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Politics below the Surface: A Political Ecology of Mineral Rights and Land Tenure Struggles in Appalachia and the Andes

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POLITICS BELOW THE SURFACE: A POLITICAL ECOLOGY OF MINERAL RIGHTS
AND LAND TENURE STRUGGLES IN APPALACHIA AND THE ANDES

DISSERTATION

A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy in the College of Arts and Sciences at the University of Kentucky

By

Lindsay Shade

Lexington, Kentucky

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Lexington, Kentucky

2017

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ABSTRACT OF DISSERTATION

POLITICS BELOW THE SURFACE: A POLITICAL ECOLOGY OF MINERAL RIGHTS AND LAND TENURE STRUGGLES IN APPALACHIA AND THE ANDES

This dissertation examines how confusion and lack of access to information about subsurface property rights facilitates the rapid acquisition of mineral rights by mining interests, leaving those who live 'above the surface' to contend with complicated corporate and bureaucratic apparatuses. The research focuses on the first proposed state-run large scale mining project in Ecuador, believed to contain copper ores, and on the natural gas hydrofracking industry in three counties in north central West Virginia. Qualitative and visual methods, including mapping, are employed to determine (i.) how the geography of subsurface ownership patterns is changing, (ii.) links between changes in subsurface ownership and surface ownership, and (iii.) how these changes are facilitated or impeded by institutional and governance practices.

Rights and permit acquisitions are facilitated by state institutions, which often have strategic interests in mineral development. Accordingly, this research also considers the role of state strategy with respect to the establishment, bureaucratic management, and enforcement of vertical territory, which reflects the state's interest in and sovereign claim over subterranean resources to benefit the nation. The research finds that the historical separation of subsurface property rights from the surface is associated with a persistent weakening of surface holder claims to land in favor of mining development, and that this weakening has contributed to the long-term persistence of absentee ownership and control over land in Ecuador and West Virginia. Viewing subsurface land deals from the perspective of those whose lives are disrupted on the surface, I conclude from this work that mundane practices such as deed transfers and local micropolitics about land use are significant factors in the lead up to larger scale violences and silences, such as forced displacement and even political imprisonment of activists opposed to extraction.

KEYWORDS: Political ecology, mining, extractive industries, Latin America, Appalachia

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Table of Contents:

<u>Chapter One: Introduction</u>	1
Key Contributions: Subsurface geographies, resource dependency and the production of opacity	2
Extraction legacies and economic transition in Appalachia and the Andes.....	4
Appalachia	4
The Andes	8
Theoretical contributions: Critical Legal Studies, Legal Geography and Political Ecology	11
Methodological contributions to a comparative approach.....	16
Collaborative and Comparative Methodology and Epistemology.....	18
Collaborative Method as Global Ethnography	21
Global Ethnography in Multiple Sites	22
Key Contributions and Chapter Overviews	24
Extractivism as Spatiotemporal Process	25
State-Territorial Strategies for Managing the Subsurface.....	26
Systemic Opacity	28
Challenges and Future Directions	29
<u>Chapter Two: Producing the subsurface: Opacity as governance in the new extractivism</u>	33
Land and territorial enrollment in the new extractivism.....	36
Systemic opacity and the political economy of transparency	40
The Intag case: How land reform favors mining interests	42
Appalachian shale gas and the historical weakening of surface rights in West Virginia	48
Conclusion:	57
Chapter Two Figures:	59
<u>Chapter Three: Sustainable Development or Sacrifice Zone? Politics below the surface in post-neoliberal Ecuador</u>	68
Sacrifice zones as state-territorial strategy: Vertical territory and securing the subsoil	70
Uneven citizenship and the sacrifice zone	71
Toward a critical analysis of sustainable mining policies.....	73
The redistributive basis of mining expansion in Ecuador: 21 st Century Socialism.....	73
The not-so-redistributive basis of extractive capital in Ecuador	74
<i>Buen Vivir</i> , Socially Responsible Mining and the Ecuadorian Mining Law:	76
The contradictions of the mining law: rural livelihood or proletarianization?.....	78
<i>Buen Vivir</i> and the moral economy of space.....	79
Intag: The first state run “sacrifice zone:”	79
Land Rights	80
The role of legal ambiguity in the production of sacrifice zones	82
Enforcing the Sacrifice Zone: Military police occupation of Intag and the criminalization of activism	85

The Myth of Making Live in Intag	88
Conclusion	90
Chapter Three Figures.....	92
<u>Chapter Four: El Estado extractivista se encuentra con el Estado penal: el caso de Intag, Ecuador.....</u>	<u>93</u>
Situando lo rural en los análisis del Estado penal.....	94
Sectores estratégicos y el Estado neoextractivista en Ecuador.....	96
Asegurando los sectores estratégicos y la criminalización de la defensa del territorio	101
La criminalización de la defensa territorial en Intag	105
Conclusiones:	109
<u>Chapter Five: Conclusions</u>	<u>113</u>
Theoretical Conclusions:	113
Rent Theory and Norming the Distribution of Sacrifice:	114
Conclusions for Positionality and Activist Research:.....	121
<u>Appendix A: The Extractivist State Meets the Penal State: The Case of Intag, Ecuador</u>	<u>125</u>
Introduction:.....	125
Situating the “rural” in analyses of the penal state:	127
Strategic Sectors and the Neo-Extractivist State in Ecuador:.....	129
Securing Strategic Sectors and the Criminalization of Territorial Defense:.....	133
Criminalization of Territorial Defense in Intag:	137
Conclusions:.....	141
<u>Appendix B: Methods.....</u>	<u>145</u>
<u>Appendix C: Author Contributions for Chapter Four (Shade, Ramirez, and Castro)</u>	<u>151</u>
<u>Bibliography:.....</u>	<u>152</u>
<u>VITA.....</u>	<u>184</u>

LIST OF FIGURES

Figure 2.1. Lands purchased through the community council.....	59
Figure 2.2. Ascendant Copper properties.....	60
Figure 2.3. Mining concessions in Imbabura Province.....	61
Figure 2.4 Fuera Minera.....	62
Figure 2.5. Citizens monitoring group.....	63
Figure 2.6. Marcellus wells in West Virginia.....	64
Figure 2.7. Conventional gas well (Wetzel County).....	65
Figure 2.8. 16-well Marcellus well pad under construction in Wetzel County, WV.....	65
Figure 2.9. Wentz Well in Doddridge County, WV.....	66
Figure 2.10. Mineral leasehold in the Appalachian Basin.....	77
Figure 3.1. Trespass in sugar cane fields.....	91
Figure 3.2. Military police invasion of Junín.....	91

Chapter One: Introduction

The extraction of non-renewable natural resources at unsustainable rates is a defining dilemma of our time, which deeply challenges fundamental building blocks of dominant social, economic, and political systems. Scholars and activists alike have drawn attention to how environmental change is linked to fundamental social injustices and (neo)colonial legacies, arguing that how we respond to climate change can either help rectify or further entrench legacies of social inequality (Bond 2012; Chatterton et al. 2013; Hazelwood 2012; Terry 2009). This dissertation links the development policy and social justice sides of debates about environmental change and ecological degradation by focusing on the invisible impacts and mechanisms of how extractive economies are made and entrenched which do not make major headlines but have an important role in maintaining the status quo.

This dissertation intervenes in critical debates about the future of economic development, social justice, and the political economy of resource production and consumption by comparatively examining the material, place-based dynamics of resource extraction within national and global contexts of resource development politics. This comparative lens – which examines the construction of a copper mine under Ecuador's “Citizen's Revolution” and the rise of hydraulic fracturing for natural gas in West Virginia – makes it possible to broadly contribute to our understanding of how particular resource regimes become locally embedded and ultimately extremely resilient to change via conventional policy and development mechanisms. Such institutional resistance, I argue, is rooted in historical local power dynamics, complex administrative bureaucracies, and often difficult-to-trace patterns of capital mobility and accumulation, all of which unfold within the context of political promises that cater to desires for development and quality of life improvement. The comparative, dialectical analysis makes legible the fundamental gap between high level policy approaches to resource governance and economic development and the opacity and tenacity with which resource regimes are locally operationalized and stabilized.

While climate change mitigation and adaptation have become increasingly high priorities for governments, scholars, non-governmental organizations, and populations

around the world, comparatively less attention has focused on destabilizing dominant energy and resource regimes and transforming the practices that contribute to forms of massive environmental degradation (cf. Geels et al., 2014). Despite scientific consensus on the anthropogenic causes of climate change, there is a dearth of explicit scholarly and policy attention to the locales which are enrolled in and often dependent upon resource-based and extraction-intensive economies, where the particular institutions, practices, and energy regimes that contribute to climate change are deployed and structurally embedded. Scholars have documented the ways in which fossil fuel industries have resisted significant institutional and policy changes, especially in the US (eg. Boykoff, 2007; Supran, 2017), but extractive industries – fossil fuel and otherwise - also leave a long-term imprint on the local governance and socioeconomic structures where they operate. Each of the chapters within brings attention to the power dynamics that are deployed at multiple scales to keep existing resource production and consumption disparities intact, and likewise responds to the need for methodologies to investigate the legacy impacts of extractive energy regimes on land ownership, land use, and economic and energy transition (Taylor et al. 2014; Taylor et al. Forthcoming).

Key Contributions: Subsurface geographies, resource dependency and the production of opacity

The perspective adopted in this dissertation stands in contrast to technocratic explanations of environmental change that invite technical and diplomatic and policy interventions, as well as to more emotional appeals to the dire urgency of climate impacts on human and non-human ecologies, by seeing climate change as part and parcel of a long history of economic and ecological exploitation. Ecological Marxists, critical development scholars, and political ecologists have all pointed to the ways in which human and environmental exploitation are structurally linked to the historical dynamics of capital accumulation and imperialism (Bellamy Foster 2000; Bond 2015; Escobar 1995; Harvey 1996; Leff 1993; Li 2007; O’Connor 1998; Peet and Watts 1996; Smith 1984; Veltmeyer and Petras 2014; Wolf 1982). While these scholars vary in their approaches to understanding environmental governance under capitalism, all bring a historical perspective to uneven development, viewing it as a consequence of the demand for material inputs for the reproduction and expansion of capitalist relations of

production. As Clark and York (2005: 391) argue, “due to capitalism’s inherent expansionary tendencies, technological development serves to escalate commodity production” and this process necessarily leads to environmental degradation and increased carbon emissions.

My research builds upon the work of scholars who have addressed spatial and social differentiation in mining and energy sectors. Histories of commodity production and the imperialist state often begin with early European expansion into the America’s motivated by the search for precious metals, with the opening of gold and silver mines in the Caribbean and Central and South America in the 1500’s (cf. Brown 2012; Galeano 1971; Marx 1992 [1876]; Veltmeyer and Petras 2014; Wolf 1982). Dependency and world systems theorists in the mid-twentieth century argued that colonial patterns of primary resource extraction and export, or extractivism, locked some places into long-term path dependence and underdevelopment, keeping former colonies poor and enriching former colonizers (Baran 1957; Cardoso and Faletto 1969; Gunder Frank 1966). Other scholars have theorized how the winners and losers of extractivism may be spatially differentiated not according to nation-state borders but rather according to other historical inequalities between regions or places (Casanova 1965; Hechter 1975; Lewis 1978). More recently, following the work of David Harvey (2003; 2010), scholars have understood geographies of extraction as a consequence of the dynamism of the mobility and concentration of capital, which has rapidly expanded and fluctuated under neoliberalism (Gordillo 2014; Holden et al. 2011; Perreault 2013; Sawyer 2004). Pointing to the core debate within mining policy, others still see responsibly managed oil, gas, and minerals extraction as providing potential opportunities for socio-economic development (Collier and Venables 2011; Humphreys et al. 2007; World Bank 2014). The latter note that extraction does not inherently lead to dependency and underdevelopment – the “resource curse” conundrum – but rather that the circumstances under which it occurs determine the degree of beneficial outcomes. As Bebbington et al. argue,

“while the literature may have demonstrated that the resource curse is not inherent to mineral expansion, there is also plenty of evidence to suggest that the *realpolitik* of the sector continues to sustain practices that neither facilitate an

escape from the resource curse, nor allow governance challenges to be addressed prior to further mineral expansion” (208: 909).

This question of the *realpolitik* of extractive industry operations, then, is crucial to an understanding of the links between extraction, development, and sustainability – the key set of debates in which this dissertation intervenes. The comparative analysis of cases in Appalachia and the Andes aims to systematically address why mining has so consistently brought adverse environmental and socio-economic impacts to the locales where it is undertaken, often by force and in conflict with more sustainable, alternative uses of the surface. Deploying the lenses of political ecology and legal geography, the following chapters examine how the subsurface is socially produced and regulated, and how this process broadly shapes the production of space, place, and nature.

Extraction legacies and economic transition in Appalachia and the Andes

This research focuses on Appalachia and the Andes as two documented “hotspots” of new types of extractive activity where there are ongoing conflicts about how rights to the subsurface get decided, enabling analysis across different legal and cultural traditions as well as different types of resources (metals vs. gas). In these sites, both official government and grassroots actors frame their primary interests around the discourse of economic transition and ending dependency on a limited number of primary exports. Likewise, patterns of both surface and subsurface resource tenure are inherited from colonial legacies, and current socio-legal and political economic frameworks for governing resources are reflective of historical inequalities that are mediated by changing conditions in global commodity markets.

Appalachia

This dissertation focuses on Appalachia and the Andes as two regions which feature prominently in the restructuring of global resource markets that has occurred over the past decade, in which investments in extractive industries rose dramatically and concentrated in new destinations and technologies. The two regions also share in common political landscapes characterized by both official and grassroots mobilization

around policies to shift away from a primary commodity based economy toward more diversified and sustainable development outcomes. Recognizing the shared history of economic dependence on resource extraction and underdevelopment, Appalachian scholars have drawn from Latin American literatures on dependency and internal colonialism since the 1970's (eg. Dunaway 1996; Lewis 1978; Salstrom 1994; Wishart 2014). While many scholars and activists in both Appalachia and the Andes have criticized totalistic models of economic change in favor of more nuanced, place-based accounts, overcoming resource curse and building a more egalitarian and sustainable economy continues to be a major challenge (Billings and Blee 2000; Gaventa 1980; Kingsolver 2010; Pudup et al. 1995).

The US southern Appalachian region has been one of the world's largest suppliers of coal since at least the late 19th century, but in recent years, more than 50 of the largest coal companies, including the nation's largest producer (Peabody Energy) have filed for bankruptcy (USA Today 2016). In Kentucky, this is reflected in the loss of nearly 40% of all coal jobs since 2011, and the state of West Virginia likewise projects a 25% loss of coal jobs from 2015-2017. Coal and other resource sectors including timber, oil, and gas have long dominated the southern Appalachian economy, and there is evidence that these other sectors too are undergoing significant structural changes through the financialization of timber resources and the rise of unconventional oil and gas extraction methods (Randle et al. 2015; Morrone et al. 2012). Within the context of these structural changes, social movements in the Appalachian region have mobilized around the theme of just economic transition, noting that the current coal-based economy is characterized by high levels of inequality, under-investment in public services and infrastructure, and serious public health and environmental concerns.

The campaign for just transition focuses on building resilient communities and economies based on worker solidarity, local ownership, and ecological sustainability, especially in collaboration with those who have been most impacted by coal and other fossil fuel industries and the economic disruption caused by coal's collapse. The vision for just transition is contrasted with the current state of the region: more than one million acres of Appalachian lands have been heavily surface mined for coal and more than 500 mountains destroyed by mountaintop removal mining, leaving behind hundreds of

abandoned mine lands and associated legacy pollution (Geredian 2009); cancer rates are 36 percent higher in rural Appalachia than elsewhere in the US (Hendryx 2009); the region is the epicenter of an opioid epidemic (Becker and James 2016); and since the 1960's the region has had higher than average rates of poverty and working poor compared to the rest of the nation, and these figures have been seriously exacerbated in many rural Appalachian counties by the loss of coal jobs and coal company bankruptcies (Marley 2016). It is in this context that Appalachians are coming together to understand and contest the deep history of exploitation of the region's land and people.¹ However, even though the coal industry is in decline, highly concentrated corporate and absentee ownership of the region's land, mineral, and timber rights poses a significant barrier to transformative social change, especially as unconventional energy sources such as shale gas and coalbed methane become more prominent, displacing coal and building on and deepening patterns of elite control.

The Appalachian portion of my dissertation builds upon the 1979 Appalachian Land Ownership Study (ALOS), an early pioneer in collaborative activist research which brought land ownership to the forefront of debates about Appalachian resource dependence. The ALOS emerged from an alliance of activists and scholars who sought to address the root causes of exploitation and persistent poverty in Appalachia, and identified land ownership as the core concern. The ALOS organized citizen researchers to investigate land ownership patterns in 80 counties across six states, including qualitative and quantitative analysis of how those patterns connect to social outcomes. The final report, published in 1981, confirmed that more than 70% of all land and minerals surveyed were held primarily by out-of-state corporate owners who paid little to no taxes on their speculative holdings, contributing to the region's chronic poverty and underdevelopment.

In northern West Virginia, the expansion of hydraulic fracturing for natural gas has in recent years created new conflicts between mineral and surface land owners, where rights to different strata of land are horizontally segmented and separately owned. That

¹ This organizing work is happening in a number of organizations and is reflected in the work of the Economic Transition Team of the Alliance for Appalachia, a consortium of dozens of organizations working across the region. Likewise, the Highlander Research and Education Center has since 2015 coordinated the "Economic Transition Fellows" program, which provides staff support and leadership development to organizations who wish to dedicate a full time staff person to work on economic transition problems.

legacy and its legal framework date back to British colonialism and settlement of the southern mountains. The doctrine of estate severance – which created the legal basis for separate ownership of the subsurface and surface – created an effective outlet for surplus British capital directed toward resource speculation. The expansion of British territory through early colonial westward settlements was accomplished through land merchants who purchased large swaths of surface estates, while developers and speculators purchased minerals beneath many contiguous surface tracts (Dunaway 1994). The result has been the entrenchment of unequal and absentee surface and subsurface land tenure patterns that now characterize West Virginia and much of the rest of the southern Appalachian region (ALOS 1981). Three major studies of land and mineral ownership in West Virginia conducted in 1974, 1981, and 2013 have confirmed the persistence of what Dunaway (1994) described as “a polarized Appalachian society in which the wealthy landed gentry amassed a majority of the acreage while more than half the settler households remained landless,” and under which circumstances approximately 75% of all mineral estates are held by absentee corporate owners (Miller 1974; ALOS 1981; WV CBP 2013; WV SORO 2008). This dissertation addresses a gap in understanding how this legacy has impacted and been changed by the Marcellus shale energy boom, which has led energy companies and land speculators to once again acquire large swaths of mineral rights. Land conflicts have intensified with implementation of the so-called “Cheney loophole” of the 2005 Energy Policy Act, which exempts hydraulic fracturing wells from federal environmental regulations. The rush of energy corporations to consolidate mineral rights holdings in Marcellus shale areas has led to a spike in corporate land deals which take advantage of and continue the legacy of absentee land and mineral ownership (WV SORO 2008). Today, West Virginia is second only to Texas in the number of active oil and gas wells in the United States, while the number of natural gas permits tripled between 2007-2012 (US Energy Information Administration 2012).

While social organizations fight for a “just transition” that is not based on socially and ecologically destructive energy extraction regimes, this legacy of extraction and absentee ownership in West Virginia, and more broadly in Appalachia, poses significant challenges for destabilizing both fossil fuel dependence and economic dependence. The United States is the world’s largest per capita emitter of greenhouse gases and second

largest emitter overall (Netherlands Environmental Assessment Agency, 2015), suggesting that energy transition research and policy in the US has significant global implications for climate change mitigation. Building on recent research on property regimes and extractive sector governance (eg. Himley, 2016), as well as parallel research on “green grabbing” and “land grabbing” (eg. Borrás et al., 2011; Fairhead et al., 2012), my research takes governance of land ownership and natural resource tenure as the basis through which extractive industries are organized and institutionalized. The stability of existing energy regimes is in part linked to active resistance by fossil fuel industries to scientific investigation and public reporting of the anthropogenic causes of rising CO₂ levels (Boykoff 2007; Supran 2017), and the industry’s manipulation of research and policy has received wide attention. However, the ways in which extractive industries are structurally embedded in local institutions and socio-ecological systems has not been studied as extensively (exceptions include Bell 2016; Billings and Blee 2000; Gaventa 1980). Likewise, as particular energy resource sectors such as coal experience swings and declines, these locales are left with a legacy of uneven socio-economic development and environmental pollution, including land tenure patterns that have long revolved around primary resource extraction and export. Given the central role of property rights in organizing markets, such land tenure patterns make alternative economic structures extremely difficult to organize without significant reforms.

The Andes

In the Ecuadorian Andes, social movements have likewise converged around the theme of ending economic dependence on resource exports and the construction of more socially and ecologically just alternatives. In the Andes too, the legacy of land concentration is rooted in colonial mining speculation, which was the basis for much early European exploration and colonization throughout the America's. The surge of European capital that kicked off the wave of westward exploration and settlement in the southern Appalachians by the Spanish, French, and British in the mid-16th century was largely the result of significant structural changes in the European economy thanks to the productivity of early colonial Andean mining operations. Spanish and Portuguese conquests in present day Bolivia, Colombia, and Peru established massive silver mining

operations which touched off the price revolution in Europe and monetarized the emerging world economy in the 16th century (Ferguson 2008; von Humboldt 1822). The influx of American silver led to revolutionary levels of inflation in the prices of food and land throughout Europe, and spurred additional competition for productive mining lands, settlements, and trade routes in the Americas. Indeed, the first expeditions in the southern Appalachian mountains by the Spanish in 1566 sought new sources of gold and silver and a connection between the American interior and Spanish colonies further south via the Appalachian mountains, which they mistakenly believed led directly to Central America (Glanville 2009; Hudson and Hoffman 2005).

While the mine at Potosi (in present day Bolivia) yielded more than 40% of all silver production during the early colonial period, artisanal mines throughout the Andes also contributed bullion exports and were crucial to funding the establishment of local elite rule in the colonies (Lane 2002). Artisanal gold mining in Ecuador, dependent almost entirely on enslaved indigenous labor, was crucial to the establishment of the Royal Audience of Quito. While livestock, barley, wheat and corn were grown in the sierra for internal consumption, colonial elites oversaw the establishment of large-scale sugar plantations along the coast and central highlands, which eventually became dominated by slave labor (Lipski 1987). In the 17th and 18th centuries, Ecuador's agricultural exports included sugar, cacao, bananas, tobacco, coconuts and cotton. Although oil displaced bananas as the dominant resource export after the 1930's, the Ecuadorian economy continues to rely on primary commodities, which make up more than 90% of export earnings today (OEC 2015). The colonial acquisition of arable land to support the emerging agricultural export economy was accomplished through the expropriation of indigenous lands, and despite several waves of land reform, most of the raw materials export economy continues to be dominated by landed elites (Acosta 2001; Colloredo-Mansfeld 1999).

Despite major land reforms passed in 1964 and 1994, land ownership has continued to be concentrated in the hands of elites, which lawmakers again attempted to tackle with another set of land reforms passed in early 2016. However, indigenous and peasant organizations have broadly opposed the 2016 law since it does not guarantee equitable redistribution, but instead increases state control over rural and indigenous

lands for commodity development and agro-industrialization (Ordóñez 2016). Land and mining reforms in both the 1990's and under the outgoing Correa Administration have generally liberalized foreign investment in resource sectors. The major difference under Correa's "Citizen's Revolution" project is an increased role for the state to direct, tax, and partner in resource based enterprises. Many sectors of civil society are critical of this approach, which they argue will deepen unsustainable resource extraction and further entrench social inequalities between the urban middle and upper classes and the rural peasant, Afro-descendent, and indigenous populations. However, President Correa argues that "getting out of that [extractive dependent] economy means using this sector surplus to revive other sectors of the economy: services, agriculture, industries, etc." (Correa in Santacruz 2008). Nonetheless, Albuja and Davalos (2015) found that during the first two terms of the Correa Administration, state revenues primarily went to infrastructure projects targeted at further expansion of the extractive sectors, including energy, mining, and export agriculture. During his tenure, Correa devoted significant political, military, and financial resources to the advancement of a large scale metals mining industry in Ecuador.

While the legacy of colonial patterns of land ownership and subsequent land reforms has been investigated extensively with respect to agricultural and oil development in Ecuador (eg. Sawyer 2004), the impacts of land reform and mining liberalization laws on the emergence of a new mining industry have received less attention. On the whole, the rate of extraction of most minerals has more than doubled in South America since the year 2000 (Bebbington and Bury 2013), leading to a flurry of new research on the links between extraction-dependent economies and the new left-populist governments in Ecuador, Venezuela, and Bolivia (eg., Veltmeyer and Petras 2014; Springer 2014; Yates and Bakker 2013; Acosta 2013; Bebbington and Bebbington 2011; Peck et al. 2010). President Correa initially suspended all mining activities at the start of his first term due to mounting social conflicts, where just 39 companies controlled 84% of the country's mining concessions totaling over 2 million hectares (El Universo 2008). However since then his administration has aggressively pursued mining development, and after the most recent round of auctions in 2016, approximately 11% of the country's total territory (2.2 million hectares) is once again slated for mining

exploration by international land speculators and resource firms (Colectivo Minka Urbana 2017).²

The case study in this dissertation focuses on the Intag Zone of northwest Ecuador, which is the site of one of the country's major mining conflicts that occurred in 2006-2007 and provoked the suspension and revocation of mining titles as the start of the Correa Administration. Today, the same area in Intag has been identified for the first majority state-owned large scale mine, and it is currently under advanced exploration but faces major opposition from local residents and social and environmental organizations. Analysis of the Intag conflict provides insight into the continuities and changes in Ecuador's policies as the current government attempts to build a more responsible, well-managed mining industry with strong state oversight and with medium and long-term goals of economic diversification and equity. Social movements against mining and the pro-mining government alike claim to want to end resource dependency, to promote socio-economic development, and to protect the health of both the local and global environment. The chapters herein examine how inherited land holding patterns, legal frameworks, and economic dependency impact the political ecology of mining development in Intag, and what the implications are for the anti-mining movement's and government's different approaches to long-term social change.

Theoretical contributions: Critical Legal Studies, Legal Geography and Political Ecology

My research draws from critical property theory and legal geography to make sense of subsurface property transactions in ways that do not presuppose a specific narrative – such as neoliberal privatization – to explain how changes in the reorganization of subsurface ownership come about in practice. Property is usually considered a relationship between people about things, as obligation rather than entitlement (Singer 2000). This idea can be traced to the early twentieth century work of jurist Wesley Newcomb Hohfield. Hohfield pointed out that most entitlements could be analyzed as a series of claims and obligations among persons, which he termed “jural relations.” With the understanding of property as a set of social relationships, property as an independent

² Note these figures are for metallic and construction materials and do not include oil concessions.

“thing” disintegrates. An even earlier critique within the legal tradition of property as a taken-for-granted object is William Blackstone's (1922 [1766]) often quoted statement:

“Pleased as we may be with the possession, we seem afraid to look back to the means by which it was acquired, as if fearful of some defect in our title; or at best we rest satisfied with the decision of the laws in our favour, without examining the reason or authority upon which those laws have been built” (p. 2).

Marxist analysis has also been historically important to the development of critical understandings of property. However, like other areas of “critical” scholarship (and indeed in critical legal theory in general), interest in critical property theory flourished with the influence of feminist and post-structuralist thought in the late 20th century. The critical legal studies (CLS) movement was born in the 70's and 80's and consisted of both Marxist and post-structuralist approaches. The commonality was a critical stance toward discriminatory politics which was informed by CLS proponents' involvement in struggles for civil and human rights, part of the tradition of legal realism (i.e. the idea that progress and social change can be achieved through changes to laws) that came before and informed CLS. What began as a critique toward discriminatory politics ultimately became a critique of dominant legal ideology. The CLS movement is especially known for development of the critique of rights within US legal scholarship, and also for critiquing dominant forms of legal education that were seen as reproductive of societal inequalities institutionalized in law (Kennedy 1979 and 1981; Tushnet 1984; Gabel 1984; Olson 1984). In the 90's a few jurists began to extend the critiques of civil and human rights developed in the CLS movement to property rights, an effort pioneered by Carol Rose.

Informed by feminist and constitutional (i.e. civil rights) legal scholarship of the 1980's and early 90's that considered the centrality of discursive narrative to organizing legal norms and logic, a small number of property theorists began to ask how people become enrolled in property regimes and what accounts for the durability of (or changes to) them. In Rose's (1994) words: “Community norms - the common beliefs, understandings, and culture that hold property regimes together - raise the issue of

persuasion. Where do people get those understandings about property anyway, and what gets them over that peculiar gap between property-as-thing and property-as-relationship?” (p. 5). A collection of Rose's essays (1994) reflect her comprehensive consideration of property from several different alternative points of view and theoretical traditions, ranging from game theory, to new institutional economics and common property theory, to feminist and narrative approaches, and Marxist approaches, among others. One particular lesson I have taken from her effort to consider property from different vantage points is that a critical view of property must account for the way in which the “white fence” of enclosure for so many people represents hope and dignity. This resonates with Tania Li's recent observation that land rights have implied the possibility of building a better life, access to education, healthcare, etc. and that critical scholars should pay more attention to how these legitimate desires are “frustrated, especially for the poorest people, who are routinely dispossessed through the very processes that enable other people to prosper” (2009 p. 87).

There is a diversity of critical studies of property rights within contemporary legal theory which continues to engage the theoretical questions “what is property” and “what are the moral or other justifications for property” (Davies 2007, p. 85). For example contemporary critical property theory incorporates critiques of rights and alternative models of ownership developed from post-colonial studies (Arneil 2001), post-Marxist legal thought (MacKinnon 1983), queer theory (Davies 1999), and psychoanalysis (Schroeder 1994). These theoretical perspectives primarily delineate negative dimensions of property and property discourse, but critical property theorists are also interested in alternative and oppositional strategies. Margaret Davies (2007) suggests four “modes of disrupting and possibly changing contemporary meanings and distributions of property:” oppositional strategies that negate private property and/or consumer culture without necessarily offering any alternative; reflexive strategies that use private property against itself to challenge dominant power arrangements; construction of alternative concepts of property or ownership models; and utopian and experimental methods to envision and live new legal and political structures (p. 117). Legal scholars rarely engage in ethnographic research, and the comparative cases in my dissertation offer concrete studies of oppositional strategies to resist dispossession, moving out of the theoretical

arena and into the complex “fieldwork” of political ecology – which is likewise interested in critical and alternative conceptions of ownership.

In “Ownership and Political Ecology” (1972), one of the earliest uses of the political ecology term, Eric Wolf analyzed how local rules of ownership “mediate between the pressures emanating from the larger society and the exigencies of the local ecosystem” (p. 202). He further argued for a “processual view of ownership” as opposed to a static view of jural rights: “The property connexion in complex societies is not merely an outcome of local or regional ecological processes, but a battleground of contending forces which utilize jural patterns to maintain or restructure the economic, social and political relations of society. Thus capitalism progresses through the employment of jural rules of ownership to strip the laborer of his means of production and to deny him access to the product of his labor” (p. 202-203). Political ecologists have typically not interfaced with parallel work in critical property theory in analyzing this “battleground of contending forces.” Very little of the work on critical property theory and critical legal studies has been taken up in contemporary political ecology, despite widespread publishing on privatization by political ecologists.

My research is informed by recent studies in political ecology which draw attention to property titling in land grant conflicts in Northern New Mexico (Correia 2013 and Kosek 2006). Correia (p. 173) argues that “the legal construction of private property has obscured colonial violence and at the same time required continued violence to sustain it.” The chapters in this dissertation each deal with elements of overt coercion as well as softer violences which are orchestrated through opaque legal and economic bureaucracies. I examine the messy practices and violences that constitute subsurface properties, and I aim to connect this process to colonial histories as well as broader political economic trends at different scales. Qualitative accounts of the social process of constituting subsurface properties drawn from multiple sites make it possible to articulate a concrete theory of how opacity has historically operated in the making of property with respect to raw materials extraction.

The making of new properties through administrative and overt violence has consequences for our understandings of nature. Nick Blomley's (2008) study of property disputes related to changing historical boundaries of the Missouri River explores how

“nature” enters property and speaks to criticisms that property law simplifies nature, arguing that simplification, too, is complicated. He focuses on how property makes the socionatural world meaningful as a social institution and set of practices that produce the effect of property. My dissertation combines Blomley's approach to property with the theoretical insights of political ecologists who have been at the forefront of debates about nature and property rights (eg. Castree and Braun 2001, Robertson 2004, Mansfield 2007, Smith 2007) in order to make contributions to understanding subterranean natures, particularly how property rights and political violence are deployed to constitute particular ways of valuing subsurface spaces. While legal geographers have made headway in developing spatial analytics that account for how property and sociospatial experience are mutually constitutive, political ecologists have extensively examined spatialities of privatization as well as the material implications of different land tenure arrangements.

Refocusing analysis on the contending forces which continuously constitute, challenge, and remake jural patterns of authority and exclusion requires an opening up of material political ecological analysis to account for the diverse ways in which nature and rights are culturally produced and known. Recent feminist political ecology (FPE) accounts of environmental racism call for more intersectional postcolonial analyses in FPE (Mollett and Faria 2013). Utilizing critical race theory, Mollett and Faria define race as “‘more than colored bodies’ (Kobayashi and Peake, 1994; Pulido, 2000, p. 15), it is pertinent to the production of social hierarchies and ‘prompts the exclusion of others by making it thinkable to deny or ignore their respective claims’” (Goldberg, 1993 in Sundberg, 2008, p. 570) (p. 118). The chapters in this dissertation are largely devoted to the question of how property, nature, and identity are constituted and politicized in ways that privilege certain claims over others and cement particular development outcomes.

My dissertation research is informed by theoretical insights from critical FPE but gender itself is not a core object of analysis. However, because women are central land managers in both of my research sites, I have collaborated extensively with women in conducting the research on land that is presented in the following chapters. In Ecuador, I was challenged to think through my solidarities and how to practically support and connect liberation and justice at the household scale to the broader resource economy. For

this reason I undertook an oral history project on women's experiences, livelihoods, and role in the anti-mining movement. The aim is to collectively edit the histories and co-publish them as a booklet, which will be distributed along with the audio recordings among the women and their local communities, with the aim of fostering greater feminist solidarities and recognition of women's socio-economic and political contributions.

I have also sought to situate my dissertation research within Latin American political ecology, which has been marginalized in most Anglo-American scholarship – a fact that is reflected in the dearth of studies of mining within political ecology, at least until recently. Enrique Leff (2012) connects the history of Latin American decolonial thought to the genealogy of political ecology, arguing that dependency theory helped lay the groundwork for the emergence of a distinctly Latin American political ecology (Amin 1976; Gunder Frank 1966; Cardoso and Faletto 1976; Dos Santos 1978). These theorists described a state of world affairs in which poor countries provided the raw materials and cheap labor in an unequal exchange for technology and investment under the guise of the promise modernization and development. A parallel development in Latin American critical thinking was populist education and emancipatory pedagogies (eg. Liberation theology of Paulo Freire, eco-pedagogy of Leonardo Boff). The analyses of these intellectual movements can be directly linked to the emergence of a critical evaluation of development as a hegemonic discourse which reproduces colonial forms of knowledge and in turn to movements to counter Eurocentrism through the development of alternative forms of knowledge (eg. Quijano 1989; Dussel 1996; Escobar 1995; Esteva and Prakash 1997). These movements, then, are also connected to the history of collaborative and popular forms of knowledge production and science in Latin America (eg. Fals Borda 1981).

Methodological contributions to a comparative approach

A variety of factors affect how people struggle for rights to land in the context of new extractive investment, and how states exercise rights to territory through the institutions charged with overseeing and regulating subsurface development, for example: the structure of the legal and judicial system, cultural traditions related to property and dispute resolution, the national strategic importance of the resource being extracted,

fluctuations in commodity prices, geographical accessibility of the mining site, the relative value of other land uses and the class status of those likely to be affected, and the relative strength or weakness of administrative institutions. These particularities as well as the confluence of different interests involved define the dynamics of how disputes about extraction play out, and as such there is no ideal set of cases to study. Moreover, the incredible boom in extractive investment in the last decade has produced thousands of potential cases to choose from (Bebbington and Bury 2013). Nonetheless, a comparative approach is essential to look beyond the idiosyncrasies of individual mining conflicts to engage the micropolitics of how global extractive industry investments become assembled in particular places.

The case study sites share a number of similarities – and important differences – that contribute to the richness of comparative data for understanding how property is produced, contested, and regulated through the development of the subsurface. First, the extractive activities in each are considered a high priority for national development. In the United States, natural gas development is heavily encouraged by federal energy policies and is accompanied by a political rhetoric of a new greener, more prosperous, and energy-independent future in which natural gas has been “proof that we don't have to choose between our environment and our economy” (Obama, SOTU 2012). The Intag Valley in Ecuador is the site of the first project of the newly created national mining firm, Enami. Metals mining in Ecuador is likewise accompanied by a rhetoric of future prosperity, as President Correa routinely argues that “we cannot be beggars sitting on a sack of gold” and that responsibly managed mining development is essential to transforming the country's productive matrix. That is, in both study sites, resource extraction is framed as a pathway or bridge to a new period of more clean and just development that will benefit the entire nation, and so the governance of subsurface properties in these sites is tethered to the future of the nation itself.

