‘Cuida Nuestra Tierra’: Understanding Locally Specific Forms of Environmentalism in Lima, Peru

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Abstract

Growing concern about the ongoing environmental crisis has prompted an increased awareness of pollution and climate change. These grave environmental problems are often framed as pressing global issues, but they take unique forms in different locations. This thesis endeavours to contextualise these global issues and explore how they are apprehended at a local level. Through a focus on embodied experiential knowledge and social, political, and historical context, I have examined the specificity and local character of what it means to live with pollution and climate change in Lima, Peru. Based on ethnographic fieldwork in Lima's Cono Sur, including participant observation and interviews, I argue that environmental understandings and practices must be seen as embodied, historical, and situated in time and space.

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Introduction

Research Objectives and Findings

Problems like pollution and climate change seemed to be everywhere when I began thinking about my research. Environmental headlines dominated the news and articles about greenhouse gas levels, rising seas, and global temperature increases circulated widely. In October 2018, a landmark report from the United Nations Intergovernmental Panel on Climate Change declared that human activity had caused a global temperature rise and that further planetary warming with potentially devastating consequences could be expected. It was against this backdrop of environmental stories and headlines that I began to imagine my own research. Whether it was a report from the United Nation that estimated more than 8.3 billion tonnes of plastic have been produced globally since the 1950s, or a prediction from the US National Oceanic and Atmospheric Administration that record-breaking heatwaves in Siberia are pushing the earth towards what could be the hottest year on record, I started to wonder if these stories had long been around and I was only just beginning to pay attention to them. Or, if the onslaught of dire forecasts and sharp warnings about the global impacts of anthropogenic climate change, which at times felt hard to keep up with, really were increasing. It is these stories and many others like them that fuel my own anxiety about pollution and climate change, and my growing sense of being unable to confront what seems like a monumental global issue. However, it is also stories like these that make me wonder what these grave environmental problems mean for the people already living with them, and the others who will be affected by them in years to come.

Pollution and climate change are often framed as new or emerging problems occurring on a global scale. I do not want to diminish the importance of immediate and large-scale efforts to address environmental problems, but this conceptualization does not tell the whole story.

Although environmental problems are a global concern, the impacts are lived and felt in different ways in different places. While recognizing that locally specific ideas and responses are developing in the context of global change, this project approaches the study of pollution and climate change through an exploration of the embodied experience of everyday life and individual and collective environmental efforts. Scientific research has developed global predictive models and quantitative expert knowledge, but anthropologists have argued for the importance of attending to, "the everyday lives of people and to their own understandings of what is happening" in what are sometimes referred to as "climate ethnographies." (Hastrup 2013, 270; Crate 2011, 176). My research contributes to this growing emphasis on empirically grounded and place-based approaches that highlight how environmental problems and responses are embodied, historical, and situated in time and space. Through this project, I set out to challenge discourses that can decontextualize or generalize by exploring how the global issue of climate change and pollution is apprehended at a local level.

In my research, I explore the specificity and local character of environmental problems and responses in Lima, Peru by considering how Limeños live with pollution and climate change in their day to day life. In Lima, pollution represents a significant environmental problem with wide ranging impacts. The prevalence of air, water, and material waste pollution contributes to the development of local environmental understandings and practices that are rooted in both the individual embodied experience of Limeños and the shared social, political, and historical terrain of the city. In what follows, I examine the spatial and temporal location of environmental understandings and practices in Lima, and consider how they take on certain individualized forms and mirror existing social divisions. This requires an acknowledgement of the various ways in which environmental problems and responses are entangled with existing geographic

vulnerabilities, colonial and post-colonial histories, social inequalities, international environmental discourses, neoliberal governance models, and urbanization efforts.

Literature Review

Anthropology and the Environment

Lima faces numerous environmental problems and potential future environmental threats, such as poor air quality, high levels of pollution, rising sea levels, natural disasters, food shortages, epidemics, intense humidity, and droughts (Herrera 2017; Alonso 2018). I was aware of all of this before arriving in the city, yet there were still moments I felt these problems acutely. When an acquaintance told me about the smog that accumulated on his face and clothes after a day working in Lima's congested downtown streets or I tripped over trash laying on a sidewalk as I rushed to catch a bus, I was distinctly aware of the environmental problems surrounding me. Yet, in other moments, like when I waited in line at the pharmacy for something to treat the allergic reactions that had plagued me since arriving and never seemed to completely disappear, I was left thinking about how pollution and climate change appear in daily life in less immediately apparent ways. These moments directed my attention to the need for a framework to think about and discuss these experiences.

First, I turn to environmental anthropology, which can be understood as consisting of anthropological efforts to probe the human-environment relationship, climate change, and various forms of pollution (Crate 2011). Stemming from a basic recognition of the increased risk of extreme weather and potential human impacts caused by anthropogenic climate change, a significant focus in this literature has been the experience and management of environmental problems and how local environmental perceptions are shaped by global discourses (Crate 2011; Hastrup 2016). However, there has not been a single unified approach to studies of environment.

Some anthropologists have equated environment with nature, leading to a focus on exploring the human-nature dichotomy, while others have engaged with the term anthropocene to challenge human exceptionalism and, "directly link planetary concerns and human actions" (Hastrup 2016, 270). However, this perspective has been criticized for reinscribing, "the sanctity of nonhuman nature …[and] undifferentiated global humanity," demonstrating a tendency, "to elide the deep colonial and capitalist inequalities among humans … repeating well-worn Christian and environmental tropes" (Whitington 2016, 10; Hetherington 2019, 3). In Peru, anthropological research on the environment has primarily focused on extractive industries and climate related water issues as a way of interrogating the emergence of environmental discourses and the impacts of changing climatic conditions (Li 2015; Stensrud 2016).

On a conceptual level, environment has been characterized anthropologically as a continually unfolding contemporary issue that produces apocalyptic future imaginaries and presents a "tenuous and shifting terrain of exploration" (Whitington 2016, 7). Recognizing these challenges, anthropologists have considered the "multilayered complexities of local human experiences," in an effort to contribute empirically to a "careful, sustained … reflection on how an intellectual public might think about the problem of climate change" (Crate 2011, 176; Whitington 2016, 10). Anthropologists are also increasingly challenging pre-conceived notions about climate change, human exceptionalism, and apocalyptic environmental predictions to imagine a multiplicity of potential futures amidst changing planetary conditions. (Halpern 2017; Whitington 2016). Nevertheless, uncertainty remains about the visibility of climate change and the ways it can be known or experienced, raising questions about how embodied or experiential knowledge may be mobilized in environmental debates (Rudiak-Gould 2013).

Following this literature, I approach environment in a broad and flexible sense, while endeavouring to allow my own understanding of environment to be guided by my fieldwork. This has allowed me to attend to both pollution and climate change, and to explore the mutually reinforcing and entangled relationship between the two, without circumscribing or confining myself to strict definitions or ideas of what each might include. Schematically, pollution contributes to rising global temperatures, in turn increasing the number of extreme weather events and negative outcomes; at the same time, climate change exacerbates the considerable impacts of pollution on health, security, and well-being (IPCC 2018). At a conceptual level, I have approached pollution and climate change as a "problem domain rather than a set of authoritative facts," foregrounding a focus on the ways that these ideas emerge from the field, instead of imposing or searching for a prefigured or pre-assembled idea of how pollution and climate change present themselves (Whitington 2016, 7).

Air, water, and material waste pollution constitute a serious environmental problem in Lima. A concern with what does not belong is not new to anthropology and the social sciences. In *Purity and Danger,* Douglas considers dirt as both an everyday materiality and a symbolic construct, arguing that, "if we can abstract pathogenicity and hygiene from our notion of dirt, we are left with the old definition of dirt as matter out of place" (1966, 36). More recent research on pollution and toxicity has considered permeability and the ways pollutants have infiltrated bodies and lives, with some arguing that "all people alive today contain [industrially produced chemicals] within them" (Murphy 2017, 495). For example, Alaimo's work provides a renewed focus on the body and the ways it is enmeshed with nature by using the concept of trans-corporeality to consider how we care for the environment and ourselves (2010). At the same

time, others have noted the importance of the boundary making processes that emerge as a way of managing the uncertainties of life in a contaminated landscape (Roberts 2015).

