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# Petro-geographies and the dialectic of the everyday: Enforcing environmental laws in the hydrocarbon sector in post-neoliberal Ecuador

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## **ABSTRACT**

This article analyzes the environmental law enforcement in the hydrocarbon sector in post-neoliberal Ecuador through an institutional ethnography of the Ministry of Environment, drawing on critical state theories and theories of structure and agency. The article shows that the way “habits of oil rule” obstruct environmental law enforcement creates the conditions that allow these habits to continue. It suggests that scholars can contribute to the breaking of this vicious cycle and the transitioning toward post-extractivism through a publicly engaged scholarship. Such scholarship would emphasize collaborations with and practical support to people who are affected by and part of the institutional process.

**KEYWORDS:** *Environmental law, extractive industries, post-extractivism, institutional change, Ecuador*

## **ABSTRACT**

Este artículo analiza la implementación de los derechos ambientales en el sector hidrocarburífero en el Ecuador posneoliberal a través de una etnografía institucional del Ministerio del Ambiente, basándose en teorías críticas del estado y teorías de estructura y agencia. El artículo muestra que la forma en la cual los “hábitos de la regla petrolera” obstruyen la implementación de derechos ambientales genera las condiciones que permiten que estos hábitos continúen. El artículo sugiere que los académicos pueden contribuir a romper este círculo vicioso y una transición hacia el post-extractivismo con investigaciones orientadas a un compromiso público. Tales investigaciones enfatizarían las colaboraciones con y el apoyo práctico a las personas afectadas e involucradas en el proceso institucional.

**PALABRAS CLAVES:** *Derechos ambientales, industrias extractivas, post-extractivismo, cambio institucional, Ecuador*

## INTRODUCTION

In 2007, Ecuador's new government announced the beginning of a post-neoliberal era in which a strong state would terminate the social and environmental injustices that the Washington Consensus had brought to the country. In 2008, the Ecuadorian national assembly approved a new national constitution that aims to create "a new form of civic co-existence, in diversity and harmony with nature, to achieve *Buen Vivir*, the Sumak Kawsay" (Constitution Montecristi, 2008; Preamble). Inspired by indigenous cultures who emphasize the importance of the collective and the respect for *Pachamama*, indigenous and environmental movements have conceptualized Sumak Kawsay as a way of life in harmony with nature and all other beings (Hidalgo-Capitán & Cubillo-Guevara, 2014). There is still much debate about the exact origin, meaning, and translation of Sumak Kawsay (Bretón et al., 2014; Bretón, 2017).<sup>1</sup> However, one can interpret considerable parts of the Constitution, especially the integration of the Rights of Nature into its text, as critical institutional innovations resulting from a decade-long mobilization of these indigenous and environmental movements (Akchurin, 2015; Kaufmann & Martin, 2016). As Ávila puts it: "The constitution has institutions that not only open the door to imagining the possibilities of a different world, but that constitute an opportunity for transforming reality" (2013, p.70; my translation).

Ecuador's national development plan envisioned enabling all Ecuadorians to achieve the statist version of *Buen Vivir* by re-investing revenues from oil extraction (SENPLADES, 2009, 2013), which accrue to the

state. The nationalization of subsoil resources and rising oil prices in subsequent years augmented these revenues considerably. Accordingly, Ecuador joined those governments of the self-defined New Left that sought to counteract the previous neoliberal resource governance with a state-led, socially inclusive, ecologically progressive development model (Burchardt & Dietz, 2014). A decade after the left turn of these governments, scholars assess their success as limited despite reduced poverty and social inequalities (Villalba-Eguiluz & Etxano, 2017). Falling oil prices that diminished government expenditures, the crumbling of widespread support, and the surfacing of corruption scandals have put the governments of the New Left into question. And far from transitioning away from extractivism, the dependency on export-oriented resource extraction deepened; the economy was not diversified but instead subjected to an "extractive imperative" (Arsel et al., 2016). Ecuador did not take the road towards post-extractivism as indigenous and environmental movements who helped this government administration to power had hoped (Acosta, 2016). Even though the initial alliance between these movements and the government administration soon fell apart, constitutional innovations remained, raising the question of what opportunities for transforming realities they created. How did the constitutional changes translate into the regulatory enforcement of environmental laws on the ground? What obstacles have state officials who enforce environmental laws encountered after the constitutional turn? What spaces did the constitutional innovations open for transforming existing

petro-geographies?

This article answers these questions through an institutional ethnography of the Ecuadorian Ministry of Environment. It draws on data collected during fieldwork in Ecuador from 2013 to 2016, including 95 interviews, participant observation as an intern at a provincial office of the Ministry of Environment, and an analysis of a ministerial database of socio-environmental conflicts. The goal of this article is to find what Holloway called cracks in the wall, or

wish[ing] to understand the wall not from its solidity but from its cracks; we wish to understand capitalism not as domination, but from the perspective of its crisis, its contradictions, its weaknesses [...]. This looking for (and creation of) cracks is a practical-theoretical activity, a throwing ourselves against the walls but also a standing back to try and see cracks or faults in the surface. (2010, p.9)

In other words, to capture the potential to transform petro-geographies, this article shifts empirical attention from a perspective of the solidity of the wall to one of its fragility. Thus, this article understands “the extractivist state” in light of critical state theories, where the “state” is a contingent and provisional outcome of an always-ongoing struggle between extractivist and post-extractivist forces, with the goal of finding potential sites of change in this struggle. The article focuses on environmental law enforcement as one terrain where such struggle can be observed particularly well, which is illustrated in its

different scholarly conceptualizations. Some scholars conceptualize the enforcement of environmental laws, especially if in line with the Rights of Nature, as a way to transition toward post-extractivism, arguing that enforcing environmental laws would inhibit the externalization of environmental costs and thus disrupt capital accumulation and extractivism (Boyd, 2012, 2017; Gudynas, 2010, 2013).<sup>2</sup> Others have argued that environmental law enforcement is merely some form of green-washing capitalism (M’Gonigle & Takeda, 2013). Identifying sites of change that could potentially contribute to the transformation of petro-geographies means locating the dialectic of the everyday in these struggles over the enforcement of environmental laws. That, in turn, means identifying the obstacles to enforcement that emerge in the everyday and the extent to which these obstacles are structural, i.e. asking which daily practices replicate processes that engender them and, by extension, enable the continuation of extractive capitalism.