Secondly, while resource extraction is not new to either West Virginia or Ecuador, both are experiencing important shifts in the type, pace, and organization of extractive activities. West Virginia's energy sector is undergoing a significant transition to “unconventional” oil and gas products thanks to fracking technology and the state's geological overlap with the Marcellus and Utica shale formations. This fracking boom

has sparked intense public debates about the rights of surface estate owners, environmental contamination, and public health concerns. In Andean countries, more mining concessions were granted in the past decade than in the previous 200 years (Bebbington and Bury 2013), leading to interest in extractivism and left-populist governments in Ecuador, Venezuela, and Bolivia (eg., Veltmeyer and Petras 2014; Springer 2014; Yates and Bakker 2013; Acosta 2013; Bebbington and Bebbington 2011; Peck et al. 2010). In particular, the development of a new mining economy in Ecuador is seen as a way to compensate for declining oil revenues, while the adoption of fracking in West Virginia offsets decline coal revenues. In this way, both sites are experiencing a change in the type of extractive activity to be implemented and regulated, and these changes are broadly connected to changing geographies of energy and mining production across the globe. The comparative analysis, then, not only provides multiple sites and lenses to add to the growing body of both academic and public interest in the political economy of extraction, but brings a new focus on how the intertwined legacies of resource dependence manifest in local land holding and elite political configurations. These configurations have long-term implications for how land and resource tenure figures in struggles for climate and social justice.

Collaborative and Comparative Methodology and Epistemology

There are significant methodological challenges to conducting this research. The topic concerns the highly contentious politics of extractive development and land use; geographies of ownership are rapidly changing and rarely transparent; and ethical considerations warrant an open and collaborative approach to the research, requiring both transparency in and bracketing of my own activist allegiances. Collaborative research in general and research on land rights in particular (whether collaborative or otherwise) typically raises many of these challenges. Accordingly, I consider an important contribution of my dissertation research to be the development of novel collaborative methods for researching land rights struggles.

Collaborative ethnography is

“an approach to ethnography that deliberately and explicitly emphasizes collaboration at every point in the ethnographic process, without veiling it—from

project conceptualization, to fieldwork, and, especially, through the writing process. Collaborative ethnography invites commentary from our consultants and seeks to make that commentary overtly part of the ethnographic text as it develops. In turn, this negotiation is reintegrated back into the fieldwork process itself” (Lassiter 2005, p. 16).

Collaboration offers distinct methodological benefits including a depth of engagement not achievable with traditional research methods and the opportunity to cotheorize among diverse individuals with diverse perspectives (Rappaport 2008; Hale 2007). There is a long history of collaborative research in both of my study areas. In Appalachia, an extensive collaborative study of land ownership and taxation was conducted throughout the region in 1979 and represents some of the earliest applications of activist and collaborative methodology in the North American context. Likewise, collaborative research has been a norm in Latin American social science research for a number of years. Rappaport (2008) details how an explicitly grassroots political brand of participatory action research was pioneered in Colombia by Orlando Fals Borda (1991) which has been the foundation for recent collaborative work throughout Latin America (Caviedes 2003; Vasco Uribe 2002; cf. Bonilla et al. 1972; Fals-Borda 1991). This mode of ethnographic analysis has collaboration is at the root of both political and theoretical engagement.

In the Andean context, much collaborative research is rooted in the Andean philosophy of interculturalism (Rappaport 2005), which refers to the selective appropriation of concepts across cultures in the interests of building a pluralistic dialogue among equals (Lopez 2009). The idea of research as dialogue has presented some challenges in my work, as a PhD student who is required to “author” a dissertation on a limited timeline. To a modest extent I dealt with this problem through co-authorship, and Chapter 4 is co-authored in Spanish with an Intag movement leader. However, for the most part rich collaborations did not occur in the writing process itself, but rather manifested through long-term relationship building and listening. Dialog and exchange occurred through mutual sharing of ideas about how to mobilize interest in land and land ownership. In Intag I collaborated directly with several local anti-mining leaders and

organizations, attempting to balance my own research priorities with the needs and interests of my collaborators. However, my research priorities emerged from organic conversations with collaborators, and my interest in mapping how local land claims intersect and conflict with government and industry aligned neatly with the social organizations' land defense strategies. In West Virginia, collaborations are only now beginning to solidify through the next phase of my research on Appalachian land and mineral ownership, and indeed there is an imbalance in the work presented from each of the study sites in this dissertation, since my work in West Virginia continues to be ongoing. My ongoing collaborations in West Virginia have been developed through a series of dialogues with environmental and development organizations and community-based leaders in order to shape the research agenda for the next several years. These leaders will ultimately oversee the final coordination and implementation of the study, while the research presented in this dissertation is essentially preliminary work that informs this broader collaborative process and lays a foundation for understanding subsurface rights in Appalachia.

An important factor in both research sites has been the use of my privilege as an academic to access records and spaces – archives, maps, interviews with regulatory and industry personnel – which are inaccessible to my collaborators. Collaborative research in geography has at times been suggested as a way to move beyond notions of “positionality” and “reflexivity” (England 1994) that often inadvertently become excessively inward looking and do little to challenge the power dynamics of traditional research (Nagar 2003). Judith Butler (1990) can also be interpreted as arguing for more dialogic research models along the lines of collaborative method, but in the context of a warning about working against rather than with difference:

“The coalitional theorist can inadvertently reinsert herself as sovereign of the process by trying to assert an ideal form for coalitional structures *in advance*, what sort of politics demands that kind of advance purchase on unity? Perhaps a coalition needs to acknowledge its contradictions and take action with those contradictions intact ... The power relations that condition and limit dialogic possibilities need first to be interrogated. Otherwise, the model of dialogue risks

relapsing into a liberal model that assumes that speaking agents occupy equal positions of power and speak with the same presuppositions about what constitutes “agreement” and “unity” and, indeed, that those are the goals to be sought” (p. 20).

Others have built on Butler's ideas to critique positionality and argue instead for a more performative and praxis based approach to feminist research. Rose (1997) and Valentine (2002) have critiqued feminist geographers for attempting to define their “positionality” and be reflexive about their relationships with informants. Rose (1997) argues that such positionings are never *a priori* but are established through interaction; cannot identify a transparent, knowable self in the research process. Houston and Pulido (2002) see an opportunity to move from reflexivity to performativity as a form of embodied dialectical praxis that creates a positive space for progressive change. Likewise Besio and Butz (2004) call on researchers to, instead of simply reflect on their privilege, re-deploy it to the mutual benefit of groups they collaborate with.

At the root of these critiques is that feminist collaborative research must take seriously Donna Haraway's point that all knowledge is situated and partial. Therefore theory building counterintuitively always benefits from attentiveness to difference, and friction and conflict in all collaborations are themselves generative (Tsing 2005). Snider (2006) argues that “specific silences are crucial ... to making culture shared, inclusive, and simultaneously exclusionary” (p. 151). This brings us back to interculturalism as a learned strategy for harnessing difference rather than silencing it. In Paulo Freire's (Horton and Freire 1990) terms, “conflicts are the midwife of consciousness” (p. 187).

Collaborative Method as Global Ethnography

Tsing (2005) extends analysis of the fruitfulness of such “frictions” to the development of a methodology for studying global encounters: “attention to friction opens the the possibility of an ethnographic account of global interconnection. Abstract claims about the globe can be studied, as they operate in the world. We might thus ask about universals not as truths or lies but as sticky engagements” (p. 6). Butler (1993) also reversed her earlier positions on the evils of “universality” and similarly came to see the

term as having strategic use as an open ended category. I focus my research on lived encounters in specific sites precisely for the reasons outlined by Tsing: the sort of political economic analysis that allows me to see subsurface land as a sort of spatial fix for financial capital provides a useful framework for understanding broad trends and the production of space from the point of view of capital, but these machinations are not deployed and encountered in the same way in all places. Instead they are made and transformed through the frictions and resistances that unravel in different sites – whether intentional, as in residents opposed to mining burning down exploration equipment, or not, as in the cost of locating all of the necessary deed records in West Virginia's extremely messy records systems. This approach provides specificity to analyses of global phenomena.

Tsing specifically suggests searching out frictions in the formation of collaboratives: “ In this chapter I propose this kind of overlapping, linking difference as a model of the most culturally productive kinds of collaboration. This is not the most common connotation of collaboration; this is collaboration with difference: collaboration with friction at its heart” (p. 246). Like Freire, Tsing believes that conflicts that emerge in the context of collaboration are precisely what make new ideas possible. While overt conflicts did not emerge in my research process, there were certainly many frictions between my theoretical approach to the subsurface and my collaborators' more immediate concerns with displacement, oppression, criminalization, and environmental contamination. The key contributions of this research indeed were born of these frictions, which theorize the dramatic confrontations of mining conflict in terms of the long-range sociospatial processes of commodifying and securing the subsurface.

Global Ethnography in Multiple Sites

A particular challenge of my research agenda is dealing with “global encounters” in multiple sites. To do so builds on the approach outlined by Tsing by examining how a specific type of global change is differentially experienced and reshaped in different contexts, creating the potential for theorization at multiple scales. Burawoy (2001) has elaborated “global ethnography” as a form of potentially multi-sited extended case method (Lapegna 2009). Lapegna explains that global ethnography scrutinizes how sites

are produced and what hierarchies are (re)created in the process (p. 9). The overarching research agenda of global ethnography, then, is to “replace abstract globalization with a grounded globalization that tries to understand not only the experience of globalization but also how that experience is produced in specific localities and how that productive process is a contested and thus a political accomplishment” (Burawoy 2001, p. 158).

Similarly George Marcus (1998) has argued that research on fragmentary processes such as globalization and transnationalism requires a shift in traditional ethnographic practice from examining single sites in depth to understand their relation to a holistic world system, to multi-sited ethnography that aims to trace (and sometimes form) the dynamic interconnections between places (p. 81). He writes “for ethnography, then, there is no global in the local-global contrast now so frequently evoked. The global is an emergent dimension of arguing about the connection among sites in a multi-sited ethnography” (p. 83). For Marcus, the global is a socially constructed realm constituted by bringing to light specific connections across different localities. Since there is no distinction between the global economy and the lived worlds of individuals in local places, the goal of ethnography must be to trace “new paths of connection and association by which traditional ethnographic concerns with agency, symbols, and everyday practices can continue to be expressed on a differently configured spatial canvas” (p. 82). While Marcus provides useful guidance for conducting ethnographic research in multiple sites, the global as a purely “emergent dimension” downplays the applicability of abstract generalizations such as those developed by Marxist political economists (eg. Harvey 2003). As Tsing (2005) points out:

“we have trouble getting to either urgent local dilemmas or to far-reaching collaborative visions. In assessing environmental politics, theory has had less and less to say to activists, visionaries, and the public at large ... This means grounding one's analysis of global connection not in abstract principles of power and knowledge but rather in concrete engagements” (p. 266-267)

For this reason I have chosen to methodologically orient my dissertation research around sites and issues where I am already concretely engaged as an activist. My research results

do not detail the trials, tribulations, successes, and failures of social movements engaged in epic David and Goliath battles, but rather hone in on the day-to-day regulatory details of emerging extractive industries. These are the concrete factors that are relevant to the people to whom I have made commitments, and that is why the chapters feature not their personal stories but rather the mundane administrative violences that constitute their ongoing struggles.

Key Contributions and Chapter Overviews

The overarching focus of my dissertation research has been on the spatiotemporalities of land tenure and subsurface property rights as they connect to the making of often conflictual geographies of resource production and consumption. The guiding question has been: how does the subsurface become legible and accessible as property, and how does this process intersect with alternative social processes and values on the surface? Throughout my scholarly career so far, Marxist thought has been highly influential in my thinking about value, labor, and the apprehension and transformation of nature. The analytic of property is especially important to my thinking, and I have sought to avoid a narrow conception of property as a distinct legal category or economic object but instead tried to understand how subsurface properties are part of broader social processes and relationships. I consider the emphasis on the property analytic in my research to be a core contribution to literatures on the geography of the subsurface and resource extraction, which also intervenes more broadly in political ecology and legal geography literatures. Through the analytic of property - and specifically holding the dynamics of subsurface valorization and development in tension with the social experience of land on the surface - the comparison of distinct cases of subsurface governance yields the following inter-related insights:

- Extractivism can be understood as a set of spatiotemporal processes.
- State-territorial strategies for managing the subsurface are mediated by colonial legacies and confront incumbent and alternative land uses.
- Subsurface property is governed through systemic opacity, which conceals the impossibility of guaranteeing full rights to both surface and subsurface properties

Extractivism as Spatiotemporal Process

Critical scholars, especially in Latin America, have brought the theme of neo-extractivism or “new extractivism” to the forefront political ecology (Ayelazuno, 2014; Bond, 2015; Gudynas, 2009; Veltmeyer and Petras, 2014). New extractivism refers to the expansion and deepening of primary commodity sector dependency to promote development, and scholars of neo-extractivism have investigated how the proliferation of new mining projects is connected to the dynamics of imperialism (cf. Bond, 2015; Veltmeyer and Petras, 2014). The understanding of extractivism in terms of the dynamics of imperialism has refocused scholars on the geopolitical competition for resources and the push of the extractive sector into increasingly marginal lands to mine and process high quantities of low quality materials. To this analysis, my research contributes an emphasis on how the material expression of this process is characterized on the ground in the form of competition for access to land, which includes competition from existing or plausible surface uses on the same land.

The speculative purchase of rights to large contiguous tracts of land and resources by financial firms and multinational corporations has been extensively studied with respect to agricultural and conservation land grabbing (eg. Borras et al. 2016; Clapp, 2014; Fairhead et al. 2012). However, as I discuss in Chapters Two and Three, the oil, gas, and mining industries also have long-standing practices of consolidating their control of both subsurface and surface rights, and indeed this practice is integral to the highly tiered structure of the mining industry. Holding companies, financial firms, and intermediate firms known as “juniors” all participate in the speculative acquisition of subsurface and surface land rights. Junior firms often acquire permits and use legal strategies, intimidation, and violence to repress local opposition to strengthen the appeal to larger firms who have sufficient capital to develop large-scale projects (Deneault and Sacher, 2012). The ways in which extractive industry investments are assembled in specific sites, often unknown or only partially known to surface holders, has remained largely invisible in scholarly analysis. As Michael Watts argues (1993) “[I]t is surprising how little work has focused on the invention of institutions which produce, transmit and stabilize development truths” (p. 263).

The deployment of legal geography in my dissertation aims to shift attention to

these institutions, especially to subsurface property institutions which have especially remained under-theorized. This shift allows a spatiotemporal understanding of extractivism to come into view. This spatiotemporal understanding of extractivism suggests that although the proliferation of new mining projects appears to be temporally fueled by the “rush” of markets to feed rising consumption in BRICS and wealthy countries, subsurface development is in practice spatially enacted in a slow and piecemeal fashion through administrative procedures. Contributing to this analysis, Chapter Two examines how subsurface space is ordered through property regimes, which in both Ecuador and the US are explicitly codified to allocate mining investment in the subsurface. However, this spatial ordering is conditioned upon the temporal legacy of incumbent property systems and the dynamics of markets. Chapter Three contributes an analysis of the spatiotemporal distribution of risks and benefits of mining development in Ecuador. The populist rhetoric of developing mining for national wellbeing underscores the social production of sacrifice zones, which is enacted through a combination of different administrative procedures and the threat of violence. The chapter shows that although property is always backed up through the implication of force or violence, administrative violence is a powerful factor in the long-range enforcement of mining rights. Chapter Four, which is co-authored with Javier Ramirez and Susana Castro, outlines how “criminalization of protest” actually reflects spatial strategies of securitization and policing to enforce mining rights. The incarceration of Ramirez and deployment of police to secure subsurface rights were strategically timed in a manner to facilitate key administrative and technical requirements for mining permits. We argue for consideration of the the uneven unfolding and spatial differentiation of the penal state by examining how the state structures and deploys the security apparatus to secure not only urban investments but also nature-based commodity investments.

State-Territorial Strategies for Managing the Subsurface

Viewing extractive development as a spatiotemporal process that hinges on the enclosure and administration of subsurface properties directs attention to the theme of state-territorial strategies for managing the subsurface. Stuart Elden (2013) has drawn attention to the need for greater consideration of dimensionality in geopolitical analysis

and argues for a “volumetric” understanding of territory. Gavin Bridge (2015, 2014, 2013) has likewise focused in on the importance of subterranean space for political economic analysis. While these theorizations have helped highlight the subsurface as a significant point of inquiry, the “volumetric” approach to the subsurface risks a reductive “containerization” of space and a reification of the conflation of subsurface space with volumes of commodity resources.

By emphasizing the analytic of subsurface property, its bureaucratic administration, and struggles to (re)value land according to different interests, the dissertation chapters point to the ways in which territory is always being (re)negotiated at different scales, through local struggles, global markets, and colonial and neocolonial entanglements. Accordingly, state-territorial strategies for managing the subsurface necessarily also confront and/or adapt to other territorial configurations, which encompass how identity is rooted in material relationships to land. These changing territorial dynamics, as reflected through struggles about subsurface development and alternative use values on the surface, contribute to the spatial and temporal dynamism of extractivism. State-territorial strategies for managing the subsurface are mediated by colonial legacies and confront incumbent and alternative land uses.

Chapter Three, for example, shows how in the Intag case, the Correa government's determination to develop mining in connection with state-owned companies was based on the desire to capture subsurface rents as part of a populist political project, but still had to contend with incumbent land and policy arrangements. At the same time, the political imperative to develop the project caused even deeper rifts between industry representatives and landholders, who paradoxically could never benefit from a “socialist” mining project because they will be displaced by it. The chapter illustrates the link between administrative violence and overt violence: landed property must always be backed up with force of one kind or another to defend the exclusive rights that property defines. Intimidation and militarization combined with opacity and legal maneuvering to suppress and restrict whose competing claims could be forcefully backed.

Chapter four explicitly examines territorial defense strategies that respond to state securitization strategies and the changing dynamics of territory around mining rights. In addition to explicitly characterizing criminalization and rural policing as strategies to

enforce subsurface rights, we examine the decreasing public value of mining because of the progressive reduction and elimination of taxes, royalties, and windfall profits to be paid to the state, despite continued public investment and military and police support to mining companies. We contrast the state and private companies' efforts to responsabilize the public for demand for commodities with territorial defense strategies which aim to revalue land based not solely on economic calculations. We hope this chapter will be published in English (see Appendix A) with a modestly revised introduction that introduces the frameworks of extractivism and territorial defense that are so prominent in Latin American political ecology to English speaking audiences. These themes are also relevant to my research in West Virginia, and in both cases the non-economic attachments to land provide one explanation as to why mining companies cannot just simply buy out all of the landholders.

Systemic Opacity

The comparison between the two case studies is drawn out in detail in Chapter Two to theorize how subsurface property governance operates through systemic opacity, which refers to governance techniques that conceal the inevitable tension between surface and subsurface use values. As is summarized in Chapter Two, "Systemic opacity is a prime modality of subsurface governance which a) emerges from the irreconcilable tension between subsurface use as mining capital and alternative use values of the surface; b) consists of governmental techniques to conceal long-term dynamics of enclosure, accumulation and dispossession that characterize extractive industries; and c) has the effect of privileging extractive claims to the subsurface and foreclosing access channels for alternative claims on land." These governance techniques, such as foreclosing access to information and weakening institutional channels to make claims to surface rights, are particularly important to understand for how they a) foster over the long-term the changing spatiotemporal dynamics of neoextractivism and b) how they compliment more antagonistic and violent forms of subsurface property rights enforcement.

The theorization of systemic opacity is drawn from comparative analysis of the combination of legal tactics, political discourse, and militarization of rural lands in

Ecuador; land records, court hearings, and the legacy of absentee ownership in West Virginia; individual case stories; and comparative differences and similarities between how subsurface land deals are administratively organized and sometimes violently enforced in the US and Ecuador. The comparative and collaborative approach, described in the previous section, made it possible to interrogate subsurface property dynamics in abstract theoretical terms while also engaging with the social experiences of surface holders and activists.

Challenges and Future Directions

I have longstanding existing relationships in these study areas. Before beginning the study, I knew that residents and policy professionals in each were concerned about land loss and interested in participating in a study that documents changing patterns of land access and the accompanying evolution of legal frameworks for governing the subsurface. I believed that acknowledging and building on the strengths of my personal connections to the research – rather than attempting to hide them – would improve the study’s feasibility and lead to richer data and analysis. Indeed, I was able to begin the research process with an activist-informed perspective on complex issues that would have taken several months to understand if I had initiated a similar project in sites where I had no previous background. However, through the research process, I still needed to build trust and relationships outside of activist circles while maintaining trust within them, honor confidentiality of different actors with conflicting agendas, and navigate challenges and pitfalls of collaborative research. It was also difficult to navigate the commitment to acknowledge activists as significant knowledge producers and at the same time contribute something “new” and practically useful to grassroots expertise. In some instances, I have risen to these challenges better than in others; Chapter four is the product of co-writing with an Ecuadorian grassroots activist, Javier Ramirez. The co-writing process generated ethical and practical questions surrounding authorship and cultural differences not based just on our different class and language backgrounds but also between scholarly and activist cultures. Nonetheless, I am ultimately pleased with the praxis that the article reflects and symbolizes. We engaged in deep dialogue, reviewed literature together, and generated a theorization of the dynamics of mining and incarceration in Intag as informed

by Javier's insights and experiences. The article served to create a bottom-up intervention, and to deepen and highlight Javier's engagement with intellectual political circles in Ecuador. I personally found the process quite rewarding and different from the usual academic essays I have written which "excerpt" others' stories for my own intellectual purposes. Instead, at the outset I had to bracket my own set of ideas and let someone else take the epistemological lead, which pivoted my vantage point to broaden the scope of inquiry in the analytical contributions I made to the paper.

In addition to the challenges of activist research, the application of collaborative methodology to understand technical and legal processes of the mining industry also brought practical challenges, since extractive industries operate with remarkable opacity. I was particularly surprised by surface holders' lack of even basic understanding about how mining rights are administered. Only a few key individuals in my research sites in Ecuador were aware, for example, that no legal title exists for the ecological reserve created and maintained by residents to protect land against mining interests. In West Virginia, homeowners were not aware that the land they purchased or inherited did not include shale gas rights until landmen showed up seeking easements to access the surface for drilling equipment. I expected that many landholders operated without access to adequate knowledge about the mining industry or legal expertise, but I did not expect that they would know so little about their own legal rights or the history of mining rights in the areas where they lived. Instead of discarding surface holders as useful informants because of their lack of knowledge of the subsurface, I decided to make opacity a central organizing principle of inquiry. However, I still believed that the average surface holder's lack of information would make it impossible to do collaborative research. Indeed, throughout much of my research process I failed at spurring collaboration, and did not take it seriously enough myself. Although this point now seems obtuse, I eventually came to realize that situations in which collaborators do not already have a lot of information about something that directly affects them is the ideal context for collaborative knowledge production.

Toward the end of the research process in both sites, I began to develop much more productive collaborative relationships. In Ecuador, I worked with several individuals to produce collaborative maps which became an important political exercise

when a forum was held to review the maps and several residents in favor of mining participated, learning for the first time that the reserve they helped to acquire and maintain for more than 20 years is entirely inside the mining exploration area. I also think the attention that my research brought to land rights, through re-focusing activists on the legalization process for land in the community reserve, helped to refresh and mobilize action on land that had stagnated in the face of severe intimidation tactics on the part of police and military. At one point I arranged for the movement's environmental lawyer to come to Junin from Quito (he had never been!) to review the land legalization process in a community workshop and to provide training on land defense rights. The very next day, on our weekly hike to the mining exploration area, the community group chose to push through mining personnel and police guards who attempted to block our entry. On previous site visits before the workshop, we always ultimately accepted being turned away. The company representatives and police continued to follow us and command us not to enter certain areas, but each time we went anyway. Reflecting on this event, I believe it marked an important shift in the dynamics of the conflict. The activists were empowered and gained confidence, and the mining personnel and police were disempowered as their intimidation tactics failed. From that moment, it became accepted practice that people would enter the reserve, and that enabled the formation and implementation of a citizens' monitoring group, or *veeduría* (a strategy we also learned about from the lawyer's visit), which continues to monitor activities inside the mining concession.

I have not developed the same rich collaborative relationships in West Virginia. One reason is that my research schedule, as well as the different dynamics of extraction and land governance in the West Virginian context, did not translate into a long-term stint of living there. I did spend two consecutive months living in a boarding house for oil and gas workers in the summer of 2016, but otherwise my research was done by commuting for long weekends, phone interviews, and web-based discussion forums. These approaches were advantageous because of the dispersed nature of mineral rights and shale gas operations: communicating online and on the phone allowed me to talk to mineral owners and lawyers around the country who are active in West Virginia's shale boom, and commuting allowed me to visit different sites of activity across multiple

counties. However, I have recently begun to collaborate with a church group in Doddridge County which is excited about collaboratively producing a guide to oil and gas rights, leasing, and past and ongoing lawsuits. I believe this work will be especially important because many of the individuals I spoke with in West Virginia expressed frustration at people's inaction and hopelessness, and I hope that work on such a guide could help to begin to invigorate broader understanding of and action on the land issues that have long plagued West Virginia.

Finally, I also struggled with collaboration between other academics, nonprofits, and research institutions. Especially in Ecuador, I was lucky to have scholarly support from two fantastic institutions: The Andean Center for Popular Action (CAAP) and the Latin American Faculty of Social Sciences (FLACSO-Ecuador). Yet, I did not adequately engage within these intellectual communities because of their distance from my research sites, where I felt strongly compelled to be based most of the time. I also must admit that lack of confidence in my language skills limited my willingness to participate in scholarly arenas, at least early on. I hope to somewhat rectify this lack of engagement with visits to these institutions and participation in scholarly conferences in spring and summer 2017. Navigating these engagements will continue to be a central feature in my research, as I am presently working alongside a group of individuals – both scholarly and grassroots - to co-convene a broad, multi-stakeholder study of land ownership in the Appalachian region. Through my attempts to develop a collaborative dissertation, I have learned a great deal about linking scholarly, activist, and policy work, and I look forward to building on these lessons in future work.

In conclusion, in my dissertation research and writing I sought to work from high levels of theoretical abstraction while also being attentive to lived experiences and perspectives. The chapters that follow reflect the challenges I experienced in navigating the tension between theory abstraction, practice, and collaboration. However, I hope they also tell the stories of the politics below the surface: of the people and places that are often hidden from view and from public concern.

Chapter Two: Producing the subsurface: Opacity as governance in the new extractivism

Introduction

Enveloped in thick cloud forest humidity in northern Ecuador, mining company representatives stand inches from angry community members in heated dispute: both claim that the other is trespassing on their land. A police officer, acting on behalf of the company, briefly flashes a piece of paper, the supposed title to the land in question, and the community president discretely snaps a quick picture with his cell phone. Later, an inquiry to the county land office confirms the evidence suggested by the photo: land rights formally belong to neither party, but to a Canadian mining company that was expelled by the government more than a decade ago for hiring paramilitaries to suppress resistance to mining. For more than two decades, efforts by both mining companies and community groups to consolidate, legitimize, and defend rights to land have resulted in shifting geographies of ownership and revealed the fragility and informality of land governance in the Intag Zone of Ecuador.

Far to the north, a similar scene unfolds inside West Virginia's Tyler County courthouse. The circuit judge listens as dozens of residents present justifications for individual claims to a fraction of the subsurface where Antero Resources plans to construct a new hydraulic fracturing well pad to extract natural gas trapped in the pore space of rocks miles below the surface. They learned that land titles on their parcels were being decided today through an ad that the company was required to place in the back of the local newspaper. Claimants who did not see the ad or could not attend the hearing will forfeit their rights. In a sense, the natural gas fracking boom has created another sort of boom: a rush by local people and natural gas employees to sort out centuries old land ownership records, much like new mining permits have brought long-standing land tenure concerns to the forefront of public discussion in Ecuador.

Across the Americas, and indeed around the globe, scenes of property rights confusion and conflict have accompanied changing patterns of mining investment and extraction technologies in recent years (Bebbington and Bury, 2013, Zoomers, 2010). Community conflicts and local property rights issues may be relegated to the sidelines as mere parochial concerns in the wider context of theoretical questions about development,

dependency, culture, or social movements and the state (cf. Ballard and Banks, 2003). Yet many postcolonial development scholars have pointed out that contemporary extraction conflicts are inherently connected to colonial legacies of the uneven geography of resource plunder and consumption (Acosta, 2013; Bond, 2013; Svampa, 2015; Veltmeyer and Petras, 2014). I argue that uneven geographies of resource extraction and their attendant conflicts are made in and through the micropolitics of decisions about property and the bureaucratic and technocratic constitution of the subsurface as an object of investment, often in direct conflict with life-sustaining surface land uses such as agriculture, forestry and ecotourism.

The bounding of property is itself an articulation of state territory (Blomley, 2003; Delaney, 2005), and the dramatic confrontations associated with violent mining conflicts are often the product of long-standing performances of enclosure in the context of competing claims to place. I argue that the legal distinction between the subsurface and the surface has historically played a pivotal role in the development and evolution of state-territorial strategies, but perhaps due to the physical obscurity of the subsurface, the politics of its governance has also remained largely hidden in both every-day contexts and in scholarly analysis. Here, I propose such a shift from the focus on massive socio-environmental consequences of resource extraction to the mundane, often invisible, bureaucratic practices that produce extractive industry conflicts in particular places.

In the remainder of this paper, I put forth a general politics of knowledge associated with the extractive sector under the framework of what I term “systemic opacity.” Systemic opacity is a prime modality of subsurface governance which a) emerges from the irreconcilable tension between subsurface use as mining capital and alternative use values of the surface; b) consists of governmental techniques to conceal long-term dynamics of enclosure, accumulation and dispossession that characterize extractive industries; and c) has the effect of privileging extractive claims to the subsurface and foreclosing access channels for alternative claims on land. Systemic opacity contributes to each step in the alienation of land from those living in resource extraction zones, including changes to property rights, the transformation of fertile, biodiverse land to purely extractive purposes, and the masking of the unequal social relations behind primary commodity production.

In this analysis I hone in on the practice of estate severance, which vests rights to the surface and subsurface in different parties, separating ownership and governance in a manner that facilitates investment in extraction and enables degradation and dispossession on the surface. To do so, I draw from two case studies: the first proposed state-owned open cast metals mine in northwest Ecuador and the Marcellus shale gas boom in north central West Virginia. Though seemingly divergent, these areas share forms of systematic opacity arising in a shared historical economic dependence on extractive industries, contemporary political discourses that champion new sources of extractive income to diversify the economy, a strategic political interest in extraction, and a history of colonial exploitation. In this sense, substantial regional differences in culture, institutional and legal frameworks for subsurface governance, resource types (metals vs. energy) and the idiosyncrasies of particular mining conflicts underscore the common experience of opacity and the importance of theorizing commonalities in how the subsurface is governed. While the incredible boom in extractive industry investments over the past decade has produced many possible sites for comparison – each with their different particularities – these sites were also selected based on my previous work and relationships which facilitate a deeper level of ethnographic engagement in the context of the divisive and fraught politics of mining.

This paper is broken into six parts. I begin in the following section by examining the broader context within which land and territory are enrolled in “new extractivism” through emerging resource security practices that are discursively and materially connected to the dynamics of global commodities markets. I then discuss systemic opacity in Part 3, showing how policy makers and mining companies have sought to manage the inherent antagonisms between socio-environmental concerns and neo-extractivism through administrative and technical practices that limit access and information, as depicted in the opening anecdotes. These practices are further obscured by a discourse of “transparency” that paradoxically conceals the production of opacity which is integral to subsurface property regimes inherited from colonialism. To demonstrate this point, I provide empirical evidence from two case studies: the first state copper mining project in Ecuador (Part 4) and the shale gas boom in West Virginia (Part 5). These case studies hone in on the spatiotemporalities of property rights reforms that

govern conflicts between subsurface mining development and surface use values. In Part 6, I argue that opaque governmental and industry practices which produce subsurface properties in both case studies necessarily diminish surface rights and obscure the relations of capital that privilege subsurface development above all other use values. I conclude that opacity is a core governmental technique for allocating investment in different strata of the earth associated with different regimes of value.

Land and territorial enrollment in the new extractivism

The themes of resource security and extractive sector governance have become more prominent in both policy and scholarly spheres in recent years. This spike in interest responds to substantial shifts in extractive sector investments and development policies - and their attendant social conflicts - over the past decade, which critical analysts have termed as “new extractivism” or “neoextractivism” (Ayelazuno, 2014; Bond, 2015; Gudynas, 2009; Veltmeyer and Petras, 2014). New extractivism refers to the expansion and deepening of primary commodity sector dependency, especially energy and hard rock mining, to promote development in the Global South, but also increasingly in the Global North through the expansion of unconventional energy technologies (Gensler, 2013; Pineault, 2016; Willow, 2016).

The “new” in new extractivism also reflects attempts to democratize, or at least nationalize, resource control and redistribute commodity revenues under post-neoliberalism in Latin America, which paradoxically may negatively impact the indigenous and peasant groups that primary commodity industrialization is supposed to uplift since mining projects are often on these groups' lands (Hilson, 2002; Shade, 2015). At the same time, it is suggestive of the connection between “old” and “new” regimes of imperialist resource control, as the turn to extractivism by the progressive governments is at least partially a consequence of the legacy of World Bank and IMF interventions during the neoliberal period. From the 1990’s to the early 2000’s, a series of measures taken to promote foreign investment in extraction in Latin American and African countries subject to structural adjustment programs created the legal and regulatory frameworks to spur extractive sector growth, stifle investments in other economic and social sectors and produce the legal and regulatory frameworks that havenaturalized a

presumed comparative advantage in resources.³

The tendency toward resource extraction as the growth strategy of choice in rural areas worldwide was re-enforced by high prices during the 2000s commodities cycle, usually attributed to demand from the industrializing BRICS countries (Diallo and Tapsoba, 2015; Erten and Ocampo, 2013; Humphreys, 2010; Samake and Yang, 2014). From 2003-2008, the real prices of energy and metals more than doubled while food commodity prices rose by 75% overall (Humphreys, 2010). These high prices precipitated the increasing financialization of commodities sectors, which re-enforced and accelerated the expansion of extractive industries based not on demand, but firms seeking to diversify their investment portfolios (cf. Belke, 2013; Cifarelli and Paladino, 2010; Creti et al., 2013; Mayer 2012). The US shale boom in particular is largely attributable to the availability of new forms of finance capital (Dicker, 2015).⁴ In 2006, the onset of the decline in real estate prices that sparked the global recession of 2007-2008 pushed speculative investors toward less risky commodities futures markets (Trostle 2008). This was followed by a substantial rise in speculative institutional investments by pension funds, hedge funds, and sovereign wealth funds in commodities markets as the financial sector developed several new products to facilitate their participation (Domanski and Heath, 2007; Haberly, 2011; Irwin and Sanders, 2010). At the same time, historically low interest rates set by central banks pushed speculators seeking higher

3 Of course, this comparative advantage was already entrenched in those rural places that have historically depended on mining and energy exports, including much of Appalachia, which since the 1940's faced significant pressures to intensify coal production, especially through the application of capital intensive technologies like computer automated longwall mining and mountaintop removal coal mining (see Lewis, 2004). Although Appalachian coal production began declining in 2008, the incumbent land and political regimes built around coal have fostered and sustained a new growth in technology intensive energy production from coal seam gas and Marcellus and Utica shale gas.

4 The explosion of the fracking industry is not based just on technological innovations, which were available since the 1980's and successfully applied to extract high volumes of shale oil by 1998, but also on financial and legal innovations, as well as incumbent land regimes that make this high cost technology profitable (eg. a typical break even point for US shale is ~\$80/barrel, compared to \$30/barrel for conventional wells). Financial analysts Dan Dicker and Arthur Andersen have gone as far as to label it a Ponzi scheme which requires ever more drilling, and ever more debt (known in the industry as the "drilling treadmill") just to compensate for declines in production. This drilling treadmill, and appeals to investors to finance it, requires the acquisition of mineral rights for future wells. The "father" of the modern shale industry and founder of Chesapeake Energy Aubrey McClendon once stated in a conference call to investors that "I can assure you that buying leases for x and selling them for 5x or 10x is a lot more profitable than trying to produce gas at \$5 or \$6 per million cubic feet" and to journalist Russell Gold that "once the geology was recognized and the engineering solution had been crafted, it was the land guys that made the difference" (Gold 2014, p. 169).

rewards into riskier junk bond markets, which has become a major source of funding for the extractive sector in recent years, especially shale (Dicker, 2015; Fried, 2016).

