reinforce colonial power dynamics in the Amazon; thus, ‘epistemic violence’ takes place as indigenous traditional knowledge that makes sense of conflicts and violence is undermined and erased by western logic driven by state-led modernization and development.

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TABLE OF CONTENTS

Chapter Page

LIST OF FIGURES

Figure Page

LIST OF TABLES

Table Page

Chapter II

LIST OF SCHEMES

Scheme Page

Chapter III

CHAPTER I

INTRODUCTION

Problem Description

On October 16, 2013, the first of a number of uprisings of indigenous women took place as approximately 300 women representing seven indigenous nationalities and other environmental organizations arrived in Quito, the capital of Ecuador, after walking from areas deep in the Amazon forest. They had traveled this long distance to demand the government stop extractive activities in the Yasuní National Park, considered to be one of the most diverse areas of the region (Bass et al., 2010). Uprisings continued over the years, culminating in a march in 2018 in which women from 11 nationalities wrote a regional mandate composed of 22 points. In this mandate, they declared that their people would not acknowledge state agreements with oil and mining companies and further demanded the government enforce constitutional laws that protect their territories and ethnic rights (Vallejo & García, 2017). Patricia Gualinga, one of the movement's spokespersons, was interviewed on October 23, 2013 and explained the reasons behind their struggles:

> There is no real assessment of the true cost of extractive activities, not an assessment that goes beyond establishing corporate costs... in addition to the environmental damages, our men become short-term labor, alcoholism increases, there is prostitution, rapes, companies bribe our leaders, there are fights within families and overall fractures in the fabric of communities... An overall process of violation of our rights and those of nature... We fight not only for indigenous people, but for the survival of all Ecuadorians as we depend on nature...We are requesting an independent assessment and monitoring of the outcomes of oil extraction led by an independent organization such as the United Nations... we want to know what is happening and what is going to happen in all territories where extractive activities are currently taking place. The decision to exploit natural resources without a full assessment of the cost is wrong in a plurinational state like Ecuador...

Indeed, these indigenous women's concerns and struggles only depict a broader reality as in the last 15 years, the mining frontier in the Amazon of Ecuador has expanded at a pace and scale not seen before. In 2010, 21% of the region was affected by oil extraction; this proportion has dramatically increased over the years. By the end of 2018, up to 68% of the Amazon had been affected by active oil extraction, seismic prospecting, and/or geological surveys that precede extraction of oil and other minerals (Lopez et al., 2013, pp. 13–16).

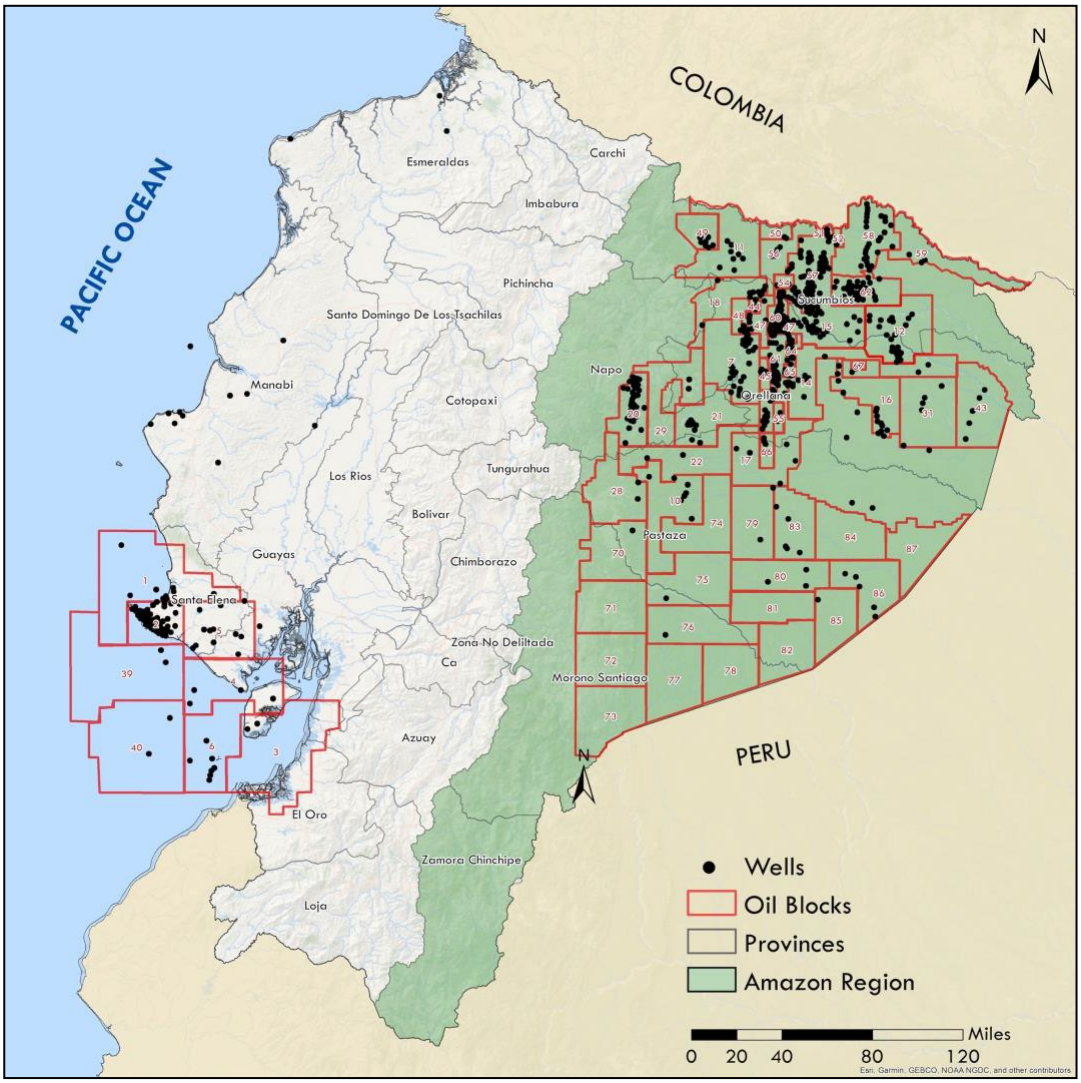


Fig. 1. Oil blocks and proven oil wells in the Amazon of Ecuador. Map by R.J Theofield (Hydrocarbons Secretariat, 2019; Geographic Military Institute, 2012).

Such expansion has required substantial changes in legal and institutional frameworks to allow the state to increase its presence and control over mining resources and people in areas where the state had been relatively absent until recently (Vela-Almeida, 2017; Sánchez & Polga-Hecimovich, 2018).

State-led intervention in rural and indigenous territories alongside oil and mining extraction has paved the way for a wave of conflicts in which rural and indigenous populations oppose, resist, negotiate and adapt to state intervention and the loss of land and livelihoods (Murcia et. al 2015; Machado, 2016). Conflicts are articulated around opposition and resistance to mining activities and state control over indigenous territories (Vallejo & García, 2017; Indigenous Women's Mandate, 2018). Conflicts are also articulated along struggles to negotiate the mechanisms of national inclusion and ethnic recognition; such mechanisms are intrinsically tied to the oil-industrial complex among other mining interests that, in the case of Ecuador, are controlled and mediated by the state (Lu, Valdivia & Silva, 2017: Ch.2–3; Lu & Silva, 2015; Martinez-Sastre, pp. 223–254). Finally, local response has been organized around local understandings of the unequal distribution of oil-related benefits and of marginalization in which race, gender, and class differences play important roles (Vallejo, 2014; Vallejo & García, 2017; Cielo & Carrion 2018, Cepek 2018).

State expansion into rural and peripheral extractive territories and the conflicts this phenomenon creates are well documented by political ecologists, feminist critical geographers, and resource geographers, but there is still a pressing need for study of the realities of how extractive activities and the materiality of oil impact indigenous livelihoods; these types of studies would require multidisciplinary input (Hubber, 2015;

Bury & Bebbington, 2013b). In addition, studies that look at how indigenous people cope and adapt their ways of survival, especially in frontiers of extraction, are necessary (Bury & Bebbington, 2013b, pp. 9–12). Such an understanding is difficult to attain because transformations are rapidly taking place in areas that are difficult to access geographically, given their remoteness.

As Patricia Gualinga elaborates in the interview featured at the beginning of this paper, indigenous people need updated information to better understand how they are being affected and how their realities are changing. This information would allow them to contest current legislation and institutional frameworks. Indigenous people are especially in need of information that allows them to understand bureaucratic and technical aspects of legislation and mining operations in addition to information aimed at assessing environmental and socio-economic oil impacts across populations and territories (CONFENIAE, 2013; Shade, 2015). With the exception of critical information produced by local activists in collaboration with indigenous people and local scholars working at the frontlines of state-indigenous struggles, like the work of Carlos Mazabanda (2013) or Víctor López et al. (2013), indigenous people still find it difficult to access the information they need.

Thus, emerging areas of scholarship in the Amazon of Ecuador are: a) the links between citizenship, nationalism, and oil as a tool of social inclusion (Sawyer, 2004; Li, et al., 2017), b) access to technical and scientific knowledge as associated with political and economic power (Sawyer, 2015); c) assessment of indigenous responses to mining based on changing subjectivities (Lu, et al., 2017; Cepek 2018; Lyall, 2017); d) an assessment of the rapid growth of infrastructure and local understandings of

modernization (Wilson & Bayon, 2017; Cielo & Carrión, 2018) and e) studies on race and gender dynamics along with intracommunity violence (Warnaars, 2013; Vallejo 2014; Vallejo & García-Torres, 2017; Cielo & Carrión, 2018; Cielo et al. 2016; among others).

This dissertation adds to the emerging scholarship and keeps coherence with indigenous requests for specialized information that could be useful to them by asking the following questions:

1) How have recent legal and institutional frameworks that allow the expansion of the oil frontier affected traditional indigenous political participation and indigenous agency in the configuration of indigenous territories?
2) How have livelihoods changed in response to state and oil expansion in the last 12 years? What are the mechanisms that inform current survival strategies?
3) How do local epistemologies make sense of the presence of oil extractive activities, conflicts, and violence? How do indigenous people, especially women, cope with violence?

In addition to being useful for indigenous people, these findings fill theoretical gaps in political ecology literature as associated with resource geography and feminist critical geography, as detailed later in the literature review of this dissertation. This work is particularly salient when oil and mining extraction threaten approximately 245,000 indigenous and 72,200 non-indigenous people living in affected areas (INEC, 2010; Mazabanda, 2013). These numbers don't account for uncontacted tribes whose numbers are unknown and that occupy primary forest in the Yasuní National Park (Lu et al., 2017, pp. 229–263).

The rise of extractive activities alongside the configuration of state-corporate ways of governance is not particular to Ecuador, but instead is part of a regional trend; the findings of this dissertation also inform similar processes taking place in countries like Bolivia, Peru, and Brazil, where rural and indigenous communities face similar threats and governments have also increased their presence dramatically in the frontiers of extraction.

Context: Mining Governance in Latin America

In the last two decades, Latin America has seen a dramatic rise in mining, oil extraction, and increased investment in the energy industry, encouraged by the growth of Asian economies (Walter, 2016, pp. 10; Bury & Bebbington 2013a). For example, Chinese investment in Latin America grew from 38 billion dollars in 2005 to 109.5 billion in 2014, while Indian investments increased to 16 billion in 2014 (Walter, 2016). This increase has been the product of countries' efforts to overcome economic downfalls by endorsing extractive agendas encouraged by the World Bank and the International Monetary Fund. These institutions have encouraged countries to reform their legal frameworks and reorganize their institutions since the 1980s so they could attract foreign investment for extractive activities (Bebbington et al. 2008; Arboleda, 2015).

Financial institutions had been pushing for legal reforms in constitutions and mining laws that would allow for the privatization of mining resources, land, and labor; similarly, these institutions have pushed for the production of geological surveys for mining companies interested in investing in the region (World Bank, 1996, pp. 30–39). Foreign investment has fueled not only extractivism, but also the growth of infrastructure that the energy industry needs to circulate commodities (De Melo & Panagariya, 1995;

Wilson & Bayón, 2016; Finner et al. 2015), but also investments in geological exploration and overall biophysical and social assessment of extractive territories where the state had previously been absent (Sawyer, 2008; Kelly & Pryor, 2013; Lerch, 2014).

Legal reforms that facilitate the privatization and/or leasing of mining resources have been considered part of a larger neoliberal agenda in the region in the last 20 years. This agenda seeks to incorporate large tracts of rural land into international markets interested in agricultural commodities such as biofuels and palm oil among others demanded by growing economies (Borras et al., 2012). Rural and indigenous people, social movements, and conservationists have opposed such policies and have grown preoccupied with the economic, social, and environmental consequences of privatization and leasing of land and natural resources (Bebbington et al., 2008; Orta-Martinez & Finer, 2010). In countries like Ecuador and Bolivia, for example, the indigenous movement not only opposed policies that threatened land tenure in rural areas, but also advanced claims for increased autonomy over indigenous territories; they pushed for legislation that would prevent commodification of natural resources and/or measures that would lessen the negative effects of extraction while including local populations' participation in the planning of extractive activities, if they were to take place (Hindery, 2013, Ch.5; Becker, 2010).

Discontent with neoliberal policies that have sought to incorporate rural land, natural resources, labor, and social safety nets paid by states have brought leftist governments that have criticized such policies into power in the 1990s and 2000s in several countries like Venezuela, Ecuador, Bolivia, Brazil, and Argentina. The election of left leaning governments gave rise to a period of time generally referred to as post-

neoliberalism because left-leaning politicians had promised to distance themselves from multilateral institutions such as the World Bank and to end privatization that favored international markets (Yates & Baker, 2014). For example, Ecuador's post-neoliberal regime (2007–present) rewrote its constitution in 2008. The new constitution declared Ecuador a pluri-national state, recognized indigenous autonomy in rural territories, granted rights to nature (natural resources such as forests and water sources) to protect them from damages produced by extractive and other capital-intensive activities, and mandated indigenous participation in extractive activities and the redistribution of oil profits among populations living in territories where extraction takes place (Ecuadorian Constitution 2008;Vela-Almeida, 2018). Very similar measures were taken in Bolivia, while Argentina, Venezuela, and Brazil offered national inclusivity policies, re-regulated social security networks, and established more controls on foreign investment (Yates & Baker, 2014).

However, despite these progressive moves, post-neoliberal governments aligned with the left expanded the extractive frontier and the energy sector more rapidly than previous neoliberal governments, revealing contradictions between leftist discourse and economic policy (Kröger & Lalander, 2016; Rhó, 2016). Countries like Ecuador and Bolivia, for instance, nationalized mining resources, increasing the state's ability to mediate all mining operations by leasing land (Borras et al., 2012); states also increased their institutional, administrative, and political reach on mining territories (Bebbington, 2013). On the other hand, countries like Peru and Brazil have gone back and forth about regulating foreign investment. Whether leaning to the left or right, all of these countries have sought to expand the extractive frontier and continue to pursue the original mining

objectives set up during the neoliberal period (Gudynas, 2009; Bebbington & Humphreys-Bebbington, 2011).

In addition, Ecuador and Bolivia have justified the encroachment of the mining frontier along with the nationalization of mining resources by using a nationalistic discourse that portrays mining as needed for economic growth, social redistribution, and inclusion of the majority of the population in social programs (Anthias, 2018, Ch. 7; Lu, et al., 2017, Ch. 1). Nationalistic discourses and practices in Ecuador and Bolivia, also known as resource nationalism (Koch & Perreault, 2018), feed on national identity sentiments that emphasize resource sovereignty where all citizens would benefit from mining profits through modernization and the expansion of social safety nets regardless of ethnic and class differences. Resource nationalism has facilitated states' efforts to gain support for extractive activities while marginalizing minorities and indigenous peoples along ethnic and gender lines (Mollet, 2016).

Literature Review and Significance:

This dissertation brings political ecology into conversation with resource geography and postcolonial critique by analyzing the following areas of inquiry: 1) political ecology and the study of underground resources as important elements that mediate processes of territorialization, 2) the study of local strategies to adapt traditional ways of live, also known as livelihoods, to the expansion of mining, and 3) the study of postcolonial analysis of race and gender and decoloniality to understand the nature of mining violence. These contributions fill gaps identified in the last decade by political ecologists assessing the field. Some of the gaps detailed in the next section, such as the need to understand the materiality of mining resources in shaping territorial conflicts,

coincide with the rise of the mining boom in Latin America and elsewhere, and some, such as the need to better understand racial and gendered violence, have been exacerbated by conflicts associated with mining.

Political Ecology, Underground Resources and Territorialization

In 2013, Jeffrey Bury and Anthony Bebbington edited *Subterranean Struggles*; in this book, they argue that political ecology in Latin America should expand its scope of inquiry to account for the role that underground resources (mining and hydrocarbons) have played in shaping social production and reproduction while also creating societal conflicts. Thus, they call for the emergence of underground political ecology (2013b, pp. 1–8). Specifically, they ask how we can account for the ways that underground resources shape political economy without resorting to resource determinism (2013, p. 7). With some exceptions, such as Michael Watts (2001, 2004a, 2004b), Sawyer (2004), and Mitchell (2011) who have written extensively about the political economy of oil and how the overall oil complex shapes and is shaped by conflicts on the ground, there has been silence among political ecologists, who have ignored the role of mining and hydrocarbons in shaping politics, economics, and conflicts at various scales up until the mid-two thousands in Latin America (Bury & Bebbington, 2013b, pp. 2–3; Bebbington, 2012)

Coming from traditional resource geography, Appel, Mason & Watts (2015, pp. 1–26), Huber (2015) and Squire & Dodds (2019) clarify that what is missing in scholarly work in general is attention to the biopolitical consequences that underground resources and infrastructure have in shaping the lifestyles we depend on in addition to their influence in configuring global networks of governance, along with domestic surveillance

and jurisdiction. Lack of information in these areas reinforced by the lack of understanding that even educated sectors of society have in relation to how much our surrounding world and social life is built upon these resources (Appel et al., 2015, pp. 4–5). In this sense, Bebbington and Bury (2013b, p. 18) and Huber (2015) believe that political ecologists should engage with political economy, resource geography, and other disciplines such as geology to understand the ways that conflicts are mediated by the material properties of the subsoil, properties that are usually hidden from view.

Particularly important for this dissertation is the call for increased attention to extraction as a territorializing process that involves technology and access to specialized knowledge related to the volumetric properties of subsoil resources (Bridge, 2013), as well as to the role that speculation on oil and gas volume and quality has in shaping land enclosures and conflicts (Bebbington & Bury 2013b, pp. 9–11; Watts 2015; Appel et al., 2015, pp. 10-20). Finally, scholars studying territory and territoriality have also turned to understanding underground resources as a volume along with state and corporate efforts to increase access, control, and surveillance over resources and infrastructure (Elden, 2013; Squire, 2016)

Political ecologists and resource geographers who have already pioneered the study of these topics have proven that linking subterranean knowledge and social conflicts allows us to better comprehend the ways that oil assemblages, made out of corporate-state interests, underground legal jurisdictions, and a variety of territorial enclosures, are linked to democracy, or the lack thereof (Watts, 2004a; Watts, 2015; Mitchell, 2011; Anthias, 2018; Squire & Dodds, 2019). Mitchell (2011), for example, shows that in pre-World War I Europe and the U.S, coal miners-controlled knowledge

was pertinent to underground tunnel digging for coal extraction and circulation; such knowledge enabled workers' ability to negotiate better living conditions but also to use their political power to negotiate with corporate and state interests.

Similarly, access to specialized knowledge pertinent to oil infrastructure, oil reserves, oil legislation, and oil toxicity shape current struggles to secure land, autonomy, political inclusion, and environmental reparations (Sawyer, 2004; Sawyer 2015). For example, Michael Watts (2004b) has demonstrated how Nigerian youth organizations struggled to access specialized knowledge related to oil flow stations and legal entitlements in order to negotiate concessions with oil companies and social inclusion with the government. Research related to these issues in Latin America is emerging at the same time that local struggles to access highly specialized knowledge are becoming an important point of contestation in countries like Bolivia and Ecuador, as shown by Anthias (2018) and Lyall (2017), respectively.

Another area that is under-researched in the region is the link between hydrocarbons' material properties, such as its quality and viscosity, with the speed at which development and modernization take place, turning oil extraction into a magic source of wealth and a synonym of urban modernization (Arboleda, 2015; Wilson & Bayon 2016; Kipfer, 2018). Finally, there are very few studies that link oil and gas material and financial speculation with domestic and regional legal frameworks, policies, and comprehensive plans to administrate territories (Valdivia, 2015).

In chapter three of this dissertation, I add to this emerging interest in hydrocarbons by engaging with the materiality of oil and oil infrastructures, local struggles to control knowledge related to such materiality, and with theoretical

understandings of territory that account for underground resources. Chapter three links territorial conflicts with struggles that seek to access and secure "volumetric knowledge" in order to influence oil legislation aimed at controlling territories. Based on Bridge (2013) and Elden's (2013) explanation of subterranean volumes and its materiality in the context of territory, I define volumetric knowledge in the Amazon as a means to visualize underground resources such as oil, anticipating its volume and quality, and even as a metric to predict environmental impacts. I not only argue that volumetric knowledge informs governance and surveillance as others already have (Mitchell, 2011), I also demonstrate that access to volumetric knowledge is key to indigenous struggles to increase their participation in defining how territories are governed in the Amazon of Ecuador. Volumetric knowledge guides state policy related to the extension of state control in oil producing territories and becomes a contested asset as indigenous people struggle to access and understand oil legislation. More importantly, indigenous people struggle to access knowledge about oil reserves, infrastructure that facilitates oil circulation, and environmental impact studies that define the potential damages of oil extraction. All this information is crucial as it informs state-indigenous conflicts over territories key to the extractive industry.

Authors such as Anthias (2018), Lyall and Valdivia (2015) and Lyall (2017) have already documented how indigenous leaders in the Amazon of Bolivia and Ecuador have recently struggled to better understand the politics of the oil industry as a tactic to increase indigenous participation in extractive activities legitimizing indigenous control of territories. This chapter extends their line of inquiry by illustrating how oil politics in which the population agrees to cooperate with oil extraction are not enough to increase

indigenous agency in defining how oil extraction affects indigenous territories. In this chapter I demonstrate that indigenous access to and understanding of volumetric knowledge determines both their ability to define the ways in which their territories are legalized and also how they participate in decision-making processes that shape how redistribution of oil extractive compensations take place.

Finally, it is important to note that, different from similar struggles led by youth-militia to access such knowledge from corporate power in countries like Nigeria as documented by Michael Watts (2004b), in Ecuador, Bolivia and other Latin American countries, the state mediates the ways in which indigenous people access such knowledge as a means to incorporate indigenous people into the nation-state.

Political Ecology and Local Response to the Expansion of Oil Extraction

Scholars interested in understanding how local communities respond to the loss of land and/or livelihoods produced by the encroachment of the mining frontiers and other capital driven stressors suggest that more research is needed to understand populations' survival strategies in the short and long term (Bury & Bebbington, 2013b, p. 10; Scoones, 2009; Crane, 2010). Indeed, in this dissertation I find that studies of local adaptive strategies in the context of extractive activities are limited, with some exceptions, such as the work of Adusa-Karikari (2015), Albert and Igbokwe (2014) and Bozigar Gray, Bilsborrow (2016) that look at changes in livelihoods in communities affected by oil extraction in Western Ghana and Nigeria and the Amazon of Ecuador respectively.

Most studies of adaptation and livelihoods respond to climate change stressors (Agrawal & Perrin, 2009; McDowell & Hess 2012), the expansion of biofuels (Sulle & Nelson, 2009), and extraction of renewable resources (Gilberthorpe & Hilson, 2016);

thus, little attention is given to adaptation to hydrocarbons and mining in extractive frontiers. Moreover, scholars report that few studies focus on the local response to extractivism using a livelihood perspective (Speranza, Wiesmann & Rist, 2014). Such a lens is important to help us understand how communities cope with transformations taking place at a pace and scale not seen before in peripheral areas of extraction such as the Amazon, as one of the few and most recent studies on adaptation to oil shows (Bozigar et al., 2016).

Thus, in chapter four of this dissertation I make a rapid assessment of livelihood changes using a 12-year framework in which I assess oil extraction and expansion of the state into primary and secondary forest in the Amazon using the Pañacocha community as a case study. In this chapter, I provide answer the need for a better understanding of how quickly livelihoods change and for the identification of the mechanisms that inform livelihoods strategies in peripheries of extraction.

My findings show that in this particular case "tactical subjectivity" (Sandoval, 2000, p. 54–59) informs decision-making processes at the household level, where local families partially embrace some aspects of development paid for with oil profits while rejecting others according to changing circumstances, material needs, local understandings of what counts as quality of life and even the symbolism that modernization and cash represents to these families. Thus, findings show that the local response does not always fit existing categories documented in the literature such as local resistance, coercion, and cooperation (Hindery, 2013; Sawyer, 2004; Anthias, 2018), and, instead, contradictory forms of resistance show selective use of modernization and development that feed local survival strategies. I argue that livelihood strategies models

aimed at better understanding how populations make decisions about how to respond the expansion of oil extraction and increased state presence should take into consideration ambiguous forms of resistance informed by tactical subjectivity.

Specifically, I argue that tactical subjectivity in populations like Pañacocha inform family decision-making processes as related to all factors that Bebbington (1999) considers important when understanding livelihood strategies, especially people's perceptions of what counts as quality of life, the ability to generate meaning out of assets such as imposed infrastructure in ways that empowers local ways of life, and the willingness to resist and contest imposed structural conditions, among others.

Understanding livelihood strategies in the light of tactical subjectivity is important to inform policy prescriptions and, most importantly, to inform indigenous families. This dissemination of information is urgent when approximately 371 communities in the provinces of Sucumbíos, Orellana and Pastaza are undergoing modernization and are the recipients of state-led development programs, whether they agree to them or not.

Political Ecology and Racism: Colonial Intersectionality, Settler Colonialism and Decoloniality

Hispanophone political ecologists have studied struggles to access and secure land and livelihoods in the context of inequities produced by colonial logics inherited thereafter, where western and non-western ways of knowledge and race and gender inequalities are usually discussed to explain processes that mediate the distribution of ecological conflicts and the conditions for political participation to achieve social justice (Delgado-Ramos 2017; Alimonda 2001, 2015; Boff, 2015; Lugones, 2016; Martinez-Allier & Roca, 2001; among others). Such an approach has also been applied to the study

of mining conflicts in recent years in Latin America (Vallejo 2014; Vallejo & García, 2017; De la Cadena, 2019). Similar efforts aimed at understanding struggles over resources informed by colonial and settler colonial legacies inform the work of anglophone critical geographers such as Radcliffe and Westwood (2005), Radcliffe (2015), Sundberg (2004; 2008) and Mollet (2010).

However, when assessing anglophone political ecology produced by researchers in the global north, Elmhirst (2011) suggested that feminist political ecology might have lost momentum due to the displacement of gender as an analytical category, as gender is being replaced by multiple intersecting subjectivities where people embody fragmented identities. In addition, Mollet and Faria (2013, p.1, 117) argued that a resurgence of work branded as feminist political ecology had failed to critically address race. According to these authors, political ecology avoids addressing race and racism and instead has used ethnicity to account for differences in the global south; however, Mollet and Faria (2013) think that addressing race is necessary, as it informs the relationship between gender and the environment.

Similarly, critical geographers and scholars in ethnic studies such as Pulido (2017, p. 310) have argued that the scarcity of studies focusing on race and racism in geography could be explained by the lack of racial diversity in the field and a lack of comfort with racial questions, further, processes of oppression are frequently studied in terms of dichotomies (white-people of colored struggles), missing the point that processes of racialization are complicit in oppression. In other words, people that identify as oppressed can simultaneously be oppressors.

In chapter five of this dissertation I account for the lack of critical engagement with race within anglophone political ecology; to achieve this, I draw from hispanophone accounts of colonial intersectionality developed mostly by Latin American scholars, I place this body of work into conversation with settler colonial theory, developed by anglophone scholars, which accounts for the elimination of indigenous people and the elimination of non-western knowledge and culture (Wolfe, 1999; 2006; Johnson & Murton, 2007). Such discussions provide a better understanding of the ways that oil extraction and the expansion of the state racialize people located at the peripheries of extraction. By using three case studies in the Amazon of Ecuador, I argue that the expansion of the oil frontier seeks to eliminate non-western epistemologies using a logic that uses race and gender submission to the logics of capitalism, western knowledge, and patriarchy. I complicate such processes by pointing at the ways in which mestizaje (racial mixing of indigenous people and people of European descent) and the elimination of non-western epistemologies could be seen as part of the same process in which subjects reproduce colonial violence while simultaneously trying to resist it. In this sense, I argue that colonial legacies are embedded in cultural amalgamation processes that seek to eliminate indigenous non-western knowledge that explains and denounces oil related violence.