My exploration of the lived realities of pollution and climate change and the locally specific environmental understandings and practices in Lima, is rooted in the ethnographic material I present in this thesis, and enabled by anthropological conceptualizations of embodiment and experience. Experience informs environmental knowledge, including the ways Limeños discuss and respond to pollution and climate change, and these experiences are mediated by the body. Anthropology has long been interested in the body, and the idea that, "a paradigm of embodiment can be elaborated for the study of culture and the self" (Csordas 1990, 5). Similarly, an interest in experience has been central to anthropological research, with Turner arguing that "of all the human sciences and studies, anthropology is most deeply rooted in the social and subjective experience" (Turner and Brunner 1986, 33). In this project, I take up embodied experience as a conceptual tool that encompasses sensory human engagement with the environment, the acquisition and formulation of empirical knowledge about the world through the body, and the recognition that individual bodies are continually conditioned, socially produced, and structurally positioned in specific ways. Many anthropological conversations around embodiment and experience have centered the phenomenological and sensorial, suggesting that knowledge is, "situated in embodied practice and movement," and the senses are, "interconnected in human perception" (Pink 2010, 332). However, others caution against viewing sensory experiences as uncontestable, instead arguing for an attention to the historical, social, and discursive production of bodies (Scott 1991).

This exploration of embodied experiential knowledge is particularly impactful, because a scientific focus on statistical models and careful measurement can serve to exclude the public

from discussions around climate change (Rudiak-Gould 2013). Although scientific assessment is an important tool for facilitating conversations about environmental concerns, anthropologists have focused their attention on those living with the impacts of environmental hazards, because, "sensory experience on the ground breathes life and urgency into desiccated expert assessments" (Rudiak-Gould 2013, 129). Accepting that embodied experience is socially positioned directs attention to the spatial context of the city and the entanglement of health, environment, and politics, even while remaining cautious not to render certain "lives and landscapes as pathological" (Murphy 2017, 496).

Anthropology and Peru

A recognition of embodied experience as situated within the specific terrain of the city, calls for an attention to social, political and historical context of Peru. The country has undergone two significant historical processes that constitute a focal point for much of the contemporary work. First, the politically fueled violent armed conflict between the *Sendero Luminoso* or Shining Path (a communist guerrilla organization) and state or state supported forces spread from the Andes and into the capital city of Lima in the 1980s and resulted in nearly 70,000 deaths (Starn 2005). This contributed to the second key focus, the nearly uncontested transition to a neoliberal governance system under the authoritarian regime of Alberto Fujimori in the 1990s, which has largely been seen as a stabilizing force and opportunity for economic growth (Feldman 2015; Drinot 2014). While Peru is seen as a relative success story amongst its Latin American counterparts, researchers have identified the negative impacts of neoliberalism, including privatization and reduced governmental capacity. This has raised questions about the efficiency of the political system and government, the impacts of privatization on the environment, and the social costs of development (Drinot 2014; Vincent 2018). This history is

central to how Limeños imagine the city, and helps to explain the persistent skepticism of the government's ability to address problems or improve urban life. The ongoing impacts of neoliberalism further exacerbate public doubt in the state's capacity.

Scholars of Peru have also recognized the deeply entrenched historical disparities that continue to produce "patterns of exclusion, expressive of racialized and gendered hierarchies, that structure … Peruvian society" (Drinot 2014, 2). These questions of inequality and exclusion are particularly relevant in discussions of the city of Lima. Although many Limeños are proud of their city, it is often described as informal, unequal, and disordered. This sentiment appears in the work of colonial writers, such as Bernabé Cobo and Alexander von Humboldt, who critique the city's apparent lack of order, cleanliness, or cultural merit (Aguirre and Walker 2017). Although these critiques are notably Eurocentric, they have persisted. In recent work on Lima's Municipal Office of Formalization, an official remarked that, "[The street vendors] do whatever they want, keep their merchandize everywhere, mess up [the streets]" (Gandolfo 2013, 281). Today, Lima, with a population of approximately ten million, continues to be associated with inequality and seemingly insurmountable informality which some have described as an invisible wall that residents, "accept and justify through … fears, timidities, preferences, and tastes" (Gandolfo 2009, 11). Given this view of the city as deeply divided and lacking order, it is unsurprising that the literature has focused on the lived realities of marginalization and informality in the urban context, with a specific focus on persistent problems of urban development, inequality, and socio-spatial segregation (Matos Mar 1956, Peters and Skop 2007, Roca 2012, and Fernandez de Cordova et al. 2015).

Despite these negative perceptions of Lima, a persistent optimism remains that the city center can and should be recuperated, leading to calls for urban reform. Foucault's work on

governmentality provides a useful tool for considering the political character of these reforms and the political rationalities or ideas of governance that are embedded within environmentalism and urban improvement efforts in Lima. Governmentality is a concept which productively links subjectivity, power, and governance in a variety of settings, although no specific form of the "art of governing" should be taken as an ahistorical universal truth or as fully replacing existing systems of sovereign or disciplinary governance. According to Foucault, governmentality can be understood as, "the broad sense of techniques and procedures for directing human behaviour," and others have accorded its popularity to the, "ability to generate detailed empirical studies, both historical and contemporary, of practices of government" (Foucault 1997, 81; Rose et al. 2006, 88). More specifically, using Foucault's work as a theoretical tool for exploring the forms of neoliberal governmentality present in Peru helps explain how the detrimental effects of pollution and climate change come to be the responsibility of individuals rather than the state. Additionally, the focus on creating a certain type of governmentalized subject through self-improvement that is present in Foucault's work complements Scott's argument that individual subjects are constituted through the embodied experiences they encounter as a result of their social position.

These concepts become important when thinking about the different forms that environmentalism takes in Lima. For example, the act of caring is often closely tied with environmental practice in the city, and discussions often use a language of care to call on an affective sense of morality, reciprocity, and attentiveness. Anthropological engagements with care have pushed beyond framing it as an innocent, evidently positive, or traditionally 'caring' act, to instead focus on care as an ethico-political duty that, "can set up conditions of indebtedness or obligation," in a way that, "organizes, classifies, and disciplines bodies" (Puig de

Bellacasa 2011; Martin et al. 2015, 627). In recognizing how care introduces a variety of individual obligations and responsibilities, it can be understood as a specific iteration of neoliberal governmentality informed by the history of neoliberalism in Peru that promotes individual actions and responsibility over governmental level intervention and large-scale change.

This is the context of contemporary research on Peru. However, the simple recognition of this history fails to account for the ways that it has come to shape life in the present. Historical ontology provides a conceptual tool for approaching the historical roots of modern environmental practices in Lima. Drawing on Foucault's work on genealogical and archaeological methods, Hacking proposes historical ontology as a method for analyzing concepts and, "what makes it possible for them to come into being" (Hacking 2002, 2). Thus, Hacking's project is interested in understanding the emergence of objects of knowledge or practice as historical and situated, even if they may not initially appear to be, arguing, "a correct analysis of an idea requires an account of its previous trajectory and uses" (Hacking 2002, 9). Following Hacking, it is imperative to consider the historical sites of our concepts in order to fully understand how they are presently functioning, because, "the logical relations among them were formed in time, and they cannot be perceived correctly unless their temporal dimensions are kept in view" (Hacking 2002, 26).

Although I cannot speak to how certain environmental understandings and practices emerged in Lima, I take up historical ontology as a way of historicizing contemporary environmentalism. Time and time again in the process of conducting fieldwork for this project, my questions about the environment, pollution, and climate change were met with stories of the past. Sometimes these stories spoke quite clearly to their relation to contemporary practices,

while other times their meaning was less clear. Using Hacking's work, I am able to consider how a broader historical context is necessary to understand the ways in which environmentalism functions in the present in Peru, because it is deeply entangled with a variety of other local ideas, understandings, and actions that have developed over time. This keeps the historical roots of modern environmental practice 'in view,' and avoids inadvertently erasing the longer historical narrative or blurring connections to existing and available ways of inhabiting the city. I have taken care to acknowledge the continuities between past and present, particularly given both the frequent imaginary of environmentalism as a contemporary issue and the reality that environmental issues often exacerbate existing inequalities and social divisions.