The new extractivism has been fueled in part by speculative capital but is also reflective of the geopolitics of resource control. Chinese sovereign wealth funds (SWF's) have been especially active investors in energy and metals, a solution to both Chinese surplus liquidity and strategic interests in resource security and control (Haberly, 2011). Many of these investments have been in Canadian firms which are especially active in acquiring mining rights in Latin America and increasingly in Africa as well. European SWF's, too, have participated heavily in the extractive sector, and most recently launched the European Fund for Strategic Investments (EFSI) in 2015, which already allocates more than 20% of investments to the energy sector. The EFSI Board is presently considering a proposal on a Minerals Investment Platform to facilitate adequate investment to meet the goals specified in the EU Raw Materials Initiative, the EU's recently adopted resource security policy framework. The Raw Materials Initiative reflects the confluence of new Chinese competition for resources on the world market with the emergence of a new sustainability consensus, which carries the implicit recognition that Earth's resources are not finite and are therefore scarce. Several geographers have recently explored how the discourse of scarcity is mobilized in the making of resource economies (Bridge, 2015; Labban, 2008, 2010; Le Billon and Cervantes, 2009). This scarcity discourse is placed into practice as strategies of securitization, and the inter-related dynamics of scarcity and security have important consequences as “world-making” practices with “capacity for constituting political ecological relations” (Bridge, 2015, p. 329).

However, resource security policies undertaken in resource producing zones are not necessarily experienced as benign attempts at managing future access and sustainability, as recently popularized policy framings around a “water-energy-food nexus” would hold (Endo et al. 2015). Rather, what comes to the fore is frequently the state's role in policing and militarizing mining concessions in the context of conflicts about land use and sovereign mining rights (Bebbington and Humphreys Bebbington, 2011). Maristella Svampa (2015) argues that the uneven geographies of resource production and consumption and their attendant practices of security are reflective of a

“commodities consensus” which “deepens the dynamics of dispossession and accumulation of land, resources, and territories, principally by large corporations, in multiscale alliances with different governments” (p. 66). Speaking to this commodities consensus, Fernanda Soliz (2013) shows that Latin American governments routinely frame extractivist development strategies around the discourse of the global need for resources, often appealing directly to the desires of the poor to access affordable consumer goods. These discourses attempt to responsabilize citizens for the rising demands for resources without acknowledging the uneven geography of consumption both nationally and internationally.⁵

The neo-extractivist discourse hinges the production of raw materials for global markets to economic development agendas as a matter of national sovereignty under the framework of “strategic resources,” elevating commodity production to a matter of military-diplomatic concern (Fornillo, 2015; Shade et al. forthcoming). In this manner, the resource security of the wealthy is tied to the *undermining* of the territorial basis of rural livelihoods, which the military and police claim as strategic resources for national development, bringing rural territory into direct conflict with state-territorial claims. These rural territories, however, must be made legible both to the state and to foreign investors and developers in order to be transformed into strategic, defensible, resources, and in the process, competing claims to the same lands must be de-legitimized. Such techno-political processes and enclosures do not happen seamlessly as a matter of state control and regulation of sovereign territory but rather confront both incumbent and alternative territorial configurations, regimes of ownership and control, and land use claims. It is these complexities which form the basis of conflicts about mining and land use and the inequitable distribution of extraction benefits. However, extractive sector governance policy has centered not on the spatial and territorial dynamics of extractivism but instead is largely centered on transparency and accountability initiatives which aim to solve problems created by mining projects through public disclosures of information.

⁵ As Soliz notes, according to the Latin American Observatory of Mining Conflicts database, as of 2009, the United States, Canada, Japan, and Europe – which have approximately 15% of the world's population – are disproportionate consumers of metals: 61% of aluminum, 60% of lead, 59% of copper, 19% of steel, and 80% of gold (p. 185).

Systemic opacity and the political economy of transparency

The era of new extractivism has been accompanied by greater attention to problems of environmental destruction, corruption, human rights abuses, and socioeconomic inequality. In addressing these concerns, extractive industries policy has converged around the themes of transparency and accountability (Haufler, 2010; Van Alstine, 2014). These themes fit neatly with dominant neoliberal policy frameworks that emphasize disclosure, efficiency, and corporate responsibility, while also aligning with activist and policy demands around access to information (Haufler, 2010). As such, policies to promote transparency are supposed to solve myriad problems, from fighting corruption and political violence to the development of more inclusive and democratic institutions, to improving the bottom lines of mining companies, leading Haufler to call transparency the “swiss army knife of policy” (p. 55). It is in this broader context of a “transparency turn” (Gupta and Mason, 2014) in global environmental governance that a number of initiatives emerged to promote “good governance” (DFID, 2006; Kaufmann et al. 2009; World Bank, 2003) of the extractive sector, particularly through disclosure-based mechanisms which posit a relationship between the availability of information, empowerment, and accountability. Yet in the context of the political economic shift in extractive investments and primary commodity prices described above, and subsequent “resource security” scramble for mining and land rights (Bridge, 2014; Collier, 2008), transparency regimes are more notable for what they conceal, rather than what they disclose.

While knowledge production about populations and territories - eg. censuses, cadastral mapping, property records, geological data, and various social statistics and calculable spaces - are recognized as pillars of modern state practice (Foucault 2009 (1978); Miller & Rose 1990; Scott 1998; Ferguson and Gupta 2002; Rose-Redwood 2006; Martinez Novo 2014; Crampton 2011), a number of scholars have examined the ways in which invisibility, silence, and opacity are likewise enrolled in relations of power and control (Das and Poole, 2004; McGoey 2007; Watts 2003; Kingsolver 2010; Raco & Tunney 2010). Strategies for producing, managing, and using knowledge are varied and often loosely coordinated, resulting in uneven knowledge terrains both within state apparatuses and the populations to be governed. At the same time, the complexity and

ever-changing institutional workings of contemporary bureaucracies and markets as well as the sheer amount of data produced and specialized expertise required by them can make “transparency” a misnomer. Inconsistent, non-existent, or impossible to navigate knowledges central to governing and/or democratic participation result in opacities and silences that, like efforts at legibility, influence and shape power relations and at times may generate conflict. Likewise, strategic silences and opacity can be instrumental in making certain bodies and demands illegible in the context of policy designs and bureaucratic implementations often aimed at improvement or national development (Murray Li 2010, Shade 2015). As Sider (2006) argues, "specific silences are crucial ... to making culture shared, inclusive, and simultaneously exclusionary" (p. 151). The “lack of information” and corruption that pervades extractive development reflects productive silences that are instrumental in creating exclusive rights of control in land to which more than one party has rights. Systemic opacity operates as a collection of governmental tactics and circumstances that are geared toward minimizing the competing claims of surface rights holders who stand to lose out in mining development.

The tendency of the mining industry toward opaque and corrupt practices is well-documented, and the obvious response has been the promotion of transparency and accountability mechanisms. The disclosure based mechanisms of transparency configure visibility in ways which open up and foreclose different political opportunities (Birchall, 2014). The status quo is easily maintained because disclosure does not lead to radically transformed narratives about extractive industries, since what is disclosed is determined and produced by the very institutions and corporations which are deemed inadequately transparent in the first place. As Fenster (2006: 885) points out in his critical discussion of transparency theory, “the frustrations with creating an open government originate in the concept of 'transparency' itself, which fails to consider the tensions it conceals.” In the context of the mining sector, these tensions are connected to changing commodity geographies, which requires that socio-legal frameworks at once facilitate the inflow of capital to the subsurface for new resource development and also suppress the barriers to this inflow presented by competing regimes of valuation and use on the surface. In the following sections I compare historical and empirical evidence from two cases in the Americas which demonstrate how, even in different cultural, legal, and resource

development contexts, subsurface governance converges around techniques of government which diminish the legibility of surface rights claims in favor of competing subsurface investments and development.

The Intag case: How land reform favors mining interests

Let us return to our heated dispute in northern Ecuador's Intag Zone of Imbabura Province, where residents of the Junin and Chalguyaco communities confront representatives of mining companies about who has legitimate rights to use land, and for what ends. The dispute takes place inside a 1500 hectare nature preserve comprised of land purchased by the town council between 1999 – 2005 for conservation and eco-tourism purposes. A trail leading up to a lookout in the preserve has been reduced to nearly impassable mud by mules carrying exploration equipment for the mining companies, and the resting place for hikers at the lookout point has been transformed into a mining camp and site management station.

Most of the workers in the camp are current or former residents of the Intag zone and are on the payroll of one of two companies: Andean Mineral Explorations of Ecuador (EMSAEC), which is a wholly owned subsidiary of the Chilean national mining firm CODELCO, and Kluane Drilling, S.A., which is a Canadian based exploration company with a branch in Ecuador. These two companies are working under the auspices of the newly created Ecuadorian national mining firm ENAMI, which has entered into an exploration and development partnership with CODELCO, where the Ecuadorian state will hold majority ownership (51%) of the mine. However, ENAMI has few employees and no capital or technical expertise to develop the mine; their primary role is in community relations and armed security provided by the military (Shade et al., forthcoming). ENAMI holds a 4,800 hectare mining concession which entails rights to explore for copper and molybdenum over an eight year period and which overlaps with the community preserve.

Although all minerals and hydrocarbons are the patrimony of the State and it has sole authority to administer the subsurface⁶, mining companies still need (state-granted)

6 From the Constitution of Ecuador (2008), Title I Constituent Elements of the State, Chapter I Basic Principles, Article 1: "Nonrenewable natural resources of the State's territory belong to its inalienable and

legal permission from private or communal landholders to use surface lands in the process of accessing these subsurface resources. As part of their constitutional right to defend territory and rights of nature, local residents formed a citizen oversight committee called a *veeduría*, which involves routinely hiking into the concession to monitor mining activities and collect data on water quality. On March 22, 2016, the *veeduría* entered the reserve to reforest areas that had been illegally cut for exploration activities, but were blocked by police guards acting on behalf of EMSAEC. The National Police argued that EMSAEC had leased the land from the appropriate landowner and had full right-of-way to establish the camp and carry out exploration activities.

This is where the story gets tricky. The landowner on record is a company called Ascendant Copper. Around the same time that the community councils were buying land to create the nature preserve, Ascendant Copper, a junior mining firm based in Canada which held rights to the mining concession from 2002-2006, also made land purchases to consolidate their rights to the surface. The residents' establishment of the community reserve was a direct strategy to control land and stave off mining interests after they successfully used direct action campaigns to block mining exploration by yet another transnational firm, Bishi Metals, in the 1990's. Ascendant Copper and the community council in many cases purchased rights to the exact same tracts of land (Figures 2.1 and 2.2). How was this possible?

The problem stems from a combination of the complexities and failures of past Ecuadorian land reform laws and institutions and the capture of Ecuadorian development policy by transnational mining interests. The Law of Idle Lands (*Tierras Baldías*) passed in 1939 established state authority over rural unoccupied lands (although often times these “unoccupied lands” were actually simply *untitled* lands managed by indigenous and peasant communities). Subsequent land reform laws in 1963 and 1975 expanded settlement into tropical forest lands, including the Intag Zone, and encouraged intensive land use logging, agriculture, and oil development. These later land reforms ended the serf-like labor system of *hausipungo* and expropriated some inefficiently managed lands from the church and large haciendas, but mostly focused on encouraging pioneers to

absolute assets, which are not subject to a statute of limitations.” English versión available from <http://pdba.georgetown.edu/Constitutions/Ecuador/english08.html>. Accessed Jan 7 2017.

settle and develop untitled lands, or *tierras baldias*. A Land Reform Institute, IERAC, was established to grant titles to pioneers who could demonstrate that they had occupied and managed *tierras baldias* for at least a decade. The IERAC, however, was abolished by another land reform law in 1994 because of widespread and deep corruption and inefficiency, and was replaced with a new institution, The National Institute for Agrarian Development (INDA). INDA, too, was ultimately abolished in 2010 and replaced with yet another institution, the Sub-Secretary of Land and Agrarian Reform⁷.

While a comprehensive discussion of the history of land reforms in Ecuador is beyond the scope of this paper, these land reforms have a number of consequences for understanding how opacity has been instrumental in territorial reconfigurations in the Intag case. First, because none of the land reform offices succeeded in adjudicating land titles for the majority of the country's *tierras baldias*, a formal, reliable, accessible land registry for rural titles has never existed. Accordingly, land ownership in Intag is handled informally, through contracts and handshake deals. This informal system fosters land trafficking, in which lawyers in cities sell false contracts, usually to urban residents, to farmland in the countryside to which they have no legal claim⁸. When mining firms seek to consolidate surface rights to legitimate their presence in anti-mining territories and access their concessions, they often partner with land traffickers. In the 1990's and 2000's, mining companies in Ecuador often successfully bribed INDA officials to obtain legal titles to *tierras baldias* to which they had no legitimate claim because they had no legal right of possession prior to receiving the title, a requirement under the land reform law⁹. This is exactly how Ascendant Copper obtained legal title to several tracts of land already purchased and managed by the Junin community¹⁰. The community's right to defend the

7 Created by Ministry of Agriculture Decree 373, May 28, 2010 abolishing INDA and justifying the creation of Sub-Secretary of Land and Agrarian Reform on the basis that INDA "does not pay attention to efficient and timely demands of society" and did not "fully comply with its powers." [Translation by author].

8 Entire barrios have been established using land trafficking practices in Ecuador's major cities, and low and middle income urban residents are usually the targets of traffickers (El Telegrafo 2014). Trafficking is also common in forested and protected areas since there is high demand for land to produce agricultural and timber products given that effective land reforms have not yet been fully implemented (see El Universo 2011).

9 Interview, Edgar Salazar, former president of the Ecuador Chamber of Mining and former country director for Rio Tinto's Ecuador office. May 27, 2015.

10 Interview, Marcia Ramirez, Chalguayaco community resident and anti-mining activist. Ramirez coordinated the legal challenges to Ascendant's land titles which led to several reversals upon adjudication.

nature preserve is enshrined in Ecuador's environmental, constitutional, and land reform laws, but legibility of these rights are eroded by formal recognition of Ascendant's title in the national land registry.

In 2006, Ascendant Copper was forced to abandon its operations in Ecuador after a scandal involving the company's use of hired paramilitaries to attack members of the anti-mining movement. In 2010 the Junin community challenged Ascendant's land titles, nearly all purchased through the same Quito-based land trafficker, and indeed the court reversed most of the land titles, reverting the lands back to *tierras baldias* or state lands¹¹. However, the land title where the mining camp is based was not reversed, and the state mining company which now holds the concession claims to have signed a lease agreement with Ascendant, although no such records have been produced.

Why did the residents not simply title the lands themselves through INDA? From the late 1980's until the election of Rafael Correa in 2007, Ecuador deeply embraced neoliberal reforms and overhauled key economic and social sectors in consultation with the World Bank and International Monetary Fund. A key feature of multilateral institutions' recommendations for Ecuador was overhaul of mining, environmental, and land rights codes to attract foreign investment in metals mining. The 1994 land reform that established INDA also inaugurated an informal policy, still in place, that land titles cannot be granted above mining concessions (although this was sometimes possible via bribes). A geological survey funded by multilateral donors and overseen by the World Bank created a database of mining prospects freely available to foreign corporations, and royalties and environmental regulations were practically eliminated (Zorrilla, 2006). More than 4,000 metals mining concessions were issued in less than five years in a country with almost no significant history of mining, except for artisanal mining. These concessions were issued almost entirely in *tierras baldias* where residents cannot obtain land titles. Moreover, the history of informality, bureaucratic complexity of land titling, distance of land offices from rural people, and lack of access to adequate legal information means that it has remained logistically impossible for most rural people to title land. Without title, land uses besides subsistence or illegal logging are difficult to

June 19, 2016.

¹¹ Land adjudication records obtained from the Property Registry of Cotacachi County (Certificate Numbers C19846 through C19858).

establish.

Although a self-described post-neoliberal government is now in power,¹² the historical appeal to attract mining investment under neoliberalism entrenched mining as a taken-for-granted national development strategy. That is, even under post-neoliberalism, the interests of the mining industry are seen as harmonious with public and national interests. At the same time, the increased role of the state in directing and securing resource development has led to the emergence of a resource paradigm in which private mining interests are protected by the state's security apparatus and police. As discussed in Chapter Three (Shade 2015), mining is supposed to transform the productive matrix of the country, eventually, but this would necessarily require broad scale dispossession of peasant and indigenous communities in the countryside where thousands of new concessions have been issued or are being processed under the new mining code, established in 2009 and weakened by subsequent reforms from 2013-2015 (Figure 2.3). Dispossession in *tierras baldias* and the violent suppression of land defense movements are supported and legitimized through the administrative opacity surrounding land rights acquisitions by *campesino*, indigenous, and Afro-descendent populations who mostly possess such lands. The weakening of rights to land and dysfunction of land reform institutes were explicitly connected to policies directed at opening the country's extractive frontier, and these policies have deepened and intensified in the context of a global explosion in extractive sector investments and mining rights acquisitions.

As the subsurface has become more legible to mining companies over the past two decades through the production of corporate and multilateral donor backed geological surveys and appeals by the Ecuadorian government to the international mining community to “partner” with the state in mining development, surface rights are increasingly muddled thanks to careless and corrupt land management practices and uncoded administrative rules that lock landholders out of receiving titles. Coupled with every-day concealments of information about mining development from local residents,¹³

12 As President Rafael Correa describes: “We aimed to lay the basis for a new contract that would allow the country to emerge from neoliberalism, recover national sovereignty over strategic resources, and put the democratic state back into the forefront of social policy” (Interview NLR 2012).

13 For example, access to environmental monitoring reports were repeatedly denied to residents, NGO's, and myself on the basis that the mining project is a “strategic” project of the State and associated information is accordingly subject to special security restrictions. Segundo Fuentes, Director of the

the progressive dilution of land rights on the surface above mining concessions amounts to a constitutive opacity in mining development. This constitutive opacity, which is executed through administrative and policy arenas that govern property, serves to hide the intentional privileging of extractive uses of the subsurface against other uses of both the surface and subsurface in order to make the primary use value as mining capital appear inherent and inevitable.

Opacity likewise sets the conditions of (non)knowledge through which land and property can be understood. As the Ecuadorian government designates Intag a “mining territory,” despite a locally constructed identity as an “ecological territory” opposed to mining, residents face numerous obstacles to *knowing* this mining landscape (Figure 2.4). Despite transparency laws that require information to be made available upon request, and promises by mining companies that “mining belongs to the citizens,” residents do not know when the Ecuadorian mining ministry promotes investments in their land at international mining fairs; or when a new concession is granted beneath their land; or the results of exploration studies as they progress. In these examples, opacity functions through the management of particular sites of knowledge, where the legibility of technical details and the alienation of rights is targeted to international investors and mining companies but shrouded from those who mining is theoretically supposed to benefit. Likewise, opacity operates by foreclosing access to institutional and administrative channels for making claims on land: When Intag residents attempt to enter lands to which they claim a right, they are blocked by military police, effectively closing off the possibility of making claims through either direct or administrative actions (Shade 2015). When they attempt to consult a lawyer, the lawyer is hired by the mining ministry.¹⁴ Opacity is also deployed in ways that strategically shield mining companies from accountability. When residents raise concerns about environmental contamination or

Northern Zone of the Ministry of Environment, referred to such widespread concealment practices in mining development when he argued with me about accessibility of this information during an interview, stating that “Of course you cannot get this information. You would not be able to get this information in your country either, so why do you expect it here?” (Interview June 11, 2015, Translation by author).

¹⁴ This occurred when Jose Serrano, former lawyer and consultant for the anti-mining movement in Intag, was appointed Subsecretary of Mines in the Ministry of Mining and Petroleum in 2008. From 2011-2016, Serrano served as Ecuador’s Minister of the Interior, where he heavily promoted mining in Intag and had a direct role in policing and militarization of the region, as well as the arrest and imprisonment of the Junin community president.

work safety conditions, the three different companies operating in the concession point fingers at one another, or at one of the past companies that held the concession (Figure 2.5). In this way, mining companies, in alliance with the state, produce the subsurface and reconfigure the territorial dynamics of land use through systemic opacity.

Appalachian shale gas and the historical weakening of surface rights in West Virginia

Sometimes systemic opacity is not directly pursued by either the industry or by state institutions, but instead is the result of the neo-colonial entanglements of extractive dependence. In the Ecuadorian Andes and Appalachian West Virginia, land ownership and mining rights are complicated by previous cycles of resource based economies and the legacy of colonial practices with regard to land acquisitions. Contemporary “land grabs” for mining contrast with the massive transfers of land for food and fuel markets that have been widely debated elsewhere (eg. Cotula, 2009; Li, 2011; McMichael, 2012) in that they are slow, piecemeal, and often start underneath the ground long before the surface impact is detectable. While the Intag case shows how mining and land rights have been transformed and harmonized to facilitate private investment over a relatively short period of time, the impacts of privately held mining rights in Appalachia's Marcellus shale boom is contextualized by more than 200 years of subsurface resource policy. With regard to land rights, Ecuador and West Virginia share an important similarity which is rooted in their colonial histories: the rights to the surface and the subsurface are administered and controlled separately, where surface rights holders have little control or recourse over extraction development.

The history of Appalachian mineral rights, although not widely studied outside of the field of Appalachian studies, has had important significance for the trajectory of both US property law and US industrial development. US property law is typically guided by the maxim “*cuius est solum, eius est usque ad coelum et ad inferos*” which is Latin for “whoever owns [the soil], [it] is theirs all the way [up] to Heaven and [down] to Hell,” a common law principle with historic roots in Roman law (Sprankling 2007). While the phrase dates back to the 13th century, a similar version appeared in William Blackstone's influential *Commentaries on the Laws of England* (1766), which established the basis for

an absolutist vision of property ownership in more recent Anglo-American property law. Despite this history, mining-related land practices came to diverge from this ‘Heaven-to-Hell’ vision and be replaced by the doctrine that land maybe horizontally severed into surface and subsurface estates. This doctrine of ‘estate severance’ allowing legal title to multiple strata to be vested in different owners became firmly entrenched in US law. Severance originates in two ancient prerogatives of the King in English common law: the right to all coin money, which theoretically reserved the right to all silver and gold deposits to the King; and the right to enter privately owned land to excavate gunpowder for use in defense (Stoebuck, 1971; Lopez, 1980).

These practices, dating from at least the 16th century, underwrote the notion that “royal mines” could exist separately from surface ownership, and so formed the initial basis for severance jurisprudence (Huffman, 1982; Wenzel, 1993). Colonists brought this practice to America¹⁵, where the onset of the industrial revolution provided the impetus for severance to evolve into a comprehensive legal doctrine applicable to private parties, as mining entrepreneurs utilized governmental severance precedent to establish the right of private parties to possess severed minerals (Whilden 2013)¹⁶. Horizontal severance practices were no doubt a contributing factor to the solidification in the late 19th and early 20th century of the now prevalent “bundled rights” approach to property in the US, widely attributed to Wesley Hohfeld (1913) and exemplified by the analogy that property is like a “bundle of sticks,” such that multiple people can own the "same" property if each possesses a different stick of the bundle (di Robilant 2013; Smith 2011).¹⁷

In Central Appalachia, the doctrine of estate severance was employed in early colonial westward settlements by land merchants who purchased large swaths of surface estates, while developers and speculators purchased minerals beneath many contiguous surface tracts (Dunaway 1994). While French and English colonial speculation drove land acquisitions and settlements before the Revolutionary War, a 1779 law passed by the Virginia Assembly allowed land certificates to be bought and sold without land surveys,

15 For a comprehensive discussion of early English law of mining see Blackstone (1922).

16 In *Del Monte Mining & Milling Co. v. Last Chance Mining & Milling Co* (171 U.S. 55 (1897) the Supreme Court of the United States recognized the doctrine of horizontal severance.

17 Note that the “bundle of sticks” concept has been attributed to both Justice Benjamin N. Cardozo and Wesley Hohfeld, who were both extremely influential in developing this conception of property in American law, even though the legal metaphor and its application to property may actually predate both of their uses (see Goldstein 1998 pp. 366-367).

which opened the floodgates for absentee land speculation based in imprecise land claims (Rice and Brown, 1993). A lucrative business emerged for lawyers in both land trafficking and resolving disputes. The result has been the entrenchment of unequal and absentee surface and subsurface land tenure patterns that now characterize central Appalachia (ALOT, 1981; WV CBP, 2013). Three major studies of land and mineral ownership in West Virginia conducted in 1974, 1981, and 2013 have confirmed the persistence of what Dunaway (1994) described as “a polarized Appalachian society in which the wealthy landed gentry amassed a majority of the acreage while more than half the settler households remained landless,” and under which circumstances approximately 75% of all mineral estates are held by absentee corporate owners (Miller 1974; ALOT 1981; WV CBP 2013; WV SORO 2004). As Shannon Bell (2016: 16) argues, “many understand [Appalachia] to be a region where the land and much of the population are exploited in order to keep the costs of energy low for the rest of country.” The historical and persistent problem of absentee land ownership in West Virginia has been acknowledged by many scholars, but the legacy of severance jurisprudence for the trajectory and spatiality of energy development has been under-explored.

Although energy production in West Virginia is usually associated with coal mining, the state also has a history of oil and gas production, and the governance of property has become much more complex with the advent of unconventional energy sources such as coalbed methane and shale gas¹⁸. In addition to severing subsurface and surface rights, deeds may also convey separate rights in specific resources, for example coal can be severed from oil and gas, or a deed may instead convey rights to specific soil depths¹⁹. Many severance deeds and production leases in West Virginia were executed more than 100 years ago, but presently apply to previously unknown resources and extraction technologies. George Washington wrote about his visit to the first “oil spring” along the Kanawha River in 1775, and early commercial oil production was documented in West

18 For example, the courts had to determine whether coalbed methane rights belong to the coal owner or to the oil and gas owner, where deeded separately, since coalbed methane arises from coal seams but is a form of natural gas, yet was an unknown resource at the time most mineral rights were conveyed.

19 All severed subsurface rights – whether the deed is “broad form” or specifically conveys certain depths or resources such as coal, oil, natural gas, etc. - are broadly subsumed under the category of “mineral rights” in WV common law, which is the term I use throughout this paper to refer broadly to subsurface ownership.

Virginia by at least 1859 (WVGES)²⁰. By 1876, hundreds of oil wells had been drilled in West Virginia, and the state's founders and early politicians were in fact mostly oilmen who became wealthy from this first boom (McKain and Allen 1994). In 1898, West Virginia led the nation in oil production, and as oil began to decline at the turn of the century, natural gas became an important energy source for the first time – which was developed commercially for salt works by William Tompkins, another West Virginia elite (Rice and Brown, 1993). From 1906-1917, West Virginia was the leading natural gas producer in the country (WVGES 2004). Most oil and gas rights in the state were deeded during that period, and another round of mineral severance deeds occurred during a subsequent energy boom in the 1970's. The earliest severance deeds, then, date back to the first commercial developments of oil, gas, coal, and timber production in the US, which emerged in the context of absentee speculation and land trafficking. It has been up to the courts to interpret old, vague, and faulty deeds through centuries of heirships, divisions, and leasing as well as for the application of new technologies where the original deed does not offer sufficient clarity. The problem of split estates has been a central theme in the governance of the Marcellus shale gas boom in West Virginia.

Natural gas contained in shale formations cannot be extracted *profitably* using conventional vertical drilling techniques. Instead, multiple horizontal or directional wells are typically drilled from a single well pad, and each is injected at high pressure with large quantities of water mixed with proprietary chemical agents and sand to crack open the shale and release gas trapped in its pores. This process is known as hydraulic fracturing, or “fracking.” The first Marcellus well in the state was completed in 2002, and to date more than 3,000 wells have been completed in West Virginia (Figure 2.6).²¹ An additional 1400 have been permitted but not yet completed.²² Marcellus gas development raises new governance questions for split estates since drilling – in comparison to conventional gas wells - occurs at much greater depths, is done horizontally at great

20 However it is well documented that both oil and natural gas were already in use by Native Americans upon the arrival of Europeans (eg. Gas Industry Vol. 13, 1913).

21 Only 10 wells were completed before 2005, and the “boom” in well construction did not begin in WV until 2006. Data sourced from West Virginia Geological and Economic Survey (WVGES) Marcellus Wells data file available at

<http://www.wvgs.wvnet.edu/www/datastat/Marcellus/Downloads/WVGES%20Marcellus%20Wells.xlsx>. Report created January 5, 2017.

22 *Ibid.*

distances and therefore invokes multiple mineral estates both horizontally and vertically, and also has much more substantial impacts on surface holders who have little to no influence over whether and how drilling occurs and receive none of the royalties from gas extraction (Figures 2.7, 2.8, and 2.9).²³ Although there is no accurate data available on the proportion of land in West Virginia with severed minerals, it is estimated that approximately 90% of properties are split in the southern part of the state (where major coal producing counties are located) and between 60-80% of properties in the northern part of the state (where major gas producing counties are located) (Danly 2015). According to current data from the West Virginia Geological and Economic Survey retrieved in January 2017, 78% of completed Marcellus wells to date are constructed on split estates. Two of the most prevalent issues that arise with regard to shale development on split estates are: 1) determining who holds the mineral rights and 2) determining whether and how the extent of surface owners' rights may differ under common law with regard to shale gas development in comparison to conventional gas wells (Anderson, 2013).

The determination of mineral rights is required for well permit applications, since permission, in the form of a lease agreement, must be granted to the gas company to develop the mineral estate (Figure 2.10). A full discussion of the numerous problems associated with identifying the mineral holder is not feasible here, but another article in progress discusses this problem at length. As Edelman (2013) notes, accelerated dispossession due to surface land grabs are difficult to document because of the complexity of land tenure and corporate ownership research and the often “intractable legibility problems” with regard to availability of land ownership data (p. 485). If anything, these issues of legibility and complexity are magnified when examining subsurface land rights, especially in West Virginia given the legacy of absentee mineral ownership, speculation, and land trafficking. Moreover, numerous stores of records are either nonexistent or were destroyed during the Civil War or later in several different

23 A number of factors make shale gas production much more disruptive in comparison to conventional gas wells: the size of the well pad, the need to construct impoundment pits to store flowback and produced water that is returned from a fracked well, emplacement of heavy machinery and processing equipment, significant continuous flaring that often occurs upon stimulation for days or weeks at a time, the increased traffic resulting from sand and water trucks and related dust, noise, and light pollution, as well as the potential for water contamination. In short, shale gas production entails the operation of a small industrial site.

courthouse fires and floods.²⁴ The combination of the physical opacity of the underground, the emergence of fly-by-night brokerage firms which speculate in Marcellus shale gas rights, industry practices that incentivize sloppy and fast title research in order to gather leases as quickly and cheaply as possible, and the legacy of absenteeism and heirships all complicate determinations of mineral rights ownership.²⁵ The situation is such that surface and mineral owners alike are poorly informed of their rights,²⁶ and county clerk offices are not a consistently reliable source for records, so that new dynamics of ownership are in fact invented through the title research and conveyance processes conducted by the oil and gas industry.²⁷

While developers must sign leases with all of the interest holders of a mineral estate, no such permission is required from the surface owner because the original severance deed itself is understood to imply an easement for “reasonably necessary” surface use to develop the minerals, on the basis that the minerals would not have been severed in the first place if the original deed holder did not intend for them to be developed (Huffman, 1982; Scherpf, 2015; Wenzel, 1994). The “reasonable necessity” standard has generally been interpreted to mean that the mineral holder has a right to whatever degree of surface access is necessary for the profitable extraction of the resource using available technology. In the case of shale gas, no alternative to horizontal drilling is available to profitably extract the gas, so surface access for well pads and fracking equipment is deemed “reasonably necessary” (Heron et al 2011; Anderson, 2013).²⁸

24 For a summary of missing records by county see West Virginia Archives and History News Vol. 1, No. 12, <http://www.wvculture.org/history/ahnews/0201news.pdf> Accessed January 5 2017

25 These conclusions are drawn from field interviews conducted between 2014-2016 with surface owners, mineral owners, county clerk offices in three WV counties impacted by shale development (Doddridge, Tyler, and Wetzell), industry abstractors (title researchers), mineral brokers and speculators, and legal professionals.

26 This is reflected on the web-based Mineral Rights Forum, where forums are organized by state and county for individuals to seek out legal and contract advice from other mineral rights holders and attorneys. A search of the Doddridge County forum returns 194 posts that reference disputes about mineral ownership errors and “lost” rights.

27 The only title research available to regulators and contract parties is usually the energy company’s title research. For example, the statistics on split estates previously referenced on this page were compiled from permit records filed with the Department of Environmental Protection. The mineral owners listed on the permit applications are provided by the gas company seeking the permit and is based on the company’s privately contracted title research. There is no verification process in place, so all of the data available is from the industry.

28 For two of the significant court decisions in West Virginia on this issue, see WV Supreme Court Case #11-1157 James Martin et al v. Matthew Hamblet in which the court ruled in 2012 that surface owners cannot challenge DEP permits for drill pads and where the pads are located on their property; and US Court

Moreover, US courts have long held that mineral estates are dominant estates, meaning that the surface is servient to the mineral estate in order to promote efficient allocation and maximum development of all resources. Wenzel (1993) summarizes the history of estate dominance in US law in her review of the Model Surface Use and Accommodation Act, noting that in 1882, the US Supreme Court affirmed at the national scale that US policy should favor mining exploration and development over surface claims. Likewise, the Pennsylvania Supreme Court articulated in a 1893 decision that

“The public might be debarred the use of the hidden treasures which the great laboratory of nature has provided for man’s use in the bowels of the earth. Some of them, at least, are necessary to his comfort. Coal, oil, gas, and iron are absolutely essential to our common comfort and prosperity. To place them beyond the reach of the public would be a great public wrong.”²⁹

These early court rulings favoring subsurface dominance are rooted in utilitarian principles that later became legally codified in the “allocative efficiency” rationale, which at once prioritizes social benefits at the expense of individual rights and also is rooted in neoclassical economic ideals. Representing this view, Huffman (1982: 203-204) argues that the US adopted mineral severance from the colonial precedent precisely “for the many economic advantages it allowed to both surface and subsurface resource developers ... Both the surface and mineral owners could take advantage of the economies of specialization which developing technologies made increasingly significant.”

The logic of allocative efficiency is based on willingness to pay as a measure of value. The mineral estate must be the dominant estate because it will garner a higher value than the surface if there are resources to be developed, and if the surface owner can no longer use the land for farming due to mining activities, she will relocate to another plot where the most efficient land use would be agriculture. The approach aims to maximize development of all lands according to their most efficient use. In accepted US legal doctrine, this is the primary role of property in markets: the efficient allocation of resources in markets through principles of universality, exclusivity, and transferability

of Appeals Fourth Circuit No. 12-1790 Whiteman and Whiteman v. Chesapeake Appalachia, LLC, decided in 2013 that the emplacement of drill waste disposal impoundments and other impediments associated with Marcellus well pads on surface owners’ land do not amount to “trespass” because these installations are considered “reasonably necessary” for mineral extraction (p. 27).

²⁹ Quoted in Wenzel (1993: 623) from *Chartiers Block Coal Co. v. Mellon*, 25 A. 597, 599 (Pa. 1893).

(Posner, 1973). The legal codification of subsurface dominance which grants access to surface lands for any “reasonably necessary” use to profitably extract resources gives mining, oil, and gas industries extensive latitude over surface lands in the name of maximizing efficiency. Accommodation doctrines adopted by various states as well as federal statute have sought to counter-balance the sweeping rights of mineral holders, but all have continued to uphold the preference for a dominant mineral estate and a standard of reasonable necessity, meaning that if there is no other alternative to recover the minerals – as in the case of shale gas – the surface holder has no recourse to stop a particular extraction practice (Wenzel, 1994; Miller, 2003; Hafer et al 2010).

In West Virginia, the only injunctive remedy available to surface owners who are aggrieved by fracking is to pursue a nuisance lawsuit, in which the surface owner must demonstrate that the mineral developer has exceeded the scope of the implied or express easement to surface use. A private nuisance exists when there is a “substantial and unreasonable” impact on the enjoyment of property, and the determination of “reasonableness” is based on the degree to which the harm to the individual outweighs the social value of the activity alleged to cause the harm (Heron et al 2011). The burden of proof on the surface owner is therefore extremely high, since it is well-established in US common and statutory law – indeed through the doctrine of mineral estate dominance – that resource development is ascribed a very high social value considered to almost universally outweigh individual harms.

Nonetheless, nuisance suits against oil and gas companies have proliferated in West Virginia since the onset of the Marcellus shale gas boom. Most nuisance suits include complaints such as constant truck traffic, unpleasant fumes and odors, 24/7 flaring of newly stimulated gas wells for extended periods of time, and bright lights during construction and operation. Nuisance suits can also come into play when gas development companies do not pursue the least intrusive options during development and construction, such as ensuring that access roads are constructed to cause the least amount of interference or damage to surface activities such as farming (i.e. failure to adhere to accommodation doctrine). As of February, 2016 more than 200 residents of Doddridge, Wetzel, and Tyler counties had filed nuisance suits against the most active Marcellus shale gas driller, Colorado based Antero Resources and its wholly owned subsidiary Hall

Drilling. A bill passed by the WV Senate (but not the House), SB508, was dubbed the “Help Out Antero Bill” because it essentially banned surface owners from filing nuisance suits in the future (Marcellus Drilling News, 2016).