In chapter five I also contribute to decolonial scholarship, as this chapter uses a methodology that seeks to make visible indigenous traditional ways of knowledge, also known as indigenous epistemologies and ontologies, in order to empower marginalized populations. Decolonial scholarship seeks to confront colonial power dynamics and reconfigure non-western marginalized knowers (Walsh, 2012; Smith, 1999). Decolonial

scholarship responds to postcolonial critique (Asher, 2013; Rivera et al., 2018; Smith, 1999) and critical feminism (Radcliffe, 2017) that has insisted that colonial power dynamics continue to play an important role in shaping power dynamics in Latin America. Decolonial scholarship calls for anti-colonial efforts both in the research methods and in the way knowledge is produced (Mignolo, 2012; Escobar, 2004; Naylor et al., 2017),

Geographers such as Naylor et al. (2017, p. 1) and Radcliffe (2017) have arrived at the conclusion that geography scholarship remains embedded in western ways of knowledge that marginalize nonwestern ones and frequently ignore the politics of knowledge production. Moreover, they criticize those geographers interested in postcolonial studies who have paid little attention to anti-colonial struggles (Jazeel, 2017), arguing that scholars keep producing research about the other instead of collaborating and co-producing knowledge with marginalized populations (Naylor et al., 2017, p. 2).

Other geographers such as Louis (2007), Peake and Kobayashi (2002), and Pain (2003, p. 652) have suggested that in order to make geographic research more relevant to social policy and community needs, scholars should make efforts to avoid seeing activism and scholarship as separate and, instead, scholars should understand theoretical production and teaching as political interventions where political subjectivity can't be avoided (Gibson-Graham, 1994, pp. 211-213; Hale 2006, p. 100). For a long time, political ecology has called on scholars to make their contributions useful for social policy and marginalized populations, transcending academic production and seeking social justice (Bury & Bebbington, 2013b, pp. 12–13; Walker 2006, 2007; Blaikie, 2012).

Thus, I follow on the steps of other geographers and anthropologists such as Gibson-Graham (1994), Stephen (2013), Castro and Santacruz (2013), Rivera, Alatorre, García & Mercon (2018), and Zaragocín (2019), among others, who have used decolonial methods aimed at allowing marginalized populations to reconfigure their own epistemologies and ontologies to visibilize their realities, problems, and demands. Moreover, Naylor et al. (2017, pp. 4–5) and Stephen & Hale (2013), suggest that indigenous epistemologies should be taken seriously, rather than as empirical data used to theorize information. Thus, in chapter four I use collaborative and participatory research methods that take into consideration indigenous analysis of narratives as theory in its own right, and I treat these findings as both useful to indigenous people and theoretically important to political ecology and postcolonial critique.

Explanation of Dissertation Format

This dissertation consists of three manuscripts designed for publication in academic journals (Chapters III to V) and they are presented as separate pieces. Chapter one corresponds to the introduction, chapter two presents the methodology, and chapter six presents the conclusions.

In chapter two, "Methods," I provide an overview of the methodology and analysis used in each chapter of this dissertation, I also provide a discussion on positionality and a section that explains how I expect to give back to communities that collaborated in this research.

In chapter three, *Post-Neoliberal Legibility and Indigenous Oil Conflicts in the Amazon of Ecuador,* I answer the first research question by building on contemporary understandings of indigenous political attempts to access and secure land as well as on

state efforts to increase legibility in the Amazon region of Ecuador. Using the Pañacocha community as a case study, in this chapter I make evident that state legibility is aimed at increasing control of underground oil deposits through legal and institutional mechanisms in which the state's ability to legalize land and redistribute oil-extraction compensations profits is used to encourage communities to cooperate with oil activities. I argue that indigenous people struggle to access volumetric knowledge associated with oil deposits and infrastructure because these tools would allow locals to better negotiate the terms under which indigenous land is legalized and the way oil-extraction compensations are paid. Information that is kept away by the oil company in association with some indigenous leaders interested furthering personal gains. Local struggles are further complicated by intracommunity conflicts in which different parties have opposing visions on how local leaders should negotiate and manage oil-related development, generating conflicts over land and uneven distribution of oil-extraction compensations.

In chapter four, *Reclaiming Marginality: Forests Livelihood Response to Oil Extraction and State-Led Development in the Amazon of Ecuador,* I answer the second research question. In this chapter I contribute to a better understanding of indigenous and peasant responses to the loss of lands and livelihoods, processes that are associated with the expansion of state-led oil activities in the Amazon region of Ecuador. I use an analysis of livelihoods strategies in the community of Pañacocha to understand the ways in which peasant and indigenous families make decisions related to survival. I argue that livelihood responses rely on tactical subjectivity; thus, families neither fully resist nor cooperate with oil activities or state intervention. Instead, their response is ambiguous as they tactically reject some aspects of oil development and modernization while

embracing others according to changing material needs, circumstances, and local views of what constitutes quality of life. Tactical subjectivity fits within theoretical frameworks of marginality and border thinking theory, complementing contemporary understandings of livelihood strategies.

In chapter five, *Mining as Epistemic Violence: Erasure of Indigenous Epistemologies in the Amazon Region of Ecuador,* I answer the third research question. This chapter draws from postcolonial race and gender intersectionality and from settler colonial notions of elimination to understand state efforts to expand the mining frontier into the Amazon of Ecuador. By using three case studies of Kichwa indigenous communities, I illustrate how the state-led modernization paid for with oil profits reinforces colonial violence based on race, gender, and patriarchy. Based on analysis of female indigenous narratives, this chapter argues that internalized colonial violence and state interventions systemically undermine and eliminate indigenous ontologies and epistemologies that explain the complexity of mining conflicts and denounce systemic violence.

In chapter six, *Towards an Understanding of Peripheries of Extraction in the Amazon of Ecuador,* conclude the dissertation by summarizing the theoretical, empirical, and methodological contributions of the dissertation, while also bringing attention to research areas that require future attention.

CHAPTER II

RESEARCH METHODS

I conducted eight months of research during 2017 and 2018 in the Pañacocha and Santa Elena communities, located in oil block 12 in the province of Sucumbíos in the Amazon region of Ecuador. In addition, my research questions are built upon four months of research conducted between 2014 and 2015 in the community of Tzawata, located in oil block 28, province of Napo. I also participated in a number of indigenous events to resist mining in 2015. All this preliminary work defined the objectives of the dissertation. Participant communities identify as Kichwa, an ethnicity that constitutes 51% of the total indigenous population in the Amazon region (Lopez et al., 2013, pp. 13–14). Additional research was conducted in the cities of Quito, Coca, and Shushufindi, where interviews were conducted, and important documentation was collected.

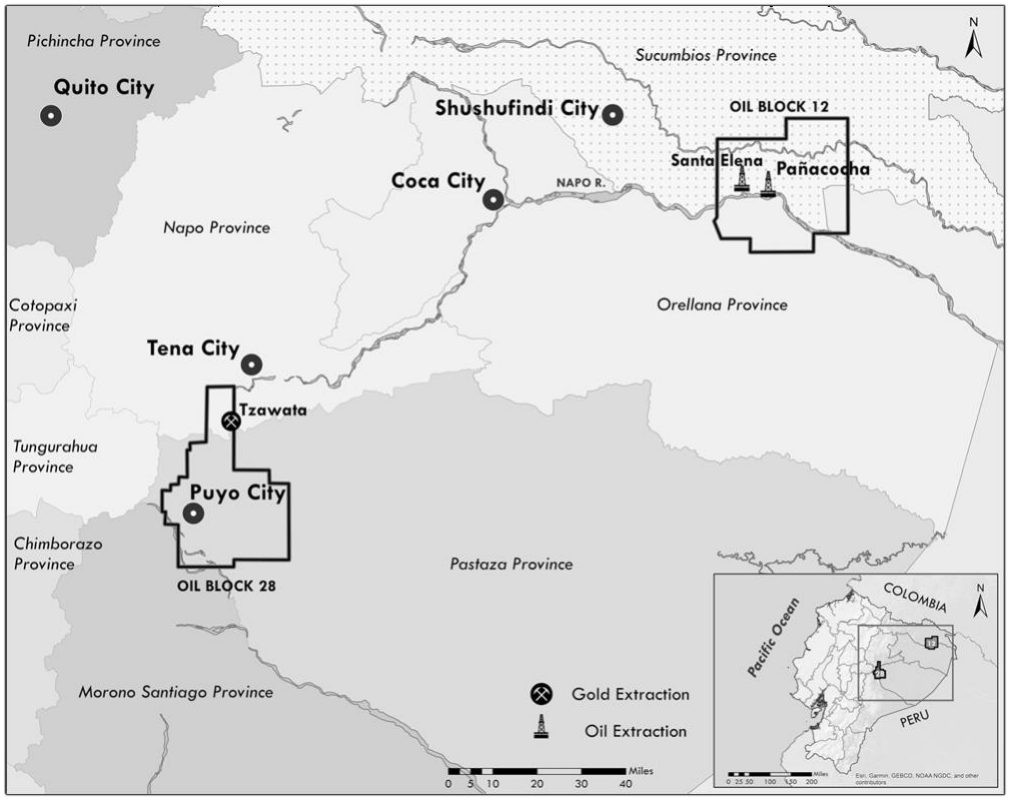


Fig. 1. Research sites. Map by R.J Theofield (Hydrocarbons Secretariat, 2018; Geographic Military Institute, 2012)

I used traditional research methods in Pañacocha to answer the first two research questions, and I used participative and collaborative research methods in Tzawata, Pañacocha, and Santa Elena to answer the third research question.

Preliminary Fieldwork

Indigenous people collaborated with me to define overall research questions as suggested by Stephen and Hale (2013). In 2014, I spent three months in Tzawata working with locals in an effort to resist gold mining operations in their territory. During this period of time, focus groups revealed that indigenous people needed access to information related to mining legislation as well as to information that clarifies how the state claims jurisdiction over ancestral indigenous territories. Such information informs indigenous resistance tactics.

In 2015, I participated in a nationwide indigenous uprising in which Amazon regional organizations represented by the Confederation of Indigenous Organizations of the Amazon (CONFENIAE) marched to Quito, requesting the state stop extractive activities in their territories, enforce the law, and conduct proper prior consultation before mining activities take place. Leaders were worried about mining impacts and their ability to maintain their livelihoods, especially in peripheral areas of extraction where people rely on hunting, fishing, and forest gathering (Personal interview: CONFENIAE president, August 13, 2015). In August of the same year, I conducted a month of preliminary field work in the Pañacocha community; this allowed me to converse with women worried about oil-related violence. In September, I returned to Tzawata and shared information collected in Pañacocha with women who had been interested in

exchanging information with other communities about resisting mining and responding to violence (Focus group with Tzawata women, September 12, 2015).

The Case Studies

I chose Pañacocha and its neighboring community Santa Elena as case studies because they are located in a peripheral primary and secondary rain forest where the mining frontier has expanded rapidly along the Napo River. These are territories where the state presence had previously been semi-absent or weak and had lacked both the infrastructure and roads to allow the expansion of urban ways of life. Thus, traditional ways of survival had remained highly dependent on forest resources and intermittent contact with nearby markets. The expansion of the oil frontier and the growing presence of the state have impacted livelihoods and grassroots political organizations deeply in the last two decades. The reality of these communities is similar to many others located along the Napo River where the state and the national oil company Petroamazonas have persuaded indigenous leaders to agree to oil extractive activities in exchange for modernizing infrastructure and oil compensations distributed in cash (Lyall & Valdivia, 2015; Wilson & Bayón, 2017, pp. 102–121; Vallejo, 2014).

I included the Tzawata community in this study in response to indigenous needs to exchange information with other Kichwa communities facing similar problems; such interest was born primarily from Tzawata women worried about how to prevent mining violence in their territory and looking for legal ways to protect themselves against the expansion of oil and gold mining. A female Tzawata leader who organized women to develop tactics of resistance in Tzawata decided to accompany me to the field for two

months to share the story of her community's resistance with the Pañacocha and Santa Elena population. Her objective was to share her story and learn from these sister communities in order to take information back to Tzawata. Chapter four of this dissertation builds on exchanges between this female leader and the populations in Pañacocha and Santa Elena, paying special attention to female narratives discussed among women in which they identify the nature of violence.

Methods Overview

I used participant observation with 20% of 95 households in Pañacocha, followed by in-depth conversations to avoid observation bias and clarify collected information as suggested by Schensul, S., Shensul, J and LeCompte (1999, p. 166). I also used semi-structured interviews with key informants in Pañacocha and Santa Elena, collecting a total of 27 interviews used in this dissertation. To achieve this, one research assistant and I lived with the 20 households for approximately 10 days each. For conducting semi-structured interviews, I had to move frequently between households, and sometimes I had to travel to nearby communities for a day or two. Also, I collected 14 interviews with state officials and oil company personnel in the cities of Quito, Shushufindi and Coca, and I compiled approximately 62 official documents associated with land conflicts in Pañacocha.

In addition, the aforementioned Kichwa female collaborator from the Tzawata community accompanied me for two months in order to conduct a participatory research method detailed later in this section, during that time she also served as a kichwa translator. I spent a total of eight months doing research during 2017 and 2018 as follows: six months living with 13 households in Pañacocha and two households in Santa Elena,

one month conducting research in the cities of Quito, Coca, and Shushufindi, and approximately half a month was spent in traveling between places and in general organization of data in the city of Quito. The research assistant, a female college student, spent one and a half months in Pañacocha living with a total of five households, also for between 10 days each, she also spent about a week organizing data in the city of Quito. The Kichwa female collaborator and translator spent two months accompanying me as we stayed with households in Pañacocha and Santa Elena. I also spent five days collecting geospatial data that illustrates the unequal distribution of oil-related compensations in Pañacocha and Santa Elena. Finally, in 2018, I returned to the field to conduct participatory analysis of part of the data with the Tzawata indigenous collaborator and two female collaborators from Pañacocha and Santa Elena; the analysis was conducted over a period of 15 days.

Methods Research Question No.1

In order to answer the first research question—How have recent legal and institutional frameworks affected traditional indigenous political participation and indigenous agency in the configuration of indigenous territories? —I conducted interviews with 14 state officials from the ministry of the environment, the ministry of agriculture, the land secretariat, and Petroamazonas field personnel in the cities of Quito, Coca, and Shushufindi. I also conducted 27 semi-structured interviews with key informants such as former indigenous leaders, community members active in local politics, local teachers, and the school principal in Pañacocha. Other semi-structured interviews included former Petroamazonas field personnel in oil block 12 and former public servants involved in conflicts related to intracommunity disputes over land and oil-

related compensations. Finally, I collected official correspondence between state institutions, Petroamazonas and indigenous organizations involved in the conflicts over land and access to oil-related compensations in oil block 12; I compiled a total of 62 documents that include official letters between state institutions as well as formal manuals that guide the ways in which oil profit compensations are to be redistributed among affected communities such as Pañacocha. See summary of research methods below:

Method	Population	Participants
Structured interviews	n=14 state officials	MAE-Quito, Shushufindi. Petroamazonas former employees, field employees.
Semi-structured interviews	n=18 population	Indigenous leaders & former leaders, key informants (police, teachers, school teachers, etc)
Official documents & correspondence	n=32 official correspondence n=6 official reports & manuals n=24 indigenous correspondence	
GIS data location: Oil-related compensations	n=55 households	Household members

Table 1. Summary of research methods, research question No.1

Analysis: Analysis of information required organizing semi-structured interviews and interview data into two main variables: V1. state access, organization, and administration of territory and V2. indigenous access, organization, and administration of territory. These variables respond to general findings that reveal clear frictions between state and indigenous views on how to administrate territory using oil profit compensations. These frictions are the main factors affecting indigenous participation and agency in the configuration of indigenous territories. Then, following Schensul et

al.'s (1999, pp. 149–164) coding technique, I coded information based on frequencies. Specifically, each semi-structured interview and structured interview was reviewed with responses organized into categories; the categories with higher frequencies of responses were used to arrive at conclusions. Below is a scheme that summarizes the analysis process; the evidence and/or data (E, D) correspond to data frequencies that support each category:

V1: State access, organization, and administration of territory
- C1: Relies on recent legislation
- C2: Relies on changes in institutional frameworks
  - E1: Content analysis of legal frameworks, see laws discussed in Ch.2
  - E2: Content analysis of the national oil company's strategic plans for working with communities and oil company's correspondence.

V2: Indigenous access, organization, and administration of territory
- C1: Depends on understanding changes in legislation and legal frameworks
- C2: Depends on access to volumetric information
- C3: Depends on ability to lobby with the state and mining company on behalf of the community
  - D1: Semi-structured interviews (frequencies)
  - D2: Interviews (frequencies)

Table. 2: Analysis process, research question No.1

Finally, I used geospatial data I collected in the field to visually understand the distribution of oil-related compensations in Pañacocha in relation to where oil infrastructure is located, a situation that generates territorial and intracommunity conflicts.

Methods Research Question No.2

To address the second set of research questions—How have livelihoods changed in response to state and oil expansion in the last 12 years? What are the mechanisms that inform current survival strategies? —I conducted a focus group with 12 members of the communities of Pañacocha, Sani, El Edén and Santa Elena. The focus group was aimed at establishing living conditions enjoyed by the population living in oil block 12 before Petroamazonas took over operations 12 years ago. These communities were chosen due to their close proximity to Pañacocha and because Pañacocha families facilitating the research suggested that living conditions among all these communities had been similarly affected by the expansion of oil extraction in the last 12 years. Participants in the focus groups were suggested by the Pañacocha families that facilitated this research; these families considered these community members trusted individuals in the region. Establishing past living conditions was important to compare them with current living conditions and assess how livelihood strategies are changing as families adapt to oil extraction. The research assistant and I documented current survival strategies in 20 households using participant observation followed by in-depth conversations with heads of households. Conversations were aimed at clarifying observations, but most importantly, they were aimed at understanding the logics that inform changes in survival strategies and the mechanisms that allow such changes. Finally, I collected nine semi-structured interviews with key informants such as schoolteachers, indigenous men that had worked for the oil company, and Petroamazonas field personnel.

Method	Population	Participants
Focus group to establish difference in living conditions between 2005–2017	n=12	Former indigenous leaders and elders—Pañacocha, Santa Elena, Sani, El Edén communities
Participant observation and in-depth conversations	n = 95 households aprox. 20% (20 households)	Family members Heads of households
Semi-structured interviews	n = 9	(2) Schoolteachers, (5) former oil workers, (2) Petroamazonas field personnel.

Table 3. Summary of research methods, research question No.2

Please note that participant observation with household members followed Emerson, Fretz & Shaw's (2011, pp. 24–39) suggestions to keep on-the-spot notes that would be later elaborated into longer descriptions at the end of the day when researchers were not involved in household activities. Additionally, in-depth conversations required taking detailed notes on the spot.

Analysis: The research assistant and I organized participant observation notes and in-depth conversations according to the following variables per household: a) families' efforts to secure access and control over food and water, b) ways that families make use of oil cash compensations, c) the degree to which families engage in wage labor opportunities, and d) the extent to which families participate in productive projects introduced by Petroamazonas. In addition, we also keep track of the factors that inform major changes in livelihoods. I compared current conditions with those present 12 years ago, identifying how living conditions had changed since Petroamazonas began operations in oil block 12. Here is a summary of the variables against which current living conditions were compared:

V1. *Access to and control over food and water (twelve years ago).*

C1. Traditional food products widely used:

a) Staples: cassava, plantains, cassava drink (daily)

b) Protein: forest game, turtle eggs, fish, trees groves (four to five times a week)

c) Domestic animals: Around eight families raised chickens but not permanently.

C2. Clean water (12 years ago):

a) Napo River (daily), Pañayacu lake (daily), rain (rare)

V2. *Wage labor (12 years ago).*

C1. Wage labor in nearby cities or nearby agricultural opportunities: a) Occasionally and for less than two months (once a year). Most men.

C2. Wage labor in oil extraction: a) Occasionally between 2005 - 2017 (once a year). Men with young families.

V3. *Use of cash in order of priority:*

a) Food products (gas, oil); b) gas, agricultural materials, construction materials; c) school supplies; d) clothing; e) alcohol

V3. Participation in productive projects introduced by the state (12 years ago):

Table 4. Analysis process, research question No. 2

Research findings are descriptive and reflect changes in livelihoods in the last 12 years (see findings in chapter four). I also analyzed in-depth conversations with heads of households to better understand the logics behind livelihood strategies. Frequency analysis was used in this case, and the frequency of responses pointed at the following categories as main findings: a) difficulties accessing forest game and alternatives, b) difficulties accessing clean river water and alternatives, c) cash being used in survival and cash been used in luxury items, d) positive and negative perceptions of wage labor, e) positive and negative perceptions of productive projects.

Methods Research Question No. 3

In order to answer the third research question—How do local epistemologies make sense of the presence of oil extractive activities, conflicts, and violence? And how do women cope with violence?—I used participatory and collaborative research methods and semi-structured interviews with key informants. Participatory and collaborative research methods include the participation of indigenous peoples' concerns in informing the research questions of this dissertation (see Preliminary Fieldwork in the methods section) and the participation of the female indigenous leader from Tzawata, who collaborated with the research by exchanging information related to mining violence with Pañacocha and Santa Elena communities, exchanges took place in Spanish and Kichwa, thus this collaborator also helped translating and/or clarifying information provided in Kichwa into Spanish when needed.

I called this method "female epistemological exchange," and it entailed exchanges between the Tzawata leader and women, focusing on forming a better understanding of mining-and oil-related violence. Such exchanges use Kichwa logics to make sense of reality. This is what I refer to as epistemology; female epistemological exchanges assume that human and non-human beings, as those that are part of the forest, have the capacity of making and communicating meaning (Kohn, 2007). The exchanges could be described as organic conversations in which women openly discussed oil extraction using dreams and narratives that blur the nature-culture divide (Descola, 2004). In this sense, oil expansion, state intervention, conflicts and violence could be narrated not only by Kichwa women but also through the lens of non-human beings that share the reality in which oil extraction takes place (Kohn, 2007; Uzendoski, 2010).

During this collaboration, women were in complete control of conversations and narratives. Thus, during most of the exchanges or in the construction of female narratives, I limited myself to taking notes of around eight narratives and would only participate when invited by the women. Because, some parts of the conversations would take place in Kichwa, the Tzawata collaborator and myself would debrief and clarify narratives at night almost daily. Given the importance of the narratives, I returned to the field in 2018 to further analyze five of these narratives in collaboration with the Tzawata leader and two women from Pañacocha and Santa Elena who provided some of the most important narrations. In this dissertation I illustrate two of the narratives in chapter four with the permission of the women involved. Part of the analytical process is also briefly shared in this chapter as women explain the logics behind their narrations. In addition, I conducted semi-structured interviews with oil company personnel, local police, health center personnel, schoolteachers, and traditional healers in order to better understand how outsiders understand violence in the region.

Finally, I also used information collected in 2013 and 2015 in the Tzawata community, including five oral histories that explain indigenous resistance to the expansion of gold mining and two transcripts of group discussions. These are similar to focus groups in which 10% of the population (18 people) participated. Information collected in Tzawata provided context when answering the third research question and information needed to analyze gender power dynamics among indigenous communities. Here is a summary of research methods used to answer the second research question:

Method	Analysis	Participants
Traditional methods		
Semi-structured interviews	n=9	Key informants: Oil company personnel, local police, health center personnel, schoolteachers
Oral histories	Tzawata: n=5 (Key informants involved in fighting the gold mining company)	Elders and leaders involved in resistance
Focus groups (2)	10% of population (18 people)	(10) Mixed group (women, men, youth and elders) (8) Women
Collaborative/participatory methods		
Female epistemological exchange	n=5 female narratives	(12) Women from Pañacocha, Tzawata and Santa Elena

Table 5. Summary of research methods, research question No.3

Analysis: To analyze the data, I required the participation of the Tzawata collaborator and women from Pañacocha and Santa Elena in 2018. Specifically, following Sandoval's methodology of the oppressed (2000, pp. 74–76), analysis of women's narratives associated with violence required conversations about the positionality of each women in relation to different categories of power. To define what categories were used, with my help, women identified the main actors involved in power relations in the narratives through drawings. They identified the following categories: a) state officials, oil personnel, police and/or armed forces; b) mestizos (the dominant racial group in Ecuador); c) indigenous men; d) indigenous leaders and, e) natural beings (animals, bodies of water, oil, and the forest, among others).

Fig. 2: Women brainstorming categories for analysis of narratives. Photos taken by Belén Noroña

Finally, I facilitated conversations among women, aiming to better understand what power relations undermine in women's lives. Over the course of four meetings and following Sandoval's methodology that suggests unveiling what power relations seek to achieve in the context of dominant relations (2000, pp. 105–108), women identified what power relations have achieved in the context of mining extraction. The most important findings include that power relations: a) dominate female labor at home, b) dominate natural resources for capital accumulation, c) dominate indigenous ways of live to transform them into modern ways of life desired by the state, and d) scare families from participating in oil profits redistribution.

At this point, the women started to wonder how they could fight processes that seek to eliminate Kichwa culture and autonomy, and in the discussions, they suggested that keeping narratives alive was the best way continue to denounce violence and keep indigenous communities informed of the dangers of mining, oil, and patriarchy. I use

female narratives as theory in their own right, and in chapter four of this dissertation, I compare female narratives with postcolonial and settler colonial theory not only to answer the research questions posed by the women, but also to generate grounded understandings of the mechanisms through which state and western logics impose themselves in the Amazon as oil extraction and the state presence expands in the Amazon of Ecuador.

Positionality

Collaborative and participatory methods of data collection and analysis were required to open spaces for women to freely discuss mining and oil related violence. In order to be able to engage with indigenous women in conversations, I tried to horizontalize power relations as Gibson-Graham (1994) and Stephen (2007, pp. 322–323) suggest. Thus, I disclosed my own positionality so that the women and I could relate with each other. I disclosed my subjective position as an Ecuadorian woman who identifies as mestiza (the hegemonic racial group in Ecuador) and has had the privilege to access western education. Although these are the subjective positions indigenous people in general take for granted in educated mestizas like me, I discussed other subjectivities embedded in power dynamics around which subjective common ground was established with the participating women.

Thus, I shared my family history going back two generations to show my family's rural and indigenous origins and to demonstrate the socio-economic struggles I experienced when growing up in Quito. In addition, I disclosed my own struggles in accessing higher education due to economic reasons and in part to overcoming gender bias, and my experience with gender discrimination and sexual harassment. Finally, I

disclosed and discussed my experiences with racism while living in the United States and my encounters with state violence both in Ecuador and the U.S. This information allowed women to relate to me and have open conversations about similar topics in the context of their own realities. Still, it is important to mention that women were aware of the advantages I enjoyed when encountering realities of social mobility that require western education and lighter skin color, among others; for these reasons we also made sure that knowledge production would benefit the women's concerns and, at the same time, that it would fulfill my academic pursuits.

Similar information, although not as detailed, was disclosed with indigenous leaders before starting research; this information is usually required by indigenous communities before they allow researchers into their territories. Similar exercises that required conversations with families about the researcher's positionalities were conducted by the research assistant and me with every household we stayed with. It is important to note that the research assistant was a female U.S college student who had experience working with Kichwa communities in Ecuador. Because of this, power dynamics were unavoidable during fieldwork, as indigenous people recognize not only my privilege as an educated mestiza but also those of a foreign white person. Thus, discussion about the researchers' positionalities was not enough; it had to be accompanied by the researchers' willingness to fully join household activities in ways that are respectful and in ways that empower families. For example, interest in learning how to prepare traditional food, participating daily in productive activities, sharing food, and joining hard work such as cleaning fields for agricultural activities were as important as having discussions about one's positionality. As Smith (1999, pp. 2, 15–16, 118–120)

reminds us, research of any kind is perceived by indigenous people as extraction of information in unequal terms unless it gives back to the community, and giving back is seen as a right the community has over information, rather than research benevolence. With this in mind, the research assistant, who were in the field for a month and a half, and I did as much as we could to lessen power dynamics. Families hosting the researchers were aware that research goals were aimed at giving back to the community; in many ways this encouraged families to collaborate with us but not always. However, the presence of the Tzawata Kichwa collaborator helped enormously to gain people's trust and facilitate research as she had known me for years and her sole agenda was to further indigenous concerns.