Examining the possibilities for a new political economy of oil in Ecuador, Lu et al. (2017) have noted that the post-neoliberal turn in Ecuador and the constitutional innovations led only to relatively minor changes in the governance of oil extraction. They observe that “while the habits of oil rule have changed throughout the twentieth-century history of oil in Ecuador, the changes in those habits were not revolutionary” (ibid., p. 76). They define “habits of oil rule” as “the entrenched tendencies of governing through practices of the oil industry as these tendencies have developed across Ecuador’s 40-plus history as an oil producing country” (ibid., p. 69). This ar-

ticle argues that the habits of oil rule not only obstruct the enforcement of environmental laws but also create the conditions that enable their own continuation. That is, the habits of oil rule continually generate problems that subsequently call for the attention of the environmental inspector. Consequently, most of the inspector's time is occupied with sorting out the past while not finding time for inspections that target the prevention of incidents, be it for older or newly started operations. This situation is aggravated by the fact that the Ministry of Environment suffers from high turnover rates in staff due to an architecture of working contracts unfavorable to providing stability in times of political polarization. I thus argue that concentrated efforts to change these habits would potentially contribute to the transformation of petro-geographies by undermining the replication of structures through these practices. The article is structured as follows: Part 2 lays out its conceptual framework; Parts 3 and 4 present the methods, data, and the case study of environmental inspections in the hydrocarbon sector; Part 5 discusses the implications of the empirical findings for the transformation of petro-geographies; and Part 6 presents some brief conclusions.

### **FINDING STRUCTURES AND AGENCIES IN THE DAILY OPERATION OF ENVIRONMENTAL LAW ENFORCEMENT**

One of the central debates in political ecology and critical geography centers on socio-ecological transformations, that is, the

transition to non-capitalist futures or, specifically in Latin America, post-extractivism (Hollender, 2015; Brand et al., 2016). They hold that the political economy of extractive capitalism is based on the capitalist mode of production that relies on the externalization of social and environmental costs for delivering cheap energy into the circuits of the global market (Watts, 2005; Huber, 2013). Such political economy generates spaces of environmental degradation and social inequalities, or petro-geographies. The relation of environmental law enforcement to the political economy of extractive capitalism remains somewhat paradoxical. Some scholars argue that the existence of environmental legislation—the projection that resource extraction is theoretically possible without significant environmental impacts if it is sufficiently regulated—distracts from the more substantial question of whether, how much, and why one needs extraction in the first place (M'Gonigle & Takeda, 2013). In this way, environmental laws and their enforcement legitimize and thus assure capital accumulation. Other scholars conceive of environmental legislation and its enforcement as an obstacle to capital accumulation (Boyd, 2012, 2017; Gudynas, 2010, 2013). According to them, legislation delays the issuing of permits (and thus slows down production); threatens with sanctions, costly litigation and facility closure; or bans natural resource extraction altogether (Broad & Cavanagh, 2015; Aldana & Abate, 2016).

Critical state theories help to clarify the role of environmental laws in the political economy of extractive capitalism and its potential transformation. Critical state theorists

hold that the state is not a monolithic, fixed entity, but a fragmented and continuously contested terrain (Painter, 2006). The state must not only guarantee capital accumulation but also generate some form of legitimation to avoid an escalation of popular resistance over the socio-ecological contradictions that capital accumulation produces (Offe, 1984; O'Connor, 1973, 1998; Kristoffersen & Young, 2010). Bryant and Bayle thus speak of "a central paradox in the state's function" (1996, p. 55) as the state needs to facilitate the exploitation of labor and nature but at the same time must "tame" such exploitation. This means that a constant struggle is at play *inside* the state between contradictory mandates that serve often directly opposed constituencies outside "the state." Different bodies of legislation and corresponding state-agencies overseeing such legislation incarnate these different mandates and thus pit them against each other (Lalander, 2014).

In post-neoliberal states such as Ecuador, this struggle takes place between its (neo)-extractivist and post-extractivist mandates. On the one hand, the Ecuadorian state must carry forward an extractivist agenda that pushes the expansion of extraction under the justification that development, especially in the form of poverty reduction or welfare programs, is not possible without extractive revenues. By that logic, extractivism provides the solution to the problem it creates. This "extractive imperative" (Arsel et al., 2016) is maintained by a coalition between extraterritorial investment and the Ecuadorian state so that, for instance, China provides financial loans to Ecuador while being paid back partly in natural resources

(Ospina Peralta et al., 2015; Veltmeyer, 2013, 2016). The extractivist mandate has driven the expansion of the extractive frontier to reach, for example, the Yasuni National Park and the South-Amazonian provinces. On the other hand, the Ecuadorian state must—for its legitimacy, including in the global arena—integrate those post-extractivist elements of the Constitution that were pushed for by indigenous and environmental movements, such as the Rights of Nature. Environmental laws and corresponding enforcement agencies thus form a part of the post-extractivist mandate insofar as they shut down extractive projects that externalize environmental costs, advancing in that way the transition from what Gudynas calls "predatory" extraction to "indispensable" extraction (Gudynas, 2010; 2013). The struggle between extractivism and post-extractivism can run through the very same state agencies responsible for environmental law enforcement. Or, as an Ecuadorian government official put it:

Thus, when you hear about oil extraction, you hear two sides of one coin. One side presents extraction as bringing benefits and resources, and a better life, etc.; and the other one asks the question of what will happen and how we will end up, where all the wealth remains that they supposedly were to give to us, where the improvement is, where the health is, where the water is, where all of that is. These are two very different things. It is the capitalist version on the one side, and the version of the communities on the other side, more or less. How to go forward along these two

lines, that is what is complicated, and that is our role, to coordinate between the one and the other; and fighting over this [environmental protection] is very difficult. (Interview, 2015)

Scholars have pointed to the dominance of extractivist forces in the Ecuadorian state, and to the fecklessness of environmental laws (Shade, 2015). This perspective is not wrong. However, critical state theorists would argue that it is important to understand such outcomes not as a given but as a contingent and provisional result arising from constant struggles inside the state. As Jessop notes,

Whether, how and to what extent one can talk in definite terms about the state actually depends on the contingent and provisional outcome of struggles to realize more or less specific “state projects” [...] [S]tate actions should not be attributed to the state as an originating subject but should be understood as the emergent, unintended and complex result of what rival “states within the state” have done and are doing on a complex strategic terrain. (Jessop, 1990, p. 9)

This article takes environmental law enforcement as an example of such “complex strategic terrain”. I argue that an understanding of how the struggle between post-extractivist and extractivist forces over the state is carried out not only illuminates one part of what Andreucci & Radhuber have called “the limits to counter-neoliberal reform” (2017, p. 282) but can also help derive the possibilities for change from the identification of such limits.