Methodology

My fieldwork was structured as a multi-sited ethnographic project in Lima, Peru. The city faces numerous environmental risks as a result of its geographic location and socio-economic inequality, making it a valuable site for this work (Herrera 2017; Alonso 2018). My project specifically focuses on the affluent areas of San Isidro, Miraflores, Barranco, Chorillos, Surco and Surquillo in Lima's Cono Sur (the area south of the city center along the Pacific coast), which are home to many environmental events and programs. Although my research was not exclusively conducted in this area, all of my interlocutors worked or lived in these neighbourhoods. In Lima, problems like material waste pollution and poor air quality are managed at the district or municipal level and geographic divisions can often represent class, race, and educational divides that shape environmental understandings and practices, making it important to locate myself in these specific neighbourhoods.

Between May and August 2019, I conducted field observation, participant observation, informal and semi-structured interviews with Limeños, and used additional digital methods. My

field observation and participant observation primarily focused on environmental events, such as eco-markets, clean-up days, and other communal gatherings, but I was also attentive to other locales throughout the city where both residents and I confronted changing environmental conditions, including workplaces, public parks, public transit systems, and residential dwellings. I attended a variety of official events, including a community bike day, an environmental festival hosted by local non-governmental organizations (NGOs), a plogging event, and a number of eco-markets and clean-up initiatives. At these events I observed the activities, spoke with Limeños and NGO workers, and took photographs. I was also attentive to other environmental practices in my day to day life, especially simple or routine practices like recycling, shopping decisions, or transit choices. I often took part in the events with my interlocutors or accompanied them as they went about their daily activities. This provided a more organic opportunity to discuss the environment and life in the city, and served as a means of gathering information by, "getting close to people and observ[ing] and record[ing] information about their lives", rather than relying only on interview accounts of people's activities (Bernard 2018, 190).

I also conducted nine informal and two semi-structured interviews. The two semi-structured interviews were recorded and transcribed, while the remaining interviews were conducted conversationally throughout my fieldwork and recorded in daily field notes. Informal interviews were particularly effective because they allowed for a discussion of issues and events as they were unfolding, touched on ideas that may not have been as memorable in a formal interview setting, and were flexible and informant driven (Bernard 2018). My interlocutors varied in age, but the majority identified as young middle-class professionals. These interlocutors were identified through existing contacts in the city and at local events, and they were all experiencing environmental hazards to varying degrees. This respondent-driven sampling or

network sampling method was particularly useful given the timeline of the project, and all research interlocutors, including my interview participants, provided written or oral consent, as appropriate (Bernard 2018). My interlocutors and research participants, with the exception of public figures, have been given pseudonyms. However, NGOs and other public organizations have been identified by name.

Additionally, I used social media and print media resources to further develop my understanding of environmental practices in the city, learn about local perceptions of pollution and climate change, and provide myself with more historical, political, and social context. Both traditional media and social media are forums where environmental problems and practices are discussed and local discourses and understandings of environment are developed, and for this reason an attention to digital spaces is important (Boellstroff 2008). These digital and material resources include leading local and national newspapers, government and NGO social media pages, Real-time Air Quality Index Visual Maps, and art and multi-media exhibits.

Through these methods, I was able to collect information about government and NGO initiatives, as well as their reception. Throughout my fieldwork, I also endeavoured to consider how I may be personally experiencing climate pollution and change. I was attentive to the environmental conditions around me and my own embodied experience of these conditions as I moved through the city. At the same time, I was also alert to how my presence as a foreign student and ethnographer may shape how my interlocutors choose to frame their narratives. The people I spoke with often seemed to explain their experiences in ways they felt I was likely to understand given my social position. Although I did not set out to centre my own experience, these observations can be seen in my own personal reflections throughout the text, particularly surrounding air pollution and respiratory health.

The combination of these methods complemented my focus on embodied experience, directed my attention towards lived realities, and allowed me to consider the recognizable and less obvious or unnoticed effects of climate pollution and change in people's lives. Through this approach, I was able to explore the many ways Limeños are living with environmental problems, and how these experiences are shaping daily practices and discourses surrounding climate pollution and change.

Thesis Outline

Chapter one takes up the question of how people live with air pollution and poor air quality, and explores how environmental understandings are shaped by urban life. This chapter focuses on how poor air quality and pollution is linked to high rates of asthma and allergic rhinitis, arguing that living in this setting informs a locally specific reimagining of the environment. However, despite these lived experiences, many residents are hesitant to fully attribute their symptoms to any one cause, including pollution, speaking to the uncertainty surrounding the ways embodied knowledge is employed, the visibility of abstract environmental threats, the overall complexity of the situation, and the perceived limits of experience as a basis for knowing. Furthermore, by examining experiences of everyday life, I highlight how environmental sensibilities are rooted in both individual bodies and the broader contexts from which they emerge, contributing to the overall argument that environmental problems must be understood as locally specific and situated in time and space.

In chapter two, I turn to different forms of individual and collective environmentalism, together referred to as environmental practices, to consider how understandings of the environment are mobilized within the the historical, political, and social context of Lima. This chapter deals with three key facets of Limeño environmental practice. First, using the concept of

historical ontology, I argue that environmental practice in the city is closely tied to past urban improvement efforts, which challenges the idea that environmental movements are entirely novel and highlights how environmentalism is part of an older project of revitalizing urban spaces. Second, I consider how environmental programs are shaped by and shaping existing inequalities and divisions. Finally, I reflect on how we imagine what environment looks like in the city, investigating the tensions between urban spaces, which are seen as constructed and inherently environmentally damaging, and non-urban spaces, which are positioned as pristine, natural, and the focus of environmental protection.

Finally, chapter three takes up a specific example of the merging of environmental practices and urban improvement efforts. The Mi Ciudad Mis Valores campaign highlights how environmentalism and urban improvement efforts are framed as practices of care. Environmental efforts often invoke an individual obligation to 'care' for the environment by associating environmentalism with broader ethical obligations and attempts to transform the city and its inhabitants. Specifically, I argue that this campaign, and others like it, impose a responsibility to attend to the city on Limeños and promote a neoliberal model of care that centers individual contributions over systemic change or large-scale intervention. As such, this chapter draws on Michel Foucault's work on governmentality and the anthropological literature on care to think critically about practices of care and recognize the asymmetrical power relations and sense of duty embedded within them.

Chapter One – Conceptualizing Environment through Embodied Experience

Introduction

It was one of my first nights back in Lima in 2019 and I had made dinner plans with a group of friends at a restaurant in a nearby part of town. Running a bit late, I met my roommate Anna on the corner of our street and together we called a taxi. We made polite conversation with our driver as he weaved through the busy streets, stopping and starting abruptly and honking his horn as he sped through intersections without stopping. Although I had spent time in the city on previous visits to Peru, the notoriously bad traffic always caught me by surprise. While our taxi waited at a standstill among idling vehicles, honking horns, and lingering exhaust fumes in the evening rush hour, I tried to ignore the cars passing dangerously close as they pushed their way through the gridlocked traffic. My motion sickness often left me feeling a bit sick whenever I had to travel a longer distance across the city, but sitting in the back seat I could also not seem to stop coughing and sniffling. As I dug through my bag looking for a package of tissues, I was sure I had caught some sort of cold on the plane. I remarked to Anna that I hoped I was not getting sick, to which the driver quickly interjected from the front seat, "No, it's just the weather, it's always like that during the winter."

Initially, I did not think much of this response, but as time went on I encountered this phrase, and others like it over and over in my conversations and daily interactions. Limeños would regularly mention their sore throats, shortness of breath, congestion, coughs, and hoarseness, but these symptoms were quickly dismissed as minor inconveniences and a part of daily life. When I met Mateo for a drink at a local open mic night in Barranco, I found him at a quiet table in the back of the venue sipping on tea with honey and lemon. When I asked if he

wanted anything from the bar, he declined, saying that he had been struggling with a sore throat all week. During our bike ride along the coast, Carlos had to stop and use his inhaler many times. As he struggled to regain his breath, he explained that his asthma had been getting worse since the weather had started to cool off. These exchanges became so commonplace that it seemed as if most of my conversations in Lima started with someone explaining away their symptoms, and soon enough I was doing the same. I assured my friends it was nothing to worry about as I sneezed uncontrollably or scratched at the hives on my face, and in return they offered home remedies or a recounting of their own experiences. As time passed, I began to realise that the normalcy of these symptoms pointed to a connection between health and the environment that merited further exploration.