Interviews with surface owners reflect bewilderment by their lack of recourse, and particularly the inability of law to protect their property rights. They recognize that the law does not “see” the forms of value that they associate with their land and often viscerally expressed their frustration. In a telephone interview, Retired Lieutenant Colonel Rick Humphreys, who unsuccessfully sued after his water well was destroyed by natural gas production, explained

“you have to make a very specific kind of claim. The courts have no way to interpret the real damage. It does not matter that this was my dream retirement, to come back home, to raise my grandkids, to have something to pass on. Because of split estates, the law doesn’t see that.”³⁰

As he continued to reflect on the situation, he became more upset, shouting “this is not property! This is not what I served for, what I fought to defend!” In another interview, Teresa Jackson, who has had to abandon her home because of the health effects she and her family suffered from fracking development, reflected through tears on the problem of differing conceptions of value at stake:

“So, the only chance I have is to try to get as much as I can out of my property to relocate and start over somewhere else. But the sad thing is, there's not a day-- it's almost like grieving. It's the death of your heritage. I mean that was our farm – I'll cry. That was our farm from 1950. That's home...[crying]...and it's just...I don't even want to go up there. I go up there to do dishes and I sit there and I cry.”³¹

These stories are not atypical of the interviews I conducted with surface owners in West Virginia’s shale fields. As in the Intag case in Ecuador, competing visions of value come up against legal distinctions which prioritize the economic value of land and equate mining with maximum social value. In the shale gas industry, opacity governs at every turn, from records management to environmental quality monitoring to labor relations. Still, improved transparency practices do little to resolve the opacity inherent to divided

30 Interview July 14, 2014.

31 Interview July 14, 2014.

estates, which erases alternative modes of understanding land and its value.

Conclusion:

Mining disputes are underlined by a fundamental tension: incompatible claims to the same land where in theory, each claim is backed by equivalently valid and enforceable rights. As I have shown, in both the Intag and West Virginia cases, the legally codified resolution is to privilege subsurface over surface rights. Yet this legal distinction rarely appears in either “David and Goliath” tales about mining conflicts or the accountability, transparency, and rights-based policy approaches to improving mining governance. This absence of emphasis on the property framework that legally codifies the subservience of alternative use values on the surface to mining capital is problematic, because what is at stake is whose claims are legible and valid, not disclosure of information or corporate negligence and abuse that can be remedied through “best practices.”

In both Ecuador and West Virginia, the legal priority given to the subsurface stems from the legacy of colonial exploration and mining policies in which subsurface resources such as gold and saltpeter were symbolically and materially constitutive of imperial economic and military might. It is from this legacy that minerals and hydrocarbons have acquired the status of “state patrimony.” Despite rhetoric about maximizing overall social or national welfare, contemporary mining development, as in colonial times, implies the necessity of dispossession and the making of new geographies of winners and losers. Here, the nationalist rhetoric of maximum social benefit of resource development in Ecuador converges with the US’s embrace of neoclassical ideologies of allocative efficiency, both of which tacitly acknowledge that the social benefit of resource development should be privileged above individual rights. These efficiencies and social benefits, however, are rooted in ideas about scarcity which reflect not a precise quantitative situation but rather a fundamentally qualitative, relative condition which changes as markets and social conditions themselves change. As in early colonial mining practice, scarcity in the “new extractivism” is about the race to produce and consume as much as possible (cf. Acosta 2012; Veltmeyer and Petras, 2015).

Of course, there are also important differences in these cases. The civil law

framework, by assigning subsurface rights directly to the state, more readily invokes military and policing to secure national interests in subsurface resources. However, the same also affords surface rights holders to mobilize greater demands for recognition of their interests in mining codes, which can more easily be modified under civil law. Common law, on the other hand, is inherently conservative and so provides few remedies to surface holders. Yet, the extent to which both Ecuadorian civil law and common law in these two case studies converge around the progressive weakening and undermining of surface claims is remarkable. Neither legal framework adequately accommodates non-economic forms of value on the surface, and this has important implications for anti-mining social movements which engage in revaluing strategies to support alternative valorizations of the surface. These struggles need to be seen not just as economic strategies or policy initiatives to achieve more incremental gains in accommodation for the surface, but rather must directly target the contradiction in law that guarantees and diminishes surface rights at the same time.

This contradiction functions through systemic opacity, that is, opaque governmental and industry techniques which necessarily diminish surface rights and obscure the relations of capital that privilege subsurface development above all other use values. On the one hand, this opacity is constructed from narratives that fail to acknowledge the social and cultural roots of resource demand and instead paint all resource production as an urgent necessity for the welfare of all people. This form of opacity requires that people come to see the subsurface - and by extension the surface above it - as valuable only to the extent that it produces metals or energy resources. On the other hand, in order to achieve this common sense attitude about mining, keep alternative claims in check and suppress recognition of the injustice of resource geographies, opacity must be practically implemented in a way that limits access to administrative institutions and hides the more unsavory aspects of extractive development. It is the latter set of opaque practices that yields the widespread calls for transparency, accountability, and respect for rights. Without recognition of how regimes of property coalesce around the facilitation of mining capital at the expense of all else, transparency paradoxically continues to enshrine opacity.

Chapter Two Figures:

Figure 2.1: Lands purchased through the community council

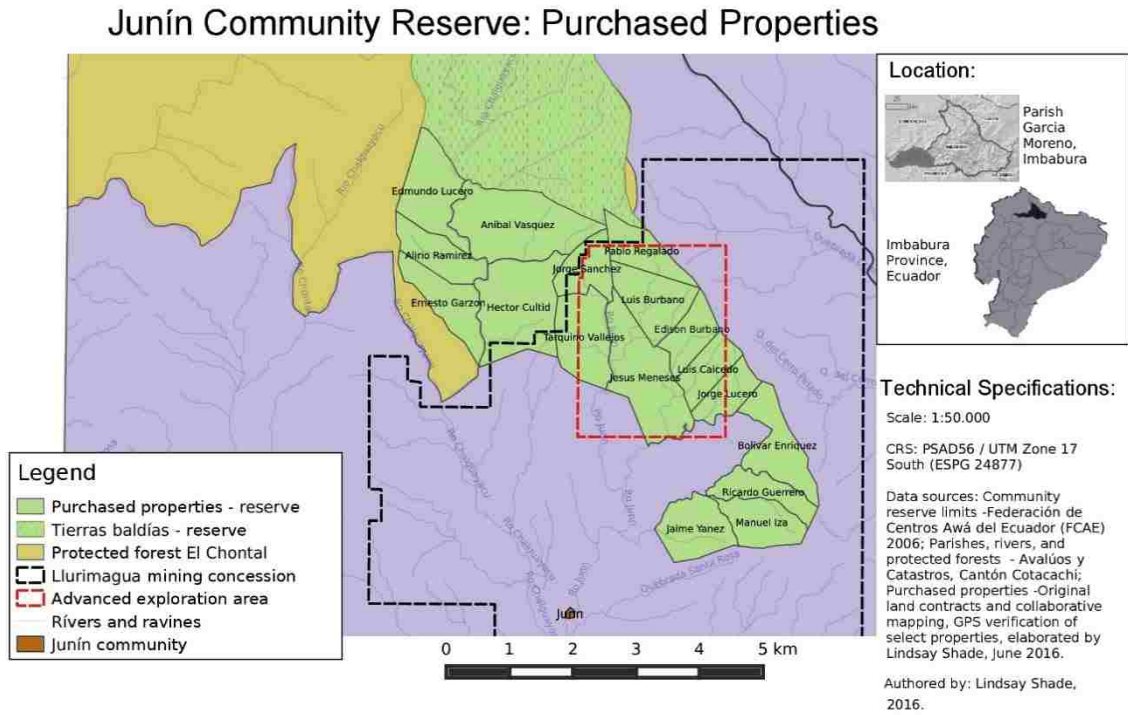


Figure 2.1 details: Lands purchased by the community council through informal contract and maintained as a community ecological reserve. Name labels for each tract refer to the individual resident who sold or donated the land to the community. Map by author 2016.

Figure 2.2: Ascendant Copper properties

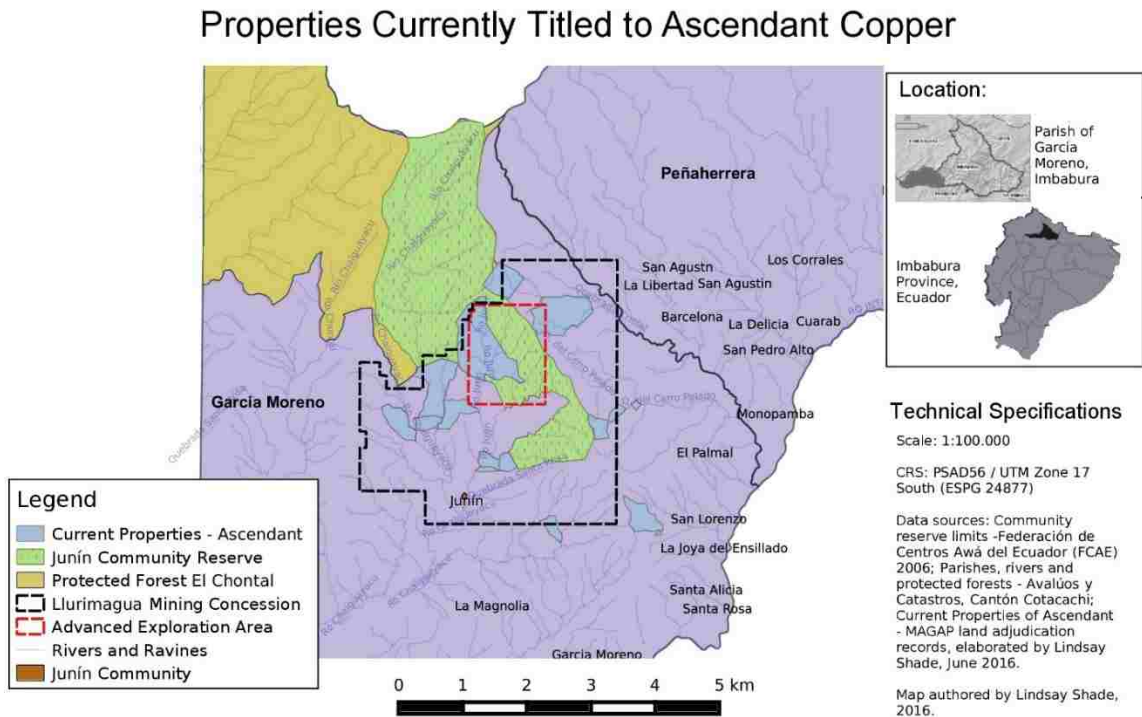


Figure 2.2 details: Lands to which Ascendant Copper still technically holds a valid title, but which overlap with lands legally possessed and maintained by local residents and/or the community council. Note that Ascendant previously held additional tracts that overlapped with much of the community reserve, but were challenged and overturned. Overturned titles do not equate to formal recognition of the community’s rights, however, but rather revert the land back to “tierras baldías” or state owned lands. Map by author 2016.

Figure 2.3: Mining Concessions in Imbabura Province

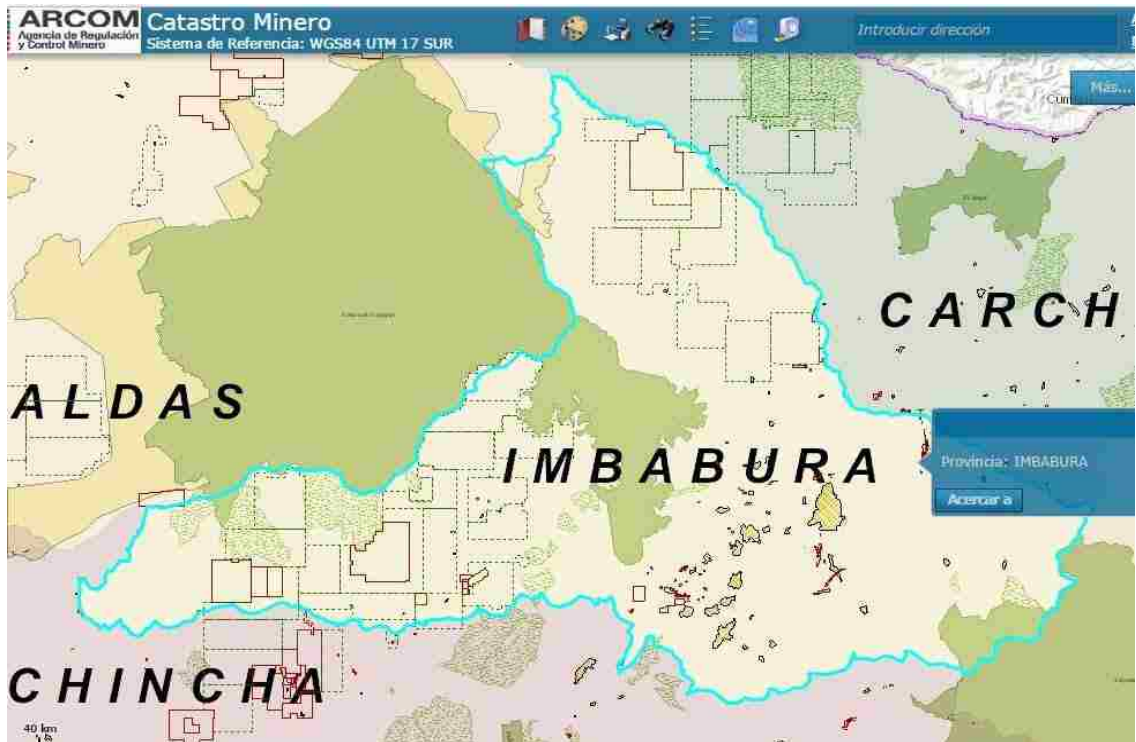


Figure 2.3 details: Agency for Mining Control and Regulation (ARCOM) Geoportal snapshot showing approved and in process mining concessions in Imbabura Province. Ecological Defense and Conservation Intag (DECOIN) asserts that these concessions open approximately 130,000 hectares of rural agricultural and forest lands to mining in Imbabura Province alone.

Figure 2.4: Fuera Minera



Figure 2.4 details: A sign erected by the state mining firm Enami EP on the road to Junin marks the Llurimagua mining project. Opponents of mining spray painted "Fuera Minera" (Get Out Mining). Source: Photo by author, 2015

Figure 2.5: Citizens Monitoring Group



Figure 2.5 details: The veeduría (citizens monitoring group) documents water contamination at points below drilling sites in the community preserve/advanced exploration area. Mining company employees attributed this contamination to prior exploration activities by the Japanese firm Bishi Metals, which held the concession until 1998. Bishi did severely contaminate water during their tenure, but results of ongoing monitoring by the veeduría at specific sites conflict with the claim that this instance is caused by legacy pollution. Source: Photo by author 2016.

Figure 2.7: Conventional Gas Well (Wetzel County, WV)



Source: Photo by author, 2016.

Figure 2.8: 16-well Marcellus well pad under construction in Wetzel County, WV



Source: Photo by author, 2016.

Figure 2.9: Wentz well in Doddridge County, WV.



Figure 2.9 details: An active fracking operation opposed by the surface owner, David Wentz. Source: Photo by Diane Pitcock of WV Host Farms, 2015.

Figure 2.10: Mineral leasehold in the Appalachian basin

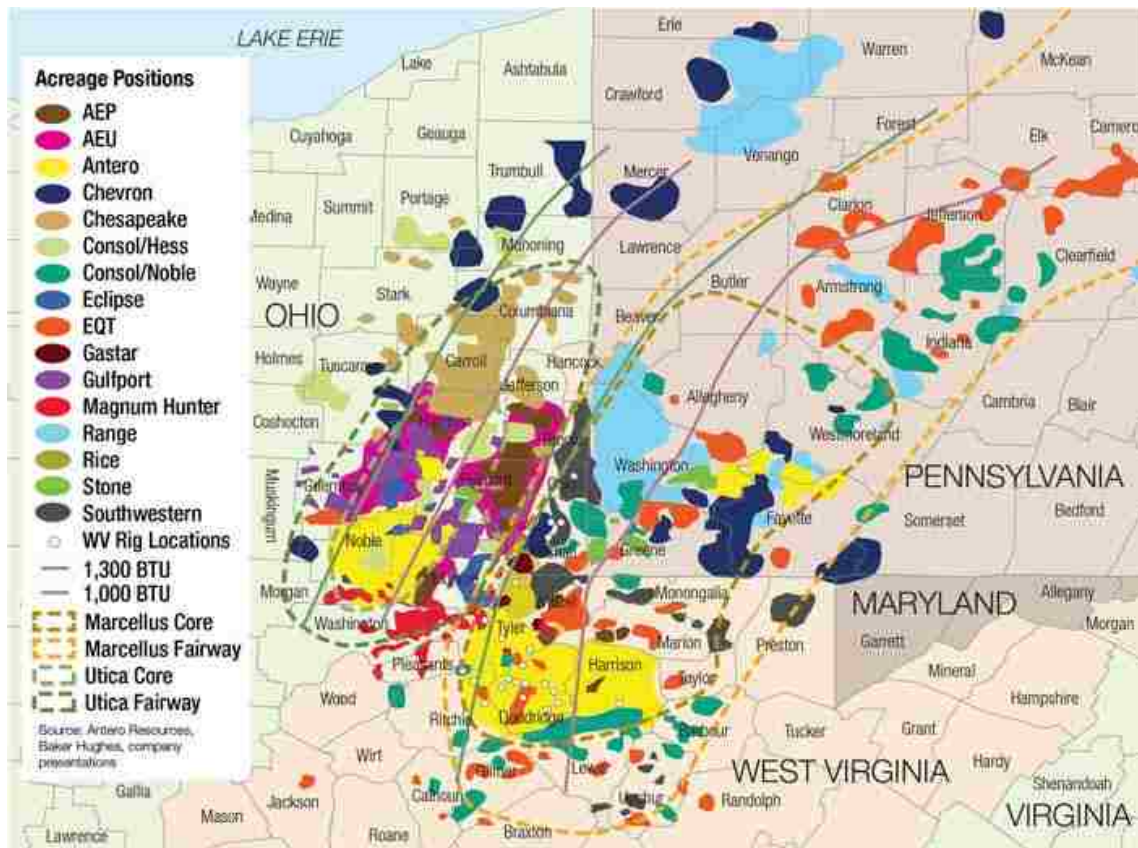


Figure 2.10 details: Leasehold acreage map for Marcellus shale play in the Appalachian Basin. Shale gas exploration and development companies appeal to investors by showing that they have strong leasehold positions. The yellow swaths represent the leasehold by Antero Resources, which by 2015 acquired 389,000 acres of speculative leasehold in three north central West Virginia counties. Source: “West Virginia Rising” investor page of oilandgasinvestor.com³²

³² Available at < <http://www.oilandgasinvestor.com/west-virginia-rising-783086>>. Accessed Jan 7 2017.

Chapter Three: Sustainable Development or Sacrifice Zone? Politics below the surface in post-neoliberal Ecuador

“Unfortunately, some people are childish, like the ones opposed to mining. But what country in the world has rejected mining? The dilemma is not ‘no’ or ‘yes’ to mining. It is well-developed mining. There is simply no dilemma...”
Rafael Correa, 2008.

Introduction:

Recent scholarship indicates that the geography of subsoil ownership in the Americas is undergoing significant changes. As Zoomers (2010, 438) notes, “increasing areas of land are also being allocated in the form of mining concessions (e.g. Mali, Honduras), which restricts the maneuvering space of local people” (p. 438). Indeed, Bebbington and Bury (2013) found that investment in extraction increased by thousands of percent in many small Latin American countries that are new mining investment destinations (e.g. FDI for mining increased by *79,000 percent* in El Salvador): since 2000 the aggregate rate of extraction of most minerals has more than doubled in South America, and in Ecuador and Colombia, more mining concessions were granted in the past 10 years than in the preceding two centuries (Bebbington and Bury 2013). These increases are fostered by legal and administrative changes, and these novel geographies have implications for the livelihood strategies of those who hold surface rights.

This move to amass subsurface properties for the purpose of future resource extraction produces value through ‘exclusion’ (Bridge 2008), resulting in increased competition for subsurface properties due in part to the nonrenewable character of underground resources. This process necessarily impinges on the surface uses of those people who live from the same lands or territories, not only through the mode of extraction itself but also through the changing social character of life on the surface as landmen, lawyers, public relations personnel, and mining executives swarm rural communities in efforts to secure subsurface property rights, sometimes with the assistance of the courts, police or military. The changing geographies and intensity of mining investment suggest a need for further investigation into these underground “land grabs” and how they are articulated in specific sites through legal and administrative

institutions.

Here, I draw from ongoing research conducted in Ecuador's Intag Zone to examine how subsurface land grabs are enforced in Ecuador. Using land title records, mining law, and interviews with policy makers as well as Intag residents, along with my observations as an international human rights observer in the region, I analyze how such land grabs are articulated and rationalized in state policy and political rhetoric in Rafael Correa's self-proclaimed "post-neoliberal" government. Specifically, I posit that these land grabs occur through a slow and piecemeal process which is the basis for the production of "sacrifice zones" in which people and their existing or desired land use practices are sacrificed in the name of national growth and development aspirations.

Sacrifice zones as state-territorial strategy: Vertical territory and securing the subsoil

A number of geographers have urged us to think through the ways in which space and sovereignty might be thought in vertical or volumetric terms to include the subsoil and airspace (Elden 2013; Bridge 2013, 2009; Adey 2013, 2010; Bebbington 2012; Braun 2000). In his 2013 address to the Political Geography Specialty Group of the Association of American Geographers, Elden (2013) argued that "biopolitics and geopolitics can be understood through processes and technologies of bio-metrics and geo-metrics, means of comprehending and compelling, organizing and ordering ... thinking about power and circulation in terms of volume opens up new ways to think of the geographies of security" (p. 15). Elden's point is that geopolitics has historically centered on flat or two dimensional spatial analyses of the distribution of power, but that reappropriating a "geometric" view of geopolitics opens up new terrains of analysis.

This point is particularly instructive when considering the relationship between the sovereign and the subsoil, for it is precisely the technical geometric and volumetric measurements of subsurface spaces that make them legible as objects of state territory and power. These measurements are also crucial in the reading of subsoil space as discrete volumes or properties, which enables the calculation and circulation of value associated with them (Bridge 2013). The moment of value production is also a moment of anticipation production, a fact activists opposed to mining know well, given that a

common strategy to block progress on mining projects is to interrupt the exploration activities during which measurement and quantification of reserves occurs. Accordingly, anticipation likewise invites securitization, as governments and mining companies react to (or sometimes, preempt) such interruptions by activists with measures to secure their investments. Here, I examine how the subsoil is secured in contemporary Ecuador, where a populist project to strengthen the state in the interest of national development is currently underway.

A wave of new leftist governments came to power in Latin America in the 2000s led first by Venezuela, Bolivia, and Ecuador, which promised more inclusive modes of governance. Despite being lauded as the first country in the world to legally codify rights of nature, the continuation of extractivist policies has been particularly striking under the Correa regime in Ecuador, which takes mining to be a key pillar of the state's strategy to guarantee *buen vivir* (living well) for all citizens. This developmentalist version of *buen vivir* departs significantly from the popular demands that brought *buen vivir*, or in Kichwa, *sumak kawsay*, into the political sphere to push for a return to use values and convivial living (CODENPE 2003; Greene 2012; Radcliffe 2013; Acosta 2013; Zorrilla 2014). These extractivist policies beg the question of how nature and nation each get decided, and get articulated, in state strategy.

Uneven citizenship and the sacrifice zone

A useful lens for taking up this question is that of the “sacrifice zone.” This term originates in early debates about nuclear energy in the US, when the Department of Energy briefly used the term “National Sacrifice Area” to designate sites of nuclear waste disposal that would become so contaminated, they may not be able to be cleaned up (NPR 1995). Activists quickly appropriated the term, and the current usage of “sacrifice zone” has been taken up by a number of journalists examining links between severe environmental exploitation and impoverishment in the US, especially the Appalachian coal fields (Davis 2002; Giardina 2010; Hedges and Sacco, 2012; Lerner 2012). However, most of these accounts examine areas that have already been “sacrificed,” where there is substantial evidence of depopulation, impoverishment, drug abuse, and health issues related to environmental toxins. The typical conclusion is that areas of

sacrifice are the product of an unfettered global capitalism, and that their sacrifice is driven primarily by profit-seeking (e.g. Hedges 2012).

I wish to explore the sacrifice zone in a different way, examining the political and legal techniques through which a sacrifice zone in Ecuador is produced over a long period of time. Likewise, I consider the importance of the sacrifice zone to the biopolitical project of the Ecuadorian state under new imperatives to ensure living well, in which some people and areas are “let die” in the context of a broader discourse of “making live” (Li 2009). I suggest that Ecuador's national project of living well, of which mining is a key strategic component, constitutes a biopolitical turn for the state with its emphasis on health, education, development and rights for nature. For Agamben (1998), bare life exists within a “state of exception” in which that life is excepted from the political calculations of the state's efforts to “make live:” it is life that is deemed unfit, often because it somehow threatens the security of the state's broader designs to make the populace live. Agamben's concepts of bare life and states of exception have been influential in works on migration and borders to understand how particular bodies are at once constitutive of citizenship but excluded from it (Peutz 2006; De Genova 2007; Mountz 2011; Millner 2011; De Genova and Peutz 2010). While Elden's (2013) call to think volumetrically highlights how state sovereignty may extend to the subsoil, I build on this idea to consider the possibility that the sovereign domain over the subsoil may itself constitute a type of border between the underground and the surface, where rights to one imply exclusion of rights to the other. The subsurface must be secured as a source of vitality for *buen vivir*, while *campesino* small-scale and subsistence lifeways on the surface are deemed unfit in the context of these national designs.

Some critiques of the usage of “bare life” in the social sciences suggest that this framing strips subjects of their politics (Fassin 2010; Owens 2009). I argue that the distinction between fit and unfit life, as in the making of all borders, always constitutes a political struggle, and that analysis of this struggle enables examination of changing instrumentalities of power as well as the political economy of life itself. The usage of the sacrifice zone as an analytical device allows a reading of how some natures and bodies may be subject to different rules and violence in the national project of living well, but these sacrifice zones are always spaces of contestation.

Toward a critical analysis of sustainable mining policies

As Dupuy (2014) reports, since the mid-1980s, 32 out of 124 countries with mining sectors have adopted new or amended existing mining laws to include social responsibility and sustainable development requirements, while nine more are in the midst of revisions to include such standards. While Dupuy (2014) sees the incorporation of social responsibility clauses into mining policy as a positive development that empowers mining affected communities, my examination of Ecuador's approach to incorporating social policies and rights of nature into the development of its first state owned mine leads me to conclude that there is a need for more critical interrogations of how “sustainable mining” policies figure in sovereign efforts to, in Elden's (2013) terms, “secure the volume.” The following sections examine the tensions between Ecuadorian *progresismo* – a term used by Latin American political ecologists to refer to neo-developmental policies (Gudynas 2009; Ruiz 2011; Zibechi 2011; Acosta 2011) – and the extractive imperative, which at once produces new mining sacrifice zones while guaranteeing their sustainable development.

The redistributive basis of mining expansion in Ecuador: 21st Century Socialism

“We cannot be beggars sitting on a sack of gold” is the mantra repeated regularly by Ecuadorian president Rafael Correa since he took office in 2007. The implication is that Ecuador should take advantage of its natural resource base, including petroleum and mineral wealth, in order to fund social development and redistribution. According to the Correa Government, Ecuador is in the midst of a “Citizen's Revolution” to usher in a new era of “21st Century Socialism.” This program is intended “to overcome 20 years of a long and sad neoliberal night” as Correa remarked on the night of his election in December 2006 (Hayes 2006). Correa's 21st century socialism is predicated on a process of state-led economic modernization that uses Ecuador's existing economic sectors, namely export of primary commodities and especially petroleum, to produce a surplus that can then be reinvested into the development of other sectors. Therefore, expansion of the natural commodity base along with the opening up of large-scale metals mining have been key priorities for the Correa Government (see Figure 3.1). As Correa summarized in a 2008 interview (Santacruz 2008):

“Unfortunately, some people are ‘childish,’ like the ones opposed to mining. But what country in the world has rejected mining? The dilemma is not ‘no’ or ‘yes’ to mining. It is well-developed mining. There is simply no dilemma. . . . [The childish environmentalists] believe that bringing an end to an extractive economy is to shut down the oil wells and close the mines. That is absurd. Getting out of that economy means using this sector surplus to revive other sectors of the economy: services, agriculture, industries, etc.”

Although aligned with traditional market approaches to development and modernization, Ecuador's current model of extractive governance includes a substantially increased role for state regulation and redistribution. Ecuador has indeed experienced a decline in poverty rates as well as increased levels of public spending not seen in decades. Debates around Ecuadorian post-neoliberalism have often pivoted around whether or not boosting extraction can be justified if it leads to public spending in the sectors that need it most, such as health and education (e.g. Grugel and Riggiozzi 2009; MacDonald and Ruckert 2010; Bebbington and Humphreys Bebbington 2011; Kennemore and Weeks 2011). Yet, there is a longstanding consensus in the social sciences that extractive rents are associated with rising inequality and weakened democratic institutions, particularly in countries such as Ecuador which have neither reliable institutions and fiscal frameworks for managing extractive rents, nor well developed non-resource based sectors (e.g. DPLF 2014; Crivelli and Gupta 2014; Polterovich et al. 2010; Gallagher 2010; Knack 2009; Brunnschweiler and Bulte 2008; Humphreys et al. 2007; Ballard and Banks 2003; Bryant and Bailey 1997; Dwivedi 2001).

The not-so-redistributive basis of extractive capital in Ecuador

The findings of Ecuadorian political economists are consistent with that consensus. Davalos (2013) and Davalos and Albuja (2014) finds that extractive rents have not been significant sources of social investment during six years of Ecuador's “Citizen's Revolution,” with the exception of a direct fuel subsidy to the middle class.

Rising household consumption demands associated with this subsidy have been met through imports from China, while overall production levels in Ecuador have lagged, suggesting that extractive rents are not being invested to revive other sectors of the economy. While there have been substantial increases in health and education investments, these increases were actually mandated by popular referendum a year before Correa took office. Ecuadorian law prohibits extractive rents from being used to cover permanent health and education expenditures. The coincidence of increased social investments noted by so many other analysts (e.g. Guardiola and Garcia-Quero 2014; Birdsall et al. 2011; Grugel and Ruggirozzi 2012; Montecino 2011; Cornia 2014) with increased extractive rents is examined in detail through analysis of Central Bank data by Davalos (2013) and Davalos and Albuja (2014). According to Davalos (2013), the majority of gains in public spending have been in infrastructure such as hydro-electric projects and highways, which are primarily funded by bilateral agreements with China and Brazil and are strategically positioned to facilitate new resource extraction projects. As Davalos (p. 201) summarizes, “if public investment is growing so significantly since the year 2007, it is not because the Ecuadorian regime has been responsive to the demands of popular sectors and has built infrastructure to solve their problems, but because there was a project of transnationalization of the economy by way of the integration of territories to extractive industries and globalization of capital.” Likewise, Acosta's (2013) analysis confirms that 90% of Ecuador's economy continues to be controlled by 1% of the population, 5% of large property holders control 52% of the agricultural market, while 60% of smallholders control just 6.4% of rural land. From this perspective, 21st century socialism has not brought broad structural reforms to the Ecuadorian economy, but has deepened dependence on extraction. And, in an impressive show of semantic acrobatics, at the same time that the Correa government insists that extraction is important precisely because it will help the country shift *away* from the extractive economy, presumably because extraction has obvious undesirable consequences, it also presents well-regulated extraction as a positive development option for rural communities.

Buen Vivir, Socially Responsible Mining and the Ecuadorian Mining Law:

In Ecuador, extraction is framed as a development mechanism not just for the nation on the whole but specifically for areas where concessions are located. Likewise the Correa Government devotes a substantial portion of PR efforts to conveying the positive impacts mining projects bring to local communities through press releases and the president's weekly televised program. In this section, I review how mining is legally codified as a sustainable enterprise locally accountable to the rights of people and nature.

Ecuador's current Mining Law was passed in 2009, despite protests from indigenous and *campesino* groups (Dosh and Kilgerman 2009) and was revised in 2013 to reduce royalties and delay payment of windfall taxes until mining firms recoup their initial investments. The law is slated to undergo more changes in 2015, as newly named mines minister Javier Cordova has stated that he would like to see the windfall tax revamped, scaled back, or eliminated completely, as well as streamline and simplify the process of acquiring a mining concession in order to attract more investors to Ecuador's mining sector (Hiyate 2015). Even before being weakened in 2013 and facing another round of tax cuts in 2015, Chilean economist and legal scholar Julian Alcayaga (2009) said of the 2009 law that its "accommodating attitude towards mining activities and the scope given to foreign investors leads me to think that this law was drawn up by the same people that gave us the Chilean Mining Law, which we inherited from Pinochet and his Minister of Mines, José Piñera: that is, the transnational mining companies." Still, the Correa Government emphasizes the importance of the Mining Law for both capturing a larger percentage of extraction revenues for the state as well as directing the ways in which mining projects should benefit local communities.

According to the slogan of the Agency for Mining Control and Regulation (ARCOM), "Mining for *buen vivir* is: environmentally sustainable, responsible to the people, and efficient for the country." ARCOM is one of several new institutions created by the Mining Law under the auspices of the Vice President's Office of Strategic Sectors. ARCOM is the arm of the Ministry of Mining that is responsible for all regulation, monitoring, and enforcement of Ecuadorian mining policy. Consistent with the ARCOM slogan, throughout the Mining Law are several guarantees to areas where mining projects are located to ensure their social responsibility and environmental sustainability. For

example:

- Art. 67 Labor obligations. Workers engaged in mining activities shall receive 3% of the share of the profit and the remaining 12% shall be paid to the State, which shall solely and exclusively assign these funds to social investment projects in health, education and housing, through the sectional bodies in the area where the mining project is located. The said project must be harmonized with the National Development Plan.
- Art. 75. Employment of national personnel. Mining rights holders are required to employ Ecuadorian personnel for the development of their mining work in a proportion of not less than 80%. As for the remaining percentage, specialized Ecuadorian technical personnel shall be preferred; in the event there are none, foreign personnel may be engaged, who must comply with the Ecuadorian legislation in force.
- Art. 77. Support for local employment and training of technicians and professionals. Mining concessionaires shall preferably engage workers resident in the locations and areas near to their mining projects and shall have human resources and social welfare policies which integrate the workers' families.
- Art. 79. Water treatment. Mining rights holders and artisanal miners who, with the prior authorization of the sole water authority, use water in their works and processes, shall return such water to the original river channel or lagoon or lake basin from which it was taken, free of contamination or in accordance with permissible limits established in the environmental and water legislation in force, so as not to affect the constitutionally recognized rights of people and nature.

As seen above, the Mining Law explicitly directs mine rights holders to employ local people, invest in social programs, and protect the rights of people and nature. In short, the Mining Law promises that extraction in Ecuador will not result in the production of sacrifice zones: instead it guarantees labor absorption and an intact landscape. Yet numerous empirical studies confirm the unlikely prospects for such outcomes. Large-scale mining in Latin America has been associated with human rights abuses, including kidnapping and assassination or threats of such, severe adverse health impacts from pollution, increased social problems such as prostitution and drug and

alcohol abuse, child labor, depletion and contamination of water resources, deforestation and desertification, and erosion of cultural lifeways (DPLF 2014, Bebbington and Humphreys Bebbington 2013, Ballard and Banks 2003, Evans et al. 2002, Peluso and Watts 2001). One only needs to imagine the footprint of a 5,000 hectare open cast copper mine – or better yet search for an image – to become skeptical that rural populations and their landscapes can be kept intact under such conditions.

The contradictions of the mining law: rural livelihood or proletarianization?

Even if promises of responsible mine development found in the Mining Law could be maintained, despite the overwhelming evidence to the contrary, there is a more fundamental dissonance within these Articles. It is problematic to, on the one hand, guarantee the proletarianization of the *campesino* population as mine workers and on the other hand, guarantee the rights of nature for which *campesino* and indigenous social movements fought to have constitutionally protected to enable the persistence of rural autonomy and subsistence livelihood. As Arsel (2012) has observed, the use of the Kichwa concepts *Pacha Mama* and *sumak kawsay* in the preamble of the 2008 Constitution suggests that under the new mode of governance, nature cannot be reduced to natural 'resources' that can be channeled into economic processes but instead must be respected and preserved for its intrinsic value. At the same time this new Constitution gives the state a key role in directing resource exploitation for national development.

Indeed, mines minister Javier Cordova explained at the 2015 Prospectors and Developers Association of Canada (PDAC) in Toronto that Ecuador's focus on community development is in fact aimed at securing miners' investments and placating communities opposed to extraction: “The social aspect is our focus, because we believe that in this kind of industry we need to have a community that works together with the project. It’s going to be difficult for a company to develop a long-term project if you’re going to always have a problem with the communities ... now that the government is more involved...in communicating the benefits of resource development...people have become much more open to development ” (Hiyate 2015).