#### **INSTITUTIONAL ETHNOGRAPHIES OF THE STATE AND THE DIALECTICS OF EVERYDAY LIFE**

An institutional ethnographic approach provides the necessary methodological and analytical tools to study the struggles conceptualized by critical state theories. Institutional ethnographies aim at revealing social inequalities that result from institutional processes and practices (Ferguson & Gupta, 2002; Bebbington, 2008; Pearson & Crane, 2017) and thus have “an explicitly critical and liberatory goal” (Billo & Mountz, 2016, p. 200). Their advantage lies in their attempt, very much in the tradition of Deleuze and Guattari, to let things emerge instead of presuming to know how they are, which increases the possibility of seeing what might otherwise have remained precluded. First, institutional ethnographies have a strong commitment to empirically grounded research that also includes a certain self-reflectivity. Second, institutional ethnographies work inductively, understanding the research process as constant discovery “which begins with the issues and problems of people’s lives and develops inquiry from the standpoint of their experience in and of the actualities of their everyday living” (Smith, 2002, qtd. in May, 2002, p. 18). And third, institutional ethnographies do not take institutions and their impacts for granted but examine what constitutes them in the first place.<sup>3</sup>

Accordingly, ethnographies of the state have demonstrated how, why, and by whom “the state” is produced (Sharma & Gupta, 2006; Mountz, 2007). To that end, scholars have examined “the less dramatic, multiple, mundane domains of bureaucratic practice by which states reproduce spatial orders and

scalar hierarchies” (Ferguson & Gupta, 2002, p. 984). Focusing their studies on a vast variety of topics, such as migration, borders, health, development, housing, education, property, popular resistance, and citizenship (Scott, 1998; Robertson, 2010; Gupta, 2012; Gilberthorpe & Rajak, 2016), they demonstrate how and why certain “state effects” are brought about (Mitchell, 1999, qtd. in Steinmetz, 1999). For instance, scholars illustrate how policing and control practices by state officials create the impression of the state as an all-encompassing authority, or how certain bureaucratic processes lead to the impression of the state as one coherent entity despite its inconsistencies (Gupta, 2012). It is important to note that these scholars come consistently to the conclusion that states are “precarious achievements”: they are “always contested and fragile and [...] the result of hegemonic processes that should not be taken for granted” (Sharma & Gupta, 2006, p. 11). It is precisely this institutional brittleness that introduces the possibility for institutional change. Indeed, the findings of institutional ethnographies ideally “suggest how and where struggles against marginalization and exploitation can be waged” (Sharma & Gupta, 2006, p. 20). Likewise, Smith argues that institutional ethnographies should be “locating sites of potential change that are within reach of those participating in the institutional process, suggesting major reformulations, or simply informing the activist of the workings of institutional processes beyond the reach of his or her experience and power to change” (2005, p. 208). However, institutional ethnographies sometimes risk drowning in the details of institutional processes without explicitly iden-

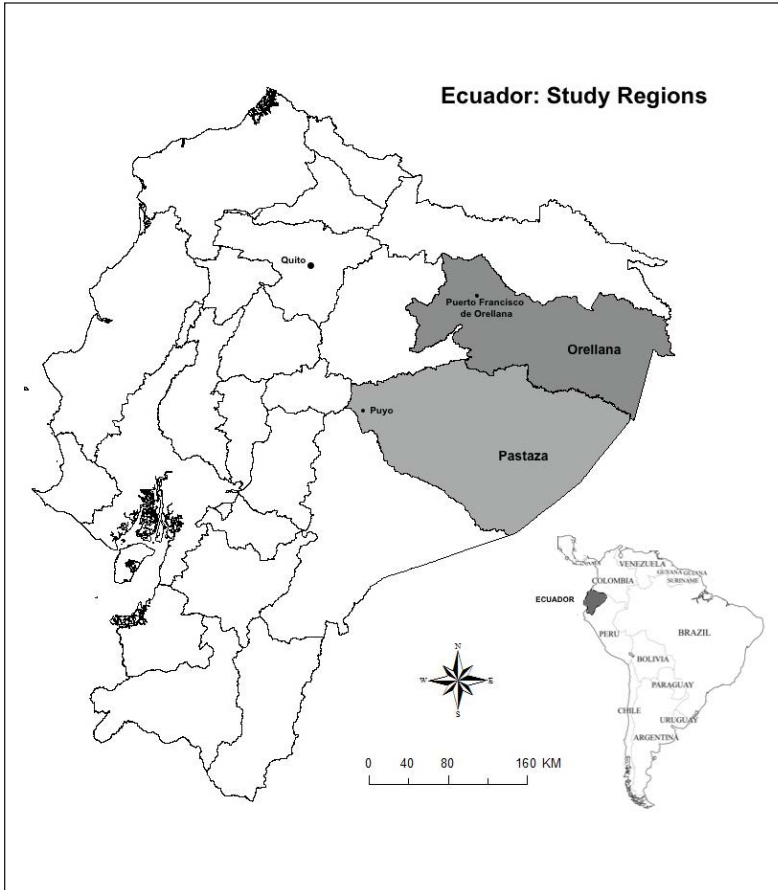
tifying any particular loci of change in such “thick description” (Geertz, 1973). The question is, “in what sense is it the case that when I go about my daily affairs, my activities incorporate and reproduce, say, the overall institutions of modern capitalism?” (Giddens, 1984, p. 19).