Giving Back to Communities

It is important to mention that these research findings have been partially shared with the women participating in the research, indeed, they considered the processes of analysis of narratives as a learning opportunity that adds to women's efforts to resist extractive activities. Also, as a way to give back, I also collaborated with Guillermo Jiménez, a painter who identifies himself as indigenous/mestizo. He painted the narratives used in this dissertation following directions from the women involved in the analysis of the narratives. The paintings are in the hands of indigenous women who wanted to use them to further reproduce narratives among other women. The paintings are also used in chapter four of this dissertation with the permission of Jiménez and the women involved.

In addition, I plan to return to Ecuador in 2020 to share the rest of the findings of this dissertation with indigenous families in Pañacocha, Santa Elena, and Tzawata. In

2018, families who facilitated this research started to work on a methodology to share research results in a way that is useful to indigenous people. Specifically, in addition to the work I already conducted with indigenous women, the author will fulfill indigenous requests to provide research results relevant to communities through illustrated manuals that provide information on how to: 1) improve indigenous tactics to better secure territories and 2) explain how indigenous livelihoods have changed in the last 12 years, stressing what families find as opportunities and main obstacles.

CHAPTER III

POST-NEOLIBERAL LEGIBILITY AND INDIGENOUS OIL CONFLICTS IN THE AMAZON OF ECUADOR

Introduction

In the past two decades, Ecuador's economic restructuring has continued to aggressively target oil and mining frontiers in the Amazon region. This restructuring has particularly increased under post-neoliberal regimes, affecting the indigenous territories where the state's presence has historically been weak or absent. The post-neoliberal economic agenda requires territorial reorganization through new kinds of state legibility. Such legibility consists of large-scale central planning and the creation of legal frameworks and institutions aimed at controlling and modernizing territory and people while simultaneously facilitating oil and mining extraction (Vela Almeida, 2018; Lu & Silva, 2015). State legibility explains state and corporate attempts to make territories readable through simplification, regimentation, and identification of the value of certain resources like oil and the neglect of others (Scott 1998).

This paper brings attention to the new kinds of legibility in which the state relies on "volumetric knowledge," understood here as state calculations based on the location, quality, and volume of oil reserves, among others (Elden, 2013; Bridge, 2013). I argue that such knowledge guides state efforts to increase control over oil-rich territories and shapes indigenous struggles to control territory and access to oil compensations.

I use a case study of the indigenous community of Pañacocha to illustrate that the state promotes legalization of indigenous territories along with the distribution of oil extractive compensations in areas that are key to the oil industry, and to show that indigenous leaders struggle to access and control the techno-bureaucratic and volumetric

knowledge that enables them to better negotiate land legalization and access to state-led modernization promised by the state in exchange for cooperation with oil extraction.

This paper examines contemporary processes of territorialization in the Amazon region and indigenous political strategies to access and secure territory and political recognition. Overall, my findings advance understandings of oil conflicts associated with territory where access to information on oil infrastructure, oil flows, and environmental impacts matters for state recognition of indigenous territory and for social redistribution derived from oil extraction.

Methodology

This paper draws on seven months of research in the cities of Quito and Coca, and in the Pañacocha parish, located in Oil Block 12. In 2017, I conducted 14 interviews with state officials at the Ministry of the Environment and the Ministry of Agriculture, and with field personnel of the national oil company (Petroamazonas) in Oil Block 12. I collected official correspondence between state institutions, Petroamazonas, and indigenous organizations involved in conflicts over land. Finally, I conducted participant observations and semi-structured interviews with indigenous community members and leaders involved in land conflict. The semi-structured interviews involved 5% of the community's total population of 380 people. I analyzed the information I gathered using frequencies and coding of relevant categories relating to the strategies used by the state and indigenous people to seize control over land; such strategies were then compared and contrasted with existing legal frameworks and institutions that govern how territories are organized in the Amazon and how oil benefits are controlled and distributed. Finally, I

used geospatial data to map the distribution of oil extraction compensations among indigenous people competing for access to land and oil benefits.

Post-Neoliberal Legibility: The Context

Legal frameworks and institutions

The concept of state legibility has been used to explain state and corporate attempts to make territories readable through simplification, regimentation, and identification of the value of certain resources and the neglect of others (Robbins, 2008; Scott, 1998, pp. 13–19). Such attempts usually follow economic interests such as oil, in which the state and/or corporate powers try to secure control over land in order to access oil deposits (Ferguson, 2005).

In Ecuador, efforts to control such spaces have shifted between the state and corporations since the discovery of oil deposits in the Amazon in the 1940s (Radcliffe, 2010). During the neoliberal period (1980s–2000s), the state sought to further oil extraction by decreasing regulations on oil companies (Acosta, 1995, pp. 157–202). The state acted either as a partner with or as a facilitator for foreign oil companies, which produced information on territories where the state—until then—had been almost entirely absent, and therefore lacked geographic, demographic, and resource data (Martinez-Sastre, 2015, p. 91-132).

In contrast, the post-neoliberal period (2007–present) has been characterized by an increased state role in mediating mining activities; thus, there have been substantial efforts to increase its capacity for central planning. These efforts include surveying territory and producing legislation that increases control over minerals (Bebbington & Humphreys, 2011; Vela-Almeida, 2018; Yates & Bakker, 2013). Indeed, at the beginning

of the post-neoliberal period in 2007, government efforts were directed at producing a unified vision of how territory rich in oil and other minerals ought to be read and governed, especially in areas where the state had historically been weak. Thus, as Robbins (2008, pp. 213–214) explains, the state produces expert knowledge that become a location of epistemological struggle as this expert knowledge marginalizes local forms of knowledge and expertise.

Because Ecuador's economic agenda has identified mining as paramount for national development and has declared these resources are property of the state, regardless of who owns rights to the surface (Ecuadorian Constitution 2008, Art. 313, 408), the state's reading of oil reserves has resulted in new maps that reorganize the region by oil blocks. In the last twelve years, the government has leased 30% of remote primary forests in the Amazon for oil extraction; around forty oil blocks (Hydrocarbons Secretariat, 2019), either in active production or to be assigned for production, overlap protected areas and 68% of all territories occupied by indigenous people (Lopez et al., 2013, p. 22). Many of those indigenous communities have not been recognized by the state as legal owners of the land.

Subsequently, new laws have been passed, reformed, and institutionalized to bring these territories under state control (Vela-Almeida, 2018). Laws such as the Territorial Plan and Decentralization Strategy (2013–2017), the Mining Law (2009), the Land Organization Code (COOTAD, 2010), the Law for Rural and Ancestral Land (2016), and the Plan for the Territorial Organization of the Amazon of 2018 are aimed at ensuring that the Amazonian territory and its people will be systematically incorporated into civil society. As Radcliffe (2001) explains, state territorialization takes place through

classification and enforcement of control over space, usually through the legitimation of the state's use of force.

Dispossession, Legal Recognition of Indigenous Land, and Oil Reinvestments

The state justifies its efforts to reorganize territory by asserting that oil revenues are needed for national growth and the modernization of rural territories and their people (Martinez-Sastre, 2015, Ch.8; Vallejo et al., 2016). According to the Mining Law (2009, Art. 67, 93), 12% of oil profits along with at least 5% of royalties generated by the oil industry are to be paid to the state for the sole purpose of investment in social projects. This approach allows the government to narrate the Amazon as poor and as a region that has long been forgotten by previous administrations and that has been waiting for productive insertion into national and international markets (Vallejo, 2014; Radcliffe 1996, p. 24). Thus, the state hopes to create a reading in which the Amazon is assessed through oil productivity and quality of life is measured through access to education, health, infrastructure, and basic services, among other western indicators (Martinez-Sastre 2015, pp. 237-238).

Oil reinvestments are distributed through decentralization schemes in which political territorial units, organized hierarchically, participate in the transfer of oil funds. They also participate in the diagnosis, planning, execution, and monitoring of development projects (COOTAD, 2010, Art.10). These decentralized units include territorial institutions such as municipalities, parishes, and, recently, indigenous governments that have land legally recognized by the state and that support the desired territorial model.

Still, according to Scott (1998, p. 22-24), state mechanisms of simplification like the one proposed by the Ecuadorian state are incapable of truly reflecting the complex relations between people and their environment and the complex social relations that have historically characterized indigenous ways of life, which leads to local resistance to the state. In the last ten years, conflicts between the state and populations resisting mining and extractive activities have spiked (Becker, 2013; Puig and Bastidas, 2012); these conflicts have been characterized by the criminalization of protest and by denying indigenous people and peasants' requests for, or making it extremely difficult to achieve, legal recognition of land tenure (Bornschlegl, 2018; Murcia et al., 2015; Shade, 2015). In doing so, the state avoids having a legitimate population that which would need to be consulted about extractive activities and which could hold it accountable for them, as required by law (Ecuadorian Constitution, 2008, Art.57, No.7). Similarly, in cases where oil extraction takes place in territories whose indigenous populations have already secured legal tenure over land but who oppose extractive activities, the state has found ways to force oil extraction despite opposition (Lu, Valdivia & Silva, 2017; Cepek 2018; Mazabanda, 2013).

This paper argues that, during the post-neoliberal period, strategies used by the Ecuadorian state to facilitate oil extraction in the Amazon include legalization of access to the surface of indigenous land for mining resources, and to control territory and people. It is notable that in the last ten years, 123 indigenous land titles have been granted; 82 of them are located in the Amazon and in provinces such as Morona Santiago and Zamora Chinchipe where mining activities are rapidly expanding (Sub-secretary of Land, 2018). Land has also been legally recognized in areas where communities with

land have already agreed to oil extraction and where pockets of land remained untitled. In other cases, territories that already hold indigenous land titles have been politically divided by mining interests; this has led to fragmentation of territories represented by councils that are more agreeable to oil extractive activities. This process is encouraged by inviting indigenous councils to participate both in territorial planning of land rich in mining resources and in processes that define how oil related compensations will be used in the territory.

Post- Neoliberal Indigenous Territory

The idea of territory and local space in Latin America has been used to talk both about political spaces over which the state has control and to refer to local populations' claims on land and resources along ethnic lines (Sandoval, et al. 2017, pp. 56–58). Therefore, indigenous territory, legally recognized as such in the term "comunas," has allowed indigenous people to claim ancestral lands by using the Commune Law, first passed in 1937, and it has also allowed the state an avenue to politically incorporate territories into the nation.

Comunas have survived in the Ecuadorian legal framework due to their simultaneous use over time for both state and indigenous interests. For instance, between the 1950s and 1970s, comunas were part of state efforts to make territory legible through population surveys and the modernization of rural territory, particularly in the highlands (Yashar, 2005, pp. 89–97). Legal recognition of comuna territory was later discouraged in the 1980s and 1990s because the state was interested in opening rural land to the markets during the neoliberal period (Sanmartín, 2016, p. 96; Shade 2015, p. 779).

In 1990 and 1992, national indigenous uprisings challenged neoliberal laws that prevented legal recognition of indigenous territory, and those who accessed the land did so through great social strife. For instance, in the 1990s the Organization of Indigenous Nationalities of the Province of Pastaza (OPIP) requested recognition of large portions of territory for their people (Sawyer, 1994, pp. 47–48). In response, the state used the concept of comunas to legalize land not for the OPIP, but rather for specific indigenous populations on the land by drawing comunas arbitrarily on a map, where each comuna would have control over a piece of land (Sawyer, 2004, p. 51). Thus, the state does not view indigenous land as a territory, but as land in possession of specific indigenous groups organized as comunas. Despite this inconvenience, indigenous people find territorial comunas useful and have used them as an opportunity to organize politically along ethnic lines and to reproduce their material culture within their territories (Yashar, 2005, pp. 61–88). Also, access to territorial comunas has legitimized indigenous people as interlocutors with the state and oil companies, although negotiations are in most cases not solved and sanctioned in their favor (Becker, 2013). As I show in the next sections of this paper, during the post-neoliberal period (2007–present), the state views territorial comunas as key to resource extraction when populations are likely to consent to extractive projects.

Contemporary Role of Territorial Comunas

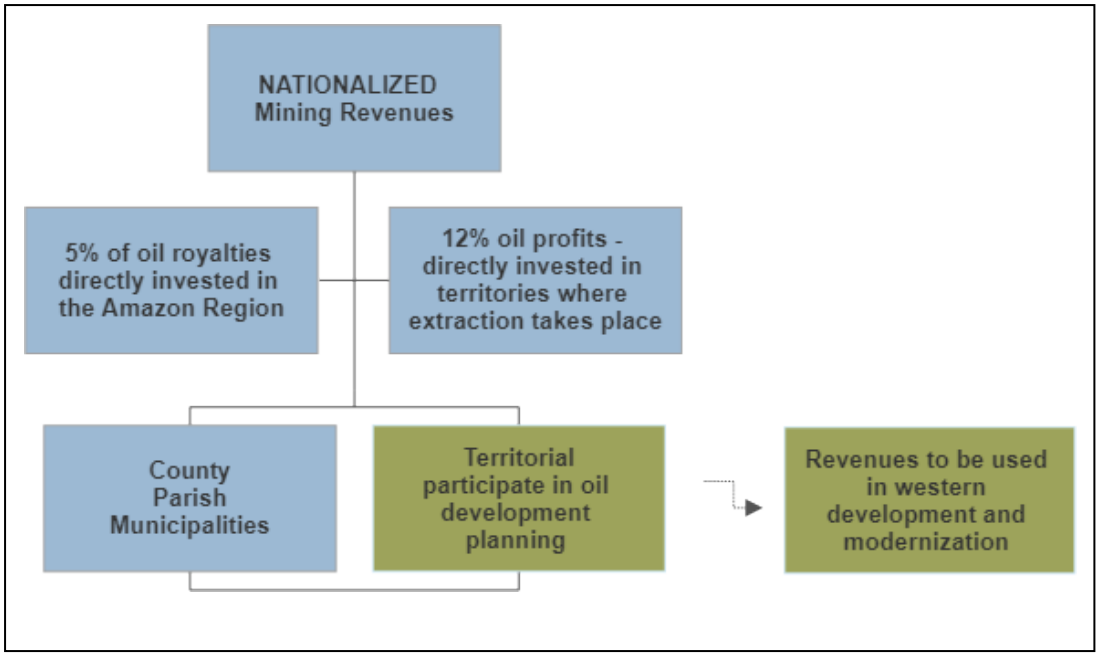
Sandoval et al.'s (2017) overview of multiple understandings of territory from a Latin American perspective shows that territory is usually used to define lived and experienced space, space that is locally appropriated according to the diversity of people and places where actors have some degree of agency in shaping state and corporate

interventions (Escobar 2008; Erazo, 2013). Territory has also been conceptualized as a process in which capitalist forces, the state, and local actors influence the ways that territories are configured; in doing so, non-local actors engage in politics of scale, while locals struggle to control power dynamics that include sociopolitical processes and economics that shape territory (Bebbington, 1997, 2002; Korovkin, 1998; Noroña, 2014; Warnaars, 2013).

Thus, territory has been seen both as a series of strategies used to contest state and corporate power, but also as a strategy that aligns with state and/or oil power, where the ultimate goal is to increase control over territory and indigenous autonomy (Anthias, 2018; Lyall & Valdivia, 2015). Bebbington (2002, p. 412) explains that, given the strength of corporate and state powers, the challenge is not to resist structural change, but to control the processes that allow territorialization.

Currently, indigenous people who can prove ancestral occupation of land and indigeneity can claim territory. In the current legal framework, indigenous territory is given in perpetuity and cannot be sold in the market (Ecuadorian Constitution, 2008, Art.57). Territorial comunas are considered basic units that can directly participate in oil-related development to the extent that indigenous plans and projects align with national planning. Comunas have the ability to administer and implement projects aimed at facilitating the incorporation of the Amazon into the rest of the country (COOTAD, 2010, Art. 308; Plan for the Territorial Organization of the Amazon, 2018). This provision is new, as in the past comunas were only used to facilitate state legibility and mediate the provision of state-led programs and services (Yashar, 2005).

Overall, the current state understanding of comunas departs from indigenous historical claims for territorial autonomy and greater participation in national planning, but in reality, legibility and state central planning reinforce state authority and western modernization through decentralization schemes, contradicting indigenous claims to exercise non-western forms of governance (Anthias, 2012; Hindery, 2013; Martinez-Sastre, 2015, Ch.8).



Scheme. 1**:** Distribution of mining revenues among territorial comunas.

Understanding Oil Volumes and Territorial Comunas

According to Elden (2010), territory can be understood as a political technology that uses technical aspects to measure land and its resources and legal aspects to control terrain. Elden's (2013, p. 35) work extends such aspects not only to the surface, but also to the subsoil, as accessing, securing, and thinking about underground volumes raises concerns and questions related to jurisdiction, authority, and administration. In terms of jurisdiction, for example, national historical struggles to access and secure underground

resources through mining laws often separate legal tenure of the surface from the subsoil (Bridge, 2013:56; Marston, 2019). This is the case of Ecuador, where mining resources have been nationalized and belong to the state regardless of diverse surface property regimes. In terms of authority, administration, and access, control of oil deposits depends on legal and institutional mechanisms that seek to secure access to surface points of entry, generating dynamic governance forms that often marginalize subordinated populations (Clark, 2017; Huber, 2015)

Moreover, Elden (2013, p.45) and Almklov and Hepso (2011) show that the volume of resources such as oil is made legible through socio-technologies interested in the materiality of resources, its reach, the incline of geophysical structures, its fluidity, and its very material composition. Bridge (2013, p. 57) adds that speculation and calculation of resource volumes are key in defining how power is exercised on the surface. Thus, the price of mining resources, along with the national and international legislation that shapes access to and circulation of oil, depends in part on the ability to anticipate access to oil volumes and its flows (Limbert, 2015). Valdivia (2015), for example, shows that resource anticipation, along with geological and volumetric understanding of deposits, deeply affects regional cooperation strategies between Ecuador and neighboring countries. Therefore, the idea of volume, oil materiality and underground verticality that becomes material through slopes, cracks, and fractures shows that territory is not only the result of state and local struggles competing to control terrain and oil points of entry, the struggle is international as well. Processes to territorialize resources are the product of different production imperatives that respond to the material properties of underground volumes such as oil (Graham, 2004).

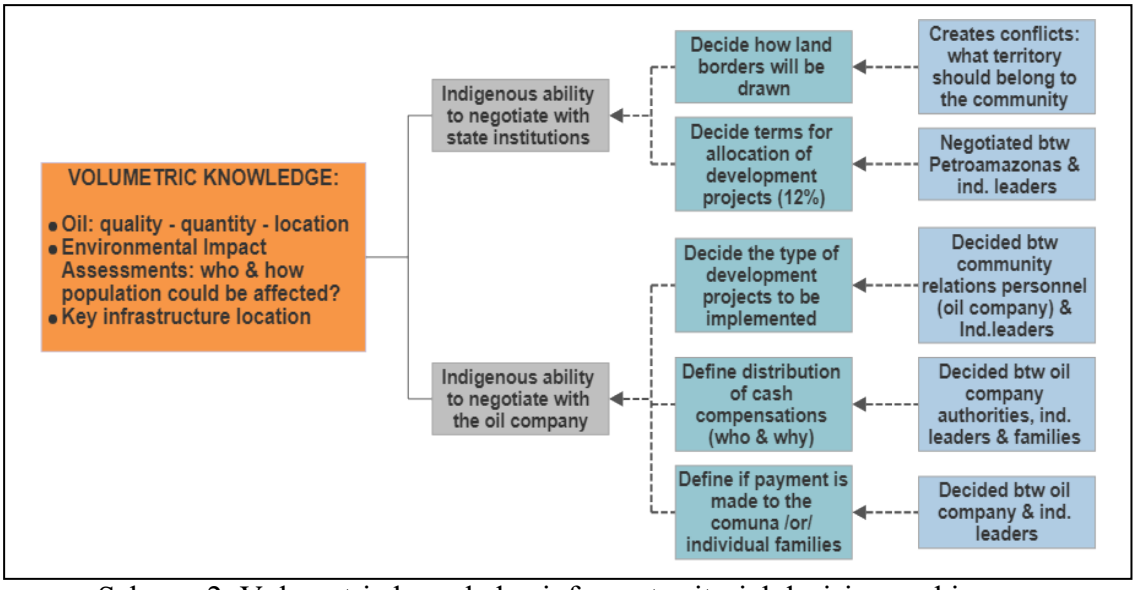
I argue that volumetric information informs state-led territorial reorganization while also affecting indigenous ability to secure land and access to resources. As described earlier, a large, recently constructed bureaucratic and institutional infrastructure must be navigated to incorporate those territories where the state's presence has been weak. Locals who want to engage in processes of territorialization must have access to the state's technocratic, legal, and volumetric knowledge in order to confront, resist, and adapt to state interventions.

Although scholars have already documented how indigenous people have developed deeper understandings of domestic and international legislation to increase control over lands (Perreault, 2003; Colloredo-Mansfeld, 2009, among others), what occurs at present in the Amazon requires locals to not only master bureaucratic and legal knowledge, but also to gain some degree of knowledge about oil production. Although Watts (2004) documents similar processes in Nigeria, the difference in Ecuador is that the state makes, to some extent, this knowledge available to local populations in pursuit of a goal to incorporate indigenous peoples into the nation-state, creating alliances between the state and indigenous leaders who act as brokers with the state. Although this could be seen as an opportunity for indigenous people to access power through accessing knowledge, indigenous aspirations are usually limited by state-corporate economic and political power, as argued by Anthias (2018) in her analysis of indigenous efforts to control oil companies in Bolivia.

In the context of comunas, which have agreed to oil extraction by negotiating access to land and/or oil compensations in the Amazon of Ecuador, locals must be able to understand basic information about oil infrastructure, such as where oil wells and

pipelines are located, in order to counter the state's proposals to draw borders of indigenous territories before the land is legalized. To some extent, they need to understand calculations of oil activity and these activities' social and environmental effects to assess how many people should be included in oil extractive compensations and how much compensation is needed to cover for possible environmental damages in the future.

According to the Mining Law (2009, Art. 26), in addition to the geological studies produced by the oil industry, environmental impact assessments are required to guide corporate and state decisions regarding the payment of oil compensations, including investment in development and modernization. Such technical information should be provided to communities in a process called prior consultation that should take place before indigenous people decide whether or not to allow mining activities. Still, it is common that not all information is given to the people, and when it is provided it is given in deceptive ways (Verbeek, 2012; Shade, 2015; Vallejo & Garcia–Torres, 2017). Thus, local leaders must use existing networks and outside allies that can help them understand this type of information.



Scheme 2: Volumetric knowledge informs territorial decision-making process

Post-Neoliberal Comunas and the Pañacocha Territory

The national oil company of Ecuador, Petroamazonas, operates in 19 oil blocks throughout the Amazon (Hydrocarbons Secretariat, 2019). Due to the relative absence of the state's presence in the area, the oil company was able to take a major role in the planning of territorial organization and in mediating the distribution of oil extraction compensations when it began operating in the region (Petroamazonas, 2010a, Ttl.1.2). Compensations usually include cash payments, the construction of modernizing infrastructure such as small health centers, and the provision of educational and productive projects. Compensations are similar to those provided by transnational oil companies during the neoliberal period when companies negotiated directly with communities by providing similar low-cost compensations and then departed without addressing environmental damages (Cepek, 2018; Sawyer, 2004, pp. 68–71). The difference now is that Petroamazonas has integrated compensations in an organized and methodical way as part of an extractive strategy required by the law. All compensations

are supposed to be discussed with the communities before the infrastructure projects start, but conversations usually involve only indigenous leaders and not the entire population. Currently, Petroamazonas has built 253 compensation-related small infrastructure projects in about 371 communities in the Amazon (Petroamazonas, 2014).

Petroamazonas operates Oil Block 12, whose territory overlaps the provinces of Sucumbíos and Orellana. On the south side of the Napo River stand the block houses of the Station of Oil Facilities Edén, known as the EPF, which hosts 179 oil wells and an industrial station where crude oil is separated from water and gas (Petroamazonas, n/d). An underground pipeline brings crude from other platforms located in the northeastern side of Edén; crude is stored in the EPF for gas and water separation, so it can be transported to the coast for export (Petroamazonas, 2014, pp. 43–49).

In addition to the Edén comuna, a number of indigenous territories are located in Oil Block 12; the most important ones are Santa Elena Association, Santa Elena, Pañacocha, and Corazón de Jesús. These communities have been very politically active despite hosting a small amount of oil infrastructure as compared to El Edén; an average of 39 wells, a pipeline, and formation water pools are located in these communities. Moreover, other communities benefit from oil extraction due to their proximity to oil infrastructure, even though oil operations don't take place directly in their territories; some of these communities are Playas de Cuyabeno, Chontaurco, Pucapeña, and San Roque. All of these communities, with the exception of Pañacocha and Corazón de Jesús, were recognized as territorial comunas and, therefore, were granted territory prior to or

during oil extraction activities; for this reason, this paper refers to these two comunities as indigenous organizations rather than comunas.

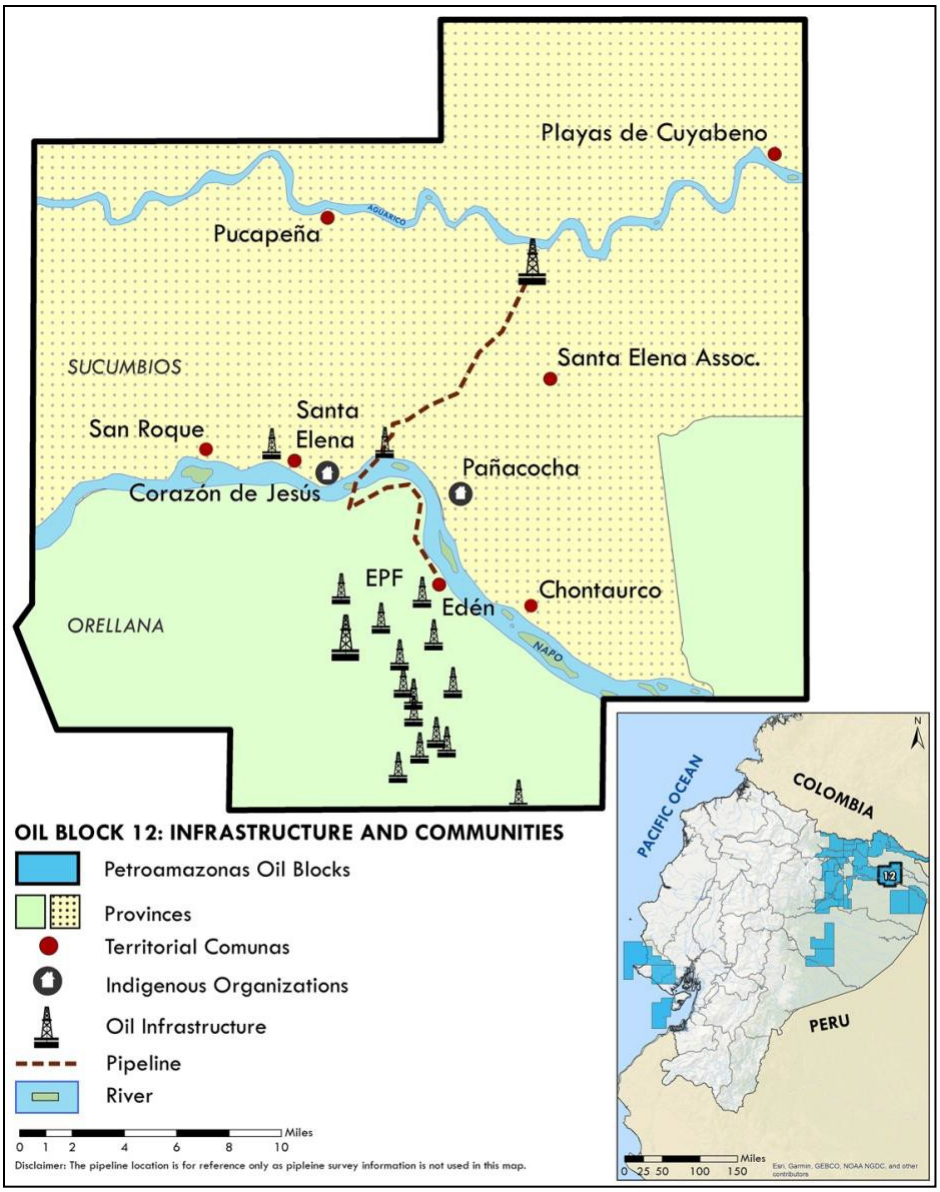


Fig. 1: Oil Block 12, oil infrastructure and communities. Map by R.J Theofield. (Hydrocarbons Secretariat, 2019; Geographic Military Institute, 2012; Noroña, 2017)

Pañacocha and Corazón de Jesús are organizations both claiming an area of 17,400 hectares of indigenous territory, and therefore both want to represent the legitimate comuna. These are competing grassroots organizations that together represent

a total of about 380 people that have lived in this territory since the 1940s, and thus land titles should have been granted to either organization prior to oil development. Despite the conflict, oil extraction, and therefore compensations and infrastructure development, have continued even though land legalization has not been completed, generating further conflicts detailed in the next section. I will refer to the land under dispute by these two organizations as the 'Pañacocha territory' throughout the paper.