In this chapter, I will discuss the prevalence of asthma, allergic rhinitis, and associated medical conditions in Lima, and how they relate to local ideas about the environment. I refer to these conditions collectively as environmental disease, inspired by the language of industrial disease which emerged from the industrial revolution to refer to ailments and conditions caused by or related to repeated or long-term exposure to workplace hazards. This is not to say, as I will discuss further, that these diseases and symptoms are the direct result of exposure to environmental contamination or that they would not occur in the absence of pollution and poor air quality, but that they are all closely linked to and exacerbated by these environmental conditions. This chapter will consider how air pollution and poor air quality present a significant problem in Lima and produce meaningful health and social impacts. Throughout this chapter, I present an ethnographically rooted understanding of the environment specific to Lima that encompasses both pollution and non-pollution related dimensions. More broadly, I am proposing a reimagining of environment that is more open to a variety of perspectives and sources of

knowledge, more inclusive of the diverse circumstances that come together under the term environment, and more accepting of the complexity of this situation.

First, I will outline the relationship between health and conventional environmental threats, primarily pollution and vehicle emissions, and examine the variety of causes and impacts of poor air quality in the city. Second, I will explore the everyday experiences of Lima residents or *Limeños*, and how both the presence of symptoms and their treatment shape daily life and practice. Through the ethnographic material, I will consider how residents understand their medical conditions in relation to pollution and other non-pollution related triggers. Finally, I will delve deeper into the question of how we may think about environment otherwise, by considering the pervasive sense of uncertainty, amalgamation of potential explanations, and the routine hesitations and partial denials surrounding both environmental disease and the environment itself. I argue that even when confronted with a complex situation and the perceived limits of embodied experiential knowledge, this reimagined understanding of the environment is developing through embodied experience of urban life in Lima, which suggests that environmental sensibilities are closely connected to the places from which they emerge. From this, I propose a broad and inclusive conceptualization of environment that recognizes the complexity of environmental problems. This will allow for discussions of the environment that acknowledge contradictions without needing to resolve them, that embrace multiple types of knowledge rather than strictly circumscribing technological or scientific definitions, and that include a variety of voices and perspectives even when they are unclear.

Environment and Health

In Lima, pollution presents a significant environmental concern. When I began discussing my research, many were quick to acknowledge that the city was an ideal site, pointing to the

single use plastic discarded on beaches, the mismanagement of material waste and recycling, the contamination of local water sources with chemicals, heavy metals, and other pollutants, and the continual problem of air pollution resulting from the relentless traffic. Globally, pollution is the leading cause of environmental disease and death, with the United Nations Environmental Assembly identifying air pollution as the most significant environmental threat to human health (United Nations Environment Programme 2017). Furthermore, the World Health Organization estimates that 90% of people worldwide breathe air containing high levels of pollution, resulting in an estimated seven million premature deaths annually (World Health Organization 2018). In addition to the direct medical impacts, air pollution also contributes to global climate change, which further exacerbates the existing impacts of pollution (IPCC 2018). Significantly, the effects of environmental pollution are not experienced uniformly, and they often compound existing problems of global poverty, inequality, and underdevelopment, while disproportionately impacting vulnerable communities. The Lancet Commission reports that "92% of pollution-related deaths occur in low-income and middle-income countries and…diseases caused by pollution are most prevalent among minorities and the marginalised" (Landrigan et al 2018, 1).

Each morning, when I scrolled through the stories on two of Peru's major news outlets, *La Republica* and *El Comercio*, headlines like, "How air pollution can raise the number of deaths in cities," and, "Peru is the country with the worst air quality in Latin America," often caught my eye, and this existing media discourse around the topic highlighted the visibility of pollution and air quality related problems in the city. Air pollution in Lima can be attributed in large part to vehicle emissions, which include nitrogen dioxide and other pollutants or airborne particulate matter. Since the 1990s, traffic in the city has grown steadily, and Lima is now ranked the third most congested city in the world, behind Mumbai and Bogota (Almenara 2019). The city's

roadways are often overcrowded with cars, taxis, buses, and combis - refurbished vans designed for low-cost communal transportation - which make up the network of public and private transportation options available to residents. In addition to the high volume of traffic, air pollution is further exacerbated by the continued use of aging vehicles and low-quality fuels.

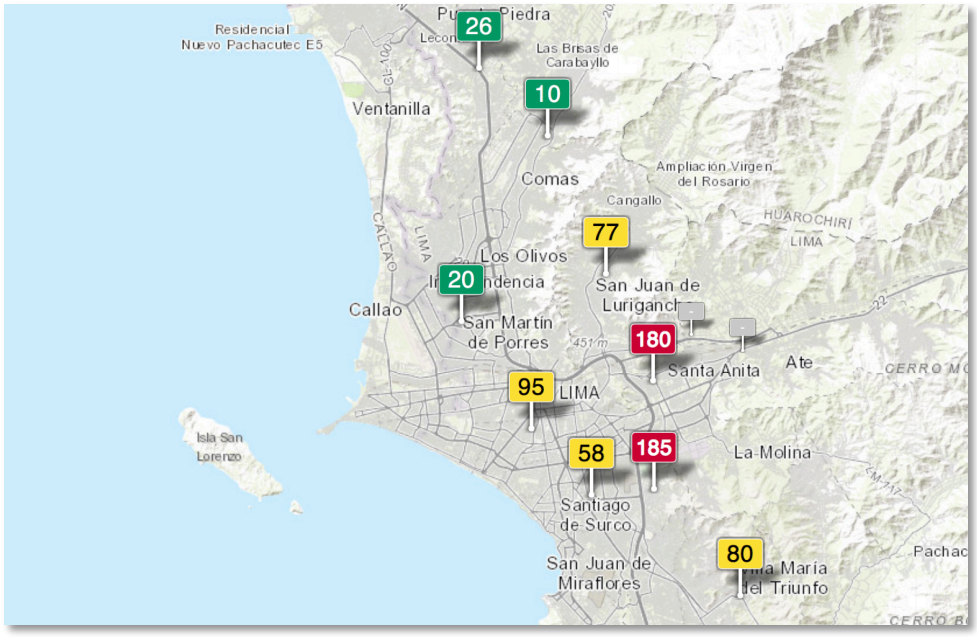

Fig. 1: *An example of an air quality map of Lima found at an online air quality tracking service*[1]. *The green colour indicates healthy or acceptable levels of pollution based on WHO standards, while the yellow indicates moderate levels of pollution which may negatively affect vulnerable groups and the red indicates unhealthy levels of pollution that can affect all residents. As shown on this map, air quality levels are typically worse in inland regions compared to coastal areas.*

During peak hours, Limeños have few good options for moving around the city, with traffic at a standstill on most of the major roadways, including the Via Expresa, the main highway running through Lima's Cono Sur. Some rely on public transportation, including the Metropolitano, a system of gas-powered articulated buses that circulate on segregated bus lanes, and the Tren Electrico, a small rail system that began operation in 2012. However, most still rely on the buses, many of which are privately-owned, that make up the majority of the patchwork

[1] This image was retrieved from an air quality tracking service found here, https://aqicn.org/map/lima/

transit network in the city. At rush hour, most of Lima's intersections are lined with commuters waiting for the seemingly endless stream of buses and combis, which provide the most affordable means of transportation. However, the crowds, the fumes, and the noise from bus attendants and honking horns make public transportation distinctly uncomfortable. Meanwhile, others choose to commute using private transportation, including cars, taxis, and rideshare services, many of which are unofficial and unsanctioned. These vehicles not only contribute to Lima's high volume of traffic, they are also associated with crime and unethical business practices, including price gouging, extortion, and robbery. The government, at both the local and national level, has made efforts to address traffic, pollution, and road safety issues. In 2017, the Ministry of Environment established vehicle emissions limits, and in 2019, the Municipality of Lima instituted the Pico y Placa program to reduce traffic and emissions on certain major roadways. However, pollution remains a considerable problem in the city (see Figure 1).