I propose, therefore, that for identifying the loci of change in the minutiae of everyday life it is worth orienting institutional ethnographies hermeneutically (or heuristically) toward insights from theories of structures and agencies (Lefebvre, 1947/1991; Bourdieu, 1972/1977, 1979/1984; Giddens, 1984). According to those theories, structures stretch out across space and time because everyday practices reproduce them, which is what Lefebvre has called the dialectics of the everyday. That is, “in and through their activities agents replicate the conditions that make these activities possible” (Giddens, 1984, p. 2). Crucial here is the duality of structures: they are what enables their becoming. For institutional ethnographies, this methodology means identifying the cases in which structures emerge from observed practices, which are arguably the most fruitful loci of change. For an institutional ethnographic account of the struggle between the post-extractivist and extractivist mandates, this means examining which practices generate obstacles for state officials responsible for environmental law enforcement in line with the Right of Nature, and to what extent those practices perpetuate (unwanted) structures.

## **METHODS AND DATA**

My inquiry into the daily practices of environmental law enforcement in Ecuador's





**Map 1:** Study Areas  
 Source: Senplades.  
 Cartography by  
 Bärbel Henneberger.

oil and gas sector included a comparative analysis of the Ministry of Environment enforcement practices at national and sub-national levels from 2005 to 2015. I applied an explicitly inductive, mixed-methods approach, collecting qualitative and quantitative data from participant observation, semi-structured interviews, official records, and official documents during fieldwork in Ecuador from 2013 to 2016. Qualitative data derives from 95 interviews with representatives from different entities at national and sub-national levels. Some of the interviewees were ecological and environmental scientists, petroleum engineers, environmen-

tal lawyers, and various officials from the Ministry of Environment, the National Assembly, environmental departments at the provincial government, the Ombudsman Office, the Comptroller General Office, the Secretary of Water, the Regulatory Agency of Water, environmental consultancies, laboratories, oil companies, local communities, NGOs, and indigenous organizations. Additionally, I carried out participant observation during an internship over a two-and-a-half-month period at the office of the Ministry of Environment in Orellana, an oil province, as well as a two-week period in Pastaza, a province with almost no

extractive projects (see Map 1). Those internships gave me the opportunity to spend time in the office as well as outside of it, mostly accompanying inspectors.

Quantitative data comes from a database provided by the Ministry of Environment on *denuncias* (civil claims) filed at the provincial level from 2013 to 2015. This database is not, however, an official one or an archive but rather a collection put together manually by inspectors to keep an overview of the cases. Thus, this database is not exhaustive and served instead for the purpose of rough estimations. During the entire research period, I took notes daily. Data-analysis included classifying inspections and *denuncias* into types. Several issues related to inaccessible or unavailable data confine this study. No accessible, systematic database documents the number and location of inspections over time. Interviewees often do not work long enough at the Ministry of Environment, or any other agency, to be able to speak to changes over more extended time periods, i.e. before and after the constitutional amendments. I did not find any representative who had worked in the past at the Environmental Protection Department (DINAPA) of the Ministry of Mines and Energy, and who could have described practices and procedures before the shift in regulatory competence. The realm of high-profile decision-makers also remained mostly inaccessible. Finally, methods such as interviews and participant observation always carry with them an inevitable Heisenberg effect: the observer always, directly and indirectly, affects the observed.

### **STRUCTURES AND AGENCIES IN THE DAILY OPERATION OF ENVIRONMENTAL LAW ENFORCEMENT: THE MAKING OF PETRO-GEOGRAPHIES**

Scholars who examined the extent to which the Correa administration opened spaces for a new political economy of oil in Ecuador have argued that despite the constitutional innovations, the environmental governance of oil extraction remains mostly unchanged in Ecuador. While compensation and restoration programs were introduced to deal with damage in an ad-hoc-fashion, the roots of environmental problems remain unaddressed (Castro et al., 2016). Notably, Lu et al. have argued that “the Correa administration d[id] not escape the habits of oil rule forming since the establishment of the industry” (2017, p. 93). They define “habits of oil rule” as those entrenched tendencies of governing through the practices of the oil industry that developed across Ecuador’s history as an oil producing country (ibid., p. 69). While they observe shifts in the administration and management of “the oil complex” that range from changes in the concession system to the introduction of new governmental agencies, oil extraction itself remains governed by the practices of the oil industry that were established more than four decades ago. This means that the habits of oil rule continue to lead to environmental degradation and social conflict that new government programs do not prevent but only address after they have occurred. In this section, I describe empirically what these habits of oil rule are in the context of environmental governance, and what consequences they

entail for the enforcement of environmental laws. This governing through the practices of the oil industry incarnates the extractivist mandate that pits itself against environmental law enforcement. I argue that the way in which these practices obstruct environmental law enforcement creates the conditions that allow the practices to continue and thus to fulfill the duality of structure.

Specifically, the practices that constitute the habits of oil rule continually cause incidents that require environmental officers to do an inspection. Each inspection takes a considerable amount of time that the environmental officer then does not have to engage in activities that would target the prevention of damage, such as surprise inspection. A high turnover rate of staff at the Ministry of Environment aggravates this situation. Preventative activities, such as surprise inspections, are some of the most effective means to enforce the compliance of industry (Lazarus, 2011). In the absence of such preventative activities, the likelihood of incidents increases. More incidents, in turn, require more inspections, and thus there is even less time for preventative operations. It is a process that perpetuates itself. I will support this argument about the making of petro-geographies with empirical detail, describing first the procedures of inspections followed by five instances of habits of oil rule and their consequences for environmental law enforcement.

#### FIELD INSPECTION IN SITU

In 2008, the Ministry of Environment assumed the authority over the regulatory enforcement of environmental laws in the ex-

tractive sector that previously lay with the Environmental Protection Department (DINAPA) at the Ministry of Mines and Energy. The central decision-making power on inspections resides with the Sub-secretariat of Environmental Quality at the headquarters of the Ministry of the Environment in Quito. Their goal is to control “not from the desk, but in the field,” that is, to have inspectors out in the field as often as possible instead of just verifying “on paper” (Government official, interview, 2015). Environmental inspections are a crucial mechanism of regulatory enforcement serving to detect environmental damage and breaches of environmental laws, especially since most other environmental oversight mechanisms rely on the mere reporting of the industry. Inspections can be of distinct types: some check up on an environmental incident such as a spill or follow up on a *denuncia*; some are regularly scheduled with the industry but unrelated to any previous environmental incident; and some are “surprises,” that is, unannounced to the industry and unrelated to any previous environmental incident. The Sub-secretariat develops a yearly chronogram that schedules two inspections per extraction site (*bloque*), of which one is announced and the other unannounced. The national headquarters thus decides on the number of regular inspections and executes them, while the provincial office performs all irregular inspections unless the incident is “serious” (Government official, interview, 2015). An incident is serious if it involves, for instance, a major social conflict, extensive damage (e.g. a significant spill), or a legal breach.