Petroamazonas's control of the Pañacocha territory is important for oil transportation and the implementation of modernizing plans required by law. Simultaneously, comuna space became contested among the local people, who struggled to control the terms under which the borders of their land are delimited and the ways in which oil extraction compensations are made available to the population.

The conflict between Corazón de Jesús and Pañacocha

Local conflicts over ownership of the territory began in the 1990s when the U.S-based Occidental Petroleum Company (OXY) operated the block. Pañacocha and Corazón de Jesús were previously one unified territory represented by the Corazón de Jesús of Pañacocha Indigenous Centre (hereafter Indigenous Centre), initially organized in 1975. In 1993 the Indigenous Centre attempted to legalize the land, hoping that legitimation would allow them to be in a better position to negotiate with the oil company. Legalization was difficult because neoliberal agrarian laws passed in 1979 and 1994 discouraged land distribution amongst indigenous communities and instead favored large landholdings associated with oil extraction and export production (Schuldt & Acosta 2009, pp. 10–15).

Around 2006, leaders from the community Playas de Cuyabeno coordinated with the Indigenous Centre and a number of communities in the block to form an indigenous oil company to operate the wells located in the northern part of the block and take the indigenous people's future into their own hands. Indigenous leaders had received advice from Canadian indigenous entrepreneurs, and they attracted an investing oil company based in the U.S (Lyall, 2017; Wilson & Bayón, 2017, pp. 105–110) to develop the block after OXY's contract expired in 2006. However, the state believed that an indigenous-controlled oil company was too radical and opposed the initiative. In addition, given that indigenous leaders didn't oppose oil extraction, but instead wanted to increase their participation in oil planning and its profits as other indigenous coalitions have requested in the past (Sawyer, 2004, pp. 137–140), the government promised to deliver large oil extraction compensations to these communities including to the Pañacocha territory (Wilson & Bayón, 2017, p. 114).

Because these negotiations had taken place at very high levels involving only the communities' leaders, local populations were very concerned, as they had not been consulted during the negotiation processes. According to locals, many were under the impression that Indigenous Centre leaders had deceived them in order to get their support by failing to explain to them that outside mestizos (the racial majority in Ecuador) and foreigners were fully involved in the creation of the company. Thus, people thought that outsiders would reap most of the benefits if the company was ever to operate.

In the meanwhile, Petroamazonas started to further divide the community by negotiating directly with groups of families located in areas where key infrastructure was located or was going to be built; therefore, it is not surprising that the populations

claimed smaller portions of land, forming their own territorial comunas and fully controlling access to subsoil resources in those specific sites. For instance, a group of families whose land is located near one of the most important oil platforms in the northern side of the block separated from its original territorial comuna Playas de Cuyabeno and created its own territorial comuna named Santa Elena Association (Wilson & Bayón, 2017, p. 111). And in 2001, an extended family in the Pañacocha territory whose land was located near one of the smaller oil platforms near the Napo River separated from the Indigenous Centre and created the territorial comuna Santa Elena. The decision of these communities to divide and fracture indigenous territories favored the oil company as negotiating with a few families in each comuna was easier than negotiating with larger constituencies that were already suspicious of their leaders. The female leader from Santa Elena community explained the following:

> We used to have too many conflicts with male leaders representing the community (Indigenous Centre); they would obtain oil compensations paid for the oil well located on my extended family's plot of land, and resources were not fairly distributed among all families. . .I would confront these leaders frequently, and they would diminish my opinions because I am a woman. These leaders (the same that now represent Pañacocha) even threatened my family over the control of the well located in here . . . One day, while talking to an oil company engineer about these complaints, I got the idea that it would be easier for my extended family to manage the compensations directly. In any case the well is in our territory, and I was so tired of having to beg for redistribution. . . I decided to go to Shushufindi and Quito cities to learn the process of land titling in the Ministry of Agriculture. We eventually got titles (she shows me the paperwork and maps). Now we deal directly with the oil company, and other leaders can't intervene.

In 2007, a more severe territorial division took place when two groups of leaders emerged, those who identified as members of Corazon de Jesús and those who identified as members of Pañacocha. Both organizations claimed the land that initially belonged to the Indigenous Centre, and leaders from these organizations disagreed about the

management of the territory and oil-related compensations promised after Petroamazonas took over the block. For example, during fieldwork when meeting with six other families from Corazón de Jesús to talk about the conflicts with Pañacocha, family members said: "We have always had internal conflicts in the territory, but everything got worse when Petroamazonas arrived because there was so much money involved." Another person added that "we disagree about how Pañacocha leaders negotiated the payment of compensations. . . whether paid in cash or in modernizing infrastructure; we are sure that oil money is appropriated by a few families instead of being redistributed among the families that need it the most. Another person in the meeting interjected by saying: "we cannot even participate in deciding what type of infrastructure is built and how. Just go see how badly built that Millennial City is or see what a waste of money it was to build showers and toilets for many family households." In general, they concluded that families identified as Corazon de Jesús disagree with Pañacoha leaders on fundamentals related to the way oil and territorial planning takes place, and therefore, a myriad of conflicts emerge out of such disagreements.

Oil Calculation and Comuna Territory as Tools of Legibility for Oil Expansion

According to the Ministry of the Environment (MAE) and the Ministry of Agriculture (MAGAP), 54.7% of the territory disputed by the organizations is protected forest, thus falling under the control MAE (Forest Affairs Office-MAE, 2017). The remaining land, where most families live and subsist, is under the control of MAGAP. It is the responsibility of these ministries to identify the legitimate occupants of the territory to legalize the land. It is important to note that, according to the community's historical accounts that begin with the arrival of indigenous and mestizo families in the 1940s,

Pañacochan families' small landholdings for living and subsistence are mostly located near the Napo River. However, the area—which is considered part of the protected forest by MAGAP—had historically been used for hunting, but not for subsistence agriculture or for living purposes. Historic occupation of land near the river had been characterized by the tenure of specific plots of land by extended families; still, it was common for families to move up or down the river, rotating crops and the use of forest resources, creating an occupation of land that is permanent, but also dynamic (Santi, 2016). This system of land use has been slowly changing since the 1980s, when OXY first arrived, because eligibility for oil extraction compensations was based on permanent occupation (Cabodevilla, 1996, pp. 317-325), which encouraged families to hold onto specific plots of land.

Currently, compensations are based on calculation of the distance between oil infrastructure and family landholdings, as suggested in environmental impact assessment documents and official development plans in Pañacocha (Petroamazonas, 2010b, Ttl. 1.5-1.10). However, those studies define affected areas in general terms and are not specific about which populations should or should not receive compensation. Due to this ambiguity, there is space for political maneuvering between the oil company and local populations when defining who should receive compensations and what form they will take.

According to the documentation I collected during fieldwork, on numerous occasions in 2009 and 2010, Petroamazonas pressured MAE to legalize land located in the protected forest. This is because Petroamazonas was poised to build a pipeline across the forest to connect northern platforms with the EPF oil complex and needed a comuna

with which to begin negotiations about how much cash the comuna would receive for allowing the pipeline construction. This is an example of an attempt to make indigenous land legible, without a legal comuna, Petroamazonas cannot see anyone to negotiate with, whether or not that entity reflects lived realities in the communities in question. It is important to note that the company did not pressure the MAGAP to adjudicate land under its control; such land corresponds to areas used by the families for subsistence purposes near the river. Locals think this is because compensations for oil platforms located near households were paid on a family basis based on traditional occupation of land and the land's proximity to oil infrastructure, alleviating the need to deal with the comuna.

In one of the many letters sent to the MAE, the executive manager of Petroamazonas urges the ministry to legalize land immediately "so that Petroamazonas can deliver comuna compensations according to the law." He adds that "compliance would prevent delays in the completion of the oil project [oil pipeline construction]" and that "failure to legalize land would bring a large economic loss to the country" (Petroamazonas, 2009, Letr. 4332).

During that same period of time, Pañacocha leaders sent several letters to MAE officials and to the Office of the President of the Republic requesting that land be granted to their organization. They provided a series of arguments to legitimize Pañacocha as the recipients of the land. In one of the letters sent to President Correa, they appeal to the state's discourse of the territory, which describes the Amazon as poor and in need of development. The letter expresses the leaders' desire to become full citizens participating in the territorial transformation of the Amazon:

> Our community is in extreme poverty as we don't have basic services such as electricity and running water, nor roads or proper ports. . . our desire is to collaborate with the government and become diligent citizens instead of indifferent Indians. (Pañacocha, June 18, 2010, Letr.33)

Given these pressures and the lack of understanding of the source of the conflict, MAE authorities adjudicated 9,519 hectares of protected forest to a list of 77 families who are the descendants of the oldest occupants of the land initially organized as the Indigenous Centre (Ministry of the Environment, 2010, Doc. 206), not considering that the population was politically divided between leaders representing Corazón de Jesus and Pañacocha interests (see figure No.2). Simultaneously, in the same document of adjudication, the land was given to the Pañacocha organization despite the fact that the 77 families did not fully correspond to the list of families represented by the Pañacocha organization at that time. According to local accounts from both parties, the mistake occurred because in the process of waiting for the titling of the land, Petroamazonas had already begun unofficial negotiations with Pañacocha leaders, indirectly legitimizing Pañacocha's authority in the territory and undermining the group of families represented by Corazon de Jesus' leaders. According to local residents, early in the negotiations, Pañacocha leaders received motorized canoes and cash payments from the oil company to incentivize them to cooperate and keep the population in favor of oil activities.

In addition, current geographical knowledge of the territory is shaped by recent transformations made possible by oil extraction. Locals divide the territory into three areas: Tereré, Pañacocha Centre, and Lower Pañacocha. Most Pañacocha leaders have traditionally held landholdings in Lower Pañacocha; those families were also granted homes in the nearby Millennial City (an urban infrastructure paid for with oil profits), along with the provision of utility infrastructure at their landholdings such as electricity,

toilets and water wells for a number of families. Ironically, most of the oil development infrastructure is located in Tereré, where many Corazón de Jesús leaders have had landholdings and where benefits from oil have not materialized as they have in Lower Pañacocha; for example, no piped water or electricity is available in Tereré. Thus, although most of the oil infrastructure is located in Tereré, families have not received oil extractive compensations as fully as families living in Lower Pañacocha.

In addition, by excluding those community members opposed to Pañacocha leaders, Pañacocha increased control over communal space unofficially legitimized by the oil company. According to the law, if Pañacocha becomes the official comuna and receives the land, oil extraction compensations for activities in Tereré should be negotiated and paid to the territorial comuna through its leaders, rather than to individual families. Community members usually side with Pañacocha even though they accuse them of keeping oil benefits to themselves, maintaining that this is the only way to be included in government modernization programs and to receive any kind of oil compensation.

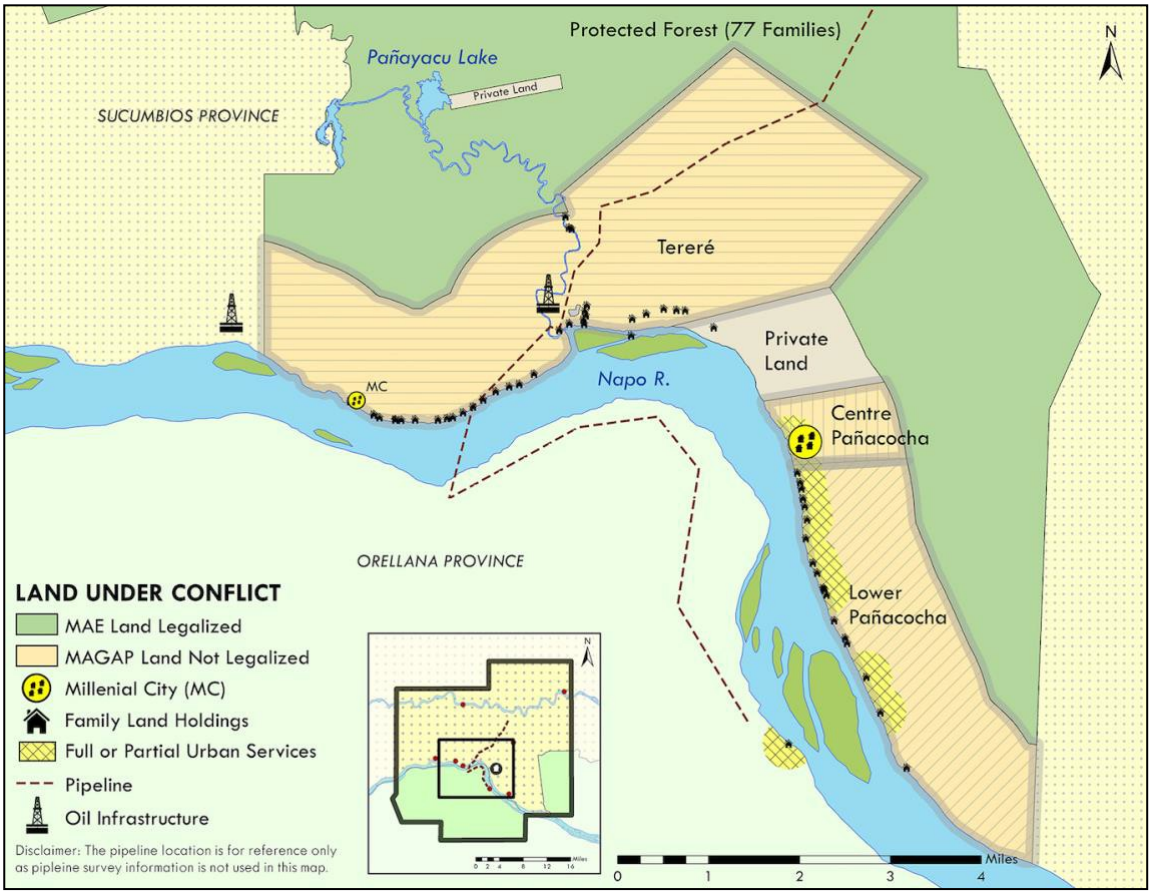


Fig. 2. Legalized and non-legalized areas of the Pañacocha territory and geographical distribution of oil infrastructure, oil-compensations, and population. Map by R.J Theofield. (Geographic Military Institute, 2012; Noroña, 2017; Forest-Affairs-Office, 2017; Ojeda, 2012)

Authorities have tried to mediate the conflict between Pañacocha and Corazón de Jesus. In the process, Corazon de Jesus requested that the state either divide the land between the two organizations or title the land to individual families rather than to one community in order to solve the conflict. However, Pañacocha leaders have rejected this solution, as the land occupied and claimed by Corazón de Jesús has an oil platform and the pipeline in the Tereré area, so the only way to continue to receive benefits from that territory is by keeping the land communal. This conflict has also prevented the MAGAP from granting the remaining 7,874 hectares used for subsistence agriculture to either

organization. Overall, the national oil company becomes the reference for territorial reorganization, as final decisions related to whom to negotiate with rely on Petroamazonas assessment rather than on the assessment of MAE and MAGAP, demonstrating that oil interests are at the core of state legibility.

Accessing and Securing Bureaucratic, Technical and Volumetric Knowledge

Petroamazonas has an office of community relations with a multidisciplinary staff that maintains relations with communities, conducts negotiations with leaders, and plans social and compensation programs (Petroamazonas, 2014, p. 103). In the process, community relations personnel teach local leaders the basics of state bureaucracy as associated with oil infrastructure, oil development and compensations required by law; community relations personnel also rely on these leaders to mediate state-led development with the rest of the population. This process disempowers traditional systems of authority and instead empowers a new class of leaders (Erazo 2013, pp. 119-121, Wilson, 2010). In Pañacocha, leaders secure access to technical and volumetric knowledge by accessing it directly from Petroamazonas or other actors such as larger indigenous organizations, international actors such as the Canadian entrepreneurs initially helping local leaders with starting an indigenous oil company, and from outside mestizos, such as lawyers involved in negotiations.

For example, during a night of festivities when former Pañacochan leaders had been drinking, one of them explained the following to me:

> Initially, before Petroamazonas started to work here, we wanted to create our own oil company, one that would belong to the community. A lawyer who was interested in partnering with us knew how to achieve this legally, and we agreed with the lawyer's plan. We (the leaders) were willing to use our land as collateral for the initial investment. . . When that was not possible, some of us became close friends with Petroamazonas engineers; we helped them to secure consensus

> among the families so they could take over the wells and build the pipeline. . . we know where the most important oil landmarks were located, that is why I told my brother to occupy land in Tereré . . . Petroamazonas has been very nice to us, and we have helped organize the people and keep things in peace.

During this conversation, it was clear that the status of this particular leader had been heightened by his participation as a broker with the oil company and that Petroamazonas engineers had provided him and other leaders –those willing to cooperate– with important information about oil infrastructure. Another leader who participated in the conversation regretted not having the participation of the lawyer who had initially attempted to help them to create the indigenous oil company. Apparently, indigenous leaders were sharing volumetric information with the lawyer in order to obtain advice on how to improve negotiations with the oil company in order to benefit the leaders' families. According to Corazón de Jesús families, they became aware of these underground negotiations, in which the lawyer was being paid by oil compensations received by community leaders on behalf of the community; thus, Corazon de Jesús leaders reported the lawyer to the authorities.

Moreover, during this conversation, other indigenous leaders bragged about their knowledge of the future location of two additional wells that Petroamazonas might drill. One of them said: "we invited families that are our friends to come live in strategic locations." These families that have been invited to live in Pañacocha are originally from nearby communities, and according to Pañacochan leaders, they had been welcomed to use land located in strategic locations in exchange for their loyalty and support to local leaders. When I asked about why those locations were strategic, they said, "those households received cash compensations because of their proximity to oil infrastructure,

and because we (the leaders) have helped them, they will continue to support us," implying that compensations paid to those families have been shared to some extent with local leaders.

In addition, Pañacocha leaders prevent other community members from accessing information by excluding them from leadership positions and by refusing to share knowledge. A good example is the urban development known as the Millennial City, built in 2014 in the middle of the jungle, which is comprised of approximately 75 tin-roof cement homes, a school, a health center, a police station, and administrative offices. This urban area was given to the population living in the disputed territory as part of the reinvestment of 12% of oil revenues (Petroamazonas, 2013).

According to accounts from Corazón de Jesús and Pañacocha community members, most of the population requested that homes be built at each family's landholding, and many requested the use of traditional materials such as wood and palm for the roofs. However, Pañacocha leaders and state officials decided without consulting with the population that, transportation of materials to each landholding would be too complicated and expensive as families live scattered along the river. Moreover, families located in Tereré that identify with Corazón de Jesus wanted the homes to be built in their communal space, while some families living in Lower Pañacocha identifying with Pañacocha leaders wanted the construction to take place closer to them.

According to a former local parish authority, it was clear that local leaders were hiding information related to the construction of the city from the rest of families; this parish authority told me that hiding information reinforces not only leaders' political power but also economic power. For example, the authority explains "the leaders, and the

developers of the millennial city used cheap materials in the construction saving money that was later redistributed among themselves."

At the end, around 50 homes, the school, and health center were built in the Pañacocha Center, the remaining 15 homes were built in Tereré, which is also the area where the oil platform and pipeline are located (see fig 3). However, the homes in Tereré lack electricity, water, and sewer system making the homes unusable; in contrast, clean water and electricity are provided in Pañacocha center, and the sewer system is working, although with some problems. Locals complain that negotiations did not have the full consent of the population; moreover, they were not fully informed of the rationale informing these decisions.

Beneficiaries of the homes don't live in the urbanized development as there is no space for subsistence agriculture, and the Pañacocha parish, which has authority over the urbanization, prohibits residents from growing food or raising animals for consumption. According to state documents, state plans include turning Millennial Cities into urban centralities where most social services can be available to the rest of the population scattered up and down the river (Petroamazonas, 2010a; 2013). Most beneficiaries continue to live on their landholdings and visit the cement homes on the weekends.

Moreover, although the Millennial City was a compensation given to the community (whether represented by Pañacocha or by Corazón de Jesús), very recently the Municipality of Shushufindi took control of the city in order to maintain structures that are quickly decaying. For example, the sewer system needs to be rebuilt as pipes are too narrow and have collapsed; now grey water ends up in the Napo River. Still, no institution has taken care of the homes built in the Tereré area, despite the fact that they

are in worse condition. Members from Corazón de Jesús explained that building a few homes in Tereré was a strategy to appease family claims for participation and better redistribution of oil compensation; however, they think neither Petroamazonas nor local Pañacocha leaders were actually interested in improving redistribution. In addition, given that the legal status of the comuna is in question, beneficiaries who never received titles to their homes (because the homes were supposed to belong to the territorial comuna) fear losing what they view as a small inheritance in exchange for oil operations. This anxiety applies to all 75 homes.

Petroamazonas's decision to undermine the conflict between the competing organizations and to negotiate only with Pañacocha legitimizes it as the de-facto owner of the land, encouraging many indigenous families to remain part of Pañacocha even though they don't agree with the leaders representing them. As one female head of a household expressed:

> There is nothing else for us to do than allow them [the leaders] to continue to put money in their pockets. We don't understand how to speak to the oil company…. I don't even know what those machines behind my house are [she refers to a fenced oil platform]. At least with the leaders we end up getting something. (Personal interview, August 2, 2017)

According to a Corazón de Jesús leader, Pañacocha leaders prevent them from getting involved in any type of negotiation because they fear losing their access to the oil company and their monopoly on technocratic, bureaucratic, and volumetric information:

> Pañacocha leaders prevent us from getting involved in politics by destroying documentation and hiding important information from the community members. They're afraid we could take over their expertise, expose the truth and do things differently…. Moreover, when Pañacocha community members have requested that oil company officials attend general assemblies to clarify irregularities, oil company officials have said they didn't have the time to explain to over 100

> people what these negotiations are about; that's why leaders were already briefed on these details. (Personal interview, September 12, 2017).

Corazón de Jesús and Pañacocha community members have turned to Petroamazonas and other state institutions such as MAE and MAGAP, holding them accountable for what they view as development that has benefited only an emerging class of leaders. Often, the response of these institutions has been to cite the autonomy that indigenous communities have in their territories to administer projects and the economic resources that come from oil revenues and oil-related benefits. Sawyer (2004, pp. 137-146), who documented similar behavior by oil corporations during the neoliberal period, compares this strategy to Ferguson's anti-politics machine (Ferguson, 1994). She points out that the state and companies deny their participation in the creation of the conflicts by claiming that they are internal problems that comunas should solve.

Moreover, the advantage that Pañacocha leaders have over the rest of the population rests on its access to oil volumetric knowledge. For example, in a letter sent to Petroamazonas, Pañacocha leaders claim that paying oil platform and pipeline compensations to individual families living in Tereré would be unfair for the community, and they make a case for making payments available to their organization:

> As you know, an oil spill located at the beginning of the flux line [the beginning of the pipeline] would likely damage the Pañayacu lake and the Napo River…. And as you know, besides the families that have received a millennial house, most of the families in Pañacocha rely on river water for survival. Therefore, pipeline compensations should be paid to all the Pañacocha comuna instead of individual families. (Pañacocha, Feb 12, 2013, letr. No.52).

In this particular case, the oil company decided to pay compensations only to those families whose land was intersected by the oil pipeline, as well as to those families located near the oil platform, many of them from Corazón de Jesús. According to an

interview with a Petroamazonas official working in the block, the only platform built in what Pañacocha leaders deem as their territory is in Tereré, and that platform produces very little oil compared to other platforms in the block. According to him, initial oil calculations of the Tereré oil platform misrepresented oil output, leading Petroamazonas to wrongly negotiate large compensations with Pañacocha. If knowledge of actual oil production was available when negotiations took place back in 2010, the Pañacocha territory would not have received the Millennial City. However, he added that if the oil pipeline breaks, then the risks are high, as the combined flux flow of almost 30 productive wells could get out of control contaminating the area. Because of this danger, it makes sense for Pañacocha leaders to have requested compensations for the pipeline to be paid to the comuna, rather than to individuals.

On the other hand, Corazón de Jesús' leaders and the population they represent have reached out to lawyers, cartographers, and indigenous people from other communities that understand oil politics to help them make a case against Pañacocha's leaders' monopoly on oil knowledge. These leaders counter Pañacocha's political advantage by mapping their landholdings and documenting the ways in which they believe to have been unfairly treated when receiving oil extraction compensations, especially given their geographical proximity to oil infrastructure. These claims have effectively prevented MAE and MAGAP from deciding which organization should receive the land.

These examples show how oil knowledge complements technocratic and bureaucratic knowledge, proving that the apparatus created by the state to reorganize territory in the Amazon requires indigenous people to access such knowledge to

guarantee their fair participation in comuna-based territorial development. Still, as this article shows, even when the conditions for accessing and securing such knowledge depend on government institutions and indigenous leadership, there is always space for maneuvering. Indigenous populations are resourceful when building networks and finding allies to cooperate with them in accessing and producing information.

Although the case study provided reveals how struggles to access volumetric knowledge can produce territorial fractures, uneven development, and local rivalries, not all communities behave the same way. Neighboring communities such as El Edén, whose territory holds the largest oil complex currently operated by Petroamazonas in the Amazon, have a reputation of better indigenous management of oil-related development. Given their proximity to the Pañacocha territory, additional interviews were conducted in El Edén; according to local families, their leaders have been more successful in making benefits available to most of the population. In addition, according to local perceptions, information related to oil development is usually shared with the community in ways that, although not perfect, are more transparent than those used in Pañacocha. More importantly, families interviewed recognized that understanding oil processes and legal frameworks associated with oil extraction had been key for their leaders in negotiating with Petroamazonas for favorable terms. As such, they believe that their ability to maintain control over their territory along with their political autonomy as a comuna is directly linked to their leaders' understandings of oil and their ability to negotiate and lobby in favor of the whole community.

Conclusion

Unlike the neoliberal period, economic restructuring during the post-neoliberal era has been characterized by a high level of state intervention and territorial organization to facilitate oil extraction, mining, and large-scale infrastructure. This restructuring requires the state to transform territory where it has historically been absent or weak into a place that can be easily abstracted and understood by state officials.

I have argued that a special kind of legibility that includes indigenous land legalization has become important for the state to access and secure subsoil resources. Although land grabbing along with the criminalization of protest have been described in the literature as state strategies to secure access to mining and oil resources, land titling of indigenous territories is also becoming a common practice used by the state to access surface rights and secure sub-surface oil. Thus, the increase in land legalized to indigenous communities in the Amazon in the last ten years merits further analysis.

In this sense, the state provides incentives for peripheral territories and populations to welcome extraction by participating in territorial reorganization and planning as far as local participation aligns with state plans for modernization. Communities likely to cooperate could claim indigenous territory along with access to oil extraction compensations. In addition, the state reinforces a discourse in which indigenous ways of life are seen as backwards and poor and in which social development and modernization paid with oil profits are portrayed as necessary for local and national progress, justifying extraction and neo-colonization in indigenous rural and peripheral territories.

More importantly, I have argued that state legibility requires not only technical, legal and bureaucratic knowledge, but also volumetric oil information that entails basic

understandings of the ways in which the oil industry works, knowledge of the location of infrastructure, understanding of the estimated volume and importance of oil reserves, as well as calculations of possible environmental effects. Thus, volumetric knowledge becomes key to state territorializing processes and to local struggles to secure land and livelihoods as the state expands the oil extractive frontier.