***Buen Vivir* and the moral economy of space**

The socially responsible rhetoric of the Mining Law and ARCOM is part of a broader discursive regime employed by the state which serves to harmonize the extractive agenda with popular demands for a transition away from the extractive sector to an economy that privileges social equality and sustainable development. The logic behind constitutional “rights of nature” was to liberate nature from its condition as subject without rights or object as property, to operate in a structural and complementary relationship to human rights which recognizes the value of all living things as an ontological fact (Acosta 2013). However, even with political rights, nature does not cease to be objectified as property. Without this crucial transformation, sovereign power is obligated to recognize nature as a political subject, to speak for it and secure it, and this new political subject can only be known, heard, in terms of the rents it generates. The rents from large scale extraction are much greater than smallholder agriculture, and so a “moral economy of space” is produced in which land and people become more or less valuable depending on their relationship to the growth agenda (Cox 1999), and which invites the securitization of subsoil resources at the expense of human rights of those living from surface lands. Accordingly the emphasis on rights of nature and *buen vivir* obscure the reality of mining sacrifice zones, replacing the known consequences of a deepening extractive economy with the image of the paternal state carefully managing resources for the benefit of the nation. The following section examines how mining for *buen vivir* is administered in the case of the Intag Zone, the site of several mining concessions as well as the first state-run mining project, a proposed 4800 hectare copper mine known as *Llurimagua*.

Intag: The first state run “sacrifice zone:”

Intag is located in the western slopes of the Andes in Ecuador's Imbabura Province. Early settlers arrived in this sub-tropical cloud forest in the 1930s, escaping intense forms of subjugation as hacienda workers outside of Quito, the center of power in Ecuador. A second group found their way from Colombia in the 1940s as they fled that country's bloody civil wars. These settlers carved Intag's communities from the forest, and the majority continue to live “by machete,” as is often said. Memories of

landlessness and the history of self-sufficiency in the Intag region contributed to the emergence of a strong and consolidated land defense movement when mining companies sought to explore parts of Intag for copper deposits in the 1990s (Keucker 2008, Lopez 2012). Community resistance movements expelled two transnational mining corporations, Bishi Metals (Japan) and Ascendant Copper (Canada), in the 1990s and 2000s, respectively. Environmentalists have also spoken out against mining in Intag, since it is located at the confluence of two important biodiversity conservation areas, the Tropical Andes Biological Hotspot and the Tumbes-Choco-Magdalena Hotspot (CEPF 2001). In November 2011, the Ecuadorian Government announced that the development of the Intag mine would be the first project of the newly-created state mining firm, *Empresa Nacional Minera del Ecuador* (ENAMI EP), in partnership with Chile's national mining firm, CODELCO (since Ecuador has no existing large-scale mining expertise or infrastructure). In what follows, I only refer to ENAMI, but a reference to CODELCO is also implied with each reference to ENAMI. The formal process of informing impacted communities about mining exploration and the environmental impact assessment (EIA), known as socialization in Latin America, began in 2013 and at the time of writing, advanced exploration was just commencing.

Land Rights

While residents have raised legitimate concerns about eventual displacement from their lands, based in part on the EIA produced by the Japanese in 1998 (JICA 1998), there are significant impacts to land access that have already occurred as a consequence of mining incentives and speculation over the past 20 years. Lopez (2012) identified broad territorial transformations associated with the 20-year mining conflict, especially outmigration of young people and changing aspirations with regard to labor and development. According to his analysis, the promises, and often direct manipulation, of mining companies introduced new debates about material development in the region, instituting and deepening local perceptions of underdevelopment and desires to move away from the self-sufficient identity of previous generations. Moreover, Lopez argues that the growth of an environmental movement in the region and influx of NGOs likewise transformed the class structure of Intag and attempted to compete with the mining

industry to shape ideas about development in the region. He predicts that this class differentiation and emphasis on development will paradoxically lead to increased support for mining as residents seek out wage labor rather than subsistence farming.

Compounding this process of territorial reconfiguration are laws and regulatory institutions that explicitly favor a mining economy and suppress other land uses. Specifically, the 1994 Law of Agrarian Development marked the initiation of a policy to prohibit the issuance of new land titles above existing mining concessions. That is, existing land titles can be divided by inheritance as well as sold to new owners, but abandoned or previously untitled lands cannot be newly titled. Because concessions were previously granted for 80-year terms (and are presently granted for renewable 25-year terms), many untapped concessions overlap with surface populations. Ostensibly, this rule is a tool for logical land use planning and at the same time a tacit acknowledgement that alternative land uses cannot coexist with a mining economy: land titles should not be granted on lands designated for extraction. However, the station manager of the 17,000 acre Los Cedros Biological Reserve – a protected forest surrounded by mining concessions and small communities – argued in an interview that in practice, the function of the policy is to reduce the cost of doing business for mining companies.³³ If residents above concessions do not have land titles, mining companies can more easily avoid costs associated with securing easements – negotiated legal contracts that grant the right of use over the property of another for a specific purpose and a defined period of time, and with agreements regarding compensation for damages that may occur – during exploration phases. Likewise, a lack of land titles for local people means firms can avoid costs for relocation or damages that may occur during exploitation, since these costs are determined from tax assessment records.

Regardless of the intent of the law, it has concrete effects for residents which are only indirectly related to the future of extraction. Interviews revealed that a lack of access to land titles has inhibited at least some residents from making productive investments in their land to expand farming and tourism. An interview with a resident of the community of *El Paraiso* who wished to remain anonymous, stated that:

“I would like to take out a loan to expand production of beans on my land, but I

³³ Personal communication, DeCoux, 9 Jul. 2013.

have been prevented from taking out a title because of the 1994 law. We only have possession. Without the full title, we can't get loans.”³⁴.

El Paraiso is an extreme example of a community that was settled atop an inactive mining concession in the 1990s, where virtually no residents have access to full title to all of their land. Although it is difficult if not impossible to determine the extent to which a lack of access to land titles has contributed to the lack of dynamism of the region's economy, it seems plausible to connect it to the problem of “underdevelopment” which government plans would rectify with the implementation of a mining economy.

Similarly, many tracts of land in the region have been abandoned due to previous waves of mining exploration. In the early 2000s, a Canadian junior mining firm, Ascendant Copper, held the *Llurimagua* copper mining concession currently under development by the state mining firm, ENAMI. Mining companies commonly purchase land directly from residents as a means of accessing land and buying out opposition to mining. My review of the Cotacachi County Rural Cadastre showed that approximately 28% of all titled land area above the *Llurimagua* concession is presently under the name “Ascendant Copper,” a firm that has since been dissolved. This means that previous buy-outs have left more than a quarter of land stagnant for more than a decade, and remaining or new residents cannot take over the land for productive use since the lands were abandoned by a company that no longer exists (i.e. there is no legal entity that can sell the pre-existing title and new titles are prohibited).

The role of legal ambiguity in the production of sacrifice zones

The negotiation of land access for mining is fraught with ambiguity, and ENAMI has utilized such ambiguity to sidestep acknowledging the rights of landholders altogether. While companies that formerly operated in Ecuador may have purchased land titles outright above their concessions, Ecuador's 2009 Mining Law provides for the use of easements. According to the law, easements must be negotiated directly with land holders whenever access to private lands are required for mining operations, including the exploration phase. An interview with the current legal director of the Agency for Mining Control and Regulation (ARCOM) clarified that these negotiations do not

³⁴Personal communication, Anonymous, 12 Feb. 2015

become public record, unless the landholder refuses to negotiate an easement. In the latter case, the mining company may petition the appropriate regional ARCOM office to determine the terms of and authorize an easement.³⁵ The director also stated that in most cases, it is preferable for companies to purchase land outright before the exploitation phase, and that easements are primarily intended to be used during exploration for activities such as building roads and trails and accessing water sources. However, when ENAMI first began operating in the Intag zone in 2013, residents were informed that they should not expect offers to purchase land.³⁶ Presumably, this meant that residents should not expect land purchases during the exploration phase, as with previous concession holders, but that instead easements would be used to gain access to land. Nonetheless, residents were not aware that mining firms need formal permission to access their land: it was only through their participation in this research that residents were first informed about the Mining Law's provision for easements.

While the process for acquiring easements lacks transparency and it is not possible for a landowner to refuse to grant an easement over their property,³⁷ ENAMI seems to be skirting this process – facilitated by the fact that most residents do not even know that ENAMI needs permission to access their land. Since there is no public record of privately negotiated easements, it is impossible to determine if any easements have been acquired for lands above the *Llurimagua* concession, but interviews and participant observation suggest that so far they have not been used in Intag and several residents have complained about company workers encroaching on their lands. I accompanied a group of residents to a meeting with ENAMI personnel in which they sought a remedy to damage caused by the widening of a road to move in equipment for exploration. Their sugar cane crops were damaged while flooding caused the road to become impassible by motorcycles, the primary mode of transportation in the area (Figure 3.1). The residents had expected to meet with an engineer to voice their concerns, but instead, ENAMI's head of public relations, Jose Benitez, was sent to resolve the issue. He cited Ecuador's *Ley de Caminos* (Law of Roads) as giving the state complete and sole authority to construct public roads, and apologized for the fact that this is simply the law and

35 Personal communication, House, 13 Mar. 2015

36 Personal communication, Zorrilla, 25 Jun. 2013

37 Personal communication, House, 13 Mar. 2015

therefore there is nothing ENAMI can do to rectify their concerns. At the same time, he emphasized the benefits of the widened road, arguing that this would improve the ability to transport cattle.³⁸ Likewise, other residents of the Junín community have complained about and documented with photos the felling of trees and construction of other trails and roads as well as encampments of several workers inside a community owned forest preserve.

It is not surprising that ENAMI has failed to obtain “permission” or legal contracts in the form of easements to facilitate entry to private lands in Intag. On the one hand, easements can be read as a disciplinary technology of the law, which under the guise of objectivity and impartiality, produces and regulates our juridical lives, often lending legitimacy to the status quo (Kennedy 1997; Tadros 1998). The operation of easements as such a technology of governmentality might obscure and resolve the inherent conflict in the production of sacrifice zones, as the easement represents a mutual agreement between two free entities – the mining company and the rural peasant – which have equal power and status as juridical subjects of the law.. On the other hand, the deployment of legal technologies is rarely smooth or predictable, but opens up new spaces of conflict and negotiation. Therefore it is strategic for ENAMI to avoid the discussion on land rights altogether. Moreover, since peasants opposed to mining are seen as an impediment to the promise of living well, a burden to be cleared as efficiently as possible, their political subjectivities are not taken seriously in the context of the broader project of *buen vivir*. While legal institutions are ostensibly objective and impartial, the codified rights of those in sacrifice zones become illegible in the context of the patriotic project of the “Citizen's Revolution,” as the following section of the paper demonstrates.

In fact, Article 33 of Ecuador's *Ley de Caminos*, a product of the military junta of 1964, does “establish easements for compulsory and free access to land adjacent to public roads,” while a 2013 publication by the Ministry of Transport and Public Works clarifies that any road, including private roads, that has been in use by inhabitants of a particular area for more than 15 years is considered a “public road” (MTO 2013). The 2013 notice also clarifies that it is prohibited to plant crops or construct buildings within 25 meters of

38 Personal communication, Benitez, 9 Feb. 2015

the center of the road. Therefore, according to the *Ley de Caminos* ENAMI did not require an easement to widen the road, despite stipulations made by the Mining Law and ARCOM personnel. Yet, if the *Ley de Caminos* was being followed in that instance instead of the Mining Law, a notice should have been left with each affected property holder at least eight days in advance of the work.

The above example demonstrates both ENAMI's avoidance of the easement negotiation process as well as the confusion that arises when attempting to invoke legal protection in mining zones. *Campesinos* do not approach industry personnel armed with lawyers and have little recourse when the industry claims that the law does not really protect them. In the case of ENAMI's operations in the Intag zone, the law is used more as a shield for mining operators than for the responsible management of land and human rights. Obtaining easements would necessarily slow down the exploration process, inhibiting efforts to obtain additional foreign investment in the project, which was presented to investors at the March 2015 convention of the PDAC (Sectores Estratégicos, 2015). At the same time, acquiring easements would open up potential for property holders within the concession to refuse easements, involving ARCOM and thereby creating a public record of the dispute and state intervention. As the ARCOM legal director noted in our interview, "there are many problems with the *Llurimagua* project because many people in Intag do not support it, and this presents a legal problem for ARCOM."³⁹ The solution to this legal problem is apparently to prevent these legal conflicts from ever coming to the fore by using the *Ley de Caminos* as a "smoke and mirrors" tactic, offering "improved cattle transport" as an alternative public good when the mining project appears to be creating a "public bad."

Enforcing the Sacrifice Zone: Military police occupation of Intag and the criminalization of activism

Operating with a lack of transparency under conflicting and obscure laws is one way that ENAMI has proceeded with a "responsible and sustainable" state-run mining project amidst significant local opposition, but like all law, it has been *enforced* with the threat of violence (Benjamin 1921). On 8 May 2014, approximately 200 Ecuadorian

³⁹ Personal communication, House, 13 Mar. 2015

military police accompanied four mining executives and 18 technicians to the small community of Junín, historically the geographical and political center of the *Llurimagua* mining conflict (Ministry of Interior 2014; Figure 3.2). The purpose of this police force was to facilitate technicians' access to the area for the collection of samples required for the environmental impact assessment (EIA). Although official *Sectores Estratégicos* press releases stated that the company entered “with unanimous support from the community,” residents' memories of the event tell a different story (Sectores Estratégicos 2014).

Olga Cultid, a lifelong resident of Junín, said of that day “the way they entered, all those armed police, I thought we were at war. I was terrified.”⁴⁰ Polibio Pérez, a resident of the neighboring community of Chalguyalco Bajo, described the incursion of police as a “form of persecution by the national police,” noting “we are *campesinos*... people of peace... not terrorists” (Agencia Tegantai 2014). Banners hanging outside of houses in Junín likewise read: “*somos campesinos, no terroristas* (we are campesinos, not terrorists).

In order to better understand the disproportionate scale of 200 police entering Junín, consider that it is a community of approximately 30 households. This community has a reputation of taking direct action, such as blocking roads, to stall the progress of activities such as socialization and impact assessments. These large numbers of police, then, were a deliberate tactic to generate fear and ensure that mining personnel could successfully enter the area in the face of broad opposition. This fear has been maintained by the continued presence of 26 police deployed throughout Intag to date, 16 of whom were stationed in Junín until October 2014, when government funding to pay local families for food and housing was depleted. A report by a commission of Ecuadorian human rights and environmental organizations formed to monitor the situation in Intag found that the police presence constituted a *de facto* state of emergency as it restricted freedom of movement, freedom of expression, and freedom of association (Fundación INREDH et al. 2014).

Moreover, weeks prior to the police's arrival in Junín, the community's president and an important anti-mining activist, Javier Ramirez, was arrested and jailed. On 10

40 Personal communication, Cultid, 7 Sept. 2014

April 2014, Ramirez was invited to meet with officials of Ecuador's Ministry of Interior in Quito to discuss the mining project. He was told that the Ministry was open to hearing the community's concerns. During the meeting, Ramirez reiterated that, as president of the Junín community, he could not officially support the *Llurimagua* project since a majority of Junín residents are opposed. After the meeting, he boarded a bus to return to Junín, but the bus was stopped and police arrested him without charges (the warrant for his arrest was issued several hours after the actual arrest). Months later, he was charged with assaulting a state official and with rebellion. The charges proved to be false by medical records that showed he was under the care of a doctor at the time of the alleged assault. Nonetheless, Ramirez was held in prison in the provincial capital, Ibarra, without due process for 10 months, receiving his conviction and sentence on the day he was released. Still, ENAMI has sought Ramirez's re-arrest and imprisonment, and won their appeal in court on 16 April 2015. If the courts do not grant Ramirez's petition for an annulment of this decision, he will return to the "Ibarra Center for Social Rehabilitation," an overcrowded prison cited for human rights violations (La Hora 2011; El Telegrafo 2013), for another two months.

While Ramirez was jailed, a second, but explicitly pro-mining, local governance council (*cabildo*) was organized by ENAMI officials. Only one *cabildo*, an official unit of local governance equivalent to a town council, may be legally registered and active in a given locality. The *cabildo* must be popularly elected by members of its jurisdiction, and only the acting president may call for such elections to be held outside of normal local election cycles. The *cabildo* established by ENAMI, of course, does not meet these criteria, and it is unclear whether its authority will be accepted as legitimate by provincial and other higher level authorities, although it seems likely that it will be since it was established by an arm of the state, which at present acts with remarkable cohesion.

I lived in Junín in the Ramirez family home as an international human rights observer working with the Ecuadorian Ecumenical Commission for Human Rights (CEDHU) for five of the 10 months that Ramirez was imprisoned. Beyond the threat of police force and criminalization of the community's president as deterrence tactics was the use of Ramirez's imprisonment as a strategy to divide and conquer residents. Several friends and family members of Ramirez felt strongly that the community should publicly

come out in favor of the mining project so that he might be released, and I personally witnessed a group of ENAMI's engineers state this possibility directly to his wife, who was even offered employment with the company.

These strategies of intimidation, force and criminalization are interlocking with the legal strategies that obscure the possibilities for action for residents affected by extraction projects. During the meeting I mentioned in Section 5.3, during which several landowners intended to contest the widening of a road that caused destruction to their crops, ENAMI's PR director claimed that there was no legal option open to the residents, and that the road was for their benefit anyway. Since the meeting took place the day before Ramirez's sentencing hearing, and ENAMI's invocation of the *Ley de Caminos* deflated the initial strategy to contest the road, they shifted their strategy on the spot to pleading on behalf of Ramirez. This resulted in an important reinforcement of the power dynamic in favor of ENAMI: the group's strategies were quickly downgraded from the initial plan, made the night before the meeting, to block engineers' access to their properties until their complaints were answered. Instead, they ended up attempting to negotiate with a public relations figure, who effectively used the shield of the law to make their concerns about the road seem illegitimate. Ultimately, the meeting ended with pleading and offers of complacency if ENAMI could use its sway with national authorities to help their detained community president. This dispute about a road may be more significant than it seems on the surface. Social movements depend on finding and exercising unexpected sources of power, on turning the tables during small moments and building up to bigger moments (Maney et. al 2012, Khakgram et. al 2002; Sonny and Tracy 2011; Staples 2004; Chambers 2003). ENAMI's combination of strategies ultimately succeeded in blocking residents' efforts to “win” such a moment, transforming defiance into complacency.

The Myth of Making Live in Intag

Although activists deploying human rights campaigns succeeded in highly publicizing Ramirez's case in the country and internationally, the militarization of Intag and state tactics to secure subsoil rights are not well-known in Ecuador. Public discourse around extraction is carefully crafted by the Correa Government using a variety of state-

owned media and especially Correa's weekly television and radio program *Enlace Ciudadano* (commonly referred to as *sabatina*) where it is framed as a development boon to areas targeted for new mines. For example, an article in *El Ciudadano*, the official newspaper of Ecuador's "Citizen's Revolution," highlights a visit by Ecuador's Vice President (the head of *Sectores Estratégicos*) and the Minister of Interior to Garcia Moreno, the parochial seat of government for the sector of Intag in which the *Llurimagua* project is located. The article, titled "Intag is supported in its development by the national government," explains that the government of Ecuador considers that the strategic development of the *Llurimagua* project requires three central conditions: "strict respect for the environment, respect to the communities through a process of social development, and economic responsibility for the state and its citizens" (El Ciudadano 2014).

The article mentions 21 development projects totaling more than US\$5.5 million in local investments in the area of impact of the *Llurimagua* project, including three key projects which are especially emphasized: a new high tech Millennium School (a new educational program favored by Correa but widely opposed by Ecuador's teachers' unions), a Class A health care center, and a local police unit. To date, none of these investments have materialized, with the exception of a large-scale hydroelectric project expected to power the mine's copper concentration facility. So far, there has been no infrastructure development to deliver electricity from this project to local households and businesses.

It is unclear whether these projects are associated with the exploration or the exploitation phase. The distinction is important, because for all practical purposes of the state, exploration and exploitation constitute completely separate projects. When the impacts of large-scale mining are discussed in protest of the project, residents are always quickly reminded by representatives of ENAMI that the current project is only for exploration. The exploitation phase will require a new socialization process and environmental impact study, so related social and environmental impacts are never considered in the exploration phase, another legal technicality to control public discourse related to large-scale mining. Of course, there seems to be no limit to the state's discussion of the potential benefits, both for community and nation, of exploitation.

Although the school, health center, and police unit have not yet come to fruition, there have been some state investments in local households in Junín. These investments come primarily from direct payments to families for housing members of the national police, 16 of whom were stationed indefinitely in Junín until funds ran out in October 2014. These payments amounted to US\$19/day per family, plus US\$3 for each meal, a significant boon to household income considering the average for Intag families is less than US\$300/month, and less than US\$100/month for nearly half of all families (Dominguez 2014). When the budget for household payments was depleted in October, police were moved into the school house of neighboring Chalguyaco Bajo. This means that, rather than receiving a new high tech school building as promised by the project, primary and elementary school aged children in the most immediately affected area of the mining project were displaced to a school approximately one hour away.

In short, mining is framed as a “make live” program in itself, but the efforts to secure the mining site in Intag have resulted only in sacrifices: the sacrifice of the community president, of freedom of movement as police stop and harass motorcyclists using the roads, of autonomous daily life unencumbered by constant state surveillance, of agricultural crops and community owned forests, of stable tenure and associated economic possibilities for landholders above the concession, and even of local children's access to education.

Conclusion

I have argued that state strategies to control the subsoil are characterized by a set of biopolitical and security tactics that frame mining as a program for making live, which compels compliance but at the same time as disguises the production of mining sacrifice zones. Following Li (2009), these are the areas where labor is surplus in relation to its utility to capital, where resources are valuable, but the people are not.

The production of sacrifice zones, in the context of areas designated for mega-mining projects, is often a slow and piecemeal process. As demonstrated in the examples given herein, a number of “small” episodes of violence may occur long before the dramatic expulsions and protests that accompany mining projects, given that the development of a proposed mine takes many years. These incidences of violence, I

argue, are articulated through obscure legal techniques, court cases, and criminalization of activism, which produce the environments in which people become both politically and economically marginalized such that opposition no longer seems viable.

Furthermore, I have argued here that the production of these sacrifice zones in Ecuador is tied to a state-centric discourse of “living well” under 21st Century Socialism, of which mining is a critical strategic component. This suggests the need to not only critically re-examine how we think “post-neoliberal” Latin America in the context of widespread resource conflicts, but the need to further examine the specific mode of governance through which “rights of nature” and “living well” have become key government priorities alongside increasingly aggressive policies targeting the lands of the rural poor for extraction. On this point, Bridge's (2013) assertion that biopolitics increasingly centers on securing volumes in space – oil, carbon, water, etc. – is instructive. In this view, the Constitutional protection of nature gives the state more authority than ever to *secure* resources for the well-being of the population.

From this observation, the question follows: *which* population? In this brief space I have tried to devote some attention to the politico-legal domain that addresses, *inter alia*, the spatialities of jurisdiction, authority and administration in an attempt to raise the question of where the law applies, which law, and when. A telling story of which laws count for whom is found in the example of an episode of *Sabatina*, President Correa's weekly televised address, which showed photos of me, two other US students who have been human rights observers in Intag, and three of the most vocal Ecuadorian activists from Intag: we were all described as “foreigners” who use violence to impede the democratic development of the nation (Correa 2013). Residents opposed to mining in Intag are subject to the state's authority in much of the same way as non-citizens. The securitization of the subsoil means those living above it are outside of and subject to the state's security apparatus. The area above the *Llurimagua* mining concession in the Intag Zone has become a barrier to the patrimony of the state, to the full realization of its biopolitical strategies. It is a “sacrifice zone.”

Chapter Three Figures

Figure 3.1: Trespass in sugar cane fields



Figure 3.1 Details: Sugar cane crop damage caused by road construction for exploration, Junín community. Photo by author, 2014.

Figure 3.2: Military police invasion of Junín



Figure 3.2: Military police “peacefully” secure ENAMI’s access to Junín to collect samples for environmental impact assessment. Photo by anonymous Junín resident, 2014.

Chapter Four⁴¹: El Estado extractivista se encuentra con el Estado penal: el caso de Intag, Ecuador⁴²

Introducción

Reportes sobre el Estado penal en América Latina han documentado cómo el rápido aumento de las tasas de encarcelamiento en las dos últimas décadas fueron acompañadas por políticas neoliberales de desarrollo y la penalización de la informalidad urbana, como un medio para hacer a la ciudad más atractiva y segura para la inversión. Estos investigadores deducen que, junto con las políticas estadounidenses de guerra contra el narcotráfico, el desarrollo urbano neoliberal ha contribuido directamente a los problemas de sobrepoblación y de corrupción en las prisiones de América Latina, que han servido principalmente como almacenes peligrosos e insalubres para los sectores más marginados de la población. En el presente artículo esperamos construir sobre esta premisa para entender cómo las zonas rurales también figuran dentro el Estado penal en América Latina, en relación con las aspiraciones del neodesarrollo contemporáneo, que tiene como fines: la securitización y la explotación de los recursos naturales; la modernización de la producción y de la infraestructura rural; y la incorporación política de las poblaciones indígenas y campesinas.

En particular, examinamos la criminalización de la resistencia a la extracción en Ecuador, a través del lente de la detención política de Javier Ramírez (coautor de este artículo)⁴³. Ramírez es presidente de la comunidad de Junín, situada en la zona de Intag, provincia de Imbabura, que está política y geográficamente en el corazón del primer proyecto minero de la empresa estatal minera Enami EP. A través una examinación de la trayectoria de los 20 años del conflicto minero de Intag, desde la era neoliberal hasta la actualidad, argumentamos que ha habido un cambio acentuado en las propuestas del Estado ecuatoriano para facilitar el desarrollo extractivo, lo que coloca más fácilmente a los recursos del Estado en servicio del capital extractivo. Este servicio del estado a las

41 Co-authored with Javier Ramirez and Susana Castro. See Appendix C for author contributions.

42 The Extractivist State Meets the Penal State: The Case of Intag, Ecuador. See Appendix B for English version.

43 Este trabajo fue realizado como un proceso de colaboración entre los tres autores sobre la situación actual en Intag y el encarcelamiento político de su presidente, Darwin Javier Ramírez Piedra. A pesar de que Javier es un co-autor de este artículo y habla desde su punto de vista, como un grupo de autores, usamos la voz impersonal, teniendo en cuenta que la experiencia no pertenece a todos los autores.

industrias extractivas opera a través de la vigilancia y la securitización de las zonas rurales, y de la penalización de la defensa territorial y de las estrategias de supervivencia rurales.

Situando lo rural en los análisis del Estado penal

La mayoría de los estudios del Estado penal en Latinoamérica han recalcado la criminalización de la pobreza urbana en relación a los procesos de renovación urbana y a la circulación del capital (ej. Crossa 2009; Swanson 2007; Davis y Reyes 2007; Garcés 2004; Koonings and Kruijt 1999). Estos estudios han sido ampliamente informados por el concepto de Loïc Wacquant “de la contención punitiva como estrategia estatal para la administración de la población desposeída y deshonrada en la polarización de la ciudad en la era triunfante del neoliberalismo” (Wacquant 2008, p. 56). Según Wacquant (2009a, 2010), la penalización de la pobreza marcó un cambio central en la postura del Estado de bienestar Keynesiano hacia el Estado penal neoliberal en los EE. UU. y Europa que, Wacquant argumenta, se estaba convirtiendo en un fenómeno global, especialmente en Latinoamérica (2009b, 2004). La investigación contemporánea sobre la gobernanza urbana latinoamericana, en efecto, ha demostrado la extensa adopción de políticas que penalizan las estrategias de subsistencia urbana, principalmente mediante las políticas “broken window” y “cero tolerancia,” que apuntan al “desorden” percibido que, de hecho, es una consecuencia de las condiciones socioeconómicas (Dammert y Salazar 2009; Müller 2012).

Reportes sobre la adopción de tácticas severas para vigilancia, en unión con proyectos de renovación urbana por todo el globo, proveen una suntuosa base para entender la economía política del Estado penal. Sin embargo, es también importante considerar el despliegue desigual y la diferenciación espacial del Estado penal. Mientras los centros urbanos representan sitios de aglomeración y concentración del capital (Sassen, 2000), que están profundamente entrelazados con y son dependientes de los aparatos estatales para su funcionamiento (Cox 1999), asimismo el Estado sirve como función crítica en la transformación de la naturaleza en recursos y comodidades (Keucheyan 2014, Solíz 2013; Smith 2007; Glassman 1999).

La relación entre la naturaleza y la acumulación del capital, articulada por el Estado, es especialmente consecuente para los Estados con una larga historia de dependencia económica de la exportación primaria. Considerando cómo el Estado también estructura y despliega el aparato de seguridad para garantizar inversiones con base en la naturaleza, nuestro análisis se construye sobre investigación urbana previa que examina al Estado penal en relación con “la necesidad de convencer a los potenciales inversionistas de la seguridad y la protección de sus respectivos lugares de inversión” (Müller 2012, pg. 61). Es decir, nosotros sostenemos que la oposición a la extracción de recursos naturales y a otros proyectos de megainfraestructura, que han resultado en la criminalización de la protesta social, pueda ser productivamente analizada dentro del marco del Estado penal (ej. Alves 2012).

Expandir la noción de Estado penal, para rodear su irregular despliegue a través de las divisiones rurales-urbanas y centro-periferia, también exige la atención al cambio de modelo de gobernanza del posneoliberalismo en muchos Estados latinoamericanos, modelo que plantea retos para los conceptos de Estado penal así definidos por procesos de urbanización neoliberal. En Ecuador, el gobierno de Correa ha explícitamente denunciado la penalización de la pobreza y de la informalidad, y ha hecho reformas significativas e inversiones en mantenimiento del orden público, seguridad e infraestructura penitenciaria, así como en programas sociales. Asimismo, la llave principal del posneoliberalismo ecuatoriano es el Plan de Desarrollo Nacional, que aspira a “transformar la matriz productiva” mediante la modernización de la economía de Ecuador y, eventualmente, salir de la producción de comodidades primarias. Paradójicamente, la estrategia de desarrollo promovida por el gobierno correísta depende de ingresos proyectados considerando la apertura del país a la minería a gran escala, un “sector estratégico” que es un asunto de seguridad nacional bajo el “Plan Nacional de Seguridad Integral”⁴⁴.

En las siguientes secciones emprendemos un análisis de la confluencia del Estado penal y el Estado neoextractivista en un Ecuador posneoliberal, a través de una investigación crítica de 1) el surgimiento de los sectores estratégicos en el contexto del neoextractivismo y el discurso concomitante de seguridad; 2) los cambios del código

44 Ministerio Coordinador de Seguridad, 2011. Plan Nacional de Seguridad Integral

penal y la consolidación del control ejecutivo sobre la sociedad civil, y 3) la penalización de la defensa territorial bajo la cobertura de la expansión de la policía comunitaria y la retórica de la seguridad ciudadana. Además, exploramos cada uno de estos temas mediante la presentación del caso de detención preventiva de Javier Ramírez, y la subsecuente vigilancia y militarización de la comunidad de Junín con el fin de garantizar el acceso a la concesión minera Llurimagua con 4 839 hectáreas, creyendo que contiene yacimientos de cobre y molibdeno.

Sectores estratégicos y el Estado neoextractivista en Ecuador

En términos más simples, el extractivismo se refiere al modo de acumulación y a la dominación política asociada con la modalidad primario-exportadora a través de la estructura colonial o neocolonial (Acosta 2011; Fabricant and Gufstafson 2015; Veltmeyer and Petras 2014). El término ha sido nombrado frecuentemente para referirse a toda la historia del colonialismo de las Américas (ej. Acosta 2011), a la integración de Latinoamérica a la economía mundial durante el giro del siglo XIX (ej. Nadal 2012), o solamente a dinámicas contemporáneas de la *reprimarización* de las economías” en Latinoamérica | petróleo y metales desde la era neoliberal hasta hoy (ej, Svampa 2015). En debates actuales, el término es a veces modificado a “neoextractivismo” para connotar la adopción de políticas extractivistas, hechas por gobiernos populistas y progresistas latinoamericanos, para financiar programas sociales y la diversificación y modernización de la economía nacional. Aquí usamos el término neoextractivismo para indicar la continuidad entre las políticas puestas en movimiento bajo el neoliberalismo y la actual agenda neodesarrollista del gobierno correísta en Ecuador.

En la década de los 90, los gobiernos neoliberales de Ecuador colaboraron con instituciones de desarrollo multilateral para atraer inversiones extranjeras en el sector minero, mediante la revisión de las regulaciones mineras y ambientales para hacerlas más atractivas para la industria transnacional; realizando un estudio geológico comprensivo a fin de identificar reservas potenciales; criminalizando la minería informal; y creando incentivos fiscales para las empresas mineras extranjeras (Sacher and Acosta 2012). Estas reformas dieron paso a lo que Sacher y Acosta llaman una “hemorragia” de concesiones mineras, con 20% del territorio ecuatoriano bajo concesión (Acosta 2009, p.93). Esta fue la situación del sector minero ecuatoriano cuando Rafael Correa llegó a la presidencia en

2007, aunque todavía no existían minas a gran escala. A pesar de que el gobierno de Correa revocó la mayoría de las licencias mineras mientras el país elaboró la Constitución de Montecristi de 2008 y una nueva ley minera en 2009 — que elevó la vigilancia y el impuesto estatal sobre la minería de modo significativo⁴⁵ — las mismas reformas vieron el marco institucional y legal para que la minería se transforme de ser un sector atractivo para la inversión extranjera a ser un sector estratégico para el modelo económico y político de Ecuador.

El artículo 313 de la Constitución⁴⁶ establece que, “El Estado se reserva el derecho de administrar, regular, controlar y gestionar los sectores estratégicos, de conformidad con los principios de sostenibilidad ambiental, precaución, prevención y eficiencia. Los sectores estratégicos, de decisión y control exclusivo del Estado, son aquellos que por su trascendencia y magnitud tienen decisiva influencia económica, social, política o ambiental, y deberán orientarse al pleno desarrollo de los derechos y al interés social. Se consideran sectores estratégicos, la energía en todas sus formas, las telecomunicaciones, los recursos naturales no renovables, el transporte y la refinación de hidrocarburos, la biodiversidad y el patrimonio genético, el espectro radioeléctrico, el agua, y los demás que determine la ley”.

Con el artículo 313 como base constitucional, el decreto ejecutivo No. 849 fue emitido en enero de 2008 para crear el Ministerio Coordinador de Sectores Estratégicos⁴⁷, que tiene la misión de “dirigir la política para responsablemente aprovecharse de los recursos naturales para beneficiar a todos los ecuatorianos”. Las funciones principales de los Sectores Estratégicos son la supervisión y coordinación entre el Ministerio de Hidrocarburos, el Ministerio de Minería, el Ministerio de Electricidad y Energía Renovable, la Secretaría Nacional del Agua, el Ministerio de Telecomunicaciones y Sociedad de la Información, y, desde 2013, el Ministerio del Ambiente.

Estos son los sectores, con sus ministerios correspondientes, que son considerados esenciales en las metas de modernizar al Estado y a la economía nacional en acuerdo con

45 La ley de 2009 fue debilitado sustancialmente por las reformas en 2013 y la posterior legislación adicional para atraer la inversión minera, explica con más detalle en la pág. 7 en el presente documento.

46 Constitución de la República del Ecuador 2008. Decreto Legislativo 0. Registro Oficial 449 de 20-oct-2008.

47 Artículo 1 del Decreto Ejecutivo No. 849, promulgado en el Registro Oficial No. 254 de 17 de enero del 2008, de creación del Ministerio de Coordinación de los Sectores Estratégicos.

la amplia visión del Buen Vivir explicado en la Constitución de Montecristi y en el Plan de Desarrollo Nacional — concepto que atañe a todas las instituciones estatales ecuatorianas y su discurso. Por ejemplo, la declaración de la visión de 2016 resume las aspiraciones del Ministerio Coordinador de Sectores Estratégicos:

“ser el modelo de gestión para el aprovechamiento racional, sostenible y eficiente de los recursos mineros, hidrocarburíferos e hídricos, y la prestación efectiva de los servicios públicos de telecomunicaciones y de electricidad; generando el máximo beneficio social e impacto económico con una mínima afectación ambiental, orientados a garantizar los derechos de la población” (Sectores Estratégicos 2016)⁴⁸.