At the Environmental Quality depart-

ment's provincial office, three to seven inspectors are responsible for the territory of 21,692 km<sup>2</sup>. The number of inspectors is said to have increased over time since 2008, though it is still far from sufficient. There is at least one inspection per week that involves the oil and gas sector; sometimes there are inspections each day, or even several inspections per day. Inspectors leave their provincial office between 7:00 and 8:30 am to head to the extraction site to be inspected. The drive to the site takes on average at least one hour in one direction. The less frequent inspections of extraction sites located deeper in the Amazon—what inspectors call *adentro* (on the inside)—require a boat or helicopter and take an entire day of one-way travel. Besides the inspectors from the Ministry of the Environment, at least one representative from the oil company and staff from the laboratory are always present at inspections. If the inspection follows up on a *denuncia* (civil claim), the claimants and other involved community members are present. Each inspection begins with a hearing that includes all parties at the site to determine “what the case is” (what happened, and what has been and will be done), which takes between 15 minutes and one hour. After the hearing, the Ministry of Environment inspects the site and directs the laboratory on what samples to take and where. The taking of samples lasts on average one to three hours, depending on how many samples are needed and the distance between the sample locations. If the incident was, for instance, an oil spill into a river, the inspector follows the river until they encounter no further oil patch (or assume that they will not encounter any sig-

nificant oil patches further along). Inspectors take photos and geographic coordinates from each sampling site. Inspections can be physically challenging. They involve wandering for hours in tropical heat through difficult terrain and climbing unsecured to considerable heights over pipelines and tree trunks in order to cross rivers and clefts. After taking the samples, the company staff, the laboratory, and the Ministry of Environment go over the *cadena de custodia* (chain of custody), which takes another 30 minutes. If the inspection lasts several hours, the Ministry of Environment has lunch and/or dinner at the company site as regulated in the sectorial legal framework (RAOHE). Subsequently, inspectors must write a technical report for submission to the national headquarters of the Ministry of Environment in Quito. In sum, inspections take a considerable amount of time and energy: at least half of the inspector's day is devoted to them.

#### **THE MAKING OF PETRO-GEOGRAPHIES: BAD HABITS, ENVIRONMENTAL LAW ENFORCEMENT, AND THE DIALECTICS OF THE EVERYDAY**

Interviewees suggest that the challenge of environmental law enforcement consists in changing *malas practicas* (bad practices) that emerged in the early years of oil extraction in the Amazon region. Likewise, Lu et al. (2017) have argued that some habits of oil rule have persisted since the establishment of the oil industry in Ecuador. “Bad practices” became “bad habits” because the dialectic of the everyday replicates them. This means that, in addition to having a robust coalition, the extractivist mandate has a self-reinforcing mechanism on its side, which makes it

difficult for post-extractive forces to change these practices. I have identified five different forms in which old practices of the oil industry persist in the present: environmental liabilities, old infrastructures, compensation practices, legal frameworks, and working contracts. I argue that the effects of these practices on environmental law enforcement, or the way they become intertwined with it, create the conditions that enable their reproduction. The practices that constitute the habits of oil rule regularly call for inspections and thus demand a substantial investment of time from an already limited numbers of inspectors, which leads to the neglect of activities aimed at the prevention of damage.

First, past practices are present in the form of *pasivos ambientales* (environmental liabilities), i.e. damages that have neither been cleaned up nor compensated for and that constitute maybe the most literal expression of externalized social and environmental costs. Such material residues are the most frequent reason for inspections across all oil provinces. In the early days of oil extraction in Ecuador, the oil consortium Chevron-Texaco, later replaced by the state company Petroproducción, introduced practices that were primarily the result of cost-cutting measures aimed at extracting oil in the cheapest way possible. These practices involved the dumping of crude oil, toxic waste, sludge and formation waters into open pits (Fountaine, 2003; Kimerling, 2013). The Ministry of Environment has recorded 3658 of such sources of contamination left unrepaired by oil companies in the Amazon region (PRAS, 2016). While cleanup programs are underway, they are very slow and hampered by ongoing law-

suits over the liability for the damages. The Ministry of Environment cannot repair the damage as long as it serves as legal evidence.

Second, old infrastructures are another residue of past practices that provokes a considerable number of inspections. Oil companies rarely change such infrastructure even if they frequently cause environmental incidents, such as spills of crude oil, diesel, or produced water, explosions within gas stacks, or noise from generators. Inspections for current environmental incidents due to old infrastructure, including required follow-ups, made up about 35 percent of the inspections completed during my time at the provincial office. Some infrastructure at mature oil fields is said to produce a spill each day. Surprisingly, even some oil company staff present at inspections tend to be critical of such infrastructure and sometimes asks the Ministry of Environment to demand their replacement. The Environment, Health and Security Department within an oil company is generally said to receive the least resources and have the least decision-making power (Corporate actor, interview, 2015).<sup>4</sup> Interviewees in Ecuador say that it is cheaper for the industry to pay for environmental damage than to replace infrastructure, and that inspectors can only record the damage but not change the roots of the problem: "For example, in one single bloque, there are thousands of spills, a real high number of spills; these are not big spills, not big volumes, but this is something daily, quotidian, when it should rather be something that does not happen often, like an emergency. I think that for the companies it may just be easier to pay than to change the way they do things" (Government official, interview, 2015).

Interviewees suggest that instead of closing such mature extraction sites, one should instead force companies to invest in replacing old infrastructure to improve not only their environmental record but also their productivity. Some argue that enhancing the productivity of mature fields through investments in infrastructure would also help to prevent the opening of new areas for extraction, which would be essential for transitioning toward post-extractivism (see also Kaup, 2010).