This case study of Pañacocha in Oil Block 12 illustrates how the distribution of oil infrastructure defines the ways that indigenous territories are legalized and therefore the way in which they become legible to oil industry and state officials. This case study also describes the processes through which oil extraction compensations, along with state-led development and modernization, serve as powerful tools used to persuade indigenous leaders to welcome oil development. Through these processes, the state fosters a new class of indigenous leaders that mediates state development and modernization. This case study also portrays the ways in which technical, legal and oil knowledge are at the core of indigenous contestation. Thus, access to specialized knowledge shapes territorial struggles between communities and the state as well as internal land conflicts characterized by the competition of indigenous families to secure information that enables access to oil-related compensations.

Finally, despite the incongruencies that post-neoliberal legibility poses for territorial comunas, indigenous people find them useful to further their own agendas. In this context of state and local access to territory, increased participation in plaining, and access to specialized knowledge, local indigenous leaders and competing community members unleash processes of resistance and contestation that evidence the shortcomings of large-scale central planning. Finally, as documented so often in the past, indigenous

people appropriate what seems to be hegemonic knowledge, discourses, and agendas to reformulate their own thoughts and needs and to reorganize their struggles in unpredictable ways. Although this case study shows how state-led intervention deepens internal conflict and uneven distribution of oil-related compensations, it is clear that local indigenous people are not naïve, nor powerless, and that they continue to push against internal class formations and the very legal frameworks and institutions they initially decided to welcome.

CHAPTER IV

RECLAIMING MARGINALITY: FOREST LIVELIHOOD RESPONSE TO OIL EXTRACTION AND STATE-LED DEVELOPMENT IN THE AMAZON OF ECUADOR

Introduction

Rural and indigenous people's responses to the rapid expansion of mining and oil extraction in frontiers like the Amazon rainforest has become an area of much contestation and scholarly attention in the last 20 years (Bebbington, 2012; Bury & Bebbington, 2013). Political ecology research has studied the expansion of mining as associated to decreased access to resources key to survival, showing that the indigenous response is usually resistance and confrontation with states and mining companies (Hindery, 2013; Bury & Norris, 2013). However, there are also cases of cooperation with mining activities in which rural and indigenous peoples are encouraged or coerced into accepting mining investments and waged labor while losing access to traditional ways of life (Lyall &Valdivia, 2015; Hall et al., 2015). Furthermore, scholars have also analyzed the ways in which locals consider participation in oil extraction as a strategy to increase control over territories and oil environmental impacts (Anthias, 2018; Lyall & Valdivia, 2015).

I add to the existing literature by arguing that local response does not always result in acts of resistance, coercion or cooperation. Instead, populations offer ambiguous responses that suit local material needs for survival and a local desire to be included in power dynamics. I examine the case of the Pañacocha community, located in the Amazon region of Ecuador to illustrate that ambiguous responses can be better understood as the

outcome of *tactical subjectivity* (Sandoval, 2000). I argue that tactical subjectivity, in the case of Pañacocha, consists of locals' conscious participation in some aspects of state-led modernization paid by oil profits and rejection of others. Thus, although Pañacochan families prefer their traditional ways of life and reject logics of accumulation and market productivity, they also embrace certain aspects of state-led modernization and the payment of oil compensations as long as it is used to carry out local ideas of what constitutes their quality of life. I also illustrate how, as the population engages in tactical subjectivity, families create spaces to escape oil politics, if only for a while, and treat western assets as symbols of power historically denied to them.

To arrive at these conclusions, I use an analysis of livelihood strategies (Bebbington, 1999), precarity, and border thinking theory (Tsing, 1994; Mignolo, 2012) to explain how locals negotiate between material needs, local understandings of what constitutes a meaningful quality of life, and their desire for a share in power historically denied to marginal populations. These frameworks allow understanding decision-making processes at the household level, using the subjective position of local families concerning the state and oil development.

Understanding livelihood strategies in the light of tactical subjectivity is important to inform mainstream policy prescriptions, but it is even more important when considering how much indigenous families need access to information. This need is urgent when approximately 371 communities in the provinces of Sucumbíos, Orellana, and Pastaza are undergoing modernization and are the recipients—willing or not—of development programs paid for by oil profits (Petroamazonas, 2014). Under these conditions, Pañacocha and surrounding communities feel disempowered, forced to lose

control over resources that are necessary for basic survival (Wilson & Bayón, 2017; Santi, 2016). However, as this study shows, despite the power differentials between communities and the nexus of state-oil power, indigenous agency impacts state intervention and redefines the local quality of life in particular ways.

The Pañacocha Community

The Pañacocha community is composed of around 95 households whose territory overlaps with Oil Block 12 in the province of Sucumbíos in the Amazon region of Ecuador. State officials identify indigenous and non-indigenous families - also known as 'colonos' - as the oldest landholders in modern times. Indigenous families from Payamino (near Coca city, see fig.1) arrived in the area in the 1940s with Capuchin missionaries, who founded a center in Pañacocha to evangelize, educate and organize indigenous people along the Napo River (Goldaraz, 2016). Colonos are the descendants of landholders who had held land near Pañacocha before the 1941 war with Perú.

Landholders usually used indigenous indentured labor for agriculture and to tend farms (Santi, 2016) used for subsistence and in the trade of products along the Napo River with Perú. After the 1941 war with Peru, several landholding families were forced to move out of the areas of conflict; they relocated in or near Pañacocha. Over time, most landholdings lost indigenous labor as the Capuchin mission started to organize and help indigenous families to free themselves from landlords (Goldaraz, 2016). Without indentured labor, colono families adopted rural economies and lifestyles. Over time, colono and indigenous families have intermarried, maintaining blood ties and similar subsistence practices. For instance, most families have relied on subsistence agriculture, forest foraging, hunting, and fishing, and they have had contact with markets over the

decades through merchants who would exchange goods in cities. As merchants traveled the Napo River, they would provide local families scattered throughout the area with goods such as machetes, matches, nails, fishing nets, and candles, amongst other goods; and in exchange, they would collect maize, plantains, and wild game to sell in the cities.

Politically, Pañacocha families have remained semi-isolated as historically there have been no roads, communications infrastructure, or state institutions that could effectively connect communities along the Napo River with political centers. For instance, the registration of births, weddings, and deaths was only possible in Coca City. Health services were only available in Coca and Rocafuerte, a post founded by the Capuchin Mission where they had a school and a health center available to the local population. Getting to Coca and Rocafuerte required two days of travel by river. Communities did not have access to Ecuadorian identifications until the 1970s; therefore, they were nonexistent for the state, as there was no registry of those populations.

During the 1970s, oil extractive activities began in the provinces of Sucumbíos and Orellana. Oil prospecting and extraction arrived in Pañacocha in 1985 with arrival of the Occidental Petroleum Corporation. This company ran operations up until 2006, when Ecuador terminated Occidental's contract and allowed the National Oil Company, Petroamazonas, to take control of oil production and infrastructure in Oil Block 12.

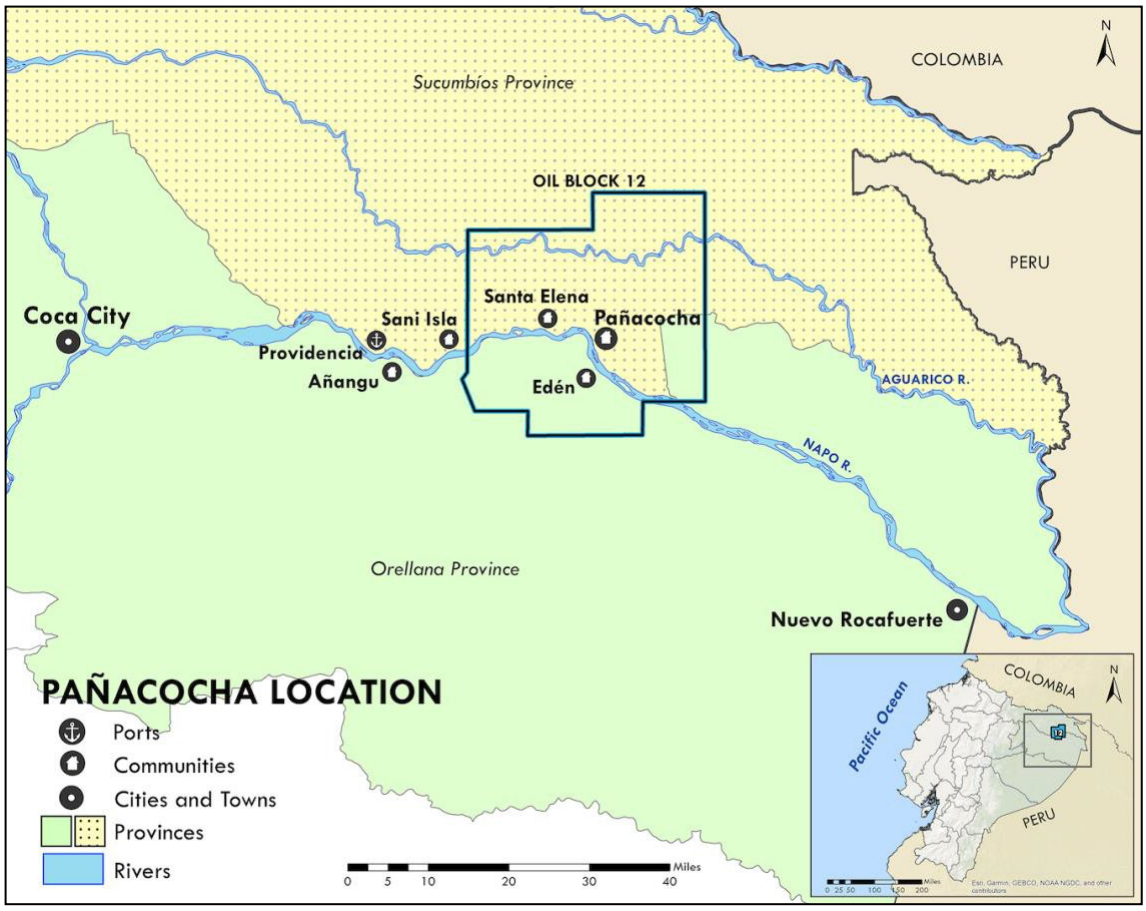


Fig.1. Pañacocha community and distance to other communities and cities. Map by R.J Theofield (Hydrocarbons Secretariat, 2018; Geographic Military Institute, 2012)

In addition, Ecuador has recently passed legislation aimed at bringing peripheral territories rich in natural resources under its control (Vela-Almeida, 2018). Among these laws are the National Development Plan (2017–2021), the Mining Law (2009), and the Plan for the Territorial Organization of Amazon (2018); these laws seek to reorganize territory in ways that facilitate oil extraction and reinvest oil profits in development and the modernization of communities. The state uses the National Oil Company, Petroamazonas, to implement and enforce these laws; Petroamazonas, in coordination with other state institutions, is responsible for the construction of modern infrastructure and development of projects in over 371 communities located in 19 oil blocks throughout

the Amazon (Petroamazonas, 2014, p. 103). For example, by 2014, Petroamazonas had implemented 253 infrastructure projects in these communities; these projects extend state-led education, health, basic services, productive infrastructure, and projects in areas where the state was previously absent. Petroamazonas is promoting the cultivation of 437 hectares of coffee and cacao aimed at supplying the markets (Petroamazonas, 2014, p. 107); and in Pañacocha, Petroamazonas has built an urbanized area with 75 cement homes known as the Millennial City. It has also provided cash compensations, agricultural programs, and wage labor opportunities aimed at encouraging families to engage with the markets and move towards urbanization. These programs promote conditions for the loss of land and livelihoods, decreasing families' abilities to relate to forest resources, thereby generating dependence on state-led programs (Borras Jr., Franco, Gómez, Kay, Spoor, 2012; Harvey, 2009).

Methodology

This study looks at livelihood response to the expansion of oil extraction and state intervention in Pañacocha. It does so by analyzing the efforts of local families to secure: 1) access and control to clean water and food, 2) use of cash compensations, 3) use of wage labor and productive projects. Additionally, this study contrasts livelihood responses from the study period (2017) with livelihood conditions 12 years ago. To understand livelihood conditions in the past, I conducted a focus group with 12 indigenous and colono people of the area, six from Pañacocha community and six from the El Edén, Sani and Santa Elena communities; all are neighbor communities with Pañacocha facing similar conditions (see fig.1).

With the help of one research assistant, I engaged in participant observation and semi-structured interviews with 20 percent of the households in Pañacocha (20 out of 95 households), spending an average of 10 days with each household. We documented observations and made systematic entries concerning family daily activities (see points 1 to 3 above). To clarify this information and add depth, we also held interviews and unstructured conversations with family members. Finally, the researcher conducted semi-structured interviews with key informants such as the school principal at the Millennial City, community elders, and Petroamazonas personnel. The analysis of this information entailed organization and coding of observations and semi-structured interviews according to the above categories; response frequencies were established among households and then compared to livelihood conditions in the past.

Landgrabs

Landgrabs here refers to the processes by which local populations lose control over land and/or their means of subsistence as a consequence of state and corporate interests in natural resources, including agricultural land, water, and oil, amongst others (Peluso & Lund, 2011). Such processes don't always require expulsion of local populations; instead, land grabbing includes processes aimed at controlling the resource grabbing mechanism (Ribot & Peluso 2003; Borras et al., 2012). Specifically, although families stay on the land, their labor is absorbed by industries, their lands are leased to private investors, or families agree to cooperate with industries in exchange for economic inclusion (Borras et al., 2012; de L.T-Oliveira, 2013). Conditions for this type of dispossession are produced by the systematic identification of peripheral or marginal land held under ambiguous tenure regimes (Li, 2014; Makki, 2018). Thus, marginality is

often produced by ambiguity that results from the lack of state presence in those areas, or by the lack of state claims on the land.

These conditions flourish when there is a lack of private property, for example, when the territory has been populated by communities under communal forms of land tenure. In these situations, national legislation may recognize certain indigenous or customary rights, but those rights are often treated as less legitimate than the individual or corporate rights recognized by the state (Correia, 2018). It is precisely the ambiguity between customary and private rights that allows states to legally maneuver in favor of transnational capital and private property to the dispossession and detriment of communities with customary rights.

Scholars have long theorized and documented such legal ambiguity and how it allows for the dispossession of land and livelihoods (Anthias & Radcliffe, 2015; Correia, 2018; Sawyer, 2004; Anthias, 2018). In the case of Ecuador, the state has taken advantage of this ambiguity in favor of mining and oil extraction interests, especially in areas where the state presence has been previously weak, as in the case of Pañacocha, or in areas where local populations have no legal titles over land (Sawyer, 2004). Moreover, the state justifies resource extraction and dispossession of livelihoods by using discourses and legal frameworks that portray traditional ways of life as backward and poor, so that they must invest oil profits in development and modernization to raise standards of living (Vallejo, 2014; Martinez-Sastre, 2015, pp. 237–238).

Land grabs and dispossession are frequently mediated by local leaders, who feel pressured and persuaded by the state and oil companies to collaborate with oil development and state intervention. Leaders might sign agreements with states or

transnational capital without fully understanding their consequences (Lu, Valdivia & Silva 2017, pp. 200–201). Moreover, as scholars have shown, even when leaders understand the consequences of oil extraction (Lyall & Valdivia, 2015, p. 30; Anthias, 2018), they sometimes sign legal documents without the full consent of their populations (Li, 2014, p. 598). Indeed, knowledge of the logic of the state apparatus and the oil industry grants local leaders a position to negotiate the terms under which modernization and oil extraction take place (Erazo, 2013; Wilson, 2010). These negotiations are often not shared with the rest of the population, thus, a response to oil expansion usually has two sides: on the one hand, a response that represents leaders' efforts to act on behalf of their populations, and on the other hand, the daily struggles the population itself deals with as they adapt to the changing circumstances (Indigenous Women's Mandate, 2018).

As I found in Pañacocha, leaders welcomed oil extraction in exchange for communal land titles as well as access to oil compensations sanctioned in the 2009 Mining Law. Also, even when titles to land have not yet been secured, access to oil compensations and modernization have materialized through the construction of modernizing infrastructure and the payment of cash compensations. However, as in other examples of imposed modernization in resource frontiers (Scott, 1998), families complain about not agreeing to the terms under which modernization and development take place.

Livelihood Strategies

Given the structural forces aimed at controlling land rich in resources, livelihoods that depend on land and control over the means of subsistence become precarious. According to Tsing, precarity in this context can be defined as "livelihoods without security", where changing with the circumstances is equated with survivability (Tsing,

2015, pp. 3, 27). Precarity is both a stress on families and also serves as a strategy and an opportunity to take advantage of existing and imposed assets, networks, political power and structural forces (Scoones, 2009; Bebbington, 2004; Alobo-Loison, 2015). According to Bebbington (1999), livelihood strategies are shaped mainly by the following: a) people's perceptions of what counts as well-being, b) access to natural resources and assets such as modernizing infrastructure, c) awareness of the structural conditions that produce dispossession, d) awareness of networks of outside allies and institutions and e) ability to create meaning out of situations of dispossession, as well as from opportunities to access assets.

According to Bebbington (1999) and Escobar (2008), populations are forced to change with the circumstances, and in the process, they learn from the structural forces shaping their reality. For instance, modernizing infrastructure can become "vehicles for instrumental action" that transform traditional knowledge by adding new meanings that lead to new forms of agency, empowering decision-making processes where people have more leverage to decide how to change (Bebbington, 1999, p. 2022). Escobar (2008, Ch.4) has also written extensively about how community access to assets and knowledge through networks of allies allows them to adapt to oppressive environments, challenging the conditions under which dispossession takes place. However, despite these opportunities, power dynamics continue to affect marginalized populations, as economic interests usually favor national and corporate agendas that undermine communities' needs while reinforcing racism and mainstream economic systems (Hale, 2005; Escobar, 2008; Vallejo, 2014).

Political ecologists, for instance, have documented how families living in peripheral areas of the Amazon of Ecuador respond to market integration; their results show lack of control over resources that are key to survival lead to poor nutrition, affecting average growth of children (Lu, 2007; Lu et al., 2010; Houck et al., 2013). Other studies have discussed how development and modernization programs offered as oil compensations in the Amazon seek to replace communities' ties with the forest, creating a dependence on state-led services and forcing market logics upon indigenous populations (Cielo, Coba & Vallejo, 2016; Cielo & Carrión, 2018). Indeed, Petroamazonas hopes to transform local families into entrepreneurs by offering agricultural assistance to help them produce for the markets. However, based on historical evidence of similar state programs operating in indigenous highland communities between the 1940s and 1970s (Yashar 2005), we know that such efforts do not always achieve all of the state's goals because technical assistance and training are necessary along with access to markets and capital investments, not to mention families' willingness to participate. Still, these elements are not present in current state efforts in the Amazon (Lu, Valdivia & Silva 2017).

Participation in Oil Extraction as an Access Strategy

Local willingness to directly participate in oil development often functions as a mechanism to increase control over natural resources and assets; in other words, participation in oil extraction functions as a mechanism to control how land and livelihoods are grabbed (Borras Jr. et al., 2012). For example, indigenous leaders have tried to start their own oil companies, participate in them as shareholders, and be involved in state oil planning to increase control over the terms under which environmental

impacts and oil extraction compensations are paid to local families (Anthias, 2018; Lyall & Valdivia, 2015; Sawyer, 1994). Others studying grassroots responses to corporate power have discussed how rural families seek active incorporation into corporate value chains as a way to secure inclusion in wage labor and access to markets (Hall et al., 2015; Martin et al., 2016; Gilberthorpe & Hilson, 2016).

Moreover, Lyall and Valdivia (2015) argue that communities' decisions to participate in oil extraction are often explained not only by the need to increase control over livelihoods, but also by their pursuit of inclusion in systems of power from which they have been excluded along ethnic lines. According to many researchers, initiatives such as the construction of ports, the building of urbanizations like the Millennial City, and state-led services in the Amazon are a façade that function as an aesthetic simulation of modernity to enchant and pacify locals in exchange for oil extraction support (Wilson & Bayón 2017; Cepek 2018; Vallejo 2014). Although these projects might not successfully incorporate families into the markets immediately, they affect living conditions and introduce modernization as an ideal among local families. Thus, local subjectivities often seek to emulate western ways of living to ease the power differentials that have divided them from the rest of the nation-state, but such emulation do not change power relations.

Consider for instance Sani and Añangu communities (see fig.1), both located near the Napo River. Sani agreed to oil operations in exchange for the construction of tourist infrastructure that would benefit the community, while Añangu benefited from the assistance of an NGO working with sustainable tourism. Although some control is gained, there are still huge power differentials, Sani for example considers that they could

have negotiated a better deal with the oil company when negotiations took place. Moreover, after agreements with the oil company and NGO respectively were over, communities found themselves unable to run the business side of touristic initiatives successfully; instead, they rely on outside expert labor, placing them at a disadvantage once more (Personal interviews with Sani and Añangu indigenous leaders, August 2 and September 14, 2017). Communities grow frustrated, feeling alienated and forced into ways of living or circumstances they did not choose, whether they agree or disagree with oil extraction (Thill, 2018; Lu, Valdivia & Silva, 2017, pp. 133–175).

This study complements prior scholarship by arguing that, despite these adversities, livelihood strategies in Pañacocha include nuanced forms of agency based on tactical subjectivity (Sandoval, 2000), an exercise that locals might not even be aware of. Tactical subjectivity allows local families to partially embrace and reject certain aspects of cash compensations, modernizing infrastructure, and extraction based on different circumstances. Livelihood strategies are also the result of families' efforts to materially cope with dispossession as they struggle to level economic power differentials with the state and oil companies. As the results section demonstrates later in this article, families are not always aware of the effects that subjective and material local responses have on state-led development.

Tactical Subjectivity

While dispossession takes place through the identification of peripheral land as marginal in relation to the state and corporate power, colono and indigenous populations living in Pañacocha are not entirely marginal to the state, nor are they part of the state apparatus. As Tsing puts it (1993, pp. xi, 9), "populations living in marginal areas share

understandings of expanding capitalism, and they speak from spaces and subjectivities that cannot be situated inside nor outside state and corporate power."

It is precisely this in-between marginality that reveals the instability of categories such as resistance versus willingness to cooperate with modernization and development (Tsing, 1993). Other authors have called this in-between state border thinking or double consciousness (Mignolo, 2012), third space (Bhabha, 1994, ch.1), and trickster consciousness (Vizenor, 1990), among others. Rather than defining an alternative space in which livelihood strategies might operate in Pañacocha, I pay attention to the processes through which locals produce marginal ways of responding. Specifically, I find that it is between the awareness of structural power and local understandings of what counts as quality of life that marginal or border thinking becomes tangible in Pañacocha. Indeed, border or marginal thinking is the result of the very processes through which territory and people in Pañacocha become marginal to the state and oil interests and where indigenous and colono rights become subordinate to corporate interests, as explained by Li (2014). I argue that this state of marginalization also allows for the possibility of acting on survival strategies that dance between a partial embrace and a rejection of power dynamics; this study refers to such strategies and processes as “tactical subjectivity,” as suggested by Sandoval (2000, pp. 54–59).

Sandoval argues that tactical subjectivity can be understood as the awareness of the marginal location of a subject concerning oppressive forms of power that allows subjects’ ability to move between positionalities according to their needs. In this process the subject makes use of whatever is available to speak to power, for instance, it requires

looking at oneself at the crossroads of many possibilities where loyalties shift depending on survival, moral, or political imperatives (Sandoval, 2000, p. 30).

Sandoval thinks of tactical subjectivity in the context of feminist efforts for social liberation, thus it is "performative" and aimed at securing political influence (2000, p. 62). I argue that families in Pañacocha engage in tactical subjectivity not only to increase control over their livelihoods, but also as a political tool to distance themselves from oil politics and modernization. Thus, a model to explain livelihood strategies in peripheral areas could add tactical subjectivity to Bebbington's livelihoods model (1999). Important livelihood strategies that require consideration when analyzing peripheral areas of extraction would include people's ability to participate in tactical subjectivity in addition to the following aspects identified by Bebbington: a) local ability to access resources and assets, b) local perceptions of well-being, c) the ability to learn and generate meaning out of structural forces affecting living conditions, and d) access to networks and allies

Findings

Access to and Control of Water

Overall, this study has found that the presence of oil operations and modernizing infrastructure has decreased local access to and control over water. Oil operations, modernization, and development have necessitated increased navigation of rapid motorized canoes in order transport development experts and oil personnel. In addition, there are large barges regularly transporting construction materials and oil machinery deep into the Amazon. Increased navigation causes contamination and harms wildlife, affecting Pañacocha and other communities.

Traditionally, the river was used for consumption, fishing, bathing, washing clothes, and local transportation; such use has been negatively affected by contamination. To compensate for this, Petroamazonas has built water wells for several households dispersed throughout the forest, and it has provided filtered and purified water to 50 of the homes built in the urbanization. Still, access to wells is uneven and limited to a few families; well water quality is not always fit for consumption as it is mixed with large amounts of clay. Indeed, only two out of 20 families participating in this study were able to use their wells regularly. In the last 12 years, families have started to collect rainwater using tin roofs during the rainy season (February to July) in order to access clean water; 17 of the families reported collecting water from nearby rivers, lakes, and even the Napo River when no other options were available during the dry months (December to January). Most families still bathe in the Napo River, except for three families who have running water, and river water is generally used to wash clothes and clean dishes, however families are worried about contamination and suspect its association to recent skin diseases.

Fig. 2. Rain water collection system using tin roofs

Petroamazonas has also built toilets and showers in most households, but hardly any of the families use them as there is no running water, and even when they could be used by being filled with buckets of water, families prefer to use them as storage space for household tools, food products, or eggs. Indeed, locals recognize the irony of having toilets, as they were built to prevent locals from going to the river as they had traditionally done in the past, and they realize that the oil company contaminates the river more than all the communities together.

Only a few families that have a steady cash income and can afford to buy food from markets are able to live in the urbanization and access clean water; indeed, only one out of 20 families from the sample lives in the urbanization. Most families remain on their landholdings, as they depend on subsistence agriculture and the forest to subsist.

Moving into the urban area is not an option, as the urban layout does not allow for subsistence agriculture or domestic animals.

Cielo and Carrión (2018) have identified similar conditions in the community Playas de Cuyabeno, where another urbanization was built. Indeed, the Pañacocha parish has ruled that no farm animals are allowed, as the parish hopes to transform the urbanization into a town in the near future. Most families visit their urban homes on the weekends, fearing that abandonment of homes would lead to losing what they were told represents the most lucrative compensation paid to families in exchange for oil extraction (El Telégrafo, 2013).

Fig. 3. Millennial City, Pañacocha.

Access to and Control of Food

Concerning access to food, the diet of families in Panacocha remains similar to the traditional diet of cassava, plantains, chicha (a fermented drink made from cassava or plantains), fish, forest grubs, turtle eggs, and forest game. However, access to forest game has continue to diminish over the past 12 years; according to locals, oil operations and the

construction of modernizing infrastructure have scared animals away. The amount of fish and turtle eggs has also diminished drastically, probably due to contamination, noise, and increased presence of oil activity. Fishing in the Napo River is becoming less of an option, and turtles are disappearing from the shores. Families fish in nearby smaller rivers and lakes where some animals are still present. Twelve years ago, families would have had meat, eggs, fish, or grubs four to five times a week. Today, access to this type of food has been reduced to twice or three times a month, and families must walk long distances to find the wild game they previously were used to having nearby.

To compensate for the lack of wild game, families have increased their numbers of domestic animals, especially chickens, and a few families have fish pools and pigs. Petroamazonas promotes farm chickens and fish pools; the company distributes them amongst families as part of its productive programs aimed at encouraging market production. Most families use the chickens for their own consumption instead of for market purposes. Forest game is preferred among all households, but it is consumed only when available; these households also sell extra agricultural output in the markets at least once a month to obtain cash for products such as rice, cooking oil and gas for cooking. When extra cash is available, these families also buy tomatoes, onions, oil, tuna, flashlights, batteries, alcohol, school supplies, and clothing. It is important to note that Petroamazonas has distributed commercial chicks among families on several occasions, hoping to encourage families to produce for the markets. Still, families often sell the excess of chicks as many are not interested in market production.