En este marco, los “derechos de la población” son garantizados por el desarrollo racional de los recursos naturales que es dirigido por el Estado, y la redistribución de rentas para mejorar la calidad de vida de la mayoría de ciudadanos, poniendo a la extracción en el corazón de los planes de desarrollo nacional. Como corresponde, la extracción de los recursos estratégicos y, especialmente, el desarrollo de minería a gran escala, mantiene un lugar esencial en el Plan Nacional para el Buen Vivir⁴⁹, que es conceptualizado para facilitar la salida de la dependencia de extracción y exportación primaria. No obstante, incluso proponentes de esta especie de “extractivismo sensible”, arraigados en esfuerzos para la transición a una economía posextractiva, han criticado severamente al Estado por no aplicar estándares sociales y ambientales rigurosos al dar concesiones, tolerando una gran variedad de infracciones, adoptando y promoviendo políticas cada vez más laxas con el objetivo de atraer la máxima inversión extranjera, y usando los ingresos de la extracción para construir principalmente infraestructura que facilita y profundiza la economía extractivista (ej. Gudynas 2011; Acosta 2012; Dávalos 2013; Solíz 2013; Dávalos and Albuja 2014; Shade 2015).

Según el Plan Nacional de Desarrollo Minero, la visión era desarrollar una industria de minería a gran escala que constituiría entre el 4% y el 5% del PIB durante el

48 Sitio web del Ministerio Coordinador de Sectores Estratégicos, Valores/Misión/Visión <http://www.sectoresestrategicos.gob.ec/valores-mision-vision/>

49 Plan Nacional de Desarrollo/Plan Nacional para el Buen Vivir 2013-2017, <www.buenvivir.gob.ec>, que se refiere al desarrollo de la minería más de 150 veces.

periodo 2011-2015⁵⁰, pero una serie de reformas y la gran caída en el precio del petróleo han llevado aun impulso más agresivo de la inversión extranjera en el sector minero en el periodo 2016-2017; el Estado espera atraer \$588 millones en inversiones mineras en el 2016, y aumentar a 1,5 mil millones en 2017 (El Universo 2015). Para ese fin, un decreto hecho por el Ministerio de Minería⁵¹ en marzo 30 de 2016 creó procedimientos para una subasta abierta de concesiones mineras, proponiendo 431 801 hectáreas el 1 de abril, que generó más de 196 aplicaciones en una semana (El Universo 2016). El Ministro de Minería, Javier Córdova, llamó a la subasta un triunfo, al igual que varios analistas de la industria minera, quienes establecieron que, por ejemplo, Ecuador ya “está caminando en la dirección correcta” y que el presidente “Correa reconoció que se había equivocado” en cuanto al sector minero, después de tratar de capturar una proporción mucho más grande de ingresos mineros para el Estado a través de la Ley minera de 2009 (El Universo 2016). Los “éxitos” se produjeron después de varias reformas en la ley minera y en las políticas fiscales entre 2013 y 2015 que incentivaron la inversión extranjera. La empresa global de consultoría Wood Mackenzie, que se especializa en la industria minera, fue contratada para ayudar a diseñar estas reformas y promoverlas en el Día de Ecuador de la Feria de la Asociación de Prospectores Mineros de Canadá (PDAC) en 2016 (Barnes 2016; Ministerio Coordinador de Sectores Estratégicos 2015).

Algunos de los beneficios de estas reformas e incentivos amistosos de la industria, son la eliminación de los requisitos para presentar informes de monitoreo ambiental y también la eliminación de los requisitos para obtener la aprobación de las comunidades y de las autoridades locales antes de comenzar operaciones⁵²; reducciones significativas en la participación del Estado en ingresos de minería en forma de regalías e impuestos⁵³; y la

50 Plan Nacional de Desarrollo del Sector Minero, 2010-2015, Ministerio de Recursos Naturales No Renovables, Agosto de 2011, p. 73.

51 Decreto Ministerial No. 2016-002 del Ministerio de Minería, publicado en el registro oficial No. 722 el 30 de marzo de 2016.

52 Ley Orgánica Reformatoria a la Ley de Minería, publicada en el registro oficial No. 37 el 16 jul 2013.

53 La ley Orgánica Reformatoria a la Ley de Minería establece un límite de 8% para las regalías. Decreto ejecutivo No. 475, se reformar el reglamento general a la ley de minería, publicado en el suplemento del registro oficial No. 385 en 28 nov. 2014 establece nuevas fórmulas fiscales que eliminan efectivamente el impuesto a los ingresos extraordinarios y el impuesto de ajuste soberano. La Ley Orgánica de Incentivos para Asociaciones Público-Privadas y la Inversión Extranjera, publicado en el registro oficial No. 652 en 18 dic 2015, restringe la aplicabilidad del impuesto a la renta; exime equipos de minería del IVA; y aplica el reintegro del IVA por las exportaciones mineras. Resolución No. 135-INS-DIR-ARCOM-2014, publicada en suplemento del registro oficial No. 415 en 13 ene 2015, permite la depreciación acelerada de 5 o 10 años

eliminación de la burocracia para la adquisición de nuevas concesiones⁵⁴. Con estas reformas, la recaudación de impuestos total de Ecuador está en par con la de Colombia y de Perú, dos países ampliamente criticados por mantener y profundizar políticas neoliberales, especialmente con respecto al sector extractivo (Lust 2014; Gibbs y Leech 2009; Sullivan 2014).

Si el gobierno de Correa ha continuado la neoliberalización del sector extractivo, ha sido a partir del cambio de modelo neoliberal estatal que se basa en el repliegue del Estado. Hoy, el Estado ecuatoriano está poniendo los recursos del Estado directamente al servicio del capital extractivo. Una presentación para la industria minera transnacional en la PDAC 2016 dada por el Ministerio Coordinador de Sectores Estratégicos, el Ministerio de Minería y Wood MacKenzie, destacó la inversión sustancial de Ecuador en su infraestructura para beneficiar a la industria minera como vías, puertos y proyectos hidroeléctricos⁵⁵. Además, reivindica que el país tiene una ventaja del 40% con respecto a otros países mineros en América Latina en costos de operación, de mano de obra, electricidad, combustible y carga⁵⁶.

En la misma presentación al PDAC, el Ministerio de Minería promovió oportunidades para asociaciones privadas con la empresa minera del Estado Enami EP para desarrollar las concesiones existentes, en las que la exploración inicial, los estudios de impacto ambiental y las relaciones comunitarias se realizan a costa del Estado⁵⁷. Si bien la subvención de infraestructura y exploración para el desarrollo minero beneficia significativamente a las empresas privadas, el funcionamiento de las relaciones comunitarias es crucial. Como lo resumió el Ministro de Minería, Javier Córdova, “antes de nuestro gobierno, las relaciones en la comunidad eran solo entre la empresa y la comunidad —era una relación directa— y eso creó malos resultados” (Hiyate 2015). En contraste, como “sector estratégico”, la industria minera en Ecuador ahora disfruta de

a discreción de la empresa.

54 Decreto Ministerial No. 2016-002 del Ministerio de Minería, publicado en el registro oficial No. 722 en 30 mar 2016.

55 Ecuador Mining October 2015 preparado por Wood Mackenzie, p. 6 recuperada de <<http://www.sectoresestrategicos.gob.ec/wp-content/uploads/downloads/2015/11/Ecuador-Mining.pdf>>

56 *Ibíd.* p. 8

57 Ecuador: The New Mining Frontier, p. 19. recuperada de <http://www.mineria.gob.ec/wpcontent/uploads/downloads/2016/03/PDAC2016_EcuadorDay04_MinistroCordova.pdf>

toda la legitimidad, autoridad y recursos de seguridad (como policía y militares) del Estado.

Asegurando los sectores estratégicos y la criminalización de la defensa del territorio

La reorganización contemporánea de la economía política de Latinoamérica ha sido marcada por una adopción de un discurso de “recursos naturales estratégicos,” particularmente por los gobiernos populares-nacionalistas⁵⁸. Como Bruno Fornillo (2014) ha observado, este discurso tiene sus raíces en la tradición diplomática-militar post Primera Guerra Mundial, que fue cimentada como parte de la respuesta proteccionista a la crisis de los años 1930. El resultado de este discurso fue asignar un valor excepcional a un recurso como asunto de seguridad nacional y, fundamentalmente, equiparar a los recursos con poder.

Según Fornillo, la versión actual del discurso de los recursos estratégicos y sus políticas asociadas refleja la continua reordenación de las dinámicas de acumulación de capital, en torno al conocimiento de que los recursos son finitos —expresado en la política extranjera de la Unión Europea sobre seguridad de recursos como premisa para asegurar las provisiones— y la contradicción de la necesidad de un desarrollo con un frente verde o sustentable dentro de estructuras económicas basadas en la subsunción de la naturaleza al capital.

Los recursos estratégicos, en este sentido, son expandidos necesariamente más que aquellos recursos tradicionalmente asociados con tecnología militar y/o rentas monopolistas para incluir, al menos en el caso de Latinoamérica, aquellos que anteriormente no fueron dignos de atención, fueron considerados inagotables, o aquellos que son considerados clave para el desarrollo de una economía verde. Este discurso evolutivo de recursos estratégicos desplegado en Ecuador, y en otras partes de América Latina, continúa caracterizándose por la genealogía de la tradición militar-diplomática que señala a ciertos sectores de la naturaleza como materia de seguridad y soberanía nacional.

58 La versión actual del discurso recursos estratégica y sus políticas asociadas ha sido promovida por las instituciones multilaterales y los gobiernos europeos, entre ellos la Comisión Económica para América Latina, el Foro Económico Mundial, el Banco Mundial, Alemania y Noruega.

En el caso ecuatoriano, la adopción del enfoque de recursos estratégicos puede ser vista dentro de un contexto más amplio en el Plan Nacional de Seguridad Integral⁵⁹, que integra el discurso de seguridad con los planes de desarrollo. El plan define seguridad integral como “la condición que tiene por finalidad garantizar y proteger los derechos humanos y las libertades de ecuatorianos y ecuatorianas, la gobernabilidad, la aplicación de la justicia, el ejercicio de la democracia, la solidaridad, la reducción de vulnerabilidad, protección, respuesta y remediación ante riesgos y amenazas” (p. 14). El plan de seguridad representa un importante cambio general en el discurso del Estado y de las prácticas en relación al desarrollo de un aparato moderno de seguridad, que está organizado en torno a las normas disciplinarias de la protección y la ciudadanía. Varias secciones prefiguraron la adopción de leyes que codifican explícitamente la acción militar y policial para garantizar los proyectos de sectores estratégicos y penalizar la defensa territorial.

El Plan Nacional de Seguridad Integral (2011) asigna responsabilidad para proteger los recursos estratégicos, bajo el respaldo de la defensa militar como materia de soberanía y desarrollo nacional. Explícitamente prescribe una política de “fortalecer y especializar las capacidades estratégicas y operativas de la Defensa en todos los niveles y ámbitos de la sociedad”, para la estrategia de “proteger los recursos estratégicos del Estado” (p.94). El marco de defensa elaborado, en líneas generales, para los recursos estratégicos dentro del plan de seguridad integral, está específicamente codificado en la Ley de Seguridad Pública y del Estado⁶⁰, que fue reformada en mayo de 2014 para permitir que las fuerzas armadas respaldaran a la Policía Nacional en cuanto a la seguridad pública interna. Este cambio fue extensamente publicitado con respecto al uso militar para reprimir protestas, pero el despliegue militar para reprimir a las comunidades oponentes a la minería ha recibido comparativamente menos atención.

El Artículo 43 de la Ley de Seguridad Pública⁶¹ autoriza al Ministerio de Defensa a desplegar fuerzas armadas como medida de prevención y protección de establecimientos e infraestructura pública o privada. El manual del Ministerio de Defensa

59 Ministerio Coordinador de Seguridad, 2011 “Plan Nacional de Seguridad Integral”.

60 Ley Reformatoria a la Ley de Seguridad Pública y Del Estado, publicado en el registro oficial 263, segundo suplemento del 09 jun 2014.

61 Ibíd

para operaciones militares⁶², que especifica el papel del militar en la seguridad interna, se refiere al Artículo 313 de la Constitución, reservando el derecho al Estado para administrar y controlar los recursos estratégicos, y también al Artículo 43 de la Ley de Seguridad Pública para trazar los procedimientos de seguridad para sectores estratégicos.

El uso de la fuerza pública para asegurar los proyectos de extracción no es una simple posibilidad presentada por la ley. Tres incidentes separados ocurrieron en septiembre y en octubre de 2015, y en febrero de 2016, cuando grupos de fuerzas armadas militares, Policía Nacional y contratistas de seguridad privada, forzosamente removieron a familias, destruyeron casas en el distrito de San Marcos de Tundayme, Zamora, para dar paso a una empresa china, Ecuacorriente, para empezar la construcción de la mina de cobre El Mirador (Inredh 2016). Asimismo, en mayo de 2014, en la zona de Intag, provincia de Imbabura, aproximadamente 214 miembros del Grupo de Operaciones Especiales (GOE), del Grupo de Intervención y Rescate (GIR) y de la Policía Nacional acompañaron a técnicos con el fin de llevar a cabo el estudio ambiental para el proyecto minero Llurimagua (El Comercio 2014a; Ministerio del Interior 2014). Además, una fuerza de seguridad permanente ha sido instalada dentro del área de exploración hasta ahora.

El aseguramiento de la extracción de recursos es respaldada aún más por nuevas leyes que criminalizan protestas y oposición a los planes de desarrollo del gobierno. Estas leyes, codificadas en el Código Penal que se efectuó en 2014, también tienen su base en el Plan de Seguridad Integral bajo el subtítulo “Violencia Política”:

“este tipo de violencia se genera cuando no existe respeto a los ciudadanos(as) ante una manifestación legítima de sus derechos, o cuando grupos políticos o sociales tergiversan el reclamo hacia las autoridades, situación que puede desencadenar en una alteración del orden y la paz social, y que da pie a actos de vandalismo, agresión a la propiedad privada, saqueos y otros hechos delictuales que afectan a la seguridad ciudadana”⁶³.

62 Ministerio de Defensa Nacional, Manual de Derecho en las Operaciones Militares, primera ed. 2014. pp. 36-37 y 78-81. Recuperada de <http://www.coed.mil.ec/archivos_coed/MANUAL%20DE%20DERECHO%20EN%20LAS%20OPERACIONES%20MILITARES.pdf>

63 Ministerio Coordinador de Seguridad, 2011 “Plan Nacional de Seguridad Integral” p. 52.

En referencia a las protestas de la policía de 2010 como “prueba irrefutable” de que la protesta tiene el potencial de poner en peligro la estabilidad democrática del Estado, el texto continúa señalando que “la seguridad pública... tiene que ver con el control y mantenimiento del orden público frente a las amenazas de alteración del orden y la paz social, para lo cual, el Estado utiliza la Fuerza Pública de manera progresiva, pudiendo utilizar los estados de excepción”⁶⁴. Esta tema llamada “violencia política” del plan de Seguridad Integral se concreta en el Código Orgánico Penal Integral (COIP)⁶⁵ revisado en 2014, que contiene 29 artículos que definen una amplia variedad de delitos políticos contra la “seguridad pública” algunos de los cuales pueden ser castigados con hasta 13 años de prisión.

Bajo este subtítulo de “seguridad pública”, el COIP tipifica una serie de delitos que penalizan la protesta social, incluyendo, pero no limitados al Artículo 336-Rebelión, Artículo 345-Sabotaje, Artículo 346-Paralización de un servicio público, Artículo 348-Incitación a discordia entre ciudadanos, y Artículo 366-Terrorismo. Junto con el historial del gobierno correísta de enjuiciar la protesta social bajo los artículos de “sabotaje y rebelión” en el código penal anterior, estos artículos impiden el ejercicio del derecho constitucional de participar en protestas políticas. Además, estos artículos tienen en común una redacción ambigua, dejando a la discreción del juez determinar qué conducta constituye un delito y cuál no. El lenguaje del Artículo 345-Sabotaje, es particularmente amplio, dirigido a quien “trastorna el entorno económico del país o el orden público⁶⁶” e incluye muchas actividades que son tradicionalmente asociadas con la protesta social en Ecuador, como cerrar las líneas de comunicación o las vías.

El lenguaje impreciso del COIP es especialmente problemático dada la subordinación del sistema de justicia a intereses ejecutivos bajo el gobierno de Correa, donde el Código Orgánico de la Función Judicial permite la intromisión en funciones judiciales en casos de “error inexcusable”⁶⁷, que son vagamente definidos en el código y permiten la interpretación laxa. Así mismo, el Secretario Jurídico de la Presidencia de la República, Alexis Mera, ha comunicado, en cartas a los jueces, que todos los casos que

64 *Ibíd.*

65 Código Orgánico Integral Penal, publicado en el registro oficial No. 180 en 10 feb 2014.

66 *Ibíd.* p. 53.

67 Código Orgánico de la Función Judicial, publicado en el registro oficial No. 544 en 09 mar 2009, Art. 108 p. 36.

afecten directamente al Estado serán procesados nuevamente en tribunales superiores si la decisión no favorece a los intereses del Estado⁶⁸. Por otra parte, los jueces pueden ser personalmente responsables y despedidos si el tribunal superior invierte sus decisiones (Focus Ecuador 2015). Es en este contexto que, a lo largo del gobierno correísta, más de 200 líderes de la Confederación de Nacionalidades Indígenas del Ecuador (Conaie) han sido juzgados por ejercitar sus derechos a protestar (El Comercio 2014b). Asimismo, varias organizaciones de derechos humanos han encontrado que la criminalización de la protesta social ha aumentado rápidamente en Ecuador, en el contexto de extracción y de otros proyectos de megainfraestructura, donde las acusaciones son realizadas, en la mayoría de los casos, por las empresas (OMCT 2016; FIDH 2015; Amnesty International 2012).

La criminalización de la defensa territorial en Intag

Uno de estos casos fue el de Darwin Javier Ramírez Piedra (coautor de esta contribución), presidente de la comunidad Junín en la zona de Intag, provincia de Imbabura, donde está ubicada la concesión minera Llurimagua. El proyecto Llurimagua está actualmente dentro de la fase de exploración avanzada por la empresa nacional minera Enami, en convenio con Emsaec, el subsidiario ecuatoriano de la empresa nacional chilena Codelco. Ramírez fue injustamente detenido en el Centro de Rehabilitación Social en Ibarra por diez meses bajo “detención preventiva”. Ramírez fue arbitrariamente arrestado el 10 de abril de 2014, inmediatamente después de una junta con el Ministro del Interior, José Serrano⁶⁹, en Quito, quien invitó a Ramírez y a otros dos líderes del movimiento antiminero de Intag, Polibio Pérez y Silvia Quilumbango, para escuchar sus preocupaciones. Durante la junta con Serrano, Ramírez afirmó la oposición de la comunidad de Junín al proyecto minero Llurimagua. A Ramírez no le fue dada ninguna razón para su arresto en el momento de su detención, pero fue eventualmente acusado de terrorismo, sabotaje y rebelión. Él fue acusado por la Enami de atacar a un empleado y dañar maquinaria de la compañía durante una manifestación para

68 Comunicación personal (fuente anónima)

69 Los dirigentes tuvieron esperanza por esta reunión porque han solicitado la oportunidad de conversar con alguien de poder, no solamente con los técnicos que vienen a las comunidades para convencer la gente aceptar la minería. Además, antes de su carera en el gobierno de Correa, Serrano era el abogado al movimiento anti-minero de la zona de Intag, entonces, una vez tenían una buena relación con él.

prevenir que técnicos recolectaran información para el estudio de impacto ambiental del proyecto minero. Sin embargo, los registros médicos demostraron que Ramírez estaba bajo el cuidado de un médico al momento de la manifestación y no estaba presente. La corte no tuvo en cuenta las pruebas a su favor y Ramírez fue finalmente condenado por rebelión después de diez meses de prisión sin audiencia; fue puesto en libertad el día en que fue condenado, al haber cumplido su condena en prisión preventiva. Su hermano, Hugo Ramírez, también fue acusado y una orden de captura sigue vigente, pero hasta la fecha no ha sido detenido.

Un mes después de la detención de Ramírez, en mayo de 2014, aproximadamente 200 miembros de la Policía Nacional - incluyendo miembros de unidades tácticas muy entrenadas como el Grupo de Operaciones Especiales (GOE) y el Grupo de Intervención y Rescate (GIR) - y 18 técnicos, entraron a la comunidad de Junín a la fuerza para facilitar la terminación del estudio de impacto ambiental. Varios miembros de la comunidad, incluyendo la madre de Ramírez y su esposa, fueron golpeados por la policía durante el enfrentamiento. Sin embargo, una nota de prensa hecha por la Policía Nacional, describió el acompañamiento a Enami como una medida tranquila y preventiva para asegurar el orden público y señaló que “prevaleció el respeto a los Derechos Humanos y dignidad de las personas del sector de Junín, así como de las autoridades y técnicos” (Policía Nacional 2014a). Aunque la narrativa oficial de la Enami es que solamente una minoría de individuos se oponen a la minería en Intag, el despliegue de un número tan grande de policías es testimonio de la eficacia de la resistencia popular, que previno intentos previos de la Enami de acceder a la concesión, lo que es admitido incluso en el comunicado de prensa de la policía antes mencionado.

El arresto y detención de Ramírez no pudo ser considerado ajeno a la entrada de la policía un mes después. Desde la era neoliberal, opositores a la minería en Intag habían participado en la protesta de la defensa del territorio y habían enfrentado acusaciones de empresas mineras, pero el sistema de justicia operaba con más independencia y nunca nadie había sido detenido y encarcelado por tanto tiempo (El Comercio 2015). El arresto y encarcelamiento de Ramírez, junto con el despliegue de la Policía Nacional, demostró que los intereses mineros ahora operan con la fuerza del Estado. Esta intimidación bruscamente disminuye la capacidad de resistencia, especialmente cuando es considerada

en comparación a los exitosos movimientos antimineros que expulsaron a dos empresas transnacionales previamente. Cuando la empresa minera canadiense Ascendant Copper tenía la concesión de Intag en 2004-2006, grupos de paramilitares armados realizaron varias incursiones en Junín y en las comunidades cercanas con esfuerzos de romper la resistencia y acceder a la concesión, pero cientos de inteños opositores a la extracción se movilizaron para defender su territorio. En diciembre de 2006, Ascendant fue finalmente expulsada después de que los residentes, sin violencia, capturaron, desarmaron y detuvieron a 56 paramilitares en la iglesia de Junín hasta que las autoridades respondieron una semana más tarde. Por el contrario, debido en gran parte a la detención del presidente de la comunidad de Junín, la policía no se enfrentó a la masiva resistencia organizada cuando llegó a Junín en mayo de 2014.

Por otra parte, en los siguientes seis meses, una fuerza de 26 policías nacionales permaneció estacionada en Junín y alojada en las casas de los miembros de la comunidad a expensas del Estado. Cuando no hubo fondos disponibles para la vivienda, debido a las limitaciones presupuestarias, la policía se trasladó a la escuela de la comunidad vecina de Chalguayalco Bajo, cuyos estudiantes fueron desplazados a otra escuela. Un bajo número de policías están estacionados de forma permanente para asegurar la concesión durante la exploración avanzada que se encuentra actualmente en curso. La presencia de la policía recién establecida en este sector de Intag, está planteada en los comunicados de prensa dentro del discurso oficial de “seguridad ciudadana,” que consiste de servicio comunitario, reforma policial, y la expansión de la policía comunitaria. De hecho, bajo el Plan Nacional de Seguridad Integral, el Estado ha invertido en la construcción de más de 400 nuevas unidades de policía comunitaria (Policía Nacional 2014b; Policía Nacional 2014c).

El establecimiento de la policía y del personal de la Enami en la comunidad de Junín, permitió la vigilancia directa y la intervención en el panorama político. Con la detención del presidente de la comunidad, la directiva jurídica de la comunidad fue paralizada. Mientras tanto, Enami instaló una segunda directiva a favor de la minería y compuesta principalmente por residentes temporales contratados para hacer mano de obra relacionada con la actividad minera. Aunque la directiva instalada por la empresa fue ilegítima, ya que no fue elegida en una asamblea general, esta constituía una estructura

formal de organización política y de legitimación de la presencia de la empresa y su trabajo en relaciones comunitarias.

Con el tiempo, la división se hizo más profunda a medida que más familias comenzaron a proporcionar alojamiento, comidas, o mano de obra para la empresa minera y para la policía, sin un camino viable para la resistencia a la ocupación policial. Las fracturas sociales dadas hicieron posible que la Enami promoviera en los residentes, con éxito, un discurso clave del Estado con respecto a los recursos estratégicos: que el desarrollo nacional requiere de la minería de cobre a gran escala. Por el contrario, quienes se oponen a la minería argumentan que, debido a que se exportarán los recursos extraídos y se exteriorizaran los costos sociales y ambientales, los beneficios se acumulan en los manos del gobierno y de las empresas, Es decir, la minería a gran escala es principalmente un medio para la reproducción del Estado y la reproducción del capital. Analizar y deconstruir el discurso del desarrollo del Estado constituye la fase actual del movimiento de oposición.

Una faceta de este análisis es la importancia del vínculo entre el emergente Estado penal y el emergente Estado extractivista. El caso Ramírez es un emblema de la persecución a la defensa territorial y a la resistencia en contra de la extracción, y muestra de varias maneras cómo el Estado penal está tomando forma en este ámbito. En primer lugar, la invocación de la detención preventiva demuestra que, bajo el nuevo COIP⁷⁰, esta medida sigue siendo desplegada en exceso, pese a las críticas elaboradas por el papel de la detención preventiva en la sobrepoblación de cárceles y como violación contra los derechos humanos (Unodc 2014). También, el Plan Nacional de Seguridad Integral⁷¹ tiene como objetivo explícito la caducidad de la prisión preventiva, pero mantiene la práctica de “un período de detención para la investigación”. Es importante tener en cuenta la utilización política y sistemática de la prisión preventiva en los casos de los activistas antiextracción, acusados con delitos especialmente graves, con el retraso de audiencias durante tanto tiempo como sea posible y luego la reducción de los cargos a delitos menores más apropiados para asegurar la condena y legitimar la detención preventiva (Vintimilla y Vallacís 2013). Esta práctica difiere de la aplicación de prisión

70 Los Artículos 522, 534, 535, 537, 538, 540, 549, and 550 del COIP se refieren al uso de la detención preventiva.

71Plan Nacional de Seguridad Integral, op. cit. p. 81.

preventiva para los acusados de delitos leves en ciudades en que los procesamientos son excesivamente retrasados, debido a la falta de recursos dentro del sistema judicial para procesar los casos de manera oportuna.

En segundo lugar, el caso de Ramírez apunta a la intromisión del poder ejecutivo en los procesos judiciales. Los abogados que representaban a los hermanos Ramírez — Ramiro Ramón y Raúl Bolaños— están siendo investigados por el Consejo de la Judicatura por presuntamente retrasar los procesos judiciales, a pesar de la abrumadora evidencia de que los abogados trataron de acelerar el caso con el propósito de poner fin a la detención preventiva de Javier Ramírez. La persecución de los abogados por parte del Consejo se entiende como una motivación política y una advertencia a los abogados que se oponen a los intereses del Estado en los tribunales.

En tercer lugar, la incursión de vigilancia en territorios rurales bajo los rubros de seguridad pública y policial comunitaria sugiere una expansión significativa de los aparatos disciplinarios del Estado. Al mismo tiempo, los requisitos legales del ejército y de la policía para salvaguardar la infraestructura de los sectores estratégicos, y las reformas al COIP —que permiten a los militares ayudar en materia civil— sugieren la evolución de un aparato estatal de seguridad menos benévolo que, sin embargo, funciona bajo el pretexto de servicio y policía comunitaria.

Por último, el papel de la empresa nacional minera Enami, en la gestión de relaciones comunitarias y en la administración de seguridad para las empresas mineras extranjeras, sugiere que el Estado ha sobrepasado su papel como simple regulador y facilitador del capital global. Ahora los recursos del Estado están enteramente a disposición de las industrias extractivas en nombre de asegurar sectores estratégicos para el desarrollo nacional.

Conclusiones:

La adopción total del sector extractivo transnacional por parte del Estado ecuatoriano no es simplemente nuestra opinión: una presentación por parte del Ministerio de Minería dada en PDAC 2016, titulada “Ecuador: La nueva frontera de Minería” anunció a los inversores potenciales que “la asociación con Enami proporciona una entrada simplificada en el mercado ecuatoriano, y beneficios y apoyo que normalmente se reserva para las entidades estatales” (p. 19). Codelco en Ecuador (Emsaec) sin duda

disfrutó de una “entrada simplificada” a la concesión Llurimagua en Intag. Teniendo en cuenta el despliegue de táctica policial para permitir el ingreso del personal minero a Junín por la fuerza, la posterior ocupación policial, los diez meses de prisión de Javier Ramírez, los “beneficios” proporcionadas por Enami —que es una empresa minera estatal que, en realidad, no tiene la capacidad para minería a gran escala— parecen estar orientados principalmente a la disciplina y, simultáneamente, a forzar a las comunidades a aceptar la minería y además subvencionar el costo de hacer negocios en Ecuador.

Un sector clave en la estructura jerárquica de la industria minera mundial son las empresas pequeñas y transitorias conocidas como “junior”, que generan sus ganancias a través de la especulación y del trabajo sucio de hacer que las comunidades resistentes parezcan conformes con la minería, a fin de vender la concesión a empresas más grandes y establecidas. Esta historia de los junior —la mayoría con domicilio en Canadá debido a los incentivos fiscales que ofrece ese país al sector minero— y sus violaciones a los derechos humanos en Ecuador están bien documentadas (North 2011; Deneault y Sacher 2012; Grupo de Trabajo sobre Minería y Derechos Humanos en América Latina 2014). Como demostró la expulsión del junior canadiense Ascendant Copper de Junín en 2006, el modelo de dependencia de los junior es muy arriesgado. El papel de la Enami para neutralizar el riesgo puede ser considerado como una nueva técnica para la gobernanza y facilitación de acumulación de capital primario en el contexto del “capitalismo de alianza”, emergente en América Latina, cuyos Estados tienen mucho menos poder de negociación en el ámbito del capital transnacional en comparación con China y otros países BRIC.

Hemos argumentado que este nuevo papel del Estado se articula a través del discurso de los recursos estratégicos y de un cambio más amplio hacia una retórica de la seguridad ciudadana. La securitización de los recursos en las zonas rurales se ha visto acompañada por la instalación de unidades de policía y equipos de vigilancia en zonas que, históricamente, tenían más autonomía relativa de la vigilancia directa del Estado. Por ejemplo, un comunicado reciente realizado por el Ministerio del Interior (2015) publicó el titular “En la zona de Intag, la Ciudadanía vive Segura”, que destacó la buena relación policial-comunitaria, el control de los delitos menores como conducir una

motocicleta sin licencia, y el éxito de prevención de narco y microtráfico, basado en el hecho de que hasta el momento la policía no ha detectado esos delitos en Intag.

Sostenemos que, la extensión del orden público y de la llamada “calidad de vida” policial en las zonas rurales, es una avenida fructífera para futuras investigaciones sobre la evolución del Estado penal en América Latina, especialmente como ha ocurrido junto a la tendencia regional hacia “recursos estratégicos” que, a menudo, se refieren a las economías rurales. El desarrollo extractivo y de megainfraestructura es asociado con un aumento de delincuencia, mientras que el despojo rural, asociado a la extracción, expulsa a los habitantes rurales hacia las ciudades para convertirlos en miembros de sectores urbanos marginales, donde se enfrentan a más vigilancia policial y la criminalización de la supervivencia urbana.

Esta observación plantea preguntas acerca de la “calidad de vida” y acerca del discurso de “seguridad” invocado para justificar este tipo de políticas que, generalmente, se utilizan en el lenguaje del Buen Vivir en la retórica oficial ecuatoriana. ¿Para quién es la calidad de vida puesta en juego?, y precisamente ¿quién necesita el desarrollo extractivo de los recursos? Como sostiene Solíz (2013), el esfuerzo para responsabilizar a la población rural sobre la creciente necesidad de metales no toma en cuenta la estratificación interna y externa del consumo de metales. Este aumento de consumo, por otra parte, se basa en el subsunción del consumo bajo el capital “por lo que la extracción de plusvalía del trabajo se oculta y se reprime por la sobrevaloración del consumo y sus ideologías neoliberales de autotransformación” (ngai 2003, p. 469).

Llegamos a la conclusión de que la conexión discursiva del Buen Vivir con el desarrollo, la seguridad y la calidad de vida, permite al Estado moldear el discurso radical alternativo del Sumak Kawsay —que es incompatible con la formulación cultural dominante del Estado— y subordinarlo al Estado en su rol convencional como facilitador del capital. A tal fin, la modernización de seguridad, policía, cárcel e infraestructura militar bajo la rúbrica de seguridad ciudadana es, de hecho, una cuestión de seguridad estatal frente a la presión de grupos subordinados. Prueba de ello es la explicación del Plan Nacional de Seguridad Integral sobre cómo la “violencia política” —ahora tipificada en 29 artículos del nuevo COIP— es una amenaza:

“La protección y el bienestar de la nación en su conjunto son una responsabilidad y la razón de la existencia del Estado y sus instituciones; es al Estado a quien la sociedad le ha depositado la vida, salud e integridad física de sus ciudadanos, sus valores morales sociales (paz, tranquilidad, orden, seguridad, moralidad, libertad, justicia, solidaridad), así como sus bienes patrimoniales (vivienda y bienes muebles)... Por ello se puede considerar como una amenaza a la seguridad del Estado, la conspiración política para derrocar a un gobierno legítimamente constituido”⁷².

Como se mencionó anteriormente, son precisamente los artículos relativos a la violencia política que se han invocado para criminalizar la protesta social, sobre todo a raíz de los planes de extracción. Se señala a menudo que la expansión del sector extractivo y la persecución de protesta está al borde de la violación de la Constitución de Montecristi, que garantiza el derecho a la protesta, así como los derechos de la naturaleza. Sin embargo, todas las leyes se hacen en la práctica mediante interpretación y luchas por su significado.

El Estado, como mediador entre la naturaleza y el capital, juega un papel profundo en la transformación de la naturaleza en territorio y recursos; y, del mismo modo, la transformación de las comunidades e individuos en poblaciones y ciudadanos (Foucault 2009). Es la violencia de la ley que hace parecer a estas categorías como autoevidentes, universales y objetivas. La ley que incorpora el Buen Vivir como concepto jurídico para ser desplegado y defendido por el Estado, suprime el Buen Vivir como praxis viviente de conocimiento subalterno (de Sousa Santos 2007). En consecuencia, una de las conclusiones significativas de los defensores del territorio en Intag es que siempre será un error para los movimientos sociales colaborar con el Estado. Los intereses del Estado están fundamentalmente en desacuerdo con los esfuerzos populares para definir e implementar el concepto transformativo del Buen Vivir, que exige el fin de la persecución de los defensores de la tierra y de la vida de todo ser.

⁷²Plan Nacional de Seguridad Integral, op. cit., p. 53.

Chapter Five: Conclusions

Theoretical Conclusions:

In this dissertation I have mobilized insights from a cross-section of anti-extractivist struggles in the Americas undertaken on different property and legal regimes in order to generate a broader picture of the character of subsurface property rights and anti-mining struggles. This international comparative analysis makes possible new theoretical insights into how uneven development outcomes and resource dependency are sociospatially (re)produced through state-institutional processes that assign, administer, and enforce particular values associated with land. The banality of these administrative practices obfuscate their inherent violence. As chapters three and four demonstrate, overt conflicts, policing, and criminalization are outcomes of long-range conflicts about the technical administration of property rights. This dissertation views resource extractivism as dynamically reflective of broader processes of capital accumulation, concentration, and mobility, and links the spatiotemporal dynamics of extractivism to discursive and administrative norms deployed in different state-institutional frameworks.

I have organized these ideas under the term “systemic opacity,” which reflects a technique of governance which is essential to the alienation of subsurface lands and the persistence of resource extractivism. That is, systemic opacity refers to how knowledge is produced and discursively deployed within and about resource-based economies. As Chapter Two shows, a key feature of systemic opacity has been the effective weakening of alternative, non-extractive use values of land. It is precisely the conflict between competing values that necessitates opaque governance strategies and property regimes, and that is central to all mining conflict. Taken all together, the chapters in this dissertation point to novel theoretical considerations for understanding how the implementation and administration of subsurface property rights are linked to ground rents and the global political economy of extractivism, which I explore in further detail in this conclusion.

Rent Theory and Norming the Distribution of Sacrifice:

My dissertation research has focused on spatio-temporal histories of land tenure, subsurface property rights and their administrative and governance contexts as they connect to making geographies of resource production and distribution. The guiding question has been: how does the subsurface become legible and accessible as property, and how does this process intersect with alternative social processes and values on the surface?

Throughout my scholarly career so far, Marxist thought has been highly influential in my thinking about value, labor, and the apprehension and transformation of nature. The analytic of property is especially important to my thinking, and I have sought to avoid a narrow conception of property as a distinct legal category or economic object but instead tried to understand how subsurface properties are part of broader social processes and relationships. As Marx (1992 [1876]) explains,

"The mysterious character of the commodity-form consists therefore simply in the fact that the commodity reflects the social characteristics of men's own labour as objective characteristics of the products of labour themselves, as the socio-natural properties of these things" (pp. 164-65).