Third, the past is present in compensation practices that lead to social conflicts, which again call for inspections. Historically, compensations have reportedly often been of only palliative nature, recompenses that were in no way equivalent to the damage caused or that involved the repair of the damage. Communities, however, became used to and dependent upon such recompenses from oil companies despite their inadequacy. Such recompense practices by the oil companies are said to have destroyed the social fabric of communities by triggering conflict between community members over who will get what (see also Billo, 2015). Such tensions often translate into *denuncias* (civil claims) submitted to the Ministry of Environment by different community members for the same incident. To stop oil companies from offering inadequate compensation to local communities that tend to benefit those who are the loudest and not necessarily the most affected, in 2012 the Ministry of Environment started to request that oil companies adopt a new compensation scheme as regulated in the Ministerial Agreement 001. Accordingly, the company must submit their methodologies for determining the level of compensation to the appropriate office at the

Ministry of Environment, the Program for Social and Environmental Repair (PRAS) with headquarters in Quito. PRAS decides whether or not to approve such methodologies, and only after approval can the company proceed. However, this procedure often leads to frustration on the part of community members accustomed to more immediate recompense than in the past: “The community is already so accustomed to the oil company giving immediately that when things are not like that anymore, it generates problems” (Government official, interview 2015). Besides, companies appear to hardly stick to this procedure when faced with conflictive situations that can potentially be “pacified” by some forms of immediate recompense. Immediate recompenses, in turn, have the potential to exacerbate tensions between and within communities because compensation levels are not standardized. It remains unclear to community members why some individuals received specific amounts, or material compensation, while others did not. That uncertainty often leads to more social conflict and the submission of further *denuncias* to the Ministry of Environment that needs to verify them via inspections. *Denuncias* resulting from disputes over compensations were the reason for about 30 percent of inspections and appear to have been rising especially over recent years, a trend that many assume is likely to continue (Government official, interview, 2015).

Furthermore, not all *denuncias*—whether about environmental or compensation issues—turn out to be “substantiated”. A *denuncia* is substantiated when the denounced issue is proven “factual”; if the inspection or subsequent laboratory analysis fails to find

what is stated in the *denuncia*, it is “unsubstantiated”. The fact that the Ministry of Environment must mostly coordinate inspections with the industry can explain some of these unsubstantiated claims. For example, if the issue to be inspected is a noise disturbance, the industry can just shut down the respective machinery in preparation for the inspection. However, some unsubstantiated claims are also just that: unsubstantiated. For example, a community that did not even have an oil platform close to the site or near any of the waterways once called for an inspection of water due to alleged contamination. Another complained about the alleged destruction of a palm tree plantation because of a flare-stack explosion miles away from the actual incident, where the explosion did indeed damage the area. Interviewees estimate that the ratio of substantiated versus unsubstantiated *denuncias* is 60: 40 in all realized inspections, which concurs with the observed ratio during my time at the provincial office of the Ministry of Environment. They explain that unsubstantiated *denuncias* are born out of financial necessity among community members who likely file the claim to see if they can receive money. The number of such unsubstantiated incidents indicates that the re-distribution of extractive revenues does not necessarily reach the community members living next to extraction sites. Or, as a state official commenting on the structural inequalities in Amazonian regions put it, “the *Revolución ciudadana* (Citizens’ Revolution) has not arrived here yet” (Government official, interview, 2015). Unsubstantiated *denuncias* are likely also due to health concerns, given that community members increasingly know

about the adverse health impacts that oil extraction can cause (San-Sebastián & Hurtig, 2004; O’Callaghan-Gordo et al., 2016).

Fourth, past practices are present in legal frameworks, which further augments the number of required inspections that are not necessarily sensible. Two legal bodies regulate the environmental impact of oil and gas extraction: the overall environmental regulation called The Unified Body of Secondary Environmental Legislation (TULAS) and the sectoral Environmental Regulations of Hydrocarbon Operations (RAOHE). While TULAS has been regularly updated since 2008 to adjust to constitutional changes, RAOHE has not been significantly overhauled since 2001. Both RAOHE and TULAS set environmental parameters that define the environmental quality the oil company must comply with. However, TULAS is much stricter than RAOHE, requiring testing of more parameters and stricter environmental limits.<sup>5</sup> During an inspection, as I observed and as people stated in interviews, however, the Ministry of Environment requests samples to be tested mostly based on RAOHE. For instance, water is tested in most cases only for Total Petroleum Hydrocarbon (TPH) conductivity and PH as established in RAOHE, regardless of what other substances and chemicals might be involved. According to interviewees, little is known about the types of chemicals and substances that each of the production processes involves at the respective oil field, which makes it difficult for the Ministry of Environment to know what other parameters to test for in any given situation. Thus, if a laboratory analysis returns inspection results as “nothing

found,” this does not necessarily mean that no contamination exists, only that no TPH is present. Additionally, the legal bodies do not capture some environmental problems that occur on site, such as dust and noise from passing trucks. That is, some environmental issues are either not regulated at all or remain below permitted levels, and thus there is nothing an inspector could legally record or do in such cases. Inspections called for such issues are in some regard nonsensical and lead to frustration among inspectors and local communities alike.

Moreover, given that oil firms choose and pay the costs of the laboratory for the analysis of each sample, laboratory results are not necessarily always reliable, which can be another explanation for “nothing found.” Interviewees stated that apart from the fact that some laboratories purposefully corrupt results, other laboratories may not have the appropriate equipment to perform a high-quality analysis of the sample as such equipment is expensive and there is the need to keep the price for laboratory analysis low. This potential unreliability adds to the mistrust on the part of communities, who subsequently submit the same *denuncia* again and again even if they had not been substantiated, which requires inspectors to do the same inspection again. Interviewees say the reason that inspectors must attend all *denuncias* equally, even if they have already done that inspection, is to ensure the legitimacy of the central government and to not drive voters and sympathizers away, especially in regions where political opposition questions environmental authority. Interviewees across political parties therefore sometimes refer to inspections as “political circus.”