Three households lacking access to protein reported that fish are less available, and that they do not have enough income or time to maintain farm animals. These

families consume plantains, cassava and large amounts of chicha for several days until fish or some forest game becomes available. It was also noted that when these families had access to some cash, they used it to buy alcohol, as many members consume it in the morning to get the strength to work; indeed 16 out of 20 households always had alcohol or chicha ready on a daily basis. Drinking has become a big problem in the community, as now several stores in the urbanization sell alcohol and beer; 12 years ago, accessing alcohol was difficult because it was only available in nearby cities.

Women in these three households explained that having farm animals such as pigs are symbols of colonizer behavior; locals remember the days when indigenous people used to live under the control of large landholders and when indentured indigenous labor was used to tend farm animals and commercial crops. In addition, they remember that they had always preferred living in freedom and feeding themselves from abundant forest resources; memories of forest abundance go back to the 1970s and 1980s. Other females explained that having chickens requires producing corn to feed them, and they lack the land required to produce corn. Similarly, fish pools require balanced food only available in the markets, and they are unable to afford it.

Fig. 4. Caiman soup and chicha, considered a luxury given the decrease of wild game.

In addition, 54 percent of the Pañacocha territory is demarcated as a protected forest where families cannot live or conduct subsistence agriculture, but they can hunt there for self-consumption (Ministry of the Environment, 2010). According to families, access to the forest is becoming more restricted because hunting is now more regulated, and families are not allowed to have guns. Therefore, families keep dogs that are able to hunt for animals that are in close proximity to their homes.

Use of Cash Compensations

In terms of access to market goods, in the last ten years, Petroamazonas has paid cash compensations for seismic prospecting in the territory, and it has also compensated families living near oil platforms and pipelines. Families have received between 3,000 and 9,000 US dollars since 2009. From the sample of families, 15 had received cash compensation, and they used the money to purchase large freezers, fridges, boom boxes, motorized canoes, and alcohol, among other items. Locals explained such purchases were

made in hopes of having electricity soon, as Petroamazonas had agreed to share some of the electricity produced by the industrial generators located in the Oil Complex El Edén, located across the river from Pañacocha (Petroamazonas, 2010, p. 5); however, electricity has only arrived in 50 homes in the urbanization.

When asked what they would store in the freezers if they had electricity, most men responded beer, while women said that a freezer wouldn't be useful to them. Even in households that don't have electricity, freezers and boom boxes are usually located in a central area of the household where everyone can see them; they seem to be a status item more than a real need. Similar behavior was documented in the communities Playas de Cuyabeno and Gareno, where families spend money on beer and boom boxes (Lyall & Valdivia 2015; Lu, Valdivia & Silva 2017).

Fig. 5. Fridge and boom box (to the right) located in the open living room of a household

Even though male heads of households made most of the decisions related to how to spend the cash compensations—often spending money on alcohol and music devices—women of 12 households reported that they would have paid for school uniforms, school supplies, and means to send children to schools outside the community, if they were making the decisions. Women in five households said that they would have kept the money for medical emergencies. All women said that buying food would have been important as well; however, it seemed to be less of a priority than education.

Additionally, all families had used cash to replace some of the roofs with those made of tin, and they have adapted them to collect water. In addition, almost all families with access to oil compensation bought necessities such as gas stoves, gas cylinders, and small electric generators. Although having gas stoves seem to be useful to women, most families keep using traditional stoves that operate with charcoal in addition to their gas stoves. According to women, cooking in gas stoves is easier, but they continue to use wood and charcoal stoves as they report that food doesn't taste the same when cooked in the gas stove. Also cooking in the charcoal stove is faster when cooking for large amounts of people; therefore, all women think keeping the traditional stoves along with the gas stoves is necessary. The few families that have working generators use them at night to help children to complete homework when diesel is available.

Fig. 6. Replacement of traditional roofs with tin ones at family homes

Fig. 7. Traditional stove

Finally, some families that received oil compensations also bought motorized canoes, but owners explained that the motors were either discarded or given away when it became too expensive to maintain them. Women in 16 households reported that owning the boats was expensive because of the cost of gas, and therefore said there was no point in keeping the motors. According to the principal of the school in Pañacocha, men that bought motorized canoes were more interested in showing off than utilizing the boats as transportation.

In general, families are suspicious of their leaders, and they are also tired of oil politics. For instance, families ignore general assemblies requested by leaders to discuss oil-related job opportunities, oil compensations, development programs, and infrastructure. According to families, there is no point in attending as their concerns are not taken into consideration when it comes to oil politics. Oil compensations have brought conflicts and discord; thus, families prefer to stay at home where peace remains. For instance, 14 of the families reported that they find peace and a good quality of life in their family households, and that such peace is disturbed by local leaders and oil politics.

The last three assemblies held during 2017 had an attendance of less than a quarter of the population, and subsequently leaders had to recruit male community members door-to-door to work on the maintenance of the oil-pipeline infrastructure, labor that was going to be paid by Petroamazonas. To attract families to the assemblies, leaders offer families beer and chicha, thus, the few men that attend get drunk. Men interviewed say that alcohol grants them the courage and knowledge to complain about local leaders' negotiations with Petroamazonas. Indeed, when extended families get together during the weekends, they eat and drink, and alcohol seems to allow bonding and the desire to discuss local politics. Conversations reflect the frustration of families in relation to leaders and the ways that oil compensations, development, and modernization have impacted their life.

Use of Wage Labor and Productive Projects

The presence of oil activities and modernization has opened job opportunities. Most of the jobs associated with the oil industry are only seasonal, not lasting more than six months. In the last 12 years, local unskilled labor was needed to build infrastructure,

such as an oil platform foundation, and to clean the path under which a significant pipeline cut across Pañacocha territory. After these construction tasks had been completed, there were few permanent jobs.

A survey of labor opportunities available during fieldwork in 2017 in Pañacocha revealed that two to three men were hired yearly to drive canoes for Petroamazonas, at least four people were hired by the local school, and one person was hired at the health center. In addition, tasks associated with the maintenance of oil infrastructure require hiring around 15 men every other year for a period of four to six weeks.

Interviews with men who have worked for the oil company reveal that wage labor is not something they would seek permanently. Men explain that they don't like having a schedule, nor do they like the discipline that keeping a job requires. They accept working for Petroamazonas occasionally, but they prefer the freedom of their households. When asked whether they need cash, they said that wage labor was a necessity, as indeed cash complements the household economy, as described earlier. Still, they were not interested in having more than what was needed to pay for the basic necessities, school supplies, and clothing. Indeed, Petroamazonas personnel explained to me that there is not much choice when hiring boat drivers among community men, as only a few are willing to commit to a schedule and to be responsible for the care of the boats.

Similarly, despite Petroamazonas' efforts to encourage families to produce coffee and cacao for the markets by providing technical assistance and agricultural supplies, only two families have been successful in producing products of market quality. Indeed, according to a Petroamazonas technician, families ignore agricultural advice, wasting agricultural supplies distributed by Petroamazonas. The technician thinks families are not

interested in these projects; according to him, only communities with a long history of engagement with the markets such as Sani and the Edén community have shown some interest, and even in those communities the number of families participating in market production is small compared to the total population.

Moreover, according to a former Petroamazonas technician that had worked in communitarian relations in Pañacocha, families' reluctance to engage with markets and to take advantage of productive projects has slowed down Petroamazonas and other state institutions efforts to introduce development programs in the area.

Fig. 8. Family drying small amounts of coffee to sell in nearby markets when needed.

In addition, the incorporation of Pañacocha in oil-associated development has created opportunities for locals to open restaurants and stores. Pañacocha has become a place where oil personnel and public canoe transportation stop for lunch and to rest as canoes travel up and down the Napo River. Usually, canoe rides from Coca to Rocafuerte

take up to seven hours, and if the trip is to Peru, the travel time can be up to 12 hours, making a stop in Panacocha ideal for travelers. In the last 12 years, two restaurants and three stores have been successfully established by families in Pañacocha. These families have left their households behind and commit all their time to working in their restaurants and stores.

Families living in their landholdings are critical of those with permanent jobs. They think these families have adopted an oppressive colonizer mentality that desires accumulation. One head of household, for example, explained that: "only colonizers and outsiders are interested in having more than what is needed for survival." Later, his wife interjected by saying that, "it does not make sense to have more land than what families need, depending on how many children each has" (Interview November 3, 2017).

Moreover, although teenagers seem very interested in market goods such as boom boxes and cellphones, when asked about their future subsistence, most of them expressed interest in securing land through marriage either in Pañacocha or nearby communities. Many said they would like to finish their high school education to be able to find intermittent wage labor in nearby cities to complement their household economies. In December 2017, out of 388 people living in Pañacocha, 13 people had permanent jobs, 15 people accessed seasonal jobs every two years, and 13 households engaged in entrepreneurial initiatives.

Discussion

Research results show that oil expansion significantly affects local access to and control over basic resources such as water and food, as well as local understandings of quality of life. As Tsing suggests, local families are forced to change according to

circumstances, and adaptation is equated with ability to survive (2015). Thus, families in Pañacocha continue to lose access to clean water and forest game; however, they have some agency in deciding how and when to change livelihood strategies. In this sense, precarity is not only the stress of survival, but also an opportunity to take advantage of imposed assets such as modernizing infrastructure, as discussed by Bebbington (1999) and Escobar (2008). This is seen in the way locals use resources such as rainwater collection, reject the use of toilets, or make the decision to maintain farm chickens provided by the oil company as an at-hand source of protein. Moreover, families might seek state services that they consider to be necessary, such as requesting the municipality to extend the water grid, while rejecting pressure to leave their traditional lifestyles and move into the urbanization.

Families make these decisions fully aware of the conditions that allow for dispossession; thus, local families identify: loss of livelihoods, increased conflict among families, mistrust of local leaders and oil politics, and uneven power relations with the state as negative aspects of oil and state interventions. Such awareness informs the negative ways that most families see accumulation of cash and land, as when families render accumulation and market production as colonizer traits, incompatible with local values. Other examples include local criticism against leaders' mediation of oil politics and the low value they place on cash compensations as related to livelihood strategies.

Local awareness in Pañacocha allows me to consider changes in livelihoods in the context of local agency and expanding understandings of the role of the state and the structural forces that shape living conditions. Just as Tsing (1993) suggests, marginal populations situate their livelihoods, and therefore their subjectivities, from a perspective

in which they don't see themselves as part of hegemonic national projects, but neither do they consider themselves to be outsiders. It is this in-between that produces marginal conditions, where local responses reveal the instability of categories that dance between resistance and cooperation with oil and state intervention.

This study illustrates that Pañacocha's livelihood strategies appear as ambivalent; such ambivalence is the product of marginal thinking or double consciousness (Mignolo, 2012). Such thinking or subjectivity does not fully embrace or entirely reject oil expansion, modernization, and development. Instead, I argue that processes of tactical subjectivity (Sandoval, 2000) allow families to pick and choose what aspects of development and modernization best suits local needs, while simultaneously permitting them to redefine what constitutes a good quality of life. For instance, local resistance to joining market production and reluctance to use cash compensations in western ways contrasts with local preference for traditional ways of survival, such as traditional staples and forest game; this contrast shows that locals consider non-market relations and forest subsistence to be critical aspects of their life.

Resistance to projects aimed at accumulation does not mean that families don't value money at all; indeed, families report needing to access cash to complement their economies. Still, I found that, far from seeing wage labor and entrepreneurial opportunities as important to subsistence, families prefer subsistence livelihoods and view cash only as a complement. Other scholars have mentioned that such preferences could differ between generations; thus, younger generations in the future might value and use wage labor and accumulation different than their parents (Lyall, 2017; Lu, Valdivia & Silva 2017, pp. 200–201). Still, from the interviews collected with youth in Pañacocha,

teenagers seem eager to secure household land and to continue to mix traditional livelihoods with eventual wage labor.

Also, families understand that cash, along with modern goods and infrastructure, symbolize economic and political power historically denied to them. Therefore, families desire to acquire the status and respect that money and accumulation seem to guarantee. Thus, families that have had access to large amounts of cash have bought freezers, motorized boats, and large amounts of alcohol, among other items, to display a higher social status. Lyall and Valdivia (2015) document similar behavior in Playas de Cuyabeno, and they explain that such purchases can be understood as a means to climb the social latter within the community. However, in Pañacocha, the disconnect between the usefulness of such items and what families deem as needed for survival serve only as a reminder that oil development has become an opportunity to access symbolic power; this is because families are aware that these items don't contribute to their needs. Similar treatment has been given to the urban area; although families prefer not to live there, they continue to maintain their homes in the urbanization. While these homes seem useless to families now, they are a symbol of western status gained in exchange for oil cooperation. In general, families' resistance to productive projects, the low value they assign to cash, their resistance to waged discipline, and their resistance to move into the urbanization become impediments for Petroamazonas' attempts to achieve its development outcomes in Pañacocha and nearby communities, as one of its former communitarian relations personnel explained to me.

In addition, families distance themselves from oil politics and local leaders by ignoring general meetings and the leaders' mediation with the state and the oil company.

This shows families' efforts to escape oil politics and find peace and a good quality of life in their households. Moreover, increased consumption of alcohol seems to respond to the need to cope with feelings of frustration related to the arrival of oil extraction and the loss of control over livelihoods. Alcohol is also used to get the courage to speak up against leaders and oil politics with which families don't agree. Alcohol consumption reveals feelings of exclusion and a sense of little control over the structural forces that shape livelihoods, demonstrating that families underestimate their agency and power to resist and shape oil and state interventions.

Finally, it is essential to mention that most families expressed interest in accessing research results from this study. They anticipate that this information will help them access knowledge to hold leaders accountable for their decisions, and to help them make decisions concerning to how to cope with the material realities of dispossession. Other authors such as Bornschlegl (2018) have documented similar requests from communities facing the loss of livelihoods due to mining activities in the Amazon; thus, this study adds to the efforts of other scholars and emphasizes the need to make information available to rural and indigenous populations.

Conclusions

Political ecologists have described indigenous and rural responses to the expansion of oil extraction and state intervention in terms of resistance, leading to conflict between communities and oil interests. In addition, literature shows that some communities are coerced to agree to oil extraction, while others are willing to participate in oil extractive planning to increase control over the ways in which oil and state expansion grab and/ or affect their livelihoods.

The findings of this study complement the existing literature by including an analysis of livelihood strategies and everyday forms of material response in the community of Pañacocha in the Amazon of Ecuador. Results show an ambivalent response to oil expansion; such response is not purely consistent with resistance, coercion, or cooperation. Instead Pañacocha families embrace some aspects of oil expansion and state intervention while rejecting others as they fit or impair survival needs and changing circumstances.

Understanding everyday livelihood strategies is important in Pañacocha, as leaders' decisions to cooperate with oil extraction don't reflect families' needs and views in relation to oil and state intervention. Specifically, Pañacocha leaders have agreed to oil extraction in exchange for communal land titles and access to modernizing infrastructure and development programs; however, families disagree with leaders' decisions because oil related benefits don't conform with local views of a good quality of life. Similar situations might be taking place in other communities, as Petroamazonas has similar projects in around 371 communities in the Amazon.

This study argues that families enact livelihood strategies by engaging in tactical subjectivity; thus, families use oil compensations, infrastructure, and productive programs in tactical and selective ways that fit material needs and subjectivities that don't fully embrace or reject state and oil intervention. Instead, families chose conditions that fit present needs and that are coherent with local understandings of what entails a good quality of life.

Research results show that despite the fact that families face decreased access and control over resources necessary for their survival, they find some space to adapt and

respond to the loss of natural resources, increased wage labor opportunities and the introduction of modernizing infrastructure and productive projects. This study has found that local understandings of what counts as a positive quality of life inform livelihood strategies, and such understandings don't conform with state plans as follows: Families are increasingly concerned about how to secure access to clean water and traditional sources of protein, these resources have been impacted by oil extractive activities and territorial state regulations that prevent the use of resources in the protected forest. Families' strategies include rainwater collection and grassroots organizing without local leaders' involvement to request that the state expand the water grid to the community. In addition, families use productive farm projects introduced by Petroamazonas to generate protein security through the maintenance of chickens and fish farms rather than using farms to produce for the markets as Petroamazonas expects.

In terms of use of oil cash compensations, results show that families don't use them to improve living standards in western ways, as the state would have hoped. Compensations have paid for some needs such as tin roofs for water collection, gas stoves, and electric generators. However, most families have bought status items such as motorized canoes, freezers, and alcohol; this signals efforts to level power differentials between populations historically excluded from national development and the rest of the country. Such items allow access to the symbolic power that western lifestyles seem to ensure, although those lifestyles are not needed or even desired by local families.

In terms of families' response to wage labor opportunities generated by the oil industry and the introduction of productive programs, we can see that the state encourages the accumulation of cash and resources, but many families see accumulation

processes in a negative light, as they associate accumulation with the oppressive behaviors of western colonization, thus bringing back memories of oppression in which indigenous populations were used as indentured labor as recently as the 1970s. Also, state programs aimed at producing for the markets or joining wage labor opportunities create conflicts between those preferring traditional livelihoods and those interested in joining the markets, exacerbating class and racial divides within the community. Most families in Pañacocha consider cash as a need which complements their livelihoods; however, they prefer traditional subsistence ways of living that are equated with direct relation to forest resources. In addition, the population mistrusts their leaders, leading families to distance themselves from oil politics to escape oil development, compensations, and loss of livelihoods.

On the other hand, state efforts to incorporate territories and populations such as Pañacocha continue to deepen, as even up to 2019, the state had tried to lease new blocks in the Amazon's primary and secondary forest. However, the families' response shows that local populations have a great deal of agency in shaping how such integration takes place and at what pace. Therefore, in the case of Pañacocha, although the state imposes specific ways of living, local families choose to delay engagement with the markets and hold onto traditional ways of living as much as they can. As a result, the long-term change that the state might have desired in Pañacocha is being delayed by livelihood strategies, showing that families' decision-making processes about livelihoods significantly impact state efforts. This reality could change if the state seriously invests in access to markets by making ports viable or by building roads to connect populations to major cities, this is a serious concern as such plans attract colonizers and outside

investors increasing pressures over natural resources and land, not to mention the damage it would pose to the social fabric of communities.

Finally, understanding livelihood strategies in light of tactical subjectivity is important to critically inform policy attuned to indigenous realities and needs, not to mention the need of rural and indigenous families for access to this type of information. As discussed in this paper, families usually feel alienated and powerless without fully realizing the importance and power that decisions at the household level have on state and oil interventions. Finally, research studying land grab processes need to be made available to communities in an accessible format to make research useful to those struggling to survive, sharing this data helps to level power differentials and empower local agency.

CHAPTER V

MINING AS EPISTEMIC VIOLENCE: ERASURE OF INDIGENOUS EPISTEMOLOGIES IN THE AMAZON REGION OF ECUADOR

Introduction

This study adds to feminist critical geography by bringing post-colonial race and gender intersectionality (Quijano, 2000b; Lugones, 2007; Mollet & Faria, 2013; Radcliffe, 2015) into conversations about settler colonial notions of elimination (Wolfe, 1999, 2006: Johnson & Murton, 2007; Zaragocín, 2019) to better understand recent state efforts to expand the mining frontier into the Amazon. Such efforts reinforce structural processes of violence that seek to eliminate indigenous traditional knowledge.

By using three case studies of Kichwa indigenous communities in the Amazon, I illustrate how the symbolic power of state-led modernization paid for with mining profits not only reinforces colonial violence based on race, gender and patriarchy among indigenous territories as others have shown (Vallejo 2014; Lu, Valdivia & Silva 2017). I argue that internalized colonial violence along with state intervention systematically undermine, silence and erase indigenous ontologies and epistemologies that explain the complexity of mining conflicts and denounce systemic violence. Such erasure allows the state to justify the expansion of the mining frontier and portray indigenous accounts of violence as a-historical and naïve, eliminating indigenous epistemic authority and therefore displacing claims for accountability.

In addition to using post-colonial and settler colonial theory to frame a discussion of epistemic elimination, I find it necessary to engage with a decolonial praxis that goes beyond post-colonial criticism (Smith 1999; Naylor et al. 2017). I do this by drawing

attention to the very epistemologies that the state seeks to eliminate. Thus, I rely on a female analysis of indigenous narratives to unveil the complexity of female understandings of intersectionality and violence, exposing the logic that drives elimination.

The article is organized as follows; first I introduce the case studies and provide an overview of recent state legal and institutional frameworks aimed at facilitating the expansion of the mining frontier into the Amazon. Second, I provide an overview of post-colonial intersectionality using the modernity/coloniality framework (MC); this section is followed by an exploration of indigenous understandings of colonial intersectionality as related to mining activities in their territories, paying attention to women's marginality. Forth, I bring MC in conversation with emergent literature on settler colonialism in Latin America. In this context, I further a discussion of mestizaje understood as a process of racial and cultural mixing between indigenous people and traits, and the rest of Ecuadorian society to point at the way violence is structural but also self-inflicted. Finally, I illustrate indigenous ways of making sense of violence, this is what I refer to as epistemology to explain how indigenous denunciation of violence is ignored and eliminated by the state.

Situating Tzawata, Pañacocha and Santa Elena communities

This article is the result of research conducted with the Kichwa communities of Tzawata, Pañacocha, and Santa Elena between 2014, 2015 and 2017. All these communities have been affected by mining and oil extractive activities in the past 15 years. Tzawata is a community of 40 families located in the province of Tena on the road that connects the cities of Tena and Puyo; their territory is contained within Oil Block 28,

where the state has interests in gold mining, oil extraction and hydroelectric production. In 2004, a gold mining company arrived to extract gold from the riverbanks, forcing the population to survive on a very limited piece of land. In 2010, Tzawata started to politically organize and oppose gold mining extraction, successfully forcing the company to cease operations. Since that time, the community has resisted state and corporate efforts to forcefully remove them and to allow the company to continue its extractive work.

Pañacocha has approximately 95 families, and Santa Elena has ten; both are Kichwa and are located in a remote area of the Amazon, where the state's presence has been minimal. In the 1980s the Occidental Petroleum Corporation arrived in the region to conduct oil exploration and eventually started to operate in what is now known as Oil Block 12, where both communities are located. In 2008, the National Oil Company (Petroamazonas) took over OXY's oil operations as part of national efforts to increase state control over extractive activities and to extend the presence of the state in the Amazon.

State efforts to exert control include making changes in legal frameworks to allow the state and mining companies the ability to persuade communities to agree to mining and modernization in rural areas. For instance, since the 2009 Mining Law was passed, Petroamazonas can use oil revenues and other state funding to invest in development programs as a negotiation tool. In Pañocha, Petroamazonas agreed to build an urban area of 75 homes along with a state-funded school, a small health center and a small police station to serve Pañacocha, Santa Elena and other nearby communities. The state not only uses negotiation but also force to facilitate extraction. For instance, in Oil Block 28 where

Tzawata is located, gold mining is not the only resource that troubles local communities; the state is also interested in the construction of a hydroelectric power plant along with oil extraction. Different from communities in Oil Block 12 which have agreed to extraction, Tzawata and other communities in Oil Block 28 are resisting such interventions. Thus, the state has tried to remove the population out of the land by force.

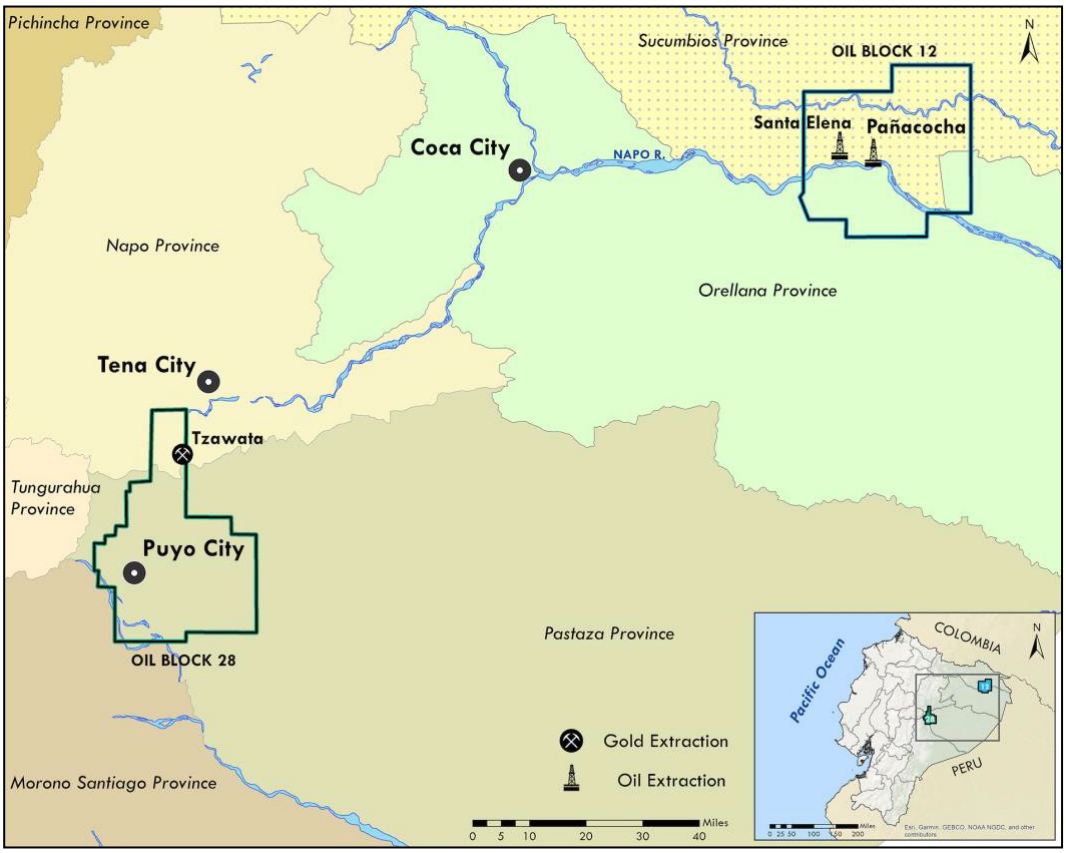


Fig. 1. Location of communities, map by R.J Theofield (Hydrocarbons Secretariat, 2018; Geographic Military Institute, 2012)

Understanding epistemic violence and its logic among subordinated groups such as indigenous people is significant to those confronting these realities. This is because there are approximately 371 communities located in the oil blocks controlled by Petroamazonas, such as Santa Elena and Pañacocha, these communities undergo

processes that seek to assimilate their traditional ways of life into western national standards (Petroamazonas, 2014). Similarly, approximately 17 rural indigenous communities in the province of Tena, where Tzawata is located, risk being forcefully removed from their territories due to their opposition to mining activities and hydropower plants (Interview with regional indigenous representative, May 16, 2018; Morán 2019).

Methodology

I used a collaborative research methodology as proposed by Steven (2007), Gaudry (2011), and Stephen and Hale (2013, 1-29); such methods call for ways in which subordinated concerns and knowledges should be taken seriously in the formulation of the research processes. Thus, research planning, data gathering, and analysis is produced with research participants. Thus, research questions emerged in 2015 out of female indigenous concerns as related to how women could be better prepared to resist and survive the detrimental effects of state intervention and mining expansion along with my own interest in understanding systemic colonial violence in extractive territories. I used a mix of traditional research methods and participatory methodologies that also included collaborative analysis.

Traditional methods consisted of participant observation and semi-structured interviews in Pañacocha and Santa Elena. In Pañacocha, I lived with 15 out of 95 households for 10 days each in Pañacocha and with two out of ten households in Santa Elena. Additional interviews included oil company personnel, local police, health center personnel, and school teachers from the urban area recently built by the National Oil Company. In Tzawata, I collected 5 oral histories from community members and two group discussions (similar to focus groups) with 10 percent of the population (18 people).

Collaborative methods include the participation of a female indigenous leader from Tzawata, who traveled with me to Pañacocha and Santa Elena to exchange information about the difficulties of living on mining territories for two months. Women's exchanges focused on their perceptions of violence associated with mining activities and how to best respond. Exchanges relied on traditional ways of knowledge that include telling dreams and narratives which use symbolism that blurs the nature-culture divide. For instance, processes that enable violence take the shape of animals or other forest spirits. Kichwa narrations are usually the product of dreams or collective understandings that explain conflict and violence (Uzendoski, 2015; Descola, 2004; Garzón, 2013).