Discussions of pollution often include stories of commuting, highlighting the struggles of traveling in the city and the connection between transit and pollution. Even if they did not directly speak of pollution, many residents traced a clear connection between poor air quality and traffic. Elena, an administrative assistant at one of Lima's universities, walks 30 minutes each morning from her house to a major intersection before hailing a taxi for the remaining 20 minutes of her trip. When she was younger, she explained, she used to walk the entire way, but she is not able to walk that far anymore. She would prefer if she could walk or ride her bike each day, but she worries about cycling on the roads. Although the city has begun to invest in bike paths and segregated lanes in an effort to make cycling a larger part of life in Lima, the city's busy roadways, filled with cars, buses, and motorcycles, present a risk to cyclist and pedestrian safety (see Figure 2). When I asked her about taking the bus, she dismissed the idea saying it

would be too much trouble. For others, long commutes in overcrowded buses and vans were the norm. While traffic is a continual problem in Lima, it reaches a peak during the morning and evening rush hours as residents commute between their home and work, which may involve crossing large sections of the city. Alan, a tourism director at a local agency, chose to walk 60 minutes home almost every evening after work. When I asked him about this, he explained that if he was to use public transit his commute would take nearly 90 minutes and involve several transfers between buses and combis to get to his home in Magdalena. He added that, even though he did not like walking in the dark, he was lucky because his route was safe.

Fig. 2: *A mural depicting cyclists found at busy corner of a residential area of Miraflores. Photograph by author (2019).*

Despite the pervasiveness of air pollution and vehicle emissions, air quality in the city is also affected by other factors, including dust, mold, and other contributors to poor indoor and outdoor air quality. Together, these forms of contamination and toxicity have significant health effects. Although asthma and allergic rhinitis are complex conditions with a variety of causes and triggers, both have been directly connected to air pollution and poor air quality. Asthma is characterized by reoccurring breathing difficulties, such as wheezing, coughing, chest tightness,

shortness of breath, or a complete inability to breathe (Kenner 2018). Allergies have similar effects, including coughing and respiratory symptoms, as well as irritation to the nose, throat, eyes or skin, headaches, dizziness, and nausea. These conditions are associated with a variety of environmental triggers, both pollution and non-pollution related, including pesticides, pollutants, smoke, chemicals, pet dander, mold, changing weather conditions, viruses, and stress, and are often managed through medication, behavioral changes, and environmental controls (Kenner 2018). As such, while pollution is a large contributor to poor air quality, consideration of environment and environmental disease in Lima must encompass both pollution and non-pollution related air contaminants.

Scientific research has increasingly pointed towards poor air quality as both a cause of and irritant to many conditions. According to a study published in *Lancet Planetary Health*, poor air quality and vehicle emissions result in 4 million new cases of asthma annually, or approximately 11,000 cases per day, demonstrating, "a strong causal relationship between traffic pollution and childhood asthma incidence" (Achakulwisut et al. 2019, E176). Similarly, allergies and other short-term and long-term medical conditions, such as pneumonia, bronchitis, heart disease, cancer, and emphysema, have been linked to air pollution (Bose et al. 2018). Furthermore, research indicates that cases of environmental disease are most common when pollution levels do not comply with the World Health Organization guidelines, and 90% of asthma incidences attributable to common forms of air pollution occur in urban and peri-urban spaces (Achakulwisut et al 2019). However, these conditions are typically the result of multiple causal factors, meaning that other triggers, such as dust and mold which are present in Lima, also contribute to the overrepresentation of these conditions. Given the high levels of auto emissions and presence of other key contributors to poor air quality, it is unsurprising that in Lima asthma,

allergic rhinitis, and related symptoms are very common, with the city reporting the highest annual rate of new childhood asthma cases globally, beating out Shanghai and Beijing (Achakulwisut et al 2019). Presented with this scientific information, it becomes clear that diseases such as asthma and allergies must be understood as environmental in the broadest and most multi-faceted sense, which includes poor air quality and pollution.

Environment in Everyday Life

Rosa was the first person I spoke with in Lima who opened up about her experience with environmental disease. We were sitting in a popular café in the public greenspace along Lima's pacific coast, overlooking the ocean and the Circuito de Playas, talking about the events of the previous week. While we sipped our coffee, we enjoyed one of the last sunny days before the cold, damp, and grey winter weather arrived. We watched children playing with soccer balls and scooters, families walking their dogs along the coast, and tourists snapping photos while street vendors tried to sell them souvenirs, jewelry, and snacks. Rosa began telling me the story of her first job as a teacher, which I had only heard bits and pieces of since I met her. After university, she had begun working at a local primary school, teaching math to a loud and unruly group of nine-year-olds who frequently spoke over her and refused to stay in their seats during lessons. As the winter season began, it was not long before she started to lose her voice. Nearly every day, she woke up with a cough and sore throat, which felt, "like a stabbing knife." At first, she thought it was from shouting over the kids, but when it persisted she assumed it must be a cold or perhaps the flu. Her suspicions were confirmed when she visited her doctor that day.

However, her symptoms did not clear up, and they grew worse as time passed. Rosa recalled her boss's annoyance at her repeated sick days and requests for time off, but she simply could not teach her class. She hesitated to go back to the doctor, not wanting to pay for an

appointment at the private clinic, but she did eventually return. The doctor diagnosed her with a throat infection, and prescribed her antibiotics and advised her to stay home from work. When the symptoms cleared, she returned to work, only to have them come back and send her back to the doctor. Rosa repeated this back and forth with her doctor a number of times before she was finally diagnosed with allergic rhinitis, which her doctor cited as the cause of her frequent throat infections. Initially, Rosa had doubted this explanation, partially because she had lost trust in the physicians at the clinic and because she had never experienced serious allergy symptoms before beginning her job at the school. Although she had suffered from cold and flu-like symptoms during pasts winters, she thought it was much more likely that mold or other building materials were causing the problem, especially since the school she worked in was old and in need of updates and repairs. However, Rosa began taking antihistamines, and her symptoms dramatically improved. She finished the school year, and Rosa continues to take antihistamines each day during the winter. Nevertheless, even with her medication, Rosa still wakes up some mornings with a sore throat, but this she says "is normal, everybody feels like this in the city." Despite her diagnosis and treatment, less than a year after starting her teaching career, Rosa transitioned to a job in the human resources department at a bank.

Rosa's story highlights the prevalence of environmental disease in Lima and the visibility of these conditions. Rosa noted that these conditions were commonplace and something that many people dealt with, demonstrating an awareness of the unusually high rates of environmental disease. During our conversations, Rosa tried to explain to me just how common these conditions are, saying "before it was not like this, but everything is different now… and now everybody has allergies." Rosa also identified one of the key characteristics of environmental disease in Lima. Although many have dealt with these symptoms throughout their

lives, the increased prevalence of these diseases may seem new, because they are now diagnosed more frequently. While people suffered from certain breathing difficulties when they were younger, formal diagnoses were rare, and have only become more common in recent years. Media and public attention on asthma, allergic rhinitis, and other environmental diseases in Lima, is also a relatively new phenomenon. Recent articles have highlighted these threats, providing broad information about environmental disease, and have helped Limeños understand, identify, differentiate, and navigate these conditions.