What is, in fact, a social relation between people instead assumes "the fantastic form of a relation between things" (165). Marx highlighted the fetshisization of commodities and sought to unveil the social relationships embedded in them. In my research, I examine the governmental and discursive techniques that keep socio-natural relations mysterious by examining the specific practices of measurement, enclosure, and enforcement of subsurface rights in particular places – northwest Ecuador and north central West Virginia. The making of subsurface rights is a highly abstract and contested process, and in order for such abstract rights to be naturalized, they must be discursively connected to very concrete objects – copper for electricity, wiring, and construction; gas for energy, mobility, warmth. These objects mark the subsurface *as potential* and are connected to people's ideals, lived realities and

imagined futures in the process of making rights. As my co-authors and I discuss in Chapter Four, in corporate discourse Intag residents who may be displaced by mining are often responsabilized for the demand for commodities made from copper. Mining industry representatives tell Inteños: “you have a refrigerator don’t you? Copper wires make that possible. Obviously the world needs copper, obviously *you* need copper!” Likewise, in West Virginia’s shale boom, it is taken as common sense even among those who worry about environmental problems that the industry has brought badly needed jobs and development – even if the jobs are not stable jobs with benefits – while the logic of the need for low-cost domestic energy is routinely used to shut down questions about alternative possible land uses. As one interviewee said, “they are going to get the gas anyway, and it’s clear that’s what the whole economy here is based on. So I don’t understand how anyone could oppose it. You can do it the easy way or the hard way. You might as well go ahead and sign the rights over and get paid for them!⁷³” In a similar vein, a Forbes (Steffy 2013) article about the “hypocrisy” of New York state’s fracking ban suggests that anyone who appreciates lower prices at the gas pump should be in favor of fracking, since the “shale revolution” has helped drive down prices.

These arguments serve to reframe people’s relationships to land around the objects that might be produced from the subsurface, and the related dreams of development and modernization (cf. Ferguson 1999). This reframing is part of a broader discursive technique to emphasize different forms of “physical trope,” which, as discussed in Chapter One, detracts from analysis of how the status quo is actually operationalized in practice. Gavin Bridge (2016) has described the “physical trope” as the tendency to emphasize the giant holes produced by large scale mining projects, which he believes detracts from other material processes, like measurement and quantification, that make it possible to equate subsurface spaces with specific resources or commodities in the first place. Building on this idea, I suggest that there are multiple forms of the physical trope, which have been embraced by environmentalists and industry alike: the big hole and other geophysical impacts; quantifiable environmental contamination; and

⁷³ Interview with anonymous oil and gas land man, Jul 14 2016.

refined and manufactured products that may eventually be produced with extracted materials. While the physical *effects* and *products* of mining are indeed significant factors in the social determination of acceptable trade-offs, the debate about trade-offs, transparency and regulation begins already from a set of assumptions about obligations to produce to meet social needs which are *assumed* as valid. If analysis about mining begins from this starting point, we are in the process naturalizing, or at least reifying, particular forms of social value and market value.

Mining conflicts are often analyzed through the lens of such physical tropes: according to these perspectives, conflict is a consequence of “resource curse,” of the significance of the physical resources themselves in certain markets, of environmental contamination, or of perceived ties of indigenous peoples to a pristine nature or commons – a nature/society duality that both perpetuates racism and creates new frontiers of capital accumulation (Smith 1984). In my research I likewise aimed to understand mining conflict, but my starting point is how the subsurface becomes imbued with value through regimes of property, and how these regimes interface with other land regimes from previous uses or competing surface uses. This consideration has led me to begin to broadly conceptualize my research contributions in terms of Marx's theory of ground rent.

As Robin Murray (1977) summarizes, “the material basis for rent of any kind ... is dependent on capital's inability to reproduce the conditions of production” (p. 112). When capital is subordinated to the soil – that is, the natural productivity of the land – landlords can gain an absolute rent for making land available to capitalists who seek to profit from the surplus production of highly fertile land. On the other hand, intensive capital investments in land can make more marginal plots competitive with highly productive ones. In *Capital* Vol. III Marx (1991 [1894]) argued that “fertility, although an objective property of the soil, always implies an economic relation, a relation to the existing chemical mechanical level of development in agriculture, and therefore changes with this level of development” (p. 636). Likewise, the quality of ores and their social usefulness are economic relations based on the application and development of mining technology and the subsumption of consumption under relations of capital. The rising organic composition of capital in the mining sector – which has made the most marginal

lands newly accessible and profitable with minimal labor requirements - creates new forms of differential rent in subsurface properties.

Viewing the changing dynamics of extractive investments as spatial process, it is possible to suggest that the rising organic composition of capital, in combination with surplus liquidity realized in financial markets, is the basis of what has been called “global extractivism.” Extractive industry investments have proliferated because newly available capital is finding its way into these markets, making cost-intensive extraction procedures more feasible to pursue in the short term, which simultaneously makes viable the production of lower quality ores at greater depths, such as in Intag, or of shale gas resources previously considered too costly to extract. These dynamics have substantially impacted the geographies of mining investment and production, especially in the context of “scarcity” narratives that are in fact based only on which resources are perceived as viable under economic conditions at any particular moment in time (cf. Labban 2010). Chapter Four, for example, provides a detailed discussion of how scarcity narratives in European markets have fueled a move toward “strategic resource” investments and securitization in Ecuador and other resource producing economies. Resource scarcity, in this sense, is a reflection of bourgeois fears of not having rather than a precise physical quantification. These fears become socially embedded and institutionalized in the policies and procedures which govern rights to land and resources, where “the will to improve” reflects local political aspirations, past resource governance regimes, and contemporary drivers of investment in resources. Copper is officially classified as a strategic resource in Ecuador, which can be developed and secured through military intervention, precisely because it is deemed a “strategic resource” by European Union countries that anticipate increasing scarcity of metals and minerals.

However, even with this rising organic composition of capital in the mining sector, mining capital cannot move freely into landed property. As Marx also recognized, landed property predates the historical development of capitalism, and while it is at once a condition of capitalist development to divorce people from the means of production, it also prevents the inflow of new capitals, which enables landlords to collect residual payments from capitalist resource firms. At the same time, enclosure of the subsurface does not reflect the need to divorce workers from land, but rather, reflects capitalists'

need to access specific material inputs. Rising inputs of capital into land reduce the degree to which capital is subjugated to the soil, but it does not eliminate this subjugation entirely. That is, land will always maintain its use value, and so - contrary to what some contemporary geographers have suggested (eg. Smith 2007; Moore 2015) – its subjection to capital is formal, but not real. Mineral rights and concessions divorce not the worker from the soil, but the subsurface from the surface, where the surface holder represents a significant barrier to mining capital to needed subsurface inputs, and this antagonism of use values is what sets the stage for land conflicts between mining and surface interests in land's use values.

As show in in Chapter Two, this is consistent with the history of severance jurisprudence, which in the US has held that mineral estates are “dominant” estates in disputes between surface and subsurface owners precisely to facilitate the most efficient allocations of capital investment in land. Early severance jurisprudence was crucial to opening up land in the Virginia's to absentee speculator capitalists, who have exerted tremendous influence on land and tax policy to date, entrenching a legacy of land policy that continues to favor land and mineral speculation by keeping land values low (Rasmussen 1994; Dunaway 1994). Severance created a new class of landlords holding mineral estates, but key informants working for mining companies and mineral holding LLC's explained to me that purchasing the entire estate, including surface rights, remains preferable whenever possible, recognizing that when controlled by those who have legal and market expertise, rent is more valuable than land in production. As famed landman and former CEO of Chesapeake Energy Aubrey McClendon remarked, “I can assure you that buying leases for x and selling them for 5x or 10x is a lot more profitable than trying to produce gas at \$5 or \$6 per million cubic feet” (Gold 2014, p. 169).

Land reforms in Ecuador have likewise served to limit the barriers to capital inflow posed by old forms of unproductive landholding inherited from the colonial era. Nonetheless, with the turn to opening metals mining as a “strategic sector” for development in the Andes from the 1980's onward, land reforms have sought to limit the recognition of possessions above mining concessions. Land reforms remain only partially implemented due to a number of conditions, including the legacy of the political and economic influence of the old class of landed capitalists, changing national agendas and

capacity, and conflicts with emerging and foreign capitalists. However, one effect is that the instability of surface rights is mobilized by mining interests to reduce their costs of doing business and to maintain opacity of their operating practices. A key lesson from Chapter Two, then, is that legal changes over time in both West Virginia and Ecuador have systematically weakened surface rights in a manner that facilitates extractive industry development, which has been achieved in many instances through direct alliances between extractive industries and policy-makers. At the same time, extractive industries have tightly controlled information and legal expertise in a manner that also reduces the cost of doing business by limiting the feasibility of both surface and mineral holders to make claims. Opacity and severance both function to distance extractive industry liability from the claims of the true landholder on the surface. In short, it is a mechanism to keep rents low despite high investments of capital in land (this does not necessarily contradict Marx's assertion that rent increases alongside increasing capital investments in land, but this effort to suppress rents through opacity and severance is a mechanism to counteract that trend).

Chapter Three, on the other hand, addresses the situation of sovereign ownership of the subsurface. As Trindade and Cooney (2015) nicely summarize, “mining codes establish the basis for economic exploitation of the subsoil, and they are crucial in defining the conditions of land access and exploitation, which then determine the possibilities for potential ground rent” (p. 5). Contrary to the common framing of “rentier states” in mainstream political science and economic literature, the study of mining codes in poor countries reveal that most reflect the “hand of the State in aid of private development” (Leal 1988, p. 185) in which large transnational mining firms have extraordinary influence in crafting industry-friendly policies *and* acquiring rights to the supposedly sovereign subsurface, because it is only these firms which have historically had the technological capacity to discover and exploit mineral deposits. It is the representatives of these firms, too, which have the expertise to inform technocratic processes with regard to mineral governance. Chapter Three shows how in the Intag case, the Correa government's determination to develop mining in connection with state-owned companies was based on the desire to capture subsurface rents as part of a populist political project, but still had to contend with incumbent land and policy arrangements.

At the same time, the political imperative to develop the project caused even deeper rifts between industry representatives and landholders, who paradoxically could never benefit from a “socialist” mining project because they will be displaced by it. The chapter illustrates the link between administrative violence and overt violence; landed property must always be backed up with force of one kind or another to defend the exclusive rights that property defines. In Chapter Three, intimidation and militarization combined with opacity and legal maneuvering to suggest and restrict whose competing claims could be forcefully backed.

Chapter Four, on the other hand, more fully interrogates “the hand of the state” in the aid of mining capital and argues that the Ecuadorian state mining firm acts as a facilitator of state resources, including security forces, to protect private and public mining investments. This chapter is co-authored with a former political prisoner who opposes mining in the Intag zone. He was convicted of sabotage and rebellion without evidence and unjustly imprisoned for 10 months. Chapter Four was the product of many months of conversation and analysis, in which Javier argued that his imprisonment was strategically timed to prevent his leadership in organizing resistance to early but crucial phases of project the mining project. We broadly analyze the confluence of the penal system and military deployment in the context of extractive industry conflicts in Ecuador and explicitly characterize criminalization and rural policing as strategies to enforce mining rights. We also examine the decreasing public value of mining because of the progressive reduction and elimination of taxes, royalties, and windfall profits to be paid to the state, despite continued public investment and military and police support to mining companies as well as discursive strategies of both the state and private companies to responsabilize the public for mining's benefits. Chapter Four also maintains the emphasis on the idea that opposition to extraction is a form of conflict about use values, and therefore focuses on the dynamics of territorial defense which are based not solely on economic calculations. We hope this chapter will be published in English (see Appendix B) with a modestly revised introduction that introduces the frameworks of extractivism and territorial defense that are so prominent in Latin American political ecology to English speaking audiences. These themes are also relevant to my research in West Virginia, and in both cases these non-economic attachments to land provide one

explanation as to why mining companies cannot just simply buy out the landholders.

This overarching theoretical contribution to a theory of subsurface rent and attendant conflicts with use values vested in other strata and territorial dynamics is clearly incomplete, and I hope to further develop these ideas in future publications from my dissertation research. In particular, I intend to expand upon the ideas presented herein to account for other elements of Marxist rent theory, including a more explicit focus on value and the falling rate of profit as well as theories of imperialist and mining rents (eg. Amin).

In summary, I have argued that: 1) Successive changes to legal and administrative regimes for governing mining have weakened the rights of surface holders, who present a barrier to the inflow of subsurface investment capital. 2) Extractive industries govern and are governed through techniques of opacity. 3) Although property is always backed up through the implication of force or violence, administrative violence is a powerful factor in the enforcement of mining rights. 4) Conflicts about mining development are conflicts about land's use values, and these conflicts are rooted in particular territorial dynamics of particular places.

Conclusions for Positionality and Activist Research:

My research is conducted in solidarity with radical social movements that view large scale mining projects as fundamental to the production of a resource-intensive global economy based on exploitation. These movements are formed primarily of people whose present means of survival are at risk of being destroyed by extractive projects, and who accordingly see direct action as a primary tactic for stopping or slowing the advance of such industries. My view is that the production of knowledge is itself an active intervention in the world, and given the privileged position of academic knowledge, it is necessary to produce research for and with social movements, rather than to view social movements as research objects. This requires being open to and participating in the kinds of dialog that take place within social movements (while recognizing the hierarchies that also exist within such movements), which construct knowledge as a group process.

Therefore, a central goal of this research process is the navigation of and production of collaborative methodologies that are deeply informed by activism, and that elevate activist knowledge to the status of academic knowledge. Secondly, I believe that

for academics to be useful activists, our work has to have some potential to contribute to the project of questioning or even displacing hegemonic discourses or norms. In this sense activist research must also involve a) a critical interrogation of hegemonic norms which can b) point to pragmatic elements that can contribute at least in the short term to policy debates and immediate social action.

I have attempted to answer these demands of activist research by making a critical intervention in how subsurface space is understood through the lens of property rights. In a scholarly sense, this intervention compliments recent shifts in geography to incorporate vertical space into interrogations of territorial dynamics of state and capital, while further building out the relatively nascent field of legal geography. It makes a critical theoretical contribution to understandings of space not as either three dimensional voluminous space (as in subsurface resource modeling) or a flat Cartesian grid (as in cadastral maps of surface properties), but instead shows how spatial dimensionality is constituted and contested through practices of (de)territorialization at different scales. The politics of dimensionality, then, often involves conflicting and overlapping ways of "seeing" and parsing space, and is both subject to spatiotemporal legacies and aligned with the contemporary objectives of states, companies, and social movements who have a stake in territorial politics.

Second, I have argued that the hegemonic ways of knowing the subsurface are achieved through a politics of knowledge that I term systemic opacity. Systemic opacity emerges from varied and pervasive techniques of government that shroud the processes of alienation and valuation of the subsurface in order to weaken alternative claims to land and property, since landed property on the surface presents a barrier to the inflow of mining capital. Shifting the discourse from "transparency" to "systemic opacity" suggests that improvements in disclosure-based mechanisms cannot overcome the fundamental tension between surface and subsurface use values that is being concealed by the institutionalization of opacity and misinformation. Indeed, transparency actually colludes with opacity in in shifting access to venues which can be regulated and controlled. Opacity is, by necessity, the standard rather than the exception when it comes to extractive industries.

This critique has important implications for activists confronting extractive

industries. First improved transparency has been a significant policy focus of activist efforts. While I will not go so far as to say that gains in transparency are of no benefit – quite the contrary – I will suggest that the push for transparency is only useful to the extent that it is undertaken with a critical understanding of the inherent tensions of (il)legibility that transparency initiatives arise from. Second, one of the more productive elements of opacity which is informed by the comparative analysis in Chapter Two is the pervasive weakening or suppression of surface rights in both civil and common law systems. Mining codes in both legal systems still bear the mark of colonial practices that were designed to facilitate the unfettered flow of extractive capital in the first place, and so existing legal frameworks cannot accommodate other forms of value. This suggests that grassroots strategies to revalue land, for example through appeals to commons or natural capital, must consider the possibility that such strategies are likely to be co-opted or repressed if they are pursued primarily through administrative or legal channels.

In an effort to put direct attention on the politics of land ownership as a necessary site of struggle, I have sought in my research process so far to make current subsurface ownership patterns more legible to surface holders. This has included efforts to develop methods that would help activists to combat the opacity of the acquisition of mining rights, which typically occurs years before mining exploitation and resulting conflicts. However, this brief research endeavor could only make very small contribution to beginning to consider and address the intractable problems around mining and land rights. However, it does point to the many potential avenues for fruitful research and action on subsurface property governance and land rights.

To that end, for the next phase of my research program, I am co-convening a collaborative and interdisciplinary initiative to study regional land ownership patterns in the US Central Appalachian region. This regional land study follows up on the groundbreaking collaborative Appalachian Land Ownership Study (1981) which is widely regarded as an early study that set the standard for action research. Our new study integrates contemporary technologies, like GIS, and responds to grassroots groups' and policy officials' need for updated data to facilitate an economic transition away from coal dependence. It is also designed to foster creative and collaborative thinking with grassroots leaders and communities about land ownership, property rights, and economic

and social justice with regard to “Who Owns Appalachia” today.

As a broad multi-stakeholder collaboration, the new study incorporates diverse scholarly interests in land use and land change as well as international comparative work on resource economies, land ownership, and global justice. Within the study, I intend to lead a working group on methods for mineral rights research and thereby continue the line of inquiry that I have begun to explore in my dissertation. So far, I have been very fortunate to develop rich collaborations with both grassroots activists and academic scholars, and I hope to build an academic career around the continuation of interdisciplinary collaborations that are both intellectually exciting and beneficial to the public.

Appendix A: The Extractivist State Meets the Penal State: The Case of Intag, Ecuador

Introduction:

Accounts of the penal state in Latin America have documented how rapidly rising rates of incarceration over the past two decades were accompanied by neoliberal development policies and the penalization of urban poverty as a means to make the city more attractive and secure for investment. Scholars argue that, along with policies associated with the US war on drugs, neoliberal urban development has contributed directly to the problems of overcrowding and corruption in Latin American prisons which serve primarily as dangerous and unsanitary warehouses for the urban poor. In this paper we seek to build on these arguments to understand how rural zones also figure in the Latin American penal state in connection with contemporary neo-developmental aspirations aimed at securing and exploiting natural resources, modernizing rural production and infrastructure, and politically incorporating the peasantry.

Specifically, we examine the criminalization of resistance to extraction in Ecuador through the lens of the political imprisonment of Javier Ramírez (co-author of this article).⁷⁴ Ramírez is president of the Junín community, located in the Intag zone of Imbabura Province, which is politically and geographically at the heart of the first mining project of the state-owned mining firm Enami EP. Examining the trajectory of the 20 year mining conflict from the neoliberal era to present, we argue that there has been a marked shift in the Ecuadorian state's approach to facilitating extractive development, which more directly puts the state's resources in the service of extractive capital through policing and securitization of rural zones and the penalization of rural survival strategies and territorial defense.

The Intag case and imprisonment of Javier Ramírez are emblematic of how the penal state is taking shape not only with regard to rural territories in Latin America, but more broadly with respect to efforts by state and police forces to “secure” extraction and infrastructure projects worldwide. Criminalization of protest in the context of

⁷⁴ This work was realized as a process of collaboration between the authors about the current situation in Intag's Junín community and the political imprisonment of its president, Darwin Javier Ramírez Piedra. While Javier is a co-author and this collaboration is intended to reflect his point of view and experience, as two authors we use the impersonal voice, considering that direct experience does not pertain to both authors.

infrastructure projects has been analyzed extensively by political ecologists (eg. Ballard and Banks, 2003; Bebbington and Humphreys Bebbington, 2011; Bryant and Bailey, 1997; Hilson, 2002), but this analysis has generally been treated as a separate matter from geographies of incarceration and the penal state. Making the connection between criminalization of rural territorial defense and criminalization of urban poverty elucidates how state security apparatuses are spatially differentiated with respect to the role of the police and prisons in securing economic investment, whether urban or rural. With this analysis, we aim to offer one approach to bridging the often cited rift between “urban” and “rural” political ecologies by suggesting that dominant political institutions deploy similar strategies to aid the valorization of urban and rural environments – a process which is necessarily intertwined with the differentiation and dispossession of “unfit” bodies from places as they are transformed into new roles in the circuits of global capital.

At the same time, attention to the dynamics and practices of exclusion, criminalization, and incarceration builds on recent feminist critical political ecology literature, which has taken up how identities are constituted and articulated in and through environmental practices and exclusions (Mollett and Faria, 2013; Pulido, 2000; Sundberg, 2004). Here, we show how policing and security apparatuses suppress and erase the territorial histories and identities of Inteño people – who are *campesino*, indigenous, and Afro-descendent peoples with a unique territorial identity based in environmentalism (Lopez 2012). This suppression is part of a broader state strategy to co-opt the radical environmental discourse of *buen vivir* and normalize a belief in the necessity of the transformation of Intag and other *campesino*, indigenous, and Afro-descendent territories into “mining territories” for the “good living” of Ecuadorian citizens. Activists in territorial defense movements are demonized as “childish environmentalists,” “lunatics,” and “terrorists” who are holding back the whole country, and they are explicitly criminalized for interfering with national development and improvement schemes (BBC Americas 2007; Santacruz 2008). While contributing a specific analysis of how the penal state is being deployed in rural Ecuador to secure mining investment, we hope that consideration of the penal state and how policing marks some bodies as disposable in a rural context can more broadly inform current and future debates about environmental

justice and the production of sacrifice zones in extraction or dumping sites, criminalization of protest against pipelines, dams, and other mega-projects, and the re-investment in these sites after their destruction – sometimes even as gleaming new prison facilities as in former mountain-top removal sites in the United States (Che 2005; Schept 2014; Yanarella and Blankenship 2005).

In the following sections we undertake an analysis of the confluence of the penal state and the neo-extractivist state in post-neoliberal Ecuador through a critical examination of 1) the emergence of strategic sectors and attendant security discourse; 2) the expansion of community policing and the rhetoric of citizen participation 3) changes to the penal code and the consolidation of executive control over civil society. We further explore each of these themes through a case study of the preventive detention of Javier Ramírez and the subsequent policing and militarization of the Junín community as a means to secure access to the 4,839 hectare Llurimagua mining concession, believed to contain copper and molybdenum ores.

Situating the “rural” in analyses of the penal state:

The majority of studies of the penal state in Latin America have emphasized the criminalization of urban poverty in connection to urban redevelopment strategies and the circulation of capital (eg. Crossa 2009; Swanson 2007; Davis 2007; Garces 2004; Koonings and Kruijt 1999). These studies are broadly informed by Loïc Wacquant’s framing of “punitive containment as state strategy for the management of dispossessed and dishonored populations in the polarizing city in the age of triumphant neoliberalism” (Wacquant 2008, p. 56). For Wacquant (2009a, 2010), the penalization of poverty marked a central shift in the character of the state from the Keynesian welfare state to the neoliberal penal state in the US and Europe, which he further argued was becoming a global phenomenon, especially in Latin America (2009b, 2004). Contemporary research on Latin American urban governance has indeed demonstrated the widespread adoption of policies that criminalize the livelihood strategies of the urban poor, especially through aggressive “broken windows” and “zero tolerance” policing which targets perceived “disorder” that is actually a consequence of socio-economic conditions (see Dammert and Salazar 2009; Müller 2012).

Accounts of the adoption of harsh policing tactics in conjunction with urban renewal projects throughout the globe provide a rich basis for understanding the political economy of the penal state. However, it is also important to consider the uneven unfolding and spatial differentiation of the penal state. While urban centers represent sites of agglomeration and concentration of capital (Sassen 2000) which are deeply intertwined with and dependent upon state apparatuses for their functioning as such (Cox 1999), the state likewise serves a critical function in the transformation of nature into resources and commodities (Keucheyan 2014; Soliz 2013; Smith 2007; Glassman 1999).

The relationship between nature and the accumulation of capital as articulated by the state is especially consequential for states which have a long history of economic dependence upon primary commodity exports. By considering how the state also structures and deploys the security apparatus to secure nature-based commodity investments, our analysis builds upon previous urban research which examines the penal state in connection with the “need to convince potential investors of the security and safety of their respective investment locations” (Müller 2012, p. 61). That is, we contend that opposition to resource extraction and other large scale infrastructure projects which has resulted in the criminalization of social protest might be productively analyzed within the broader framework of the penal state (cf. Alves 2012).

Expanding the notion of the penal state to encompass its uneven unfolding across urban/rural or center/periphery divides also demands attention to the shift to “post-neoliberal” governance models in many Latin American states, which poses challenges for conceptions of the penal state as defined by processes of neoliberal urbanization. In Ecuador, the Correa government has explicitly denounced the penalization of poverty and informality and has made significant reforms to and investments in police, security, and prison infrastructure as well as in social programs. Likewise, a key tenet of Ecuadorian post-neoliberalism is the national development plan which aims to “transform the productive matrix” through the modernization of Ecuador’s economy and eventual shift away from primary commodity production. Paradoxically, the development strategy promoted by the Correa government is dependent upon projected revenues from opening the country to large-scale mining, a “strategic sector” that is a matter of national security

under the 2011 “Comprehensive National Security Plan.”⁷⁵

Strategic Sectors and the Neo-Extractivist State in Ecuador:

Most simplistically, extractivism refers to a mode of accumulation and political domination associated with the export of primary commodities through either colonial or neocolonial structures (Acosta 2011; Fabricant and Gufstafson 2015; Veltmeyer and Petras 2014). The term has been variously invoked to refer to the entire history of colonialism in the Americas, to the integration of Latin America into the world economy at the turn of 19th century, or only to contemporary dynamics of petroleum and metals mining from the neoliberal era to present. In current debates, the term is sometimes modified as “neo-extractivism” to connote the adoption of extractivist policies by populist and progressive Latin American governments in order to fund social welfare programs and the diversification and modernization of the national economy. Here, we use the term neo-extractivism to indicate the continuity between policies set in motion under neoliberalism and the current developmentalist agenda of the Correa government in Ecuador.

In the 1990’s, Ecuador’s neoliberal governments collaborated with multilateral development institutions to attract foreign investment in its metals mining sector by overhauling mining and environmental regulations to make them more industry-friendly; conducting a comprehensive geological survey to identify potential reserves; criminalizing informal mining; and providing significant tax incentives to foreign mining companies (Sacher and Acosta 2012). These reforms led to what Sacher and Acosta (2012, p. 15) call a “hemorrhage” of mining concessions, with 20% of Ecuadorian territory under concession (Acosta 2009, p. 93). This was the situation of the Ecuadorian mining sector when Rafael Correa came into office in 2007, although there were still no large scale mines in existence. Although the Correa government suspended approximately half of all mining concessions while the country drafted a new constitution in 2008 and passed a new mining law in 2009,⁷⁶ which significantly increased state oversight and

75 Ministerio Coordinador de Seguridad, 2011 “Plan Nacional de Seguridad Integral”

76 The 2009 law was substantially weakened by reforms in 2013 as well as later additional legislation to attract mining investment (see footnote #11, p. 5).

taxation of mining, the same reforms saw the institutional and legal framework for mining shift from making the sector attractive to foreign investment to making it a strategic sector for Ecuador's economic and political model.

Article 313 of the Constitution states that

“the state reserves the right to administer, regulate, control, and manage strategic sectors in conformity with the principles of environmental sustainability, precaution, prevention, and efficiency. Strategic sectors, under the exclusive control and direction of the state, are those whose importance and magnitude have decisive social, economic, political, or environmental influence, and should be directed to full development in the interest of society. Considered strategic sectors are energy in all its forms, telecommunications, non-renewable natural resources, the transport and refinement of hydrocarbons, biodiversity and genetic patrimony, the radio spectrum, water, and whatever else the law determines.”⁷⁷

With Article 313 as the Constitutional basis, Executive Decree No. 849 was issued in January 2008 to create the Coordinating Ministry of Strategic Sectors,⁷⁸ which has the mission of “directing policy to responsibly take advantage of natural resources to benefit Ecuadorians.” The Ministry's core function is oversight and coordination between the Ministry of Hydrocarbons, the Ministry of Mining, the Ministry of Electricity and Renewable Energy, the National Secretary of Water, the Ministry of Telecommunications and Information Society, and since 2013, the Ministry of Environment. These are the sectors and corresponding ministries that are considered essential to the goals of modernizing the state and the national economy in accordance with the broad vision for *buen vivir* or living well that is outlined in the Ecuadorian Constitution and the National Development Plan, which permeates all Ecuadorian state institutions and discourse. For example, the 2016 vision statement summarizes the Ministry's aims

77 Constitution of the Republic of Ecuador 2008. Legislative Decree 0. Official Register 449 of 20 Oct 2008.

78 Article 1 of Executive Decree No. 849, Promulgated in Official Register No. 254 de 17 January 2008, of creation by the Coordinating Ministry of Strategic Sectors.

“to be the management model for rational, sustainable, and efficient exploitation of mining, hydrocarbons, and water resources; and the effective provision of public telecommunications services and electricity; generating maximum social benefit and economic impact with minimal environmental involvement, aimed at guaranteeing the rights of the population.”⁷⁹

Under this framework, the “rights of the population” are guaranteed by rational state led development of resources and the redistribution of rents such that overall quality of life is improved for the majority of citizens, putting resource extraction at the heart of national development plans. Accordingly, strategic resource extraction, and especially the development of large scale metals mining, holds a pivotal place in the National Plan for *Buen Vivir*,⁸⁰ which is framed as facilitating an eventual shift away from dependence on extraction and primary commodity exports. Nonetheless, even proponents of this kind of “sensible extractivism” rooted in efforts to transition to a post-extractive economy have harshly criticized the state for in practice not applying rigorous social and environmental standards in granting concessions, tolerating a wide variety of regulatory infractions, adopting and promoting increasingly lax policies aimed at attracting as much foreign investment as possible, and using extraction revenues primarily to build infrastructure that further facilitates and deepens extraction rather than investing in social infrastructure and wealth redistribution aimed at transforming the class structure of society (eg. Gudynas 2011; Acosta 2012; Davalos 2013; Soliz 2013; Davalos and Albuja 2014; Shade 2015).

While Ecuador sought to develop a large scale metals mining industry that would make up 4-5% of GDP for the period 2011-2015,⁸¹ a series of reforms and a drop in oil prices have led to a more aggressive push for foreign investment in the mining sector in 2016-2017, with the state hoping to generate \$588 million in investment in mining in

79 Website of Coordinating Ministry of Strategic Sectors, Valores/Misión/Visión. <http://www.sectoresestrategicos.gob.ec/valores-mision-vision/> (Accessed Aug 30 2016).

80 National Plan for Development/National Plan for Buen Vivir 2013-2017, makes more than 150 references to metals mining in its 600 pages. Retrieved from <www.buenvivir.gob.ec>. (Accessed Nov 29 2016.)

81 National Plan of Mining Sector Development 2010-2015, Ministry of Non-Renewable Natural Resources, August 2011, p. 73

2016 and increase to \$1.5 billion in 2017 (El Universo 2015). To that end, a Ministerial Decree by the Ministry of Mining on Mar 30 of 2016⁸² created procedures for open auctions of metallic mineral concessions, tendering 431,801 hectares on April 1, which generated more than 196 applications in one week (El Universo 2016). Mines Minister Javier

Cordova called the auction a success, as did mining industry analysts who stated, for example, that Ecuador is “back on the right track” and that “President Correa recognized he was wrong about the mining sector” after attempting to capture a much larger share of mining revenues for the state per the 2009 Mining Law (El Universo 2016). The “success” came after several reforms to the mining law and tax policies between 2013-2015 incentivized foreign investment in mining, which the global mining consulting firm Wood Mackenzie helped devise as well as promote at the Ecuador Day of the Prospectors and Developers Association of Canada meeting in 2016^(Barnes 2016; Coordinating Ministry of Strategic Sectors 2015).

Some of the benefits of these industry friendly reforms and incentives include elimination of environmental impact reporting requirements as well as requirements to gain approval from local communities and authorities prior to beginning operations;⁸³ significant reductions to the state’s share of mining revenues from royalties and taxes;⁸⁴ elimination of red tape for acquiring new concessions.⁸⁵ With these reforms, Ecuador’s total tax take from mining revenues is on par with that of Colombia and Peru, two countries widely critiqued for maintaining and deepening neoliberal policies, especially with respect to the extractive sector (Lust 2014; Gibbs y Leech 2009; Sullivan 2014).⁸⁶

If the Correa government has continued the neoliberalization and flexibilization of

82 Ministerial Decree No. 2016-002 of the Ministry of Mining, published in official register No. 722 on 30 Mar 2016.

83 Organic Law Reforming the Mining Law, published in official register No. 37 on 16 Jul 2013.

84 The 2013 mining law caps royalties at 8%. Presidential Decree 425 establishes new tax formulas that effectively eliminate the windfall tax and the sovereign adjustment tax. The 2015 Law on Incentives for Public-Private Partnerships and Foreign Investment restricts applicability of the capital gains tax (p. 20) and makes the VAT refundable for mining exports, creates exemptions for mining related equipment (p. 21), and lifts the prohibition on foreign investment in small scale mining (p. 29). Resolution No. 135-INS-DIR-ARCOM-2014 - published in the Official Gazette Supplement No. 415 of January 13, 2015 allows for accelerated depreciation of either 5 or 10 years at the company’s discretion.

85 Ministerial Decree No. 2016-002, Ministry of Mines – Official Gazette No. 722 dated 30 March 2016

86 While the 2013 Mining Law was resisted and widely critiqued by the public sector in Ecuador for rolling back environmental and social regulations, it is probable that tax incentives and other industry reforms have received less attention due to the piecemeal nature in which they were rolled out.

the extractive sector, it has departed from the neoliberal model's retreat of the state, directly putting the state's resources in the service of extractive capital. A presentation to the global mining industry crafted by Strategic Sectors, the Ministry of Mining, and Wood Mackenzie highlighted Ecuador's significant infrastructure investments in roads, ports, and hydroelectric projects⁸⁷ and claimed that the country can offer a 40% competitive advantage over regional peers in operating costs for labor, electricity, fuel, and freight.⁸⁸ Another report prepared for PDAC pitches opportunities for private partnerships with the state mining firm Enami EP to develop its existing concessions, in which initial exploration, impact studies, and community relations work is completed at the expense of the state.⁸⁹ While subsidizing infrastructure and exploration for mine development significantly benefits private companies, the community relations work is crucial. As Mining Minister Javier Cordova summarized "before our government, community relations was just between the company and the community – it was a direct relationship, and that created bad results" (Hiyate 2015). In contrast, as a "strategic sector" the mining industry in Ecuador now enjoys the legitimacy, authority, and security resources – including police and military - of the state.

Securing Strategic Sectors and the Criminalization of Territorial Defense:

Latin America's contemporary political economic reorganization has been marked by the adoption of a discourse of "strategic natural resources," particularly by the populist-nationalist oriented governments.⁹⁰ As Bruno Fornillo (2014) has observed, this discourse has its roots in the post World War I diplomatic-military tradition which was cemented as part of the protectionist response to the crisis of the 1930's. The result of this discourse was to assign exceptional value to a resource as a matter of national security and ultimately to equate resources with power.

87 Ecuador Mining October 2015 prepared by Wood Mackenzie, p. 6 retrieved from <<http://www.sectoresestrategicos.gob.ec/wp-content/uploads/downloads/2015/11/Ecuador-Mining.pdf>> (Accessed Jan 9 2017)

88 Ibid p. 8.

89 Ecuador: The New Mining Frontier, p. 19 retrieved from http://www.mineria.gob.ec/wpcontent/uploads/downloads/2016/03/PDAC2016_EcuadorDay04_MinistroCordova.pdf (Accessed Jan 9 2017)

90 The current version of the strategic resources discourse and its associated policies has been promoted especially by multilateral institutions and European governments, including the Economic Commission on Latin America, the World Economic Forum, the World Bank, and Germany and Norway/

According to Fornillo, the current version of the strategic resources discourse and its associated policies reflects the ongoing reorientation of the dynamics of capital accumulation around the recognition that resources are not infinite, expressed in the European Union's foreign policy of resource security premised on ensuring supplies, and the contradiction of the need for development with a green or sustainable face within economic structures based on the subsumption of nature to capital.

Strategic resources in this sense are necessarily expanded beyond those resources traditionally associated with military technology and/or monopoly rents to include, at least for the case of Latin America, those which did not previously merit attention or were considered inexhaustible, or which are considered key to the deployment of a green economy. This evolving discourse of strategic resources deployed in Ecuador and elsewhere in Latin America continues to be characterized by the genealogy of the diplomatic-military tradition which designates certain sectors of nature as matters of national security and sovereignty.

In the Ecuadorian case, the adoption of the strategic resource approach should be seen within the broader context of the National Comprehensive Security Plan for *Buen Vivir*,⁹¹ which integrates security discourse with development plans. The plan defines comprehensive security as “the condition that aims to guarantee and protect the human rights and liberties of Ecuadorians, governance, the application of justice, the exercise of democracy, solidarity, the reduction of vulnerabilities, protection, and response and remediation to risks and threats” (p. 14). The security plan represents an important overall shift in state discourse and practices with respect to the development of a modern disciplinary security state apparatus, and several sections foreshadowed the adoption of laws that explicitly codify military and police action to secure strategic sector projects and penalize territorial defense.