The overall analysis required identifying data that describes situations of oppression and violence as associated with mining expansion and the state's presence. To understand the nature of such relations, informants defined their subjectivities in relation to a) state officials and oil personnel, b) mestizos (the hegemonic racial group in Ecuador), c) indigenous men, d) local indigenous leaders and e) natural beings such as animals, river bodies and the forest. Although some of the information comes from my observations and interviews, the most revealing information was provided through female narratives. The narratives analysis took place between the Tzawata female collaborator, female informants, and myself as project researcher. The analysis required further questions to explain how these narratives were relevant to power relations involving these categories. In some cases, drawings were required to dig deeper into emotions, feelings, and the logics that inform these narratives.

Female participation in the research is central to the inquiry and findings of this paper. Findings are aimed at adding to decolonial efforts as suggested by Naylor et al. (2011). Therefore, I consider indigenous narratives and analysis as theory in its own right. The methods and theoretical findings add to the voice of other scholars who have criticized academic production as usually detached from communities' needs and interests, turning academic production into another extractive enterprise (Smith, 1999; Gaudry, 2011; Hale, 2006). Similarly, indigenous and Latin American scholars have denounced the fact that scholarly production on social justice has spent too much time criticizing neo-colonial and post-colonial ways of oppression instead of furthering anti-colonial agendas (Smith, 1999; Puebla-Cisneros 2015; Naylor et al. 2017).

Contextualizing Contemporary State Violence

Like in the rest of Latin America, policies that have promoted economic development and modernization in Ecuador have been informed by colonial understandings of difference, in which ideas of rurality, backwardness, and poverty have been linked to marginalized populations such as people of color, indigenous people and women (Rodriguez, 2012; Radcliffe, 1995). Specifically, Ecuador has historically used inclusive social policies or ‘racial democracy’ to encourage indigenous and other minority populations to assimilate into the dominant group in order to be considered political and economic actors (Radcliffe 1996, p. 30-41; Sundberg 2004; Yashar, 1999, 2005, 2015; Wade, 2010, p. 55-56). This is because indigenous ways of life diverge from western ones; thus, indigenous people have been considered an obstacle to economic growth and a problem that needed to be solved (Gutierrez, 1996; Escobar, 2008; De-la-Cadena, 2000, Ch.3). An example of this type of policy in Ecuador is the recognition of

ethnic differences in legislation drafted under neoliberal regimes that simultaneously reinforce racism, dispossession, and assimilation.

For instance, the Ecuadorian constitutions of 1998 and 2008 have recognized differentiated indigenous rights along with nature's rights; this recognition responds to indigenous historical demands for autonomy and claims to protect their territories from capitalist interests (Gudynas & Acosta, 2011). However, enforcement of constitutional mandates, policies, and regulations are politically subordinated to economic growth and modernizing development plans that divert from indigenous views (Gudynas, 2015; Walsh, 2014). Thus, as several authors have argued, inclusive policies and changes in constitutions are political moves to address social discontent, but land redistribution, protection of natural resources and access to political and economic autonomy are still lacking, reinforcing racial and gendered discrimination (Lalander, 2014; Kroger & Lalander, 2016; Radcliffe, 2012; Povinelly, 2002; Yashar, 2005, Radcliffe & Westwood 2005, p. 44).

The negative effects of racial democracy have become acute in the last 12 years as Ecuador has decided to expand its mining frontier into the Amazon using a discourse that privileges national economic growth over indigenous struggles to protect their environments and autonomy in their territories (Murcia et al. 2015). Authors have identified such a nationalistic discourse and modernizing agenda as "resource nationalism" (Koch & Perreault, 2019). Specifically, the state argues that the region is poorest, poverty is assessed in terms of access to formal education, state-health services, 'adequate' housing, and wage labor, amongst others (Vallejo, 2014).

On the other hand, rural and indigenous populations have historically maintained economies with different degrees of reliance on subsistence agriculture and intermittent wage labor relations with nearby cities such as the Tzawata community. Communities located in peripheral areas of the Amazon such as Santa Elena and Pañacocha have maintained economies that rely on subsistence agriculture, forest gathering and hunting with limited access to markets; for all of these communities, understandings of what counts as a meaningful quality of life and what development should be differs from state views (Indigenous Women's Mandate, 2018; Vallejo & García, 2017; Altman, 2013).

Racial democracy and resource nationalism become even more clear in laws such as the Plan for the Territorial Organization of the Amazon (2018) that seeks to incorporate and assimilate indigenous populations that have remained disconnected from the markets into national culture, national production, and wage labor systems. Also, the Land Organization Code known as COOTAD (2010, Arts. 93, 100) allowed indigenous territories to operate as decentralized federal units for the first-time. Thus, indigenous territories could directly benefit from state and oil rents as municipalities do, but access to public funds is available only if locals comply with development plans that seek cultural and economic incorporation.

A prime example of assimilation efforts is the Mining Law (2009, Arts. 40, 67, 93), which mandates that 12 percent of all mining profits, along with three percent of all royalties, must be used in western rural development and modernization, especially in territories where extraction takes place. This type of law provides the state a tool to negotiate benefits with indigenous communities that might oppose mining and

simultaneously enables assimilation (Valdivia, et al. 2017; Cepek, 2018; Burgaleta et al., 2018).

Systemic violence and the coloniality of power

The theoretical framework of modernity/coloniality (MC), also known as the power of coloniality, was first developed by the Latin-American scholar Quijano (2000, 2007, 2015) and later expanded by other Latin American scholars such as Walter Mignolo (2002), Arturo Escobar (2004, 2007) and Maria Lugones (2007, 2010). These scholars provide a Latin-American perspective of colonial power rooted in Latin America history, intersectionality and decolonial efforts to situate subjectivities within power structures. These contributions, along with post-colonial studies produced by radical women of color in the United States and Canada such as Anthias and Yuval-Davis (1992), Collins (2000) and Moraga and Anzaldúa (2015) among others, provide a body of theory generally referred to as post-colonial intersectionality.

In Latin America, the MC framework has been highly influential among scholars, and it explains how modern social relations in Latin America are profoundly shaped by the colonial racial hierarchical order that defines the organization of other categories, including class. According to these four scholars, white Europeans secured the monopoly of economic and political power by naturalizing racial inferiority. This perceived racial inferiority rendered non-western cultures, productive systems and epistemologies as less legitimate, inferior and immoral in the new colonial order (Spivak, 1993; Johnson & Murton, 2007). Accompanying this is the fictional view in which non-western knowledge and its very existence was seen as pre-historical, and the location of non-western

populations was seen as peripheral in relation to centers of accumulation (Mignolo, 2012; Smith, 1999; and Garzón, 2013).

In addition, the colonial capitalist system requires racial differences to appropriate labor force, just as it requires uneven geographical development to appropriate land and natural resources (Quijano, 2000b; Escobar, 2007; Mignolo, 2009, ch.1; Smith, 1999). Moore (2015, ch.9), Radcliffe (2015), Pulido (2017) and Escobar (2008, ch.3–4) among others have used similar arguments to show that modern capitalism, along with state action and international development policies, organize nature in particular ways in which heterogeneous social difference (racial, gender and class difference among others) is necessary to facilitate appropriation of resources, subordinate labor and to justify environmental racism. The power of coloniality, in sum, portrays how modernity came to be at the same time that coloniality permeated social relations in Latin America; therefore, coloniality and modernity inform each other.

Lugones (2007) reframes MC by arguing that masculinity and patriarchy are built in opposition to femininity and non-western logics of organization and knowledge, constituting a dichotomy parallel to the racial divide (white/colored), similar analysis has been furthered by North American scholars such as Kobayashi and Peake (1994). Thus, struggles to access and control resources along with access to sexual control have, since colonial times, been defined by heterosexual, white maleness. These assumptions are further inscribed in an assumed nature-culture divide; according to Latour (1993), this divide has justified the human knowledge enterprise in its efforts to objectify nature as an object of study, a natural resource and as an object of desire. As a result, non-western groups are racialized, sexualized and gendered in a hierarchy that positions them as closer

to nature, thereby justifying objectification. Scholars such as (Wade, 2010), Sundberg (2003), De la Cadena (1992, 2005) and Burgaleta et al. (2018), among others, have illustrated that indigenous groups that have remained geographically more isolated, particularly, women are rendered as closer to nature and farther away from culture, while mestizos and those accessing western cultural traits, such as those living in cities, are identified as closer to culture than nature.

The internalization of these logics explains why men racialized as inferior are also feminized or seen as closer to nature as in the case of indigenous men; however, these men think of themselves as superior to women of color because of their gender, disrupting self-reflection and opportunities for solidarity (Spivak, 1993; Lugones, 2007). At the same time, women considered to belong to hegemonic groups such as the mestizo are seen as closer to culture or closer to those attributes given to men, positioning them farther away from women of color and their concerns (Radcliffe, 2015, p.7). In this way, feminized indigenous women undergo ways of marginalization in which gender, race, geographical location and reproductive activities intersect, rendering female knowledge and agency as closer to nature and subordinated to patriarchal ways of organizing the world (Radcliffe, 2015; Zaragocín, 2019).

Insurgent Analysis: Indigenous Understandings of Colonial Power

Conversations among women reveal deep understandings of colonial intersectionality in which they acknowledge the hierarchical ways in which systemic violence is displayed. Still, they feel their knowledge is ignored and invisibilized at home, in their communities, and when relating to the state and private interests. During a meaningful exchange between the female collaborator from Tzawata and a group of

women in Pañacocha, the collaborator explained violence in Tzawata by narrating a repeated dream that has haunted her for a while:

> In my dreams, I am wrapped on sheets, and someone is trying to immobilize me and suffocate me. When I try to see who is doing this, I see two individuals part human, part monkey. They try to kill me, but I struggle for my life. . . In the fight, I can pull one arm out of the sheets, and after a further struggle, I introduce my arm through his mouth far enough to grab his heart and pull it out of his body. I am scared and furious, so I scream at them: why are you doing this? is this what you want?

Figure.2: Representation of man/monkey narrative. Painting by Guillermo Jimenez

Further analysis of the dream with this collaborator reveals that the men/monkeys could be interpreted as mining interests seeking to evict the community off the land. Indeed, Tzawata lost its territory between 1950 to 1972 during a process of agrarian reform in which the state declared those territories as empty without taking into consideration the existence of indigenous populations living on them (Deeds, 1958;

Yashar 2005, p.109–118). From that point in time, landlords not only used land and natural resources but also appropriated indigenous labor in feudal ways until 1982, when landlords were no longer allowed to use this practice (Deeds, 2010). In 2004, a gold mining company forced the population to live in about 250 square meters, suffocating families' ability to survive on subsistence agriculture while their fishing activities also significantly diminished due to contamination. In 2010, the community decided to resist mining activities and start a legal fight to recuperate their ancestral territory and traditional ways of survival.

Thus, the fury and force this Tzawata woman feels as she tries to survive in the dream are comparable to the force experienced by her and women and children who confronted police forces sent by the state to protect the mining company private rights and remove the population by force on June of 2010. The day of the incident, most indigenous men were away working for the day; women and children had to use their bodies at the entrance of the community to prevent the police from invading the land. Over time the men arrived and helped the resistance, and, by the end of the day, the police left the site as they were unable to attack women and children publicly.

Although the collaborator considers herself a leader in her community, and despite the fact that women's input in fighting for their territory has been extremely important to the community's resistance, she and other women are still subjected to violence at home at the hands of their husbands. Moreover, male leaders are suspicious of women's participation in organized resistance. She thinks the anger she feels in the dream is also comparable to the anger she feels when her husband beats her children and her. Similarly, men sometimes mistreat children who are not able to fully help in reproductive

activities at home and simultaneously keep up with school. In those moments, this female leader wishes she had the force she has in her dreams to grab her husband's heart and teach him he can't harm her and her children.

Embodied Kichwa women's experiences are usually dreamt, narrated and shared among one another in a praxis that communicates emotions and feelings of marginalization within larger structures of power. Thus, female dreams articulate concerns in which masculinity and patriarchy are defined along with gender and race logics. Such logic is not only structural but internalized in communal relations. Indeed, as this female leader explains, the men/monkeys could be indigenous while simultaneously white, depending on the circumstances.

Because Tzawata, like other communities in the province of Napo, has rejected corporate solutions that seek to pacify indigenous people by offering them long term opportunities to buy small plots of land or short-term solutions that allow them to use small plots of land in exchange for cooperation with mining activities, Tzawata identifies its survival as profoundly tied to territory rather than to individual plots of land. Thus, state and corporate efforts tend to criminalize indigenous resistance and seek forceful removal of populations (Becker, 2013; Warnaars, 2013; Plan V, 2019).

In the case of communities such as Santa Elena and Pañacocha, recognition of communal land is conditioned on its willingness to cooperate with oil extraction. Both communities currently have agreed to receive oil-related compensations, development and modernization programs in exchange for their support. In these cases, mediation between communities, the state and oil companies is conducted by male indigenous leaders. Indigenous men that access leadership positions in this part of the Amazon,

usually have had access to some formal education in relation to the rest of the community (Burgaleta et al., 2018). Thus, they understand legal frameworks, basic oil production, and the inner workings of bureaucracy. If decision-making processes lead by leaders do not properly consider community participation, it generates processes of marginalization within the community (Wilson, 2010; Indigenous Women's mandate, 2018).

Conversations about the dream provided above dynamized conversations between women in Pañacocha, and they have served as tools that reinforce shared understandings of violence as well as traditional networks of resistance. In Pañacocha, families have been long concerned about leaders being coopted by state officials and oil personnel; people suspect that leaders appropriate oil-related compensations that belong to the community for their benefit. Moreover, they disagree with how leaders negotiate the terms in which modernization and development programs are made available to the community. When men publicly ask for accountability, leaders dismiss their arguments by insisting they are too ignorant to understand the logic that informs their decisions. Men are told that they carry an indigenous mentality that prevents them from progressing and moving forward. Women who conversed with the Tzawata female leader started to refer to local indigenous leaders as men/monkeys. According to them, leaders belong to the land; however, they have been invaded by a mestizo ideology brought by state officials.

Men and women fear men/monkeys retaliation and further marginalization; thus, men try to keep themselves away from oil politics. This includes prohibiting their wives from organizing or even discussing oil politics outside of their homes. Embodied experiences of these men and women identify the subordination of indigenous men to the

force of the state and oil capitalist logics in ways in which men are feminized in relation to leaders' authority and oil and state modernizing logics. While women are usually located at the very bottom of the hierarchy where they are subordinated to their husband's authority, subordinated men feel they are superior to the women in their households.

These logics exemplify how the interlocking of race, gender, and patriarchy weakens possibilities for solidarity between subordinated subjectivities such as those of men/monkeys and their constituent community members. On the other hand, the Tzawata story of resistance where women and children were on the frontlines empowered Pañacocha women and also generated important conversations of patriarchy present in state, corporate oil and indigenous men's behavior.

Settler Colonialism in Conversation with Modernity/Coloniality

Settler colonialism as a conceptual framework has been used mostly in the United States, Canada, Australia and New Zealand to explain structural and systemic ways in which settler states have sought to displace, eliminate and assimilate indigenous populations in order to appropriate land and/or and indigenous and African labor (Wolfe 1999, 1–3, 2006; Radcliffe 1995). Similar to the MC framework, elimination, displacement, and assimilation are justified by racial superiority and capital interests to appropriate natural resources and labor to expand capitalism (Gott, 2007; Speed, 2017).

Post-colonial and feminist geographers have started to pay attention to settler colonialism as a tool to further analyze colonialism in Latin America. Post-colonial historian Gott (2007), for instance, evidences how Latin American states adopted elimination and assimilation policies characteristic of settler-colonial societies upon independence. Earlier contributions such as those of Radcliffe (1995) and Gutierrez

(1995) show that assimilation and eliminations in the context of settler colonialism in Latin America has to be understood in the context of dynamic social relations marked by racial mixing and the cultural amalgamation between settlers, native populations, and immigrant labor.

Other geographers such as Speed (2017) and Castellanos (2017) have argued that settler colonialism helps to account for systemic elimination in processes of state formation in Latin America, an aspect that the MC framework fails to account for. According to these two authors, states encouraged mestizaje and racial democracy to create a sense of nationalism and to further processes of modernization suppressing indigeneity. Thus, building on this lack of recognition and on notions of elimination, feminist geographer Zaragocin (2019) has used settler colonialism to study gender-based elimination. Her findings show that elimination processes are not only present in state policies but also in daily social relations practiced by larger society including indigenous people, evidencing how gendered and racial logics of elimination are present across social differences and affect the most marginalized in profound ways.

In my reading, accounting for elimination requires a more in-depth reflection about mestizaje not only as mixing between different ethnic groups, but as cultural assimilation across groups identified as different in terms of gender, class, race, etc. This is because power relations, such as those discussed by the MC framework, shape subjectivities across difference, blurring the subordinated/indigenous versus the hegemonic/mestizo (Mignolo 2009; Escobar 2008, ch.4). Thus, it is difficult to point at what individuals and processes can be identified as settler/colonizer and which ones as indigenous/colonized. Thus, to account for elimination, it is necessary to locate what

temporal and geographical aspects of difference are being eliminated when talking about indigenous people and the expansion of the mining frontier.

The Elimination of Indigeneity

According to Wolfe (2006), the logics that inform settler logics of elimination respond to a scheme that seeks appropriation of land to create conditions for private property, productivity based on extraction and accumulation, individuality and appropriation of human labor. Thus, native people whose cosmovision relies on social relations in which nature is ontologically equal to human existence presents an obstacle to the objectivation of natural resources and labor. These competing understanding of realities have produced a perceived geographic and temporal difference between specific indigenous knowledge and livelihoods as compared to western ones (Johnson & Murton, 2007; Uzendoski, 2010). Of course, we cannot draw a clear division between indigenous perception of reality and the rest of the population because the heterogeneity of society marks all individuals as different in relation to current reiterations of power, namely neoliberalism (Radcliffe, 2015, 2017).

In Latin America, elimination and acculturation logics respond to similar western logics. Ecuador had tried to get rid of indigenous productive and reproductive relations based on subsistence agriculture and reciprocity by promoting mestizaje as a path to citizenship, inclusiveness and national unification (Radcliffe & Westwood 2005, p. 30–34). Ideas of what mestizos and what proper citizenship should be were rooted in ideas of white masculinity, literacy, private property and individual autonomy (Sundberg 2003, p. 572–575; De la Cadena 2000, 2005, p. 269). Mestizo characteristics overshadowed indigenous culture and knowledge and promoted western ones. Indeed, De la Cadena

(2000, 2005) argues that contemporary racial identification in Latin America takes on not only biological traits but most importantly western ways of knowing, western dress codes and even on the geographical location such as rural or urban. Mestizaje is not only informed by racial mixing but also by subjective identification and embracement of the hegemonic culture; this can be seen as both structural violence and as a survival strategy that seeks to overcome racial inferiority (De la Cadena 2000, p. 142, 304, 320).

In the context of the evidence provided at the beginning of this article, we can see that the state uses inclusive policies such as the compulsory investment of mining profits in modernization and development in indigenous territories. This type of policy can be understood as an effort to further pursue racial democracy and resource nationalism, which only deepens state violence. As discussed in the following section, such policies seek to eliminate certain indigenous traits like traditional indigenous ways of life that rely on non-western ontologies and epistemologies.

Some indigenous people might welcome these policies as they might find in them a survival strategy, and/or they might feel forced to welcome these policies knowing that resistance is often met with state and corporate violence (Cepek 2018, Anthias, 2018). In the process of resisting, adapting or embracing state options, indigenous people are forced to use masters' tools such as use of the Spanish language and knowledge of legal frameworks and bureaucratic processes to mediate communication with the state and corporate actors (Huarcaya, 2010; Graham, 2002; Hale, 2006). Although these strategies allow indigenous leaders some political and material advantages, their use reinforces capitalist relations, empowering hegemonic state practices along with a certain group of

indigenous leaders who might or might not establish relations of accountability with their constituents (Vallejo & García-Torres, 2017; Wilson, 2010).

Thus, I argue that an analysis that bridges post-colonial intersectionality, such as MC along with deeper-reflection of the logics of elimination embodied by processes of mestizaje, clarifies that violence is self-inflicted. Mestizaje and violence is structured by the state and capitalist processes, and at the same time, violence is systematically internalized by society and forced onto indigenous people currently facing dispossession of land livelihoods as the mining frontier expands into the Amazon. Thus, indigenous subjectivities already reflect colonial power dynamics that exacerbate the expansion of the mining frontier, showing that systemic elimination is not only structural but self-inflicted.

What is Being Eliminated?

Authors like Echeverri (2004), Escobar (2008, ch.3) and the Critical Geography Collective of Ecuador (2018), among others, argue that many rural and indigenous populations understand their territories as intrinsically linked to their bodies, traditional economies, and local ways of knowledge. Thus, these authors refer to indigenous bodies and their territories as "body-territories." Rural and indigenous women are especially prone to favoring body-territory epistemologies and ontologies in their explanations of their connection to their environments and natural resources (Muratorio, 1998; Uzendoski, 2005, Ch.3,5). This is due to women's roles in productive, reproductive and caretaking tasks in which their realms of action are vitally linked to their environments (Silva, 2019; Plumwood, 1993, Rocheleau et al., 1996, 3–26)

Moreover, De la Cadena (2015) shows how body-territory relationships have survived state structural violence throughout time, and she illustrates the ways in which feminized indigenous men and women continue to resist state efforts to eliminate their bonds with "earth beings", or 'Tirakuna' in Kichwa (De la Cadena, 2015, 2019, Ch.5). When analyzing state efforts to access and secure natural resources versus indigenous survival efforts, Stetson (2012), De la Cadena (2015), Uzendoski (2010) and Kohn (2007) assert that state/indigenous discrepancies on how to relate to the environment are the result of ontological differences. According to these authors, the differences are rooted in indigenous understandings of human-nature relations, where survival is ontologically linked to the survival of 'body-territory.' On the other hand, state and western ontology is rooted in a nature-culture divide where nature is femininized and objectified as a resource, making it difficult to have a conversation about indigenous and state realities because body-territory is assumed as a-historical, backward and lacking legitimacy to speak (Spivak, 1993, 82–83); thus, indigenous arguments lack a voice and don't constitute a legitimate interlocutor.

Understandings of body-territory as an ontology among Kichwa people have several expressions; one of them is oral narration. According to Uzendoski (2015) and Descola (2004), oral narrations in the Amazon can be understood as "meshworks" that incorporate indigenous embodied experiences and the experiences of more-than-human subjectivities, such as animals, forests, bodies of water, and mountains. Oral narrations seek to explain the emotion and the logics that guide social relations, especially the logics that make sense of social justice in indigenous terms rather than explaining cause and effect (Cusicanqui, 2008). Oral narrations are usually produced collectively, and

knowledge emerges from daily experience and praxis such as daily work in agriculture, use of traditional medicine, and interrelation with nature (Garzon, 2013; Cusicanqui, 2008).

I argue that women's narratives in Tzawata, Pañacocha, and Santa Elena constitute ontologies aimed at communicating the logics behind mining conflicts and violence. They are also used as a tool to prevent violence by warning other women about the risks that mining conflicts pose and also to create networks of knowledge and resistance that circulates among indigenous communities. It is important to mention that the Tzawata female leader's participation in this research allowed her to share her own stories of resistance with women in Pañacocha and Santa Elena, while also gaining important information about the negative effects of oil expansion in Oil Block 12 that she named "katary-waira" or deathly wind. Recent legal frameworks and state expansion and its logic target these narratives to further systemic violence by invisibilizing and erasing women's and other indigenous people's epistemologies.

In the following paragraphs, I provide one of four narratives collected in the field that are well known in several communities in Oil Block 12; some of these communities are El Edén, San Roque, Sani, Chontaurco among others. This narrative is provided by an elderly female leader from Santa Elena community and uncovers the complexity of women's epistemologies as caretakers, knowledge producers and as active denunciators of violence. This is because the narrative constitutes narrated knowledge that evidences violence and provides advice to other communities undergoing similar situations:

> My six-year-old granddaughter was probably playing near the river when she was taken away. It has been a year, and we have not heard from her. Quickly we called the shamans for an urgent meeting, but they live far away, and it took them a while to arrive. [After drinking a potent hallucinogen] they saw my child. She is

still alive, but they could not bring her back. The powerful river boa had taken her through the Napo river waters without killing her. The shamans told us the boa took my girl through the underground world deep in the river and left her near the Peruvian side. The Shamans saw that she is forced to work on a farm down the river near Peru.

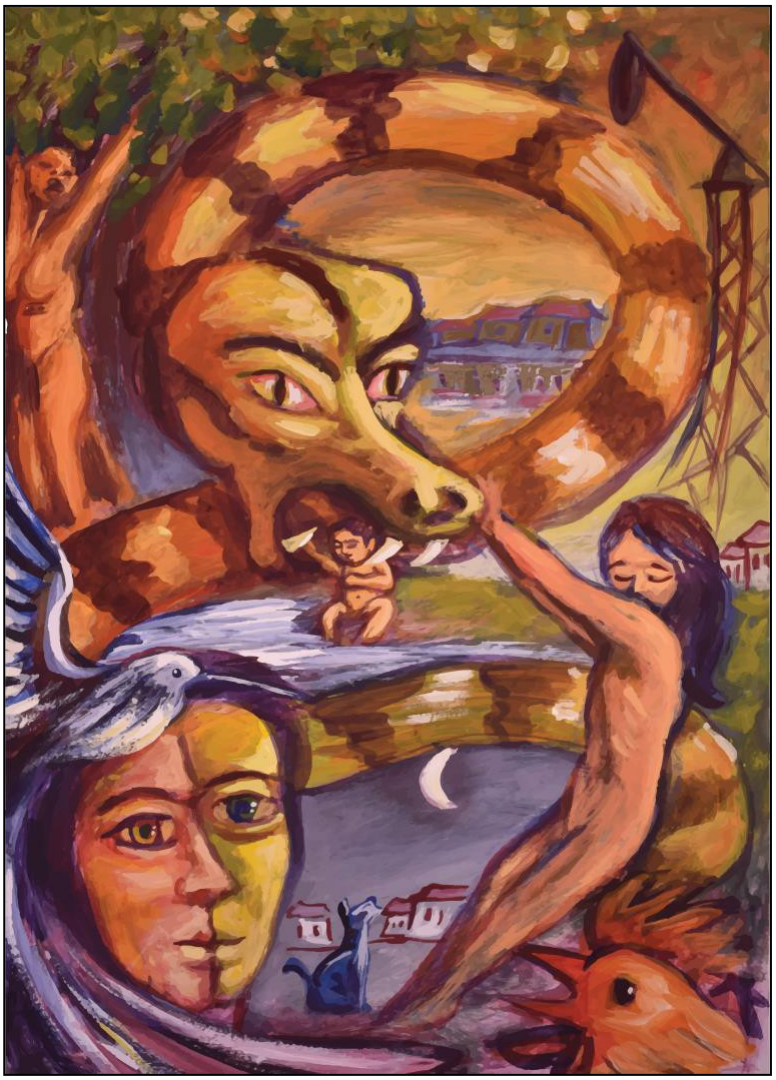


Figure 3. Representation of boa/oil narrative. Painting by Guillermo Jimenez

According to this elder, she has lost two adult family members and two grandchildren to oil-related violence. Her household and those of her extended family sit near one of the hundreds of oil platforms located on Oil Block 12. She explains that some years ago, she decided to separate her extended family and the territory they occupy from

the Pañacocha community, forming a new community called Santa Elena. She did this to avoid getting involved in oil politics dominated by the men who had been coopted by the National Oil Company. According to her, most of the oil benefits from the oil platform located in her backyard were not fairly distributed among families and were frequently appropriated by leaders; thus, she decided her extended family was numerous enough to start a new community and mediate oil benefits by themselves.

Further analysis of this narrative reveals that oil politics are integral to indigenous – nature relations in Santa Elena. This elder explains the river connects the Kichwa with the underworld, which is a side of reality where large cities, electricity, roads, and human noises overwhelm the noises of the forest. Thus, the underworld represents the body of western civilization, represented by the Ecuadorian state, wage and forced labor, productivity, and profit accumulation. As this Kichwa leader explained "to arrive at the city, you either travel by boat and road, or you can travel through the underworld. . . which is under the river on the other side."