The second key characteristic of environmental disease is its connection to the city and urban life. Claudia and I often ate lunch together, sitting in the stairwell of her building and looking out over the city. From the sixth floor, you could hear the honking horns and noise of the street. Through the open window, you could see the neighborhood's buildings and roadways which were often shrouded in a grey fog. Before she was born, Claudia's parents moved from Cusco to Lima seeking better job opportunities, and Claudia had lived in the city her entire life. She enjoyed telling me stories about Lima, both from her childhood and from further back in history. Claudia also talked about her health, explaining she had been diagnosed with asthma and allergic rhinitis. She often struggled to control her breathing, suffering from a sore throat or cough, and even developing a hive-like rash around her eyes. For Claudia, there is a tangible difference in her breathing and other symptoms in the city and outside of it, which she explained saying, "it's not like this in the country, the air is clean, here in the city it hurts you." Last year, Claudia told me, she had the opportunity to spend three weeks working in the sacred valley in the Andean mountain range of Peru. She recalled her allergies being particularly bad when she left for the airport, but her symptoms disappearing almost entirely during her time in the mountains, before ultimately returning within a few days of getting back to Lima. "I don't know what that

means," she told me when I asked her why she thought this occurred, "I'm not a doctor." However, Claudia's experience exemplified the connection between the city and adverse health outcomes and disease, reinforcing the image of Lima as dirty and hazardous. In highlighting both the growing number of Limeños suffering from asthma and allergies, as well as the prevalence of these conditions in the city, the stories of Rosa and Claudia characterize the lived experience of these conditions and urban pollution.

Fig. 3: *A mural painted in photocatalytic paint on the side of a house in Barranco, which reads, "this paint is cleaning the air, complementing the work of trees." Photograph by author (2019).*

In addition to these broader characteristics, Rosa and Claudia's stories also illustrate how environmental disease is present in their daily lives. Like many Lima residents, the effects of asthma and allergic rhinitis have profound impacts on Rosa and Claudia's daily activities and lifestyle. Tangible reminders of air pollution and poor air quality are sprinkled throughout the city, from posters advertising allergy and asthma medications, to art projects and murals on the subject (see Figure 3). Nearly everyone I met in Lima told stories of sore throats and hoarse

voices, coughing and sneezing, or shortness of breath and asthma attacks. For many, these symptoms have become a regular part of everyday life, highlighting what Kenner identified as the "accumulations, the chronicity, the mundane, low-grade, normalized dynamics of environmental health" (Kenner 2018, 5). The management and treatment of asthma and allergy symptoms are the most overt way that these conditions have shaped daily life. Although the individual experiences of Limeños I spoke with varied significantly, since these diseases have diverse symptoms, severities, and triggers, there were certain commonalities. First, for many, symptom management required medication, including antihistamines and asthma rescue inhalers. While some medicate preventatively, using daily antihistamines or daily asthma prevention medications, many others choose to only take medications in response to an attack, citing the costs of medication or a desire not to overmedicate. Therefore, those suffering from asthma, allergic rhinitis, and environmental disease have to constantly assess their symptoms to determine if action is required. In her work on asthma care, Kenner describes this process and the familiar sensations of asthma, saying patients often strategically assess and manage their symptoms, "drawing on a sensory register embedded in [their] lungs and throat and nerves" (2018, 2). Second, in addition to medication, avoiding asthma and allergy triggers was another strategy employed by some. However, this presented several challenges, because asthma triggers are present in most parts of the city, and are not always easily identifiable. Limiting exposure to pesticides, pollutants, smoke, chemicals, pet dander, mold, changing weather conditions, viruses, and stress did help some residents reduce the frequency and severity of their symptoms. For some, this meant taking a taxi and shortening their commute time in hopes of avoiding auto emissions, while for others this meant expensive dehumidifying and air filtering technology to help improve interior air quality. However, for many these types of actions were not available

and at times it was impossible to avoid these triggers, particularly pollutants and other airborne contaminants that were present in their homes, workplaces, and neighborhoods.

The impacts of symptoms and treatments was evident in daily life, both in their effect on decision making and, in the routines and practices they informed. However, the cause of these diseases and their prevalence remained much less clear for many residents. While most of my interlocutors identified or accepted that pollution affects health and contributes to certain diseases, they remained unwilling to fully attribute their symptoms and the prevalence of these disease to the environment. Drawing on their experiences with allergy or asthma triggers, many considered a variety of potential causes, such as aging and moldy buildings, poor quality building supplies, changes in diet, pesticide use in food products, or a natural impact of the humid climate. While some of these explanations can be linked to the environment, they often took on a conspiratorial quality. Rosa saw her symptoms as tied to the buildings and infrastructure in the city, which she thought was housing mold and other allergens. Meanwhile, Claudia thought that her allergic rhinitis and asthma were most likely related to the environment, she also considered the idea that they might be linked to dairy consumption or over-prescription of antibiotics. Claudia justified this, saying that while she did not doubt pollution was real or a problem, it was less tangible than other issues, because, "you can smell it, you can feel it, but you can't see it," which makes it more difficult to talk about. Other interlocutors focused less on the medical or scientific explanations, instead attributing the prevalence of disease to a failure of the state. Luis told me once that all the cases of asthma must have something to do with the government. Perhaps, he suggested, the hospital was mistreating patients or maybe the cities were not properly designed for clean air. This sentiment was echoed in online settings, including a reply to a news story on poor air quality and respiratory disease, which read, "as always, the

main causes of this problem is the government and its inefficiency, that is what allows these sorts of things to happen." Ultimately, there was a great deal of doubt surrounding these environmental diseases, and as Luis explained, the complexity of this issue made them all the more challenging, because "there was no real way of knowing."

Fig. 4: *Residual smog and airborne particulate matter accumulating on a residential building. Photograph by author (2019).*

Uncertainty and Embodied Experience

It is important to more carefully consider this sense of uncertainty surrounding individual embodied experience and environmental disease in Lima. Despite scientific evidence to suggest environmental pollution plays a large role in the higher than average rates of asthma, allergic rhinitis, and other environmental disease, this was not uniformly accepted as an explanation. When I began to struggle with cough, sore throat, sneezing, and allergies, a doctor explained that I was likely reacting to an environmental allergen, but I still found myself searching online or explaining away my symptoms using familiar excuses. Although folk explanations of

environmental disease varied greatly, Limeños often acknowledged that they lacked definitive proof or scientific backing. Rosa passionately explained the connection between increased dairy consumption and her poor health, but was quick to note that these explanations were far from scientific. Despite a recognition by many that these theories were unlikely or unproven, Limeños continued to employ them to explain symptoms and diagnoses. While common illnesses were understood by many to have some connection to the environment, they often were accompanied by partial denials and a sense that the problem was too complex to be attributed to one source.

This uncertainty is understandable for a number of reasons. First, both asthma and allergic rhinitis are linked to a large variety of potential triggers, including pesticides, pollutants, smoke, chemicals, pet dander, mold, changing weather conditions, viruses, and stress (Kenner 2018). As such, some asthma and allergy symptoms are likely the result of non-pollution related factors. Second, like other environmental concerns such as climate change, the visibility, scale, and prevalence of pollution can make it challenging to fully comprehend. Within the literature on climate change, questions remain about how environmental phenomena can be known, what qualifies as climatic change, and what types of knowledge can be used to inform studies of environmental conditions (Rudiak-Gould 2013). In Lima, this confusion is intensified by the sense that air quality has improved because certain earlier problems have been addressed over the last two decades. For example, a reduction in the use of leaded fuels, particularly as household fuels, is perceived by many as an improvement in overall air quality. Additionally, it is possible to discuss elevated levels of environmental disease or the increased frequency of natural disasters due to climate change on a large scale (IPCC). However, neat causal relationships are not typically possible on an individual level, and it is nearly impossible to attribute specific events directly to climate change or pollution. As such, some of the uncertainty

and hesitancy can be identified as a struggle to recognize pollution, which can seem intangible. Third, many of the symptoms of environmental disease, particularly cough, sore throat, sneezing, nausea, and headache, are also indicative of a variety of other health conditions. For these reasons, it is difficult to say with any certainty that anyone's specific symptoms are the direct result of pollution. In fact, they are likely the result of a convergence of factors.