The Comprehensive Security Plan places responsibility for safeguarding strategic resources under the auspices of military defense as a matter of both national sovereignty and national development. It explicitly prescribes a policy of “strengthening and specializing the strategic and operative capacities of Defense in all levels and ambits of

91 Coordinating Ministry of Security, 2011 “Plan Nacional de Seguridad Integral” (National Comprehensive Security Plan)

society” for the strategy of “protecting the strategic resources of the state” (p. 94). The defense framework for strategic sectors broadly outlined in the security plan is specifically codified in the Public Safety Law,⁹² which was amended in May 2014 to allow the armed forces to support the national police in matters of internal public security. This change was widely publicized with regard to the use of the military to suppress protests, but the the deployment of military to repress communities opposed to mining has received comparatively less attention.

Article 43 of the Public Safety Law⁹³ entitles the Ministry of Defense to deploy armed forces as a measure of prevention or protection to public or private establishments and infrastructure. The Ministry of Defense’s manual for military operations,⁹⁴ which specifies the role of the military in internal security, refers to both Article 313 of the constitution, reserving the right of the state to administer and control strategic sectors, and to Article 43 of the public safety law to outline security procedures for strategic sectors.

The use of public force to secure extraction projects and infrastructure is not a mere abstract possibility presented by the law. In three separate incidents occurring in September and October 2015 and February 2016, members of the military, national police, and private security contractors forcibly removed families and demolished homes in the San Marcos district of Tundayme, Zamora to allow the Chinese firm Ecuacorriente to begin construction of the Mirador copper mine (INREDH 2016). Likewise, on May 8, 2014 in the Intag Zone of Imbabura Province, approximately 200 members of the Special Operations Group (GOE), Intervention and Rescue Group (GIR) and national police accompanied technicians to carry out the impact study for the Llurimagua mining project and a permanent security force has been installed within the exploration area (El Comercio 2014a).

The securitization of resource extraction is further supported by new laws which criminalize protest and opposition to the government’s development plans. These laws,

92 Ley Reformatoria a la Ley de Seguridad Pública y Del Estado, [Law Reforming the Law of Public Security and the State], published in official register No. 263, second supplement, dated 09 Jun 2014.

93 *Ibid.*

94 National Defense Ministry, Manual de Derecho en las Operaciones Militares [Manual of Conduct in Military Operations], first ed. 2014. pp. 36-37 y 78-81. Retrieved from http://www.coed.mil.ec/archivos_coed/MANUAL%20DE%20DERECHO%20EN%20LAS%20OPERACIONES%20MILITARES.pdf (Accessed Jan 09 2017)

codified in the penal code that came into effect in 2014, also have their basis in the Comprehensive Security Plan under the heading “Political Violence:”

“this type of violence is generated when there is no respect for citizens at a legitimate demonstration, or when political or social groups distort complaints to the authorities, a situation that can trigger an alteration of order and social peace, and that can leads to acts of vandalism, assault, private property, looting and other criminal acts that affect public safety.”⁹⁵

Offering the police protests of 2010 as “irrefutable proof” that protest has the potential to threaten democratic stability and the state, the passage goes on to note that “public safety...has to do with control and maintenance of public order against threats to order and social peace, for which the state uses public force progressively, being able to use states of exception.”⁹⁶ Responding to the Comprehensive Security Plan’s objective of addressing so-called political violence, the revised Comprehensive Penal Code (COIP)⁹⁷ contains 29 articles that define a wide variety of political crimes against “public security,” some of which can be punishable by up to 13 years of imprisonment.

A series of types of crimes criminalize protest, including Article 336 – Rebellion, Article 345 – Sabotage, Article 346 – Stoppage of a public service, Article 348 – Incitation of disorder among citizens, and Article 366 – Terrorism. Together with the Correa government’s history of prosecuting social protest under the “sabotage and rebellion” articles of the previous penal code, these articles significantly deter the exercise of the constitutional right to engage in legitimate political protest. Moreover, these articles have in common ambiguous wording, leaving it to the discretion of the judge to determine which conduct constitutes crime and which does not. The language under Article 345 – Sabotage is especially broad, directed at those who “disrupt the economic environment of the country or public order”⁹⁸ and includes many activities which are traditionally associated with social protest in Ecuador, such as shutting down lines of communication or roads.

95 Plan Nacional de Seguridad Integral, op. cit. p. 52.

96 Ibid.

97 Comprehensive Organic Penal Code, published in official register No. 180 on 10 feb 2014.

98 Ibid. p. 53.

The vague language of the COIP is especially problematic given the subordination of the justice system to executive interests under the Correa government. The Organic Law of the Judicial Function allows for the direct interference in judicial functions in cases of “inexcusable error”⁹⁹ which is vaguely defined in the law and permits lax interpretation. Likewise, the Legal Secretary to the Presidency of the Republic, Alexis Mera, has communicated directly to judges that all cases which directly concern the interests of the state will be appealed in a higher court if the ruling is not favorable to the government’s interests.¹⁰⁰ Moreover, the judges can be personally liable and dismissed if the higher court reverses their decisions (Focus Ecuador 2015). It is in this context that, throughout the course of the Correa government, more than 200 leaders of the Federation of Indigenous Nationalities of Ecuador (CONAIE) have been tried for exercising their rights to protest (El Comercio 2014b). Likewise, several human rights organizations have found that the criminalization of social protest has sharply increased in Ecuador in the context of extraction and mega-infrastructure development, where accusations are made in the majority of cases by mining companies (OMCT 2016; FIDH 2015; Amnesty International 2012).

Criminalization of Territorial Defense in Intag:

One such case is that of Darwin Javier Ramírez Piedra (co-author of this contribution), who was unjustly detained in the Ibarra Center for Social Rehabilitation for 10 months under “preventive detention.” Ramírez was arrested arbitrarily on April 10, 2014 immediately following a meeting with Minister of Interior Jose Serrano¹⁰¹ in Quito, who invited Ramírez and two other leaders in Intag's anti-mining movement, Polibio Perez and Silvia Quilumbango, to discuss their concerns. During the meeting with Serrano, Ramírez affirmed the Junín community's opposition to the Llurimagua mining

99 Organic Code of Judicial Function, Published in official register No. 544 on 09 Mar 2009, Art. 108 p. 36.

100 Personal communication, Jul 22 2015 (Anonymous source in the legal profession).

101 The community leaders were initially hopeful about this meeting, because they had solicited the opportunity to make their case to someone in power, not simply the technicians who come to the communities to “convince” people to accept mining. Moreover, prior to his career in the Correa government, Minister of the Interior Jose Serrano was the lawyer of the anti-mining movement in the Intag zone and other mining-affected regions. Therefore, the community leaders already had a positive relationship with Serrano which they thought they could leverage in the meeting.

project, a concession held by the national mining company Enami in partnership with EMSAEC, the Ecuadorian subsidiary of the Chilean national mining firm Codelco. Ramírez was not given any reason for his arrest at the time he was detained, but eventually was charged with terrorism, sabotage, and rebellion. He was accused by Enami of assaulting an employee and damaging company equipment during a demonstration to prevent technicians from collecting data for the mining project's environmental impact study. However, medical records demonstrated that Ramírez was under the care of a doctor at the time of the demonstration and was not present. The court did not take into account the evidence in his favor and Ramírez was ultimately convicted of rebellion after 10 months imprisonment with no hearing; he was released the day he was convicted, having already served his sentence in preventive detention. His brother, Hugo Ramírez, was also charged, and an order of capture remains in effect, but to date he has not been apprehended.

One month after Ramírez was detained, on May 10, 2014, approximately 120 members of the national police, including members of the highly trained tactical units known as the Special Operations Group (GOE) and the Intervention and Rescue Group (GIR), and 60 technicians entered the Junín community by force to facilitate completion of the environmental impact study. Several community members, including Ramírez's mother and wife, were beaten by police during the confrontation. Nonetheless, a press release by the National Police described police accompaniment of Enami as a purely peaceful and preventive measure to ensure public order and noted that “respect for the human rights and dignity of the people of Junín prevailed” (National Police 2014a). Although the official narrative of Enami is that only a minority of individuals are opposed to mining in Intag, the deployment of such a large number of police is testimony to the effectiveness of popular resistance which prevented previous attempts by Enami to access the concession, which is even conceded in the aforementioned police press release.

To that end, the arrest and detention of Ramírez cannot be considered apart from the police entry one month later. Although individuals who opposed mining and participated in territorial defense protest faced accusations from previous mining companies during the neoliberal era, the justice system operated with more independence and no one was ever detained and imprisoned for a long period of time (El Comercio

2015). Ramírez's arrest and imprisonment, along with the deployment of the national police, demonstrated that mining interests now operate with the force of the state. This intimidation sharply diminished the capacity for resistance, especially when considered in comparison to the anti-mining movement's past successful expulsion of two multinational firms. When the Canadian junior mining firm Ascendant copper held the Intag concession in 2004-2006, groups of armed paramilitaries made multiple incursions into Junín and surrounding communities in efforts to break the resistance and access the concession, but hundreds of Inteños opposed to extraction mobilized to defend their territory. In December 2006, Ascendant was finally expelled after residents nonviolently captured, disarmed, and detained 56 paramilitaries in the church in Junín until authorities responded a week later.

By contrast, due in large part to the imprisonment of Junín's community president, the police did not face massive organized resistance when they arrived in Junín in May 2014. Furthermore, for the following six months a force of 26 National Police remained stationed in Junín and housed in the homes of community members at the expense of the state. When funds for housing and meals were no longer available due to budget constraints, the police were moved into the schoolhouse of the neighboring community of Chalgualco Bajo, whose students were displaced to another school. A small number of police are permanently stationed to secure the concession during advanced exploration, which is presently ongoing. The newly established police presence in this sector of Intag was framed in media releases within the discourse of community service, police reform, and the expansion of community policing that has occurred under the National Comprehensive Security Plan, which indeed has invested in the construction of more than 400 new community policing stations (National Police 2014b; National Police 2014c).

The establishment of the police and mining personnel in the Junín community enabled direct surveillance of and intervention in the political landscape. With the elected community president detained, the official directive registered with the Ministry of Agriculture, Ranching, Aquaculture and Fisheries (MAGAP)¹⁰² was paralyzed. Meanwhile Enami installed a second, explicitly pro-mining directive comprised primarily

102 The Ministerio de Agricultura, Ganadería, Acuacultura y Pesca [Ministry of Agriculture, Ranching, Aquaculture and Fisheries] is charged with oversight of rural census, land registry, and governance activities.

of temporary residents hired to do manual labor related to exploration. Although the company installed directive was illegitimate because it was not elected in a general assembly, it constituted a formal structure for the political organization and legitimization of the mining company's presence and community relations efforts. Over time, the division became more entrenched as more families began to provide housing, meals, or labor to the mining companies and police, seeing no viable path for resistance under police occupation. The resulting social fractures made it possible for Enami to successfully promote to residents the state's chief discourse regarding strategic resources: that national development *requires* large-scale copper mining. Conversely those opposed to mining argue that because the mined resources will be exported and social and environmental costs will be externalized, large-scale mining is primarily a means for the reproduction of the state and the reproduction of capital. Analyzing and deconstructing the state's developmentalist discourse constitutes the present phase of the opposition movement.

One facet of this analysis is the important link between the emerging penal state and the emerging extractivist state. Ramírez's case is emblematic of the persecution of territorial defense and resistance to extraction and is demonstrative in a number of ways in which the penal state is taking shape in this ambit. First, the invocation of preventive detention demonstrates that under the new COIP¹⁰³ this measure of precautionary detention continues to be deployed excessively, despite criticism drawn for the role of preventive detention in prison over-population and human rights offenses (UNODC 2014) and the explicit policy objective to abolish preventive prison in the Comprehensive Security Plan.¹⁰⁴ It is important to note the systematic political use of preventive prison in the case of targeting anti-extraction activists with especially grave crimes, delaying hearings for as long as possible and then reducing the charges to more appropriate crimes to ensure conviction and legitimize the preventive detention (Vintimilla y Vallacis 2013). This practice differs from the application of preventive prison for those accused of low level crimes in the cities in which prosecutions are excessively delayed because of a lack of resources within the judicial system to process cases in a timely fashion.

103 Articles 522, 534, 535, 537, 538, 540, 549, and 550 of the COIP relate to the use of preventive detention.

104 Plan Nacional de Seguridad Integral, op. cit. p. 81.

Second, Ramírez's case points to the interference of executive power with judicial processes. The lawyers who represented the Ramírez brothers, Ramiro Ramon and Raul Bolanos, are being investigated by the Judicial Review Board (Consejo de la Judicatura) for allegedly delaying the court cases, despite overwhelming evidence that the lawyers sought to speed up the case in order to end the preventive detention of Javier. The pursuit of the lawyers by the review board is understood as politically motivated and a warning to lawyers who oppose the state's interests in the courts.

Third, the incursion of policing into rural territories under the rubrics of public safety and community policing suggest a significant expansion of the disciplinary apparatuses of the state. At the same time, legal requirements for the military and police to secure strategic sector infrastructure and reforms to the COIP which permit the military to assist in civil matters suggest the evolution of a less benevolent security state apparatus which nevertheless operates under the guise of banal community policing and service.

Finally, the role of the national mining company Enami in managing community relations and providing security for foreign mining companies suggests that the state has surpassed its former role as a mere regulator and facilitator of global capital, with the resources of the state now fully at the disposition of extractive industries in the name of securing strategic sectors for national development.

Conclusions:

The full embrace of the transnational extractive sector by the state is not merely our contention; in a presentation by the Ministry of Mining given at PDAC 2016 entitled “Ecuador: The New Mining Frontier” it was advertised to potential investors that “partnering with Enami provides a streamlined entry into the Ecuadorian market and benefits and support normally reserved for state-owned entities” (p. 19). Codelco in Ecuador (EMSAEC) certainly enjoyed a “streamlined entry” to the Llurimagua concession in Intag. Considering the deployment of tactical police for mining personnel to enter Junín by force, the subsequent police occupation, and 10 month imprisonment of Javier Ramírez, the “benefits” provided by Enami - which is a state mining firm that has no capacity to actually do mining - appear to be primarily oriented around disciplining, and where necessary, forcing, communities to accept mining and otherwise subsidizing

the cost of doing business in Ecuador. In effect, Enami is fulfilling the role historically played by junior firms, but with the force of the state behind it. “Juniors” are a key sector in the highly tiered structure of the global mining industry. These small transient firms generate their profits from speculation and the dirty work of making resistant communities appear compliant with mining so that concessions can be sold to larger, more established firms. This history of transnational juniors, mostly domiciled in Canada because of fiscal incentives, and their human rights abuses in Ecuador, is well-documented (North 2011; Deneault y Sacher 2012; Latin American Working Group on Mining and Human Rights 2014). As the expulsion of the Canadian junior Ascendant Copper from Junín in 2006 demonstrated, the model of reliance on juniors is highly risky. Enami can be considered as a new governmental technology to neutralize risk in the context of the emerging alliance capitalism in Latin America, where states have much less negotiating power in the arena of transnational capital compared to China and other BRICs.

We have argued that this new role for the state is articulated through the discourse of strategic resources and the broader shift toward a rhetoric of citizen security. The securitization of resources in rural zones has been accompanied by the installation of police units and surveillance equipment in areas which have historically enjoyed relative autonomy from direct state vigilance. A recent communications release by the Ministry of Interior (2015) carried the headline “En la zona de Intag, la ciudadanía vive segura” [In the Intag Zone, the citizenry lives securely], which emphasized the ongoing community relations work of the police, the control of minor crimes like driving an unlicensed motorcycle, and the successful prevention of narco and microtrafficking, based on the fact that so far the police have not detected these crimes in Intag.

We argue that the extension of public order and so-called “quality of life” policing to rural zones is a fruitful avenue for future research on the evolution of the penal state in Latin America, especially as it has occurred alongside the regional tendency toward “strategic resources” which often concern rural economies. Extractive development and mega-infrastructure is itself associated with increases in delinquency, while rural dispossession associated with extraction sends former rural landholders to the cities to become members of the marginalized urban sectors. This observation raises questions

about the “quality of life” and “security” discourse invoked to justify such policies, which are generally couched in the language of *buen vivir* in official Ecuadorian rhetoric. Whose quality of life is at stake, and who exactly “needs” resource development? As Soliz (2013) argues, the effort to responsabilize rural people to the growing necessity of metals is without regard to internal and external class stratification of the consumption of metals. This growing consumption, moreover, is based in the subsumption of consumption under capital “whereby the extraction of the surplus value of labor is hidden and suppressed by the overvaluation of consumption and its neoliberal ideologies of self-transformation” (Ngai 2003, p. 469).

We conclude that the connection of *buen vivir* to development, security, and quality of life enables the state to flip the radical subaltern discourse of *sumak kawsay*, which is incompatible with the dominant cultural formulation of the state, and instead make it subordinate to the state in its conventional role as facilitator of capital. To that end, the modernization of security, police, prison, and military infrastructure under the rubric of *citizen* security is in fact a matter of state security in the face of pressures from subaltern groups. This is evidenced by the National Security Plan's explication of the reason “political violence,” typified by 29 articles in the new COIP, is a threat: “the protection and welfare of the nation as a whole are the responsibility and reason for existence of the state and its institutions. It is the state to whom society has entrusted the life, health, and physical integrity of its citizens, their moral and social values (peace, tranquility, order, security, morality, freedom, justice solidarity) as well as their assets (housing and property) ... for this reason the conspiracy to topple a legitimately constituted government is considered a threat to the security of the State”¹⁰⁵.

As previously discussed, it is precisely the articles dealing with political violence that have been invoked to criminalize social protest, especially in the wake of extraction plans. It is often pointed out that the expansion of the extractive sector and the persecution of protesters is in violation of the Ecuadorian constitution, which guarantees the rights to protest as well as the rights of nature. However, all laws are made in practice through interpretation and struggles over meaning. State apparatuses, as mediators between nature and capital, plays a profound role in the conversion of nature into

105 Plan Nacional de Seguridad Integral, op. cit., p. 53

territory and resources, and likewise the transformation of communities and individuals into populations and citizens (Foucault 2009). It is the violence of the law which make these categories appear self-evident, universal, and objective. The law which incorporates *buen vivir* as a juridical concept to be deployed and defended by the state suppresses *buen vivir* as a living subaltern praxis (de Sousa Santos 2007). Accordingly, one of the significant conclusions of defenders of territory in Intag is that it will always be a mistake for social movements to collaborate with the state. The state's interests are fundamentally at odds with popular efforts to define and implement the transformative concept of *buen vivir*, which demands an end to the persecution of the defenders of life everywhere.

Appendix B: Methods

Research Objectives

Through a combination of qualitative and visual methods employed over two years of fieldwork, my dissertation examines how the changing political economy of the mining industry has produced novel geographies of subsurface ownership, and in the process, altered everyday experiences of and access to land. Scholars, policy-makers, and activists studying mining have long recognized transparency as a major problem with understanding and regulating extractive industry activities. My research contributes an analysis of the specific institutional arrangements that produce the opacity through which extractive industries typically operate, and it does so by paying attention to the lived experiences of individuals and communities impacted by extractive industry land deals. The research contributes a new lens for studies of land tenure and rural economies by incorporating the vertical – how deep do my land rights extend - into questions of ownership, governance, and citizenship.

I began this project with two main objectives:

Objective I. Compare how the geography of subsurface property ownership is becoming reconfigured in two sites in Appalachia and the Andes under new forms of mining investment.

Objective II. Identify the legal and administrative changes that foster these new geographies with particular attention to the links between mundane practices (e.g. deed transfers) and overtly antagonistic practices (e.g. forced expulsion).

Through these two study objectives, I sought to demonstrate how patterns of subsurface rights distribution are linked to differences in legal and administrative terrains by comparing the governance of rights to the subsurface across different legal contexts (common vs. civil law) as well as different types of extraction interests (energy vs. minerals).

Research Questions and Tasks:

The study objectives were broken down into specific questions and tasks:

RQ 1: What is the geography of subsurface land grabs?

- **RQ1 Task 1a:** Produce maps of subsurface land grabs in my study areas using a variety of publicly available resources.

- **Outcomes:**
 - The research focus ultimately shifted to contested surface rights in the context of subsurface investments.
 - See Data Appendix B for a series of maps which demonstrate how contested ownership has shifted over time in Ecuador's Intag Zone.
 - See Chapter two for maps of leasehold in West Virginia, adapted from corporate materials.
 - See Chapter Two for maps of permitted and completed Marcellus and Utica wells in West Virginia.

- **RQ1 Task 1b:** Develop collaborative methodologies and resources that can be utilized by the public to discern opaque mineral ownership and accumulation patterns.
 - **Outcomes:**
 - Collaborations were developed with local and county level grassroots leaders and government administrative offices in the Intag Zone.
 - Collaborative mapping methods were developed in Ecuador, which involved a long-term iterative process of collaboratively reviewing and discussing other map sources, analyzing records from the property registry, reviewing county property tax data, walking property lines, and collecting GPS points.
 - Chapter Four is a Spanish publication written collaboratively with a *campesino* from Intag and published in an Ecuadorian political journal.
 - This research did not find a collaborative “home” in West Virginia but has been networked through several non-profit organizations, and a new collaboration is emerging with a Doddridge County church ministry and the Economic Development Authority. We plan to develop a public research report and guide to WV laws and title research for mineral estates.

- The opacity of subsurface ownership and governance became a central theme in the findings which are discussed in Chapter Two.

RQ 2: What sites of law making, both *de jure* and *de facto*, support the constitution of subsurface property rights, and are such processes of law making undergoing substantive change?

- **RQ2 Task 2a:** Develop appropriate analytical methods to examine complex ‘bundles’ of surface/subsurface rights including split estates, heirships, concessions, leases, and easements.
 - Outcomes
 - Research results focus on in-depth examinations of particular cases which elucidate how these bundled and contested rights coalesce in particular places, leading to piecemeal dispossessions which can become larger scale sacrifice zones (eg., Chapter Three).
 - These cases were possible to analyze through the deployment of mixed methods, including long-term participant observation, extended interviews, review of property valuation records and land registries, studying court cases and interacting with lawyers, and review of corporate publications. I plan to develop a reflective analysis of the methods and their effectiveness in a future manuscript on the development and application of mixed methods for land ownership research.

- **RQ2 Task 2b:** Account for *de facto* claims to and enforcement of subsurface property rights outside the scope of formal systems of rights or law.
 - Outcomes:
 - Rather than solely focusing on changing laws and official records, the analysis draws from participant observation and interviews to interrogate how public and private force as well as popular

resistance movements use direct action and discursive techniques to claim land and territory. Chapters Three and Four examine how official law and *de facto* law re-enforce each other and silence land claims that are not compatible with mining.

- Chapter Two examines how approaches to formalize accountability and transparency can actually deepen the systemic opacity through which extractive industries operate in my research sites. It compliments the analysis of *de facto* claims through attention to the productive power of opacity that elide formal objectives of law and order.

Methods:

A diversity of methods were employed to accomplish the research tasks, and the methods also differed somewhat between the two sites because of the different contexts. The overall methodological approach of examining mining struggles through the dialectics of subsurface property distribution and legal and administrative context is common to both sites, but different techniques were deployed in each in order to undertake the analysis required.

In Ecuador, I completed a total of 10 months of field research. This ethnographic work involved living in the rural community of Junin, which is geographically and politically the heart of a new joint venture between the state mining firms of Ecuador and Chile to build an open cast copper mine. In addition to daily participant observation and detailed note-keeping, A total of 35 interviews were completed, typically lasting 1-2 hours. Fifteen were with mining company representatives, officials in regulatory agencies, lawyers, and non-governmental organizations. Twenty were with residents living in the direct area of influence of the mine development. Additional activities included: regular hikes to the mining exploration area to observe exploration activities and security systems; property mapping using GPS; and obtainment of archival data, including the national mining cadastre, census data, the county property registry, historical land sales contracts, and land adjudication decisions. These data were used to undertake a collaborative mapping process which was central to visualizing the historical impacts of mining policy on land rights in Intag. See Figures 2.1 and 2.2 (Chapter Two)

for two of the resulting maps.

In West Virginia, field research was conducted over a nine month period. Methods included key informant interviews with policy makers, lawyers, and industry professionals; interviews with surface and mineral rights owners; and site visits to Marcellus shale well pads and other infrastructure in three counties in West Virginia. A total of 30 interviews were completed, usually lasting 1-2 hours, except for three in-depth consultations with oil and gas industry abstractors/landmen which lasted 2-3 hours each. Half of the interviews were conducted with split estate surface or mineral only owners and the other half were with regulators, county officials, and industry employees. A period of participant observation was also done over two months in which I lived in an oil and gas worker boarding house in area of high intensity of Marcellus shale gas drilling. Lastly, I consulted a variety of archival data. These included: DEP permit records maintained by the WV Geological and Economic Survey, which I used to estimate the frequency with which wells have been permitted or constructed on split estates; deed and lease books on file with county clerk offices in order to estimate year over year mineral rights transfers; 10 years of statewide PVA records to better understand how tax records for split estates are maintained across different counties; and court documents regarding land owner disputes with gas companies. I also attended one Office of Oil and Gas hearing on unitization and forced pooling.

In addition to field research, I also aimed to keep abreast of industry and market trends by subscribing to industry-oriented newsletters and web forums. I maintain subscriptions to:

- Marcellus Drilling News
- Mineral Rights Forum
- London Metal Exchange
- S&P Global Market Intelligence: SNL Metals and Mining
- Hart Energy Newsletters - Unconventional Oil and Gas Center

Adjustments

The research questions and tasks summarized above were originally intended to produce much larger datasets. I imagined that the outcomes would include complete surveys and maps of surface and subsurface claims and the conflicts between them. In

practice however, land conflicts about extraction are rooted in the maintenance of governmental and corporate opacity that serves to shroud the fundamental antagonism that exists between surface and subsurface uses. That is, most surface uses are incompatible with modern resource extraction technologies. Accordingly, this antagonism and its governance became a primary object of my research, which allowed me to draw from the comparative cases with greater clarity and cohesion to theorize dynamics of subsurface governance. Likewise, static maps help to visualize *some* competing claims and *some* points in time. The generation of large quantities of data about each research site would be more appropriate with interactive, dynamic web-based maps. This kind of data would be especially useful to help impacted groups streamline their own research and planning. This may be a future project given appropriate resources (i.e. large, stakeholder led research teams) and technological capacity. As my next project, I am co-convening a stakeholder led Appalachian Land Study and intend to form a mineral rights visualization working group within that effort. However, the collaborative research process for my dissertation did produce research reports, legal summaries, and some limited technical capacity development for each study site and laid the groundwork to make it possible to consider the possibilities and limitations for building out more collaborative infrastructure.

Appendix C: Author Contributions for Chapter Four (Shade, Ramirez, and Castro)

Shade:

- Contributed analysis of prisons, policing, and securitization
- Conducted literature review and policy research
- Wrote up the manuscript, coordinated with special issue editor
- Along with Castro, transcribed recorded conversations between Ramirez and Shade

Ramirez:

- Contributed the perspective on dependency and resource export
- Provided the content on political imprisonment
- Contributed focus on territorial identity of Intag and defense of life
- Contributed analysis of industry efforts responsibilize local people for global commodity demands

Castro:

- Assisted with transcription of several hours of conversations between Ramirez and Shade
- Provided grammar and style revisions for Spanish language
- Provoked critical reflection on word and phrase choices

*The final version of the manuscript was also revised for style and grammar by a Quito based professional editor.

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Education:

American University - Washington, DC / Universidad para la Paz - Ciudad Colon, Costa Rica

2012. Dual degree: International Affairs (MA) and Natural Resources and Sustainable Development (MA); GPA 3.9. Thesis advisors: Ken Conca, Robert Fletcher.

University of Massachusetts at Boston

2008. Political Science (BA) with concentration in International Relations, GPA 3.6. (*magna cum laude*)

Scholarly Publications:

Shade, Lindsay, Javier Ramirez and Susana Castro (forthcoming June 2017). "El Estado extractivista se encuentra con el Estado penal: el caso de Intag, Ecuador" (The extractivist state meets the penal state: the case of Intag, Ecuador). Special Issue on the Rise of the Penal State in Latin America (Ed. Chris Garces), *Ecuador Debate*.

Shade, Lindsay. 2015. "Sustainable development or sacrifice zone? Politics below the surface in post-neoliberal Ecuador" *Extractive Industries and Society*. Available online August 5, 2015. doi:10.1016/j.exis.2015.07.004

Crampton, Jeremy, Jay Bowen, Daniel Cockayne, Brittany Cook, Eric Nost, Lindsay Shade, Laura Sharp, and Malene Jacobson. 2013. "Whose geography? Which publics?" *Dialogues in Human Geography* Vol 3(1): 73-76.

Shade, Lindsay, Richard D. Beger, and Jon G. Wilkes. 2003. "The use of carbon thirteen nuclear magnetic resonance spectra to predict dioxin and furan binding affinities to the aryl hydrocarbon receptor" *Environmental Toxicology and Chemistry*, 22(3),2003, 501-509.*
*Nominated for best publication by a young scientist in Environmental Toxicology and Chemistry, 2003.

Competitive Research Grants and Fellowships:

- National Science Foundation Doctoral Dissertation Research Improvement Grant, Law and Social Science program. 2015. Politics Below the Surface: A Political Ecology of Mineral Rights and Land Tenure Struggles in Appalachia and the Andes \$13,104.
- Institute for Human Geography, Small Grants Program. 2015. Politics Below the Surface: A Political Ecology of Mineral Rights and Land Tenure Struggles in Appalachia and the Andes. \$2,650.
- Graduate Student Academic Year Fellowship, University of Kentucky. 2015. \$7500

- Latin American Studies Summer Travel Grants, University of Kentucky. 2014. \$500
- James S. Brown Graduate Student Award for Research on Appalachia, University of Kentucky, 2015, 2014. Politics Below the Surface: A Political Ecology of Mineral Rights and Land Tenure Struggles in Appalachia and the Andes. \$3,000 total.
- Barnhart and Withington Research Award, University of Kentucky. 2015, 2013. Politics Below the Surface: A Political Ecology of Mineral Rights and Land Tenure Struggles in Appalachia and the Andes. \$3,000.
- Woodrow Wilson International Center for Scholars, Global Women's Leadership Initiative grant, 2012. \$3500 (declined).
- Tinker Field Research Grant - American University Center for Latin American and Caribbean Studies. 2011. "Grassroots Alternatives to Neoliberal Development in Northwest Ecuador: Post-development in Practice." \$2500
- Graduate Research Grant - American University School of International Service. 2011. "Grassroots Alternatives to Neoliberal Development in Northwest Ecuador: Post-development in Practice." \$1000.

Teaching Experience:

University of Kentucky, Lexington, KY, Instructor
Introduction to Human Geography, 40 students, Fall 2016

University of Kentucky, Lexington, KY, Instructor
Geography of Latin America and the Caribbean, 13 students, Spring 2014

University of Kentucky, Lexington, KY, Teaching Assistant
Introduction to Appalachian Studies, Professor Kathryn Newfont, 103 students, Fall 2015

University of Kentucky, Lexington, KY, Teaching Assistant
Learning Lexington, Assistant Professor Lynn Phillips, 72 students, Fall 2013

University of Kentucky, Lexington, KY, Teaching Assistant
Introduction to Human Geography, Professor Karl Raitz, 75 students. Spring 2012

University of Kentucky, Lexington, KY, Teaching Assistant
Senior Research Seminar, Professor Matt Zook, 25 students. Fall 2012

Professional Research Experience - Academic:

Community and Leadership Development, University of Kentucky, Lexington, KY
Graduate Research Assistant Spring and Summer Term 2016, Spring and Summer Term 2017

Department of Gender and Women's Studies, University of Kentucky, Lexington, KY
Graduate Research Assistant Fall Term 2013-2014 AY

Center for Latin American and Latino Studies, American University, Washington, D.C.
Graduate Research Assistant Feb 2012 - Jul 2012

Defensa y Conservación Ecológica de Intag (DECOIN) Apuela, Imbabura, Ecuador
Research Intern May 2011-Aug. 2011

Professional Experience - Non-Academic:

Friends of the Earth U.S. Washington, D.C.
Biofuels Policy Campaign Intern: Sept. 2010- Dec. 2010

Grassroots International Jamaica Plain, MA
Individual Giving and eAdvocacy Coordinator: Jul. 2008 - Jul. 2010

Oxfam America Boston, MA
Online Communications Coordinator: Jun. 2006 - Jul. 2008

Conferences:

Conferences/Workshops Organized:

2016, *Land Ownership and Land Use for Just Transition in Appalachia: A community dialogue hosted by the University of Kentucky Appalachian Center.* Sept. 30th 2016.

2014, *Third Annual Conference on Dimensions of Political Ecology*, University of Kentucky. President of UK Political Ecology Working Group.

Sessions Organized:

2017, Appalachian Studies Association. Blacksburg, VA. *Extreme Land Politics and Just Transition: Planning a New Appalachian Land Study.*

2016, Association of American Geographers. San Francisco, CA. *Administrative Opacity and Geographies of Invisibility.*

2014, Third Annual Conference on Dimensions of Political Ecology, University of Kentucky. *Scholar-Activist Panel - Working Across Borders: US/Latin America Collaborations for Social and Environmental Justice.*

2013, Association of American Geographers. Los Angeles, CA. *Hopeful Political Economies.* Double Session in *Symposium on Geographies of Hope at AAG.*

Papers Presented:

2017, Association of American Geographers, Boston, MA. Session: *Legibility Acts and Climate Adaptation I.* Paper: From transparency to systemic opacity: Mining rights and land tenure struggles in Appalachia and the Andes.

2016, Association of American Geographers, San Francisco, CA *Point, Line, Plane,*

Volume: Increasing Dimensionality in Geographic Inquiry. Paper: Rethinking land conflict and resource extraction in Appalachia and the Andes

2015, *International workshop on the Political Economy of the Extractive Imperative in Latin America*, Institute for Social Studies, The Hague. Paper: Politics Below the Surface: Sustainable Development or Mining Sacrifice Zones in Ecuador?

2015, Society for Applied Anthropology / Political Ecology Society annual meetings, Pittsburgh, PA. Session: *Politics, People, and Participation in the Extraction Industry*. Paper: Public Revenues and Extraction in the Context of Ecuadorian "21st Century Socialism:" The Intag Case.

2014, Association of American Geographers, Tampa, FL. *Law, Culture, and Place II: International Contexts*. Paper: Politics Below the Surface: Parcellation, Place and Struggles for Land in Extractive Economies

2013, *Appalachian Public Interest Environmental Law Conference*. University of Tennessee Law School, Knoxville, TN. Workshop presentation: Finance, Land Ownership, and Mountaintop Removal Coal Mining: Hands Off Appalachia's Campaign Against UBS

2013, Association of American Geographers, Los Angeles, CA. *Hopeful Political Economies*. Paper: "Hope at the Margins: Dispossession, Death, and Resistance" Session organizer and presenter.

2013, Third Annual Conference on Dimensions of Political Ecology, University of Kentucky. *Resistance and Resilience*. Paper: "Resistance to Mining in Northwest Ecuador: Perspectives from Political Ecology and Post-Development." Presenter.

2012, Conference on Critical Geography, University of North Carolina, Chapel Hill. *Territories in Resistance*. Paper: "Cooperation and Difference: Means of Resistance in Contentious Politics over Natural Resources in Ecuador's Intag Zone." Presenter.

2008, International Conference on Multiculturalism, Education, and Sustainable Development in West Africa," Cotonou, Benin. "Civil Society and Intellectual Property Rights in the TRIPS+ Era." Undergraduate presenter.

Panels:

2016, Association of American Geographers, San Francisco, CA. Session: *The Politics and Ethics of Vulnerability: Exploring Methodologies for Rights and Justice-Based Research and Praxis*.

2014, Association of American Geographers, Tampa, FL. Panelist. *The American South: Perspectives on Researching the Region*.

2013, Association of American Geographers, Los Angeles, CA. Panelist for closing plenary of *Symposium on Geographies of Hope at AAG*.

2013, Association of American Geographers, *Tales from the Neoliberal University*, panel co-organizer with University of Kentucky Critical Pedagogy Working Group.

Public and Policy Writing:

Kate McMahon, Ben Schreiber, Paul Harvey-Weiner, and Lindsay Shade. "Buying Bills: How the Biofuels Industry Influences Congress to Waste Your Taxpayer Dollars." *Friends of the Earth*, October 2010.

Shade, Lindsay. "Honduras Crisis Exposes Weakness of US Democracy." *Common Dreams*. August 1 2009.

Professional Affiliations:

- Association of American Geographers
Specialty Groups: Cultural and Political Ecology, Development Geographies, Economic Geography, Latin America, Political Geography, Qualitative Research, Socialist and Critical Geography
- Society for Applied Anthropology
- Political Ecology Society
- Appalachian Studies Association
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