She refers to the boa as one of the most powerful forest beings. Its spirit inhabits only powerful realms such as the great Napo River or the oil streams that navigate the subsoil: "the boa can live in water and on the ground. It can kill the jaguar and the Kichwa; the boa is as powerful as oil is. Oil can also kill the jaguar and the Kichwa, like blood, oil it circulates the subsoil, and when it reaches the surface, it overwhelms the Kichwa with mestizo ideology . . . the boa takes children away, sometimes it kills them, and sometimes it just takes them away." Thus, the boa represents the power that oil has to alienate indigenous people when used as a natural resource for capital accumulation. According to the elder, shamans who serve the interests of families that benefit from oil

extraction are behind this violence; she thinks that these families have decided to fully adopt a mestizo ideology and are only interested in the money that oil has brought to communities.

As the female collaborator from Tzawata listened to this elder, she asked why women had not denounced these deaths or why they had not organized so they could fight back against local leaders, the oil company and the state as women have done in Tzawata. The elder, along with other women who conversed with us, argued that they engage in daily denunciation of violence, as the repetition of these narratives constitutes a reflection of daily experience and shared denunciation. Still, this elder and my Kichwa collaborator knew that these stories were no more than constitutive parts of the body of knowledge that Kichwa women use and that such knowledge had no authority to be heard among actors such as the state and the oil company.

Indeed, out of 12 narratives collected during research, at least five of them are well-known among most communities living along the Napo River in Oil Block 12. My collaborator and I followed these stories by conversing with women who were familiar with the main characters in the narratives. Widespread knowledge of these narratives is the outcome of women's networks in which they visit each other and discuss violence taking place in their communities and households. For example, a woman from Pañacocha explained that she visits her extended family at least once a week:

> "I bring chicha to share with my sisters and we talk, sing and work together. . . the singing and talking helps to get rid of the sadness, but it also helps us to remember. . . Sometimes we talk about our husbands, sometimes we talk about our children, sometimes we talk about our chacras (domestic crops), we also talk about leaders and we criticize leaders' wrongdoings. . ."

At that moment, an elder woman added “we all know because we all share with each other, there cannot be secrets when we are not the only ones paying attention,” implying that other beings in the forest witness oil extraction and violence. Thus, this knowledge goes beyond female narration and is also shared with natural beings such as the boa.

During my conversations with families and women, I collected similar stories that portray violence. Stories tell narratives that include destruction of property, deaths, rapes and inexplicable illnesses associated to the payment of oil-related compensations, oil contamination and competition between families seeking to secure contracts and jobs with the oil company. I went further and tried to obtain data about these crimes from state officials. When asking the police about the disappearance of the six-year-old, they told me: "you cannot believe these stories; what happens here is that these people are savages and they take matters into their own hands, and we could do nothing even if we had evidence." A doctor at the health center told me they do not have the resources to perform autopsies, nor do they have the resources to diagnose certain unknown illnesses in the area. A former employee of the oil company who had worked teaching families on how to produce crops for the markets said these events are common along the Napo River and that “they are manifestations of the wild character of the forest; this will all end when the state fully enforces law and order.” Another oil employee working on health programs told me that "violence and deaths are matters internal to the indigenous community, and that the oil company cannot intervene in indigenous affairs." These responses illustrate how state officials and public servants reinforce colonial violence; their accounts portray indigenous knowledge as feminine, a-historical and even mythical in comparison to

western knowledge. Such prejudice diminishes the authority these accounts carry and undermines, ignores and eventually eliminates indigenous epistemologies.

As we can see, the recent expansion of state institutions, state services, oil infrastructure, and oil compensations generate competition among families that reinforces the nature-culture divide as well as gendered and racialized power relations. Indigenous ontologies and epistemologies that define the relationship between the community and their environment present an obstacle to the expansion of the state and oil extraction; thus, colonial hierarchical orders are further inscribed, targeting body-territories and the epistemologies they engender. Thus, the systemic erasure of indigenous ontologies and epistemologies is critical in justifying systemic violence and enforcing assimilation processes among indigenous populations.

Conclusions

This article adds to critical feminist geography by using the Latin American framework of MC in conversation with settler colonialism along with indigenous understandings of colonial intersectionality and epistemic violence to better understand the logic of elimination and assimilation used in recent legal and institutional frameworks furthered by state-led mining interest in the Amazon of Ecuador.

Within post-colonial studies, MC is a Latin American framework that has been highly influential in understanding modern colonial relations; thus, it has shaped the writings of authors interested in understanding power dynamics between the state and subordinated groups such as indigenous people. This article has laid out recent changes in legal and institutional frameworks as the Ecuadorian state has decided to push the mining frontier further into the Amazon region, affecting indigenous people in particular. Recent

policies favor racial democracy and policies that seek national social inclusion, such as the mandatory use of mining profits in modernization and development programs targeting indigenous territories. Such policies find ambivalent responses amongst indigenous people who oppose, resist, negotiate, and might even embrace them if other survival strategies are unavailable. On the other hand, communities that oppose and resist mining have been criminalized and risk being forced out of their territories.

In general, as other authors have shown, these policies reinforce hierarchical power relations organized around racial and gender logics that define the geographical and temporal position of heterogenous subjects across scales, where indigenous people and particularly women and children are the most marginalized. These power dynamics could also be understood by using Latour's culture-nature divide in which subjects racialized as white are seen as closer to culture, while on the other hand indigenous and particularly women are seen as closer to nature. Between these two extremes, power dynamics produce social heterogeneity in which indigenous subjectivities are differently positioned in relation to the state.

In an effort to make research accountable to indigenous needs, this study uses a collaborative examination of colonial power relations described above in three indigenous communities: Tzawata, Pañacocha, and Santa Elena. Thus, in addition to traditional research methods, I used collaborative research and analysis, in which female indigenous epistemologies have been shared among women who participated in research, allowing them a deeper understanding of the nature of mining violence and furthering conversations on how best indigenous women can respond to such violence in their own terms.

This paper brings modernity/coloniality in conversation with settler colonial logics of elimination to engage in a deeper reflection about what aspects of indigeneity are currently being targeted by state efforts to make space for mining activities. Women's narratives are central to understanding post-colonial intersectionality, violence and elimination in the context of the expansion of the mining frontier in the Amazon. Based on the few women's narratives that this article has allowed these women and me to share, I suggest that accounting for elimination requires further discussion of racial democracy, resource nationalism and mestizaje, where the state encourages development and modernization paid with mining profits while also encouraging racial amalgamation, suggesting mestizo ways of life among indigenous people. Thus, processes of mestizaje do not only count as as racial mixing but as a process of colonial violence that seeks to eliminate indigenous traits, where violence is structural and self-inflicted as colonial power relations are present across heterogeneous social groups, including indigenous people.

Thus, patriarchy, corporate interests, racism and gender violence, along with structural ways of violence, affect primarily indigenous traditional ways of relating to their environment and natural resources. Indigenous relations to their environment have been theorized by Latin-American scholars as 'body-territory' to indicate the degree to which indigenous ways of understanding reality include intrinsic relations between indigenous bodies, their territories and other beings such as forests and the animals that inhabit their environments. Structural violence and internalized colonial power dynamics target body-territory relations to make space for mining and modernization. This is because Kichwa and female relations with nature get in the way of capitalism and state

logics that see extraction, accumulation, private property, and market dynamics as necessary for national development.

I argue that women's narratives reflect body-territory ontologies and epistemologies in ways that clearly specify the logics behind mining conflicts and violence; these narratives constitute knowledge of realities that denounce and expose state, corporate and patriarchal violence. In addition, these narratives are meant as warning signs about the negative effects of mining in a praxis in which these stories travel from mouth-to-mouth between communities replicating emotions of loss and fear. Indeed, the most important outcome of this research, according to women who collaborated with research, has been the praxis of exchanging stories, the exercise of denouncing violence and the expansion of resistance networks that use women's narratives as a warning of the negative effects of mining.

In addition, findings show that despite the richness of women's epistemologies, state institutions, mining companies, and larger society disqualify indigenous information by marking it as temporally a-historical and geographically as peripheral and savage. Thus, indigenous and particularly women's epistemologies and ontologies are disqualified even before they have the opportunity to be discussed with the state and broader society. This reality is particularly worrisome as epistemic erasure silences dispossession of land, loss of livelihoods, death, and illness among indigenous people with impunity.

CHAPTER VI

CONCLUSIONS

In this dissertation, I bring resource geography and post-colonial critique into conversation with political ecology to better understand how the expansion of oil extraction and state expansion into the Amazon of Ecuador affect: a) indigenous political participation and agency in the configuration of indigenous territories, b) indigenous livelihoods and c) indigenous understandings of violence and conflict produced by the increased presence of the state and extractive activities. These research objectives have responded to indigenous needs to access specialized information and resources in order to increase their autonomy and self-determination in their territories. At the same time, research findings contribute theoretically to a better understanding of the relationship between hydrocarbons, racism and struggles over territory and autonomy within the field of political ecology. In this section I provide a brief overview of research methods, a summary of the main empirical and theoretical finding in each chapter, a summary of the contributions of the dissertation and a discussion about future areas of inquiry.

Research methods

Theoretical findings are built upon empirical collection of data using traditional, collaborative and participatory research methods. Research questions were drawn from preliminary fieldwork conducted in 2013 and 2015 with indigenous leaders and communities from the Amazon of Ecuador. To complete fieldwork, I spent seven and a half months between 2017 and 2018, two research assistants helped with the collection of data for two months on the field, and a female indigenous collaborator accompanied me in the field for another two months. The research methods I used were participant

observation, interviews, semi-structured interviews, focus groups and a collaborative research method I called female epistemological exchange; this method was aimed at facilitating conversations related to mining and oil-related violence among indigenous women. Analysis of data required frequency analysis and content analysis, and for collaborative analysis, I invited indigenous women to further discuss their subjectivity in relation to their experiences with mining- and oil-related violence. The discussions were guided by a method that questions subjectivity in relation to power, which was suggested in The Methodology of the Oppressed by Chela Sandoval.

Theoretical and empirical findings

Theoretical and empirical findings are divided into three chapters of this dissertation. In chapter three, *Post-neoliberal Legibility and Indigenous Oil Conflicts in the Amazon of Ecuador,* I illustrate that state-led efforts to increase control over territories and people in the Amazon has led to changes in mining legislation and institutional frameworks. These changes seek to make territory, oil resources and people legible to the state and the national oil company in order to facilitate surface access to oil deposits as well as to create conditions that facilitate the construction of oil infrastructure. One of the most important changes in mining legislation is the redistribution of oil profits as compensation among indigenous and rural communities in addition to the legal recognition of ancestral indigenous land in exchange for indigenous cooperation with mining activities and indigenous participation in decision-making process as related to how compensations will be redistributed and used.

By using the case study of the indigenous community of Pañacocha and after reviewing Ecuadorian legislation and the rulings that guide territorial administration in

the Amazon, I argue that processes that define the redistribution of mining and oil profits, as well as process through which the state decides which land should be legalized, respond to state's 'volumetric knowledge.' Volumetric knowledge is knowledge related to the location of oil deposits, the quality and volume of oil deposits, as well as knowledge about what infrastructure is key to facilitate circulation of oil through pipelines, among others. Therefore, indigenous struggles to secure land and access to oil related compensations also rely on accessing, understanding and controlling volumetric knowledge produced by the state and the oil industry.

Understanding volumetric knowledge, legislation and institutional frameworks allow indigenous people to successfully navigate the bureaucratic apparatus that permits them to lobby in favor of indigenous interests. At the same time, such specialized knowledge becomes a contested space of struggle that can easily be coopted by state and corporate interests seeking to further the oil frontier. Thus, the uneven ways in which indigenous communities access volumetric knowledge also generates divisions and conflicts, specifically unequal participation in decision-making process and the unequal redistribution of oil related compensations.

In chapter four of the dissertation *Reclaiming marginality: Forests Livelihood response to oil extraction and state-led development in the Amazon of Ecuador,* I use a livelihoods strategies analysis to better understand local response to the loss of lands and livelihoods in Pañacocha, a process that has been well documented in communities throughout the Amazon where the state has furthered the oil frontier. Specifically, I document current livelihood strategies among Pañacocha's families and compare them with living conditions present 12 years ago. I do this to assess how state-led

modernization, development as well as payment of cash-based oil compensations affect the families in Pañacocha.

Other studies have argued that local response to the expansion of mining in peripheries of extraction can be understood by the willingness to cooperate in aims to improve the ability of the community to control how their livelihoods will change. However, resistance and imposition of mining and oil activities are also well documented. In cases such as Pañacocha, where leaders have agreed to cooperate with oil extraction, I suggest that families' response cannot be generalized as one that embraces extraction, modernization and development; instead, I provide evidence to argue that the population partially embraces some aspects of state and oil intervention while rejecting others.

Indeed, peripheric populations such as Pañacocha are aware of their historic marginality in relation to the state, in which subjectivities don't identify themselves as part of state projects that seek modernization and but not as complete outsiders either. Therefore, I argue that Pañacocha engages in tactical subjectivity, a concept developed by Chela Sandoval in her book the Methodology of the Oppressed, to explain how marginalized subjects make decisions depending on multiple positionalities as far as it helps survival strategies. Thus, Pañacocha families resist, embrace, cooperate, and reject simultaneously different aspects of modernization, development and oil politics. Finally, I suggest that tactical subjectivity should complement current understandings of livelihood strategies, especially in peripheries of extraction where families have to make practical decisions in short periods of time in order to maintain living standards according to their own views of what counts as quality of life.

In chapter five of this dissertation, *Mining as Epistemic Violence: Erasure of Indigenous Epistemologies in the Amazon Region of Ecuador,* I bring attention to indigenous voices and narratives as they make sense of mining violence in peripheries of extraction. To achieve this, I draw from post-colonial critique, settler colonial notions of elimination and fieldwork in three Kichwa communities - Tzawata, Pañacocha and Santa Elenea - to better understand the mechanisms that silence indigenous explanation and denunciation of violence in peripheries of extraction.

Resource nationalism is a concept that explains how Ecuador promotes participation in economic development through the social redistribution of nationalized mining profits. This agenda is usually supported by the mestizo society which is the hegemonic racial group that benefits from safety nets, modernization and development paid for with mining profits. Policies that democratize access to oil profits also target indigenous people living in extractive sites, but these policies seek to modernize indigenous and rural ways of life, creating conflicts among populations who disagree about the extent to which modern lifestyles are coherent with traditional ones.

Using post-colonial critique and indigenous voices, I make space for indigenous female voices that make sense of resource nationalism and the ways extraction affects them. Specifically, indigenous women expose how racism and patriarchy is structurally imposed but also reproduced among populations which are not isolated but immersed in colonial power dynamics. I use settler colonial notions of elimination and cultural mestizaje to show how power dynamics enforced by resource nationalism threaten indigenous relations with their territories and natural resources, a relation that has being theorized as body-territory.

Body-territory not only makes sense of the relation between human and non-human beings such as rivers, animals and the forest for the purpose of survival, but it also explains how indigenous people understand non-human beings as agents in the making of indigenous reality. Therefore, when indigenous people explain mining and oil-related violence using their own ontologies, they narrate and denounce violence in ways in which the nature – culture division is blurred.

I argue that resource nationalism, in the context of mining extraction, seeks to eliminate body-territory ontologies to undermine local explanations and denunciation of violence. This is achieved as state officials and broader society deem indigenous narrations of conflict and violence as peripheric to western knowledge, a-historical and savage. Thus, indigenous explanations of violence are disqualified even before they have the opportunity to be heard and discussed. This reality is particularly worrisome as epistemic erasure silences dispossession of land, loss of livelihoods, deaths and illnesses caused by the state and oil extraction compensations while enforcing and naturalizing resource nationalism.

Contributions and significance of the dissertation

My dissertation has contributed to the field of political ecology, resource geography and post-colonial studies in the following ways: a) it adds 'volumetric knowledge' to the analysis of indigenous – state struggles to access and secure territory and natural resources within political ecology; b) it suggests that 'tactical subjectivity' should be included in the analyzes of livelihoods strategies, especially in peripheric territories under pressure to adapt to state intervention and extractive activities and, c) it adds 'epistemic elimination' to current understandings of resource nationalism to better

make sense of how violence is perceived by indigenous populations living in peripheries of extraction.

Volumetric Knowledge

By volumetric knowledge, I have referred to technical knowledge pertaining location, volume and materiality of mining resources such as oil as well as understandings of the infrastructure necessary to assure circulation of such resources. I coin 'volumetric knowledge' after Stuart Elden's conceptualizations of vertical territory and Gavin Bridge's elaborations of volume a metric that informs governance. In this sense, I argue that volumetric knowledge is becoming a contested space of struggle among indigenous populations that have decided to participate in mining extractive activities as a way to increase autonomy in their territories.

Understanding volumetric knowledge in the context of indigenous – state struggles to access and secure land and resources responds to recent calls made by political ecologists Anthony Bebbington and Jeffrey Bury in *Subterranean Struggles* to better understand how underground resources shape political economy in Latin America without resorting to resource determinism. Moreover, in the book Subterranean States, resource geographers and political ecologists Hanna Appel, Arthur Mason, Michael Watts and Matt Huber have identified that what is missing is scholarly attention to the biopolitical consequences that underground resources have in shaping lifestyles, structures of governance, jurisdiction and surveillance. Thus, volumetric knowledge could include all aspects of mining resources including toxicity, geological information as related to the location of resources and even security concerns. This information extends as far as it is important for marginal stakeholders who need this information to

better sit at the table of negotiation whether with states, corporate power, regulatory agencies and non-governmental organizations among others

Tactical Subjectivity and Livelihoods

By tactical subjectivity, I have referred to the ability that populations, considered as marginal to the state, have to act on survival strategies that dance between partial embracement and rejection of imposed modernizing and development models paid for with mining profits. I borrow tactical subjectivity from Chela Sandoval's Methodology of the Oppressed to show that the marginal location of subjects concerning oppressive forms of power allow subjects ability to move between positionalities according to material need while also reconfiguring local understandings of what counts as the quality of life.

I suggest that tactical subjectivity should inform current understandings of livelihood strategies in peripheries of extraction to better understand how marginalized populations respond and adapt to the negative effects of extractive activities and state intervention. This is an important contribution to better understanding local response to the mining expansion, especially because according to a number of authors such Emma Gilberthorpe and Gavin Hilson's work on *Natural Resource Extraction and Indigenous Livelihoods*, studies on adaptation usually focus on climate change stressors, large scale agriculture and renewable resources, giving little attention to the mining sector. Moreover, scholars report that studies focused on local response using a livelihood's perspective are minimal.

Thus, by bringing postcolonial understandings of tactical subjectivity to understand local rural and indigenous response using a livelihood's framework adds to

political ecology's ability to better understand in what ways and how fast peripheral populations are responding to the intensification of mining activities in Latin America.

Epistemic Elimination and Resource Nationalism

Although hispano-phone post-colonial studies and critical geographers studying race have time explored power relations embedded in race and at the intersections of race, gender and class differences for a long, there has been little conversation between these disciplines and anglo-phone political ecology interested in the distribution of environmental conflicts. In recent years, scholars such as Sharlene Mollet and Caroline Faria have critiqued political ecology with articles such as Messing with Gender in Political Ecology, in which they suggest that the field has avoided treating race and racism in a critical way when exploring the links between gender and other types of differences and their relation to environmental conflicts. Similarly, in recent contributions, critical geographer Laura Pulido, in a series of articles exploring Geographies of Race and Ethnicity, concludes that lack of engagement with race within geography as a discipline might be the result of the lack of diversity in the field, a factor that makes scholars uncomfortable to engage with power relations from a self-reflective perspective in which race and racism are explored.

In this dissertation, I use my positionality as a woman of color to engage with the racism embedded in indigenous struggles for self-determination in a context of mining extraction. To achieve this, I have used settler colonial theory that explains racial elimination and anthropological work that identifies ontological differences between western and non-western knowers. Based on this previous work, I argue that epistemic elimination explains ongoing process of marginalization, racialization and elimination

taking place in the application of resource nationalist policies and discourses in Ecuador and the region. By using epistemic elimination, I show how resource nationalism undermines and eliminates indigenous and rural knowledge while empowering western ones in peripheries of extraction; thus, I unveil the racist character of extractive policies. I suggest that epistemic elimination is a useful concept to better understand the ways in which violence is applied to indigenous producers of non-western ontologies that denounce the conflict and violence generated by the expansion of mining frontiers.

In addition, I also contribute to decolonial scholarship within geography, given that I use collaborative and participatory methods aimed at making research useful to indigenous concerns while legitimizing indigenous voices within academia. Thus, I respond to the call of political ecologists interested in better understanding conflicts associated with underground resources who have made calls to make political ecology useful to social policy and marginalized populations, transcending academic production that seeks social justice. This call has been clear in publications such as Peter Walker's Political Ecology: Where is the policy, and Jeffrey Bury and Anthony Bebbington's introduction to the book Subterranean Struggles, among many others. It also responds to recent calls from critical geographers such as Lindsay Naylor, Michelle Daile, Sofia Zaragocín and Marietta Ramírez to decolonize political ecology by engaging in anti-colonial efforts and by including marginalized populations in the production of knowledge. Thus, in addition to using participatory and collaborative methods, in this dissertation I use indigenous female narratives and female analysis as theory in its own right as I explore epistemic elimination and power dynamics in the context of mining extraction.

The Policy Question

Activist-scholars such as Carlos Mazabanda, Penelope Anthias, Mark Becker and Arturo Escobar have studied the friction that arises as states try to incorporate indigenous populations into economic markets and western culture. They have pointed to the fact that state and corporate interests have historically prevented indigenous people from pursuing full self-determination despite the fact that international conventions such as the International Labor Organization 169, state constitutions and domestic legal frameworks protect indigenous rights to territory and self-determination based on ethnic differences in countries like Ecuador, Colombia and Bolivia. Thus, research results in this dissertation illustrate, once again, the limitations of social inclusive policies, this time a type of inclusion based on mining nationalism.

Solutions proposed by Confederation of Indigenous People of Ecuador (CONAIE) since the 1990s have called for the right to live according to what indigenous people consider their quality of life, along with the right to govern indigenous territories on their own terms. Indeed, changes in the 2008 Ecuadorian Constitution were aimed at fulfilling these aspirations. Specifically, states' acknowledgement of indigenous people and culture as rightful citizenship subjects and traits, and the recognition of nature's rights were aimed at providing the legal infrastructure to empower indigenous self-determination and protect natural resources located in national parks, protected areas and indigenous territories from extractive activities. Still, as I illustrate in this dissertation, state-led modernization and racial democracy have historically been at odds with indigenous aspirations, either because the state sees such aspirations as separatist efforts,

or because the state frames indigenous logics and aspirations as non-western and, therefore, as an obstacle to the trajectory of national development.

Still, the indigenous movement in Ecuador has been clear in identifying that what is at stake is true redistribution of power and equal participation of indigenous people in national life as clearly explained by the latest indigenous Women's Mandate presented to the government of Ecuador in March of 2018. In their mandate, indigenous Amazon women reject extractive activities and command the state to enforce existing laws. In the context of this dissertation, enforcing existing laws requires sharing economic and political power with indigenous people; thus they should be consulted about extractive activities in their territories prior to extraction. If they freely agree with extraction, they should be given the means to participate in the planning of extractives activities as regulated under the Mining Law and the Territory Organization Law, amongst other laws. Equal participation in the process would require making highly specialized knowledge such as volumetric information available to indigenous people who would require this knowledge to better negotiate the terms under which extraction takes place.

In this sense, states such as Ecuador refuse to implement international conventions and constitutional mandates to protect economic and political interests, reflecting contradictions along with class and racial fractures within the Ecuadorian society. It is precisely in the drafting and implementation of secondary laws that most of the contradictions are found because laws seek indigenous inclusion only as a tool to secure consent to further the extractive frontier, while economic and political redistribution of power is constantly undermined.

Future research

Future areas of inquiry identified either in empirical findings not included in this dissertation or during analysis include:

First, a more rigorous analysis of volumetric knowledge as a site of contestation among indigenous and rural populations which have agreed to mining extraction in exchange for redistribution of mining profits is required. In chapter three of this dissertation, I present information that shows that a recent increase in rural land titles coincides with the expansion of mining activities. Therefore, it is be important to assess the nature of environmental and land conflicts among communities that received land in exchange for their cooperation with mining activities.

Specifically, I was able to identify that 123 communal land titles have been granted to indigenous communities in the last ten years; 82 of them are located in the Amazon Region. Future studies could survey the nature of environmental and land conflicts either in all these territories or a sample of them. Land and environmental conflicts are usually tracked by documentation as communities negotiate with the state, such documentation reveals what type of information indigenous people require to make their arguments legible to the state as in the case of volumetric knowledge. This information is important to indigenous politics as well as to inform political ecology's interest in the materiality of mining resources and its relationship with politics on the ground.

Second, more information is needed to better understand how livelihoods change in response to the expansion of the state in peripheries of extraction. This dissertation, for instance, does not cover local response to the presence of state-led education or to state-

led health services. Still, these services have been widely expanded throughout the Amazon among communities that are currently cooperating with oil extraction. Education is particularly important to explore as it could shape present and future's generations views of how they want to respond and adapt to mining extraction and state efforts to modernize traditional ways of life.

In addition, a more systemic evaluation of how livelihoods strategies are changing among community's participation in mining extraction is required throughout the Amazon. Quantitative analysis could better explain the degree to and the speed at which rural livelihoods are changing. This information might be particularly important for policy makers but also for indigenous organizations worried about survival.

Third, much more work in needed to understand violence in peripheries of extraction, especially because violence is ignored and unacknowledged by the state as this dissertation shows. Thus, quantitative along with qualitative studies are needed to account for violence. I would suggest surveying and mapping deaths, disappearances and rapes in communities where mining extraction takes place using official and unofficial accounts. For transparency and accountability, I would also suggest involving indigenous people to collect information. This information could portray a better picture of the most damaging aspects of mining in peripheral areas of extraction and could be used for corporate and state accountability.

APPENDICIES

A. IRB Approval

UNIVERSITY OF OREGON

DATE: February 20, 2017 **IRB Protocol Number: 12142016.023**

TO: Maria Noroña, Principal Investigator
Department of Geography

RE: Protocol entitled, "Redefining territories of oil extraction: Quichua adaptive strategies to secure livelihoods and territories"

Notice of IRB Review and Approval
Expedited Review as per Title 45 CFR Part 46 # 6, 7

The project identified above has been reviewed by the University of Oregon Institutional Review Board (IRB) and Research Compliance Services using an expedited review procedure. This is a minimal risk study. This approval is based on the assumption that the materials, including changes/clarifications that you submitted to the IRB contain a complete and accurate description of all the ways in which human subjects are involved in your research.

For this research, the following additional determinations have been made:

- The IRB has waived the requirement to obtain documentation of informed consent under 45 CFR 46.117 (c)(2) to allow for a verbal consent process for Phase 1, 2, and 3 research activities.

Please note IRB approval of this protocol is subject to the following contingencies:

- Since this research will be conducted in a language other than English, a completed Release Form for Translators and translated consent materials should be provided to RCS once developed and prior to use with human subjects.

This approval is given with the following standard conditions:

1. You are approved to conduct this research only during the period of approval cited below;
2. You will conduct the research according to the plans and protocol submitted (approved copy enclosed);
3. You will immediately inform Research Compliance Services of any injuries or adverse research events involving subjects;
4. You will immediately request approval from the IRB of any proposed changes in your research, and you will not initiate any changes until they have been reviewed and approved by the IRB;
5. You will only use the approved informed consent document(s) (enclosed);
6. You will give each research subject a copy of the informed consent document;
7. **If your research is anticipated to continue beyond the IRB approval dates, you must submit a Continuing Review Request to the IRB approximately 60 days prior to the**

UNIVERSITY OF OREGON

IRB approval expiration date. Without continuing approval the Protocol will automatically expire on February 19, 2018.

Additional Conditions: *Any research personnel that have not completed CITI certificates should be removed from the project until they have completed the training. When they have completed the training, you must submit a Protocol Amendment Application Form to add their names to the protocol, along with a copy of their CITI certificates.*

Approval period: February 20, 2017 - February 19, 2018

The University of Oregon and Research Compliance Services appreciate your efforts to conduct research in compliance with University of Oregon Policy and federal regulations that have been established to ensure the protection of human subjects in research. Thank you for your cooperation with the IRB process.

Sincerely,

Utterback

Lizzy Utterback
Research Compliance Administrator

CC: Shaul Cohen, Faculty Advisor

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Chapter III

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