Finally, the past is manifest in the architecture of Ecuador’s working contract system for public officials that, in combination with a situation of political partisanship, leads to high turnover rates among staff. High turnover rates, in turn, destabilize the Ministry of Environment as a whole, which disrupts the continuity necessary for environmental law enforcement. Officials in leadership positions such as ministers, sub-secretaries, and directors are appointed on contracts called “free appointment and removal,” which means they can be replaced at any time. That is, if the presidential cabinet does not welcome decisions, top-floor officials are easily dismissed. In cases of such exchange, it is often the whole team of a department or secretary that leaves voluntarily or must go if the new leadership position comes with their staff. The remainder of contracts is composed of provisional appointments, permanent appointments, and occasional appointments. Merit-based competition is required to receive a permanent contract, and generally, there is a plan to transform a certain number of provisional appointments into permanent positions through merit-based competitions. Permanent contracts, however, are currently the least common at the Ministry of Environment; most officials have temporary or occasional contracts, and often leave before even having terminated the contract. The fact that not permanent state income, such as taxes, but rather non-permanent income, such as extractive revenues finance the projects and programs of the Ministry of Environment might contribute to the scarcity of permanent contracts. Fluctuations in the oil price determine the duration of the projects



and programs which form an important part of the Ministry of Environment, thus only allowing short-term employment for a great number of staffs. The consequence of such instability is that a considerable amount of institutional memory and knowledge gets frequently lost, which makes environmental law enforcement, particularly inspections, even more complicated.

### **TRANSFORMING PETRO-GEOGRAPHIES?**

In this section, I discuss the consequences these empirical findings might have for the possible transformation of petro-geographies, and for geographic research on resource extraction. Some scholars have argued that the extent to which the “New Left” has opened new possibilities for transforming the political economy of extractive capitalism and related petro-geographies in Latin America remains relatively small, pointing to the overall fiasco of the “Pink Tide” and the continued domination of extractive forces governing the setting of national development trajectories (Veltmeyer & Petras, 2014; Arsel et al., 2016; Lu et al., 2017). This narrative of an all-dominant, all-encompassing extractivism, however, risks discounting if not erasing the post-extractivist struggles within (and outside of) these states, and with that “a sense of political possibility” (Pearson & Crane, 2017, p. 3). It is certainly important to document the impacts of extractive capitalism (and complicit state forces) that continue to degrade the environment, exploit labor, and dispossess communities. However, it is also important to simultaneously generate systematic empir-

ical knowledge about concrete ways to change such political economy: why some potential “counter-strategies” work or why not (Silveira et al., 2017). To keep “a sense of political possibility” to transform petro-geographies means thus to shift empirical attention from an analysis of the solidity of the wall to an analysis of its fragility, or “the cracks in the wall” (Holloway, 2010, p. 9). This article has therefore proposed to understand “the extractivist state” in light of critical state theories as a contingent and provisional outcome of an always ongoing struggle between extractivist and post-extractivist forces, and to record potential fragilities through an institutional ethnography attentive to structures and agencies. Such approach helps to locate “sites of potential change that are within reach of those participating in the institutional process” (Smith, 2005, p. 208), revealing “how and where struggles against marginalization and exploitation can be waged” (Sharma & Gupta, 2006, p. 20).

This article has identified five sites of potential change where battles could be waged to advance the transformation of petro-geographies. The identification of these sites is just a first step from which to develop, in Smith’s (2005) sense, a further refined inquiry. The next round of research must investigate how and why these sites are produced. For instance, investigations could ask how to best push for the replacement of old infrastructure. What would speed up the repair of environmental damage? Researchers could also contribute to solving the problems that emerge from compensation practices. I would caution against discarding all compensation and restoration programs as merely “neoliberalist techniques to pacify resistance” because envi-

ronmental damage in the Amazon does need to be repaired, and people who are suffering from the toxins in their backyards do need to get compensated (see also Kallis, 2013). The question is instead: What does a just compensation look like? Would it be useful to draw on concepts such as ecological debt or restorative justice? How to avoid compensation becoming an end-of-pipe solution that inhibits addressing the roots of environmental degradation and social inequalities? Some indigenous activists have told me they would see research that enhances methodologies which show the actual costs of environmental damages as a useful contribution to their struggles against the expansion of the extractive frontier. Another avenue of research could find out why the RAOHE is not updated. If legislators argue that they are unable to regulate a particular environmental parameter unless they have more empirical data on a specific environmental impact, the researcher could provide such an empirical data-set. That is not to say that only “bounded rationality”, i.e. lack of knowledge, keeps legislators from changing legal frameworks. However, only by providing the missing empirical evidence can researchers find out whether legislators consider this information, and why they do not. Another field of intervention would be the study of safeguards in the employment contract system and labor laws that could reduce the precarity of certain job positions and lead to more stability at the Ministry of Environment.

Answering these questions would, of course, not immediately make the world post-extractivist. However, it might mean taking one step further toward the desired transformation of petro-geographies, or as

Ostrom (1990) would say, it might solve a second-order problem that might influence the first-order problem. I would argue, however, that whether or not any of these suggested avenues for further research contribute to transforming petro-geographies depends not only on *what* research we do but also on *how* we do it. One of the things that struck me the most in this study is that I often heard from practitioners, indigenous and non-indigenous activists, and local community members alike that academic research generated in the social sciences was often useless to them. Bebbington’s (2012) observation that political ecologists, especially those outside the region, were fundamentally behind on catching the phenomena of extractive industries that NGOs, practitioners, and activists long knew about might be indicative of this problem. Indeed, researchers tend to learn from the people they interview and observe, and they carry these findings back to their respective academic fields. However, the people interviewed and observed, that is, the people involved in the institutional process, do not necessarily learn very much from such research: what is news for the researcher (and their respective academic fields) is not necessarily news to them.<sup>6</sup> Consequently, I suggest that institutional ethnographies that aim to contribute to the transformation of petro-geographies beyond merely locating sites of change must attend to three things.