However, this uncertainty can also be understood as a result of the perceived limits of embodied experiential knowledge and the prominence of scientific or expert forms of knowledge in this domain. This uncertainty encompasses the perceived ambiguities of embodied experiential knowledge and a belief that these forms of knowledge lack reliability. Thus, uncertainty captures a sense that that one should not entirely trust one's own perception and instead rely on other external markers. Although the social sciences have long been attuned to the study of the mind and rational thought, according to Hirschkind, studies of embodiment and sensorium have been challenged by the ways "Kantian and neo-Kantian political philosophies devalue forms of life that give priority to their own sensory dimensions" (2010, 4). Studies have tended to, "privilege questions about the rational unchanging and the eternal… denigrating questions about embodied, concrete, practical experience" (Curtin 1992, xiv). However, anthropologists have asserted that the body is more than simply a passive vehicle or neutral tool for existing in the world, suggesting that it is worthy of intellectual attention and consideration in its own right. Csordas has argued, "a paradigm of embodiment can be elaborated for the study of culture and the self," while Turner argued for attention to experience as a means of capturing both what people do and how they understand their actions (Csordas 1990, 5; Turner and Brunner 1986).

Embodied experience is conceptually valuable for exploring environmental disease because it provides a window into everyday life and local understandings of pollution and

climate change. As a discipline, anthropology has long been attentive to embodiment, beginning with Mauss's use of habitus to argue that all bodily actions, no matter how routine, are learned on both an individual and cultural level (Mauss 1973). This was later taken up by Bourdieu to understand the regularities of bodily actions concerning class, gender, and ethnicity, while still recognizing the potential for individual agency (Bourdieu 1990). Beginning in the 1970s, anthropological attention to embodiment focused on the phenomenological and sensorial, which challenged conventional conceptions of mind/body dualism (Csordas 1990). Anthropologists also took up embodiment to address questions of power and oppression, and contest normalized ideas about sex, gender, and race present in discourses and representations of the body (Mascia-Lees 2011). In their work on embodiment, Lock and Scheper-Hughes problematize the 'black-boxing' of the body, proposing the 'three bodies' as a way of exploring the interrelations between the individual, social, and political (Locke 1993; Scheper-Hughes and Locke 1987). This idea can also be seen in the work of critical race and feminist scholars whose use of embodiment recognizes, "how people literally embody, biologically, the multilevel dynamic and co-constituted societal and ecologic context within which we live, work, love, play, fight, ail, and die, thereby creating population patterns of health, disease, and well-being within and across historical generations" (Krieger 2016, 832).

Within the literature on embodiment, there is a recognition of the sensorial capacity of the body. The lived body, "is part of an individual's system of knowing, of presentation, of meaning making and identity or subjectivity," and it is in part through sensory bodily processes that people gain knowledge about the world around them (Amsterdam et al. 2017, 335). This phenomenological approach to embodiment and experience informs my own recognition that bodies are sensing and are involved in how we interact with the world, mediate those

interactions, and understand their meaning. Symptoms such as shortness of breath, itching, coughing, sore throat, or congestion, whether or not they are directly linked to the environment by those experiencing them, become one way that residents can begin to think about their bodily interaction with the external world. In her work on chronic obstructive pulmonary disease in Uruguay, Wainwright describes the sensation of breathlessness, and argues it is physical symptoms that make those who suffer with respiratory illness attentive to their body, and by extension their environment, because, "breathing and air are intimately entangled, in that sensing the breath inside the body is sensing the air outside it" (Wainwright 2017, 333). Claudia, who sometimes struggles to control her asthma and allergies, describes leaving the house each morning and knowing whether it was a "good day" or "bad day", in regards to air quality, within a few moments. Some days she can walk all the way to work, while others she begins to lose her breath or develop hives around her eyes. During this process of assessing and addressing her symptoms through her body, Claudia is also assessing the world around her, which represents both potential causes and triggers of illness.

Embodied experiential knowledge is necessarily produced through individual bodies interacting with the environment. In these moments where Claudia must assess her symptoms and make a judgement on treatment options, whether that be using her inhaler or attempting to regulate her breath using breathing techniques, she is highlighting the ways that bodily capacities can be cultivated. The idea that bodies can be moulded by the environment and that bodily sensibilities can be developed through the experience of living with pollution and climate change challenges romanticized notions of the body or experience as pre-social or somehow outside the political, and bridges the divide that is often placed between the mind and the body. In his work, Asad illustrates the use of, "techniques of self-cultivation (in short, ritual practices)," by

medieval Christians, "to reshape their wills, desires, and emotions in accord with authoritative standards of virtue," and argues that religious subjects are able to cultivate certain bodily techniques and sensibilities in order to produce themselves as pious subjects (Hirschkind 2010, 3). In a similar way, Limeños are trying to construct themselves as subjects well suited to life in the city and amidst pollution, and in doing so are cultivating certain environmentally informed bodily sensibilities. Through a process of trial and error, Limeños like Claudia have worked out a system for adapting to changing environmental conditions and symptoms. At the same time, the material environment of the city has honed specific bodily capacities, and produced certain physical responses to environmental irritants, such as coughing or shortness of breath. Thus, while embodied experience is produced through individual bodies existing in and interacting with the environment, it is important to recognize that these bodies are carefully attuned to specific local realities.

Individual bodies are also socially produced and positioned. As such, knowledge about the environment and explanations of disease are not just constructed by the sensory capacity of the physical body, they are also shaped by social, political, economic, and geographic realities. Scott cautions against viewing sensory experiences as uncontestable, arguing that, "we need to attend to the historical processes that, through discourse, position subjects and produce their experiences," (1991, 779). This serves to highlight the constructed nature of experience and illustrate how individuals are impacted by their lived experience and social location. For example, Maria, a stay-at-home mother of two young girls, posted a recent article on price gouging and corruption in some local clinics and pharmacies on her social media page. When I spoke to her, she explained that it made things very difficult, because both her children needed asthma inhalers. Medicine at the clinics was very expensive, but she worried cheaper medication

from pharmacies was low quality, counterfeit, and ineffective. More broadly, the embodied effects of pollution are felt disproportionately by minorities and marginalized people in Lima, and poor air quality is most prominent in areas facing existing issues of inequality and poverty (Achakulwisut et al 2019). Within the city, marginalization and inequality are persistent problems, and they are often tied to a lack of urban development and socio-spatial segregation (Peters and Skop 2007, Roca 2012, Fernandez de Cordova et al. 2015, and Gandolfo 2013).

Despite the extensive work that has been done on the body, tensions between scientific expert knowledge and embodied experiential knowledge still persist. In part, this is because the scientific focus on objective truth has often been at the expense of the embodied or experiential. Although science has grown more open to different understandings of climate change, for some, "climate change is inherently global and fundamentally a phenomenon of climate: a statistical aggregation of long-term, precise measurements" (Rudiak-Gould 2013, 121). This leaves an enduring sense that climate change itself is unknowable to the average person, and the general public can only speak to the effects of climate change that they have experienced. (Rudiak-Gould 2013). Furthermore, proposing the body as a site of knowledge production and an interpretive frame can be used to discredit scientific inquiry. For example, the invisibility or intangibility of global temperature rises and airborne particulates is often used to invalidate the phenomena of climate change and the detrimental effects of pollution. There is a temptation to regard weather as a marker of climate, and when weather does not coincide with climate predictions and warnings, to dismiss the threat altogether (Rudiak-Gould 2013). It is also important to note that the embodied experience of Limeños is necessarily mediated by individual understandings and the language available to describe them. In order to share and discuss their experiences with me,

my interlocutors first had to narrativize their embodied experiential knowledge. It is only through these narratives that others can then come to know something about these experiences.

Conclusion

This chapter illustrates the impacts of pollution and poor air quality in Lima, and how medical conditions can be understood in relation to a variety of pollution and non-pollution related environmental factors. Even when they do not directly relate to pollution, the different ways Limeños discuss asthma, allergies, and other conditions contributes to evolving ideas about environmental problems in the city. Living with pollution cultivates an attentiveness to the physical environment and positions the body as a site of judgement and assessment that can destabilize a more conventional scientific paradigm or a common-sense assumption that environment is the domain of the expert. I suggest that this calls for an attentiveness to embodied experiential knowledge, and how these forms of knowledge contribute to the production of a distinctly local understanding of the environment that I observed taking shape in my field site. This attentiveness to embodied experience requires a reimagining of environment that recognizes both the pollution and non-pollution related factors that affect air quality, health, and overall quality of life in the city, and continues to push the domain of environment beyond the expert or scientific. This proposed reimagining recognizes the complexity of the situation, including the variety of potential causes and effects of environmental disease and the ways they compound each other. In recognizing this complexity, it does not seek to delineate these causes and effects or prove their authenticity. Instead it allows these circumstances to be understood collectively with an attention to how they shape daily life.