First, as others have pointed out, institutional ethnographies fundamentally should be collaborative from their very start (see also Smith, 2005). Specifically, researchers should foster collaboration with the participants in the institutional process. What ques-

tions do the involved people think need to be answered? What research needs do they see? Furthermore, collaborations across national boundaries for analytical comparison would be useful, specifically cross-national studies with longitudinal research design. Additionally, interdisciplinary collaboration might promise to generate transformative research results. For instance, geographic research on the governance of environmental impacts could collaborate with disciplines such as environmental law, environmental science, ecology, anthropology, and political science. Transformative research should also aim to “link the people who change things” (Mayers & Bass, 1999, qtd. in Blaikie, 2012). That would mean fostering collaboration among people linked through a common commitment to environmental protection and environmental justice, instead of fencing off collaboration through pre-given categories (“the state”, “society”, “activists”, “academia”, “industry”, “parties”). All such collaborative efforts would speak to the need to build alternative networks, i.e. networks of political ecologies:

If contemporary capitalism is made possible by the bundling of the subsoil with specific networks of power, knowledge, and technology, then any alternative way of governing the subsoil and its relationships to life above the surface will be brought into being through different networks of power, knowledge and technology. That is the project of a political ecology of the underground, and it is one whose challenge far exceeds the possibilities of academic po-

litical ecologists working alone. (Bebbington, 2012, p. 1160)

Second, transformative institutional ethnographies should aim to provide the practical support that participants involved in the institutional process articulate as needed. What datasets do they need generated and systematized? What maps would come in handy? How to gear geospatial technologies toward their goals? For instance, if in Ecuador one of the leading obstacles to inspections is time restrictions, what would alleviate such restrictions? One possibility would be assisting in organizing the databases of the *denuncias* and inspection reports and acting directly as an additional labor force. Or, as a state official in the Ministry of Environment answered the question about what they would need to fight against the predominance of the industry: “Come to work here” (Government official, interview, 2015). Another contribution from geographers could be support for environmental monitoring through geospatial technologies. Presumably, environmental monitoring through remote-sensing or drones (INECE, 2015; Mena et al., 2017) would alleviate the problem of distance and limited field inspections due to time restrictions. Providing training and support in geospatial technologies could also assist communities in their efforts to document environmental impacts.

And third, transformative institutional ethnographies should aim at improving the communication of their research results to reach different audiences and a broader public. The conversation about research communication that has seemed very animated in the “pure”

natural sciences over the past few years needs to become livelier in geography and fields such as institutional ethnographies. Publicly engaged research still tends to collide with many of the requirements imposed on academics by the current institutional processes of the ever more neoliberalizing academy (Autonomous Geography Collective, 2010; Hawkins et al., 2014). Thus, transforming petro-geographies might also mean transforming the way to do research in geography, that is, finding sites of change to transform institutional practices within the academy. That way, further research would not only provide an interpretation of the world but also potentially contribute to its transformation (Marx, 1845/1888; Castree, 2010).

## CONCLUSION

This article has examined the extent to which constitutional innovations that incorporate several post-extractivist elements have translated into the enforcement of environmental laws in the hydrocarbon sector, in an effort to understand the limitations and possibilities of transforming petro-geographies in the post-neoliberal Ecuador. Holding that the narrative of all-dominant extractive powers in the Ecuadorian state risks obscuring the efforts of post-extractivist struggles, I have proposed understanding “the state” in light of critical state theories as a provisional and precarious outcome of extractivist and post-extractivist forces. I have therefore analyzed the challenges in the daily inspections by state officials responsible for the enforcement of environmental laws on the ground. I have followed Lu et al. (2017) in their argument

that certain habits of oil rule persisted since the establishment of the oil industry over four decades ago. I have empirically shown what exactly these habits of oil rule consist of and what their consequences are for the daily enforcement of environmental laws. I have argued that the manner in which these practices constitute an obstacle in the everyday of environmental law enforcement creates conditions that allow these practices to continue, which constitutes a self-perpetuating process. The habits of oil rule continuously generate incidents that call for inspections, which take a considerable amount of time. Consequently, environmental inspectors do not have time to engage in operations that would target the prevention of environmental damages. I have found five different examples of such oil practices that link the past to the present and help to replicate petro-geographies: environmental liabilities, old infrastructures, compensation practices, legal frameworks, and employment contracts. Further research efforts should examine how to change these five instances to advance the transformation of petro-geographies. To that end, institutional ethnographies should go beyond locating sites of change. In particular, institutional ethnographies could make an explicit effort to foster collaborations, especially with people involved in and affected by identified institutional processes; they could aim at providing practical support down the line to those involved; and they could try to apply innovative ways to communicate research results. Transforming petro-geographies thus also means working on changing institutional processes within the academy and on advancing publicly engaged scholarship.

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**NOTES**

1 Scholars identify three basic understandings of Sumak Kawsay in Ecuador (Breton et al., 2014; Villalba-Eguiluz & Etxano, 2017). The first is the statist version in which Sumak Kawsay, translated as Buen Vivir, means some form of Aristotelean human flourishing, close to Sen's capability approach, which can be achieved by all members of society through state-led ecological modernization. This version of Buen Vivir serves as a guiding principle for the development policies of the government administration of the *Revolución Ciudadana* (Citizens' Revolution). The second is an indigenous-essentialist version in which Sumak Kawsay is said to be part of an ancestral indigenous cosmovision, representing as such the antidote to modernity and developmentalism. These interpretations tend to "reflect a strong essentialist-identitarian bent that is sharply opposed to the regime" and is "typically articulated by a select group of indigenous and pro-Indian intellectuals" (Bretón, 2017, p. 189). Thirdly, there is a post-developmental understanding of Sumak Kawsay as an alternative to development that incorporates pluriversal perspectives, and that is continuously under construction. It is mainly a group of non-indigenous scholars, including post-extractivist thinkers, who articulate this version.

2 As the capitalist system (maintained by capitalist social relations) relies on cheap energy that is extracted in an exploitative way, the inhibition of such exploitation would not only transform energy systems but also related social relations (see also Malm, 2016).

3 "Institution" is a complicated term with a long history of academic and policy debate. I mean by institutions not only organizations and agencies but everything that structures reality or that defines what reality is. In that sense, I would argue, institutional ethnographies precisely aim to find out what institutions are.

4 Given the production pressure, it appears common in the oil industry to prioritize investment in exploration and production over environment and safety. BP invested \$39 billion in exploration and \$20 million per year in safety, accident prevention, and spill response research (Bratspies, 2011, p. 7).

5 For instance, for water discharges, lead (Pb) is limited to 0.2mg/l in TULAS, while RAOHE allows up to 0.4mg/l.

6 I do not exclude myself from this problem. I am just about to disseminate my research findings to participants in this study, but I would not be surprised if my results at this stage were not of fundamental use to anyone involved.

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