By tracing a locally specific understanding of environment in Lima, I hope to have provided insight into how large phenomena are felt and understood by the people living with

them. I have endeavored to take seriously the accounts of Limeños and expand who can be included in discussions of environmental problems. By exploring the hesitancy to attribute disease to environmental causes, which is understandable given the scope of the issue, the non-uniformity of symptoms, and specific social, political, economic, geographic context, this chapter demonstrates the complexity of addressing pollution and pollution related illness. As I move forward, the idea of narrativity and the specifically located and positioned ways in which we describe not only our everyday experiences but also our past will come up again in relation to its impact on environmental actions. Furthermore, it remains important to consider the question of how we take seriously the embodied experiential knowledge produced by those living with pollution and climate change, which is at the heart of this chapter's reimagining of environment.

Chapter Two – Contextualizing Environmental Practices

Introduction

In perhaps his most famous work, *Los Gallinazos sin Plumas*, Limeño author Julio Ramón Ribeyro tells the story of two young boys, Efraín and Enrique, from Lima's pueblos jovenes. Each day, the boys scavenge the streets of the city in search of food scraps for their abusive grandfather's insatiable and foul-tempered pig. Unable to provide for the pig's voracious appetite by rifling through the trash cans in Lima's most affluent neighbourhoods, Efraín and Enrique are forced into vast garbage dumps along the pacific coast. In turn, each boy takes sick from the time spent digging through the city's filth, and as a punishment their grandfather feeds their pet dog to the pig. The story reaches its violent conclusion when Enrique attacks the old man, who falls into the pigpen and is eaten by the ravenous creature. Ribeyro, born in Lima in 1929, is best known for his short fiction and realist style which captures the melancholy, banality, and anonymity that at times can characterize life in the city, particularly amongst the poor and working class (Gerdes 1993). Although his work deals with a variety of important themes, including migration, urban expansion, discrimination, and violence, this is not what struck me when I first read the story.

Having picked up an anthology of Ribeyro's work at a local bookstore earlier in the week, I flipped through the pages as I sat in a waiting room, and I was struck by Ribeyro's depiction of the city's waste and the spatial divides that kept it from impeding on the lives of Lima's upper classes. Upon first arriving at the dump, the boys are, "overcome by a nauseating smell that seeped into their lungs," and while they work they are engulfed "into a pile of feathers, excrement, and decayed or charred matter" (Ribeyro 1955, 19). This image is in direct contrast to the description of clean tree-lined streets in Lima's wealthy residential neighbourhoods (Ribeyro

1955). Despite the sparse style of Ribeyro's writing, he calls forth an evocative image of waste which is intricately connected to urban life. Garbage and other household waste, even when it is ignored or overlooked by some residents, is so quintessential to the functioning of the city that Efrain and Enrique's entire life centers around it. While in much of the global north, waste management systems have normalized the absence of household waste and trash, the same cannot be said for Lima, at least not in its entirety. Garbage disposal and collection is handled differently throughout the city's various districts, but in many areas, waste can be found discarded in streets and other shared spaces. As Reno reminds us in his exploration of waste management in the United States and Canada, "wherever mass waste goes, it destabilizes environments, values, social relations, bodies, and lives in open-ended ways" (2016, 12). Thus, given the destabilizing effect of waste and its prevalence in the lives of many Limeños, it is unsurprising that clean-up and anti-littering programs have come to take up the majority of environmental attention, despite the concerns around air pollution and poor air quality.

In this chapter, I turn to environmentalism in Lima, which is largely focused on cleaning up contaminated spaces, preventing the production of waste, and preserving the cleanliness of communal areas. I argue that environmentalism is rooted in a larger project of urban improvement and city making. As such, these efforts are closely tied to and shaped by local understandings of environment, historical narratives about the city, and broader discourses that circulate around urban life. Building on the previous chapter, I will consider what locally specific understandings of the environment and the city inform both collective environmental programs and individual environmental efforts, which I will jointly refer to as environmental practices. Here I will focus on three key facets that underlie environmentalism in Lima to explore how environment, as an object of knowledge and practice, is temporally and spatially situated and

how environmental practices function within the historical, political, and social context of the city. First, inspired by Hacking's work on historical ontology, I will examine how environmentalism and contemporary environmental practices are tied to existing concerns about life in the city and ongoing urban improvement efforts. Second, I will locate environmental practices within the terrain of the city to consider how environmentalism is shaped by while often reinforcing existing social inequalities and divisions. Finally, I will return to the question of how environment is understood and imagined in Lima, including the tensions between urban spaces, which are seen as constructed and inherently environmentally damaging, and non-urban spaces, which are seen as pristine, natural, and the intended targets of environmental protection.

Forms of Environmental Practices in Lima

Environmental practices in Lima deal with a range of issues, including air pollution, water contamination, and natural disasters, but when I began talking with Limeños about environmentalism, the conversation often focused on material waste. Individual actions, which can include recycling or avoiding single use products, make up the bulk of environmental practice in day to day life. Despite the prevalence of air pollution and poor air quality and some efforts to address this, including the use of public transportation, cycling, or other "eco-friendly" options, the most visible and most upsetting environmental issue for many Limeños was garbage. This included the mismanagement of waste disposal and the pervasiveness of single use products littering streets, parks, beaches, and other public places. As I sat in our living room describing my research project to my landlady Elena shortly after arriving in Peru, she immediately started to complain about the garbage on Lima area beaches. She told me how Limeños would leave an entire day's worth of food wrappers and drink bottles behind when they were finished, not even thinking to try and dispose of it or bring it back home, something she saw as a particular failing

of local environmental consciousness. While many public spaces, at least in well-off areas, were maintained by teams of street cleaners employed by the municipal governments, it was not uncommon to see garbage. This served as a visual reminder for people like Elena, who would always point out the waste left behind as we walked through parks or along the Lima's busy sidewalks and lament the state of the city or the lack of care among its residents.

Given the visibility of garbage in Lima, recycling served as a key way for residents to demonstrate an understanding of environmentalism and try to help reduce waste. One day, I went along with Eva to pick up her young son Raphael from his school and visit the park together. As we walked, he told us all about his day, explaining that his new class assignment was to collect all the recycling in the house, bring it to be recycled, and take a picture of the process. When I asked him why it was important to recycle, he explained to me that plastic, garbage, and pollution was hurting the plants and animals, and it was our job to take care of the planet. In Lima, recycling serves as a normalized way of signalling environmental consciousness in daily life, because it requires some effort on the part of Limeños, the goods must be cleaned, sorted, and kept aside so they can be disposed of properly, but it is also a routine activity that can easily be incorporated into everyday errands. In many of the neighbourhoods of Lima's Cono Sur, households must save up their recyclable goods and return them to a recycling station, often outside a grocery stores or a public building (see Figure 5). In my house, that meant keeping a pile of cardboard on top of the defunct washing machine in the kitchen and the plastic and glass containers in the old laundry sink beside it, before returning them each Sunday. At the recycling stations, the goods were divided up by type (cardboard, clear plastics, coloured plastics, and glass). It was not uncommon to see people emptying bottles and boxes into the recycling bin as I

walked past these stations, and the bins were often overflowing, meaning the recyclables accumulated in piles along the sidewalk.

Fig. 5: *A community recycling station outside of a municial buiding in Barranco's main square. Photograph by author (2019).*

Unlike more established recycling programs, the use of reusable bags is a much newer environmental practice. Even as recently as 2018, it seemed relatively uncommon to use your own cloth bag when buying groceries or shopping for other goods. During earlier visits to Lima, I cannot recall seeing any other shoppers using reusable bags or seeing them available in-store, and I often got a funny look or confusion when I asked the cashier if I could use my own bag at the check-out. I was struck by the difference when I returned and reusable bags had appeared in my neighbourhood. In grocery stores, reusable shopping bags were displayed near the cash and signs encouraged Limeños to bring their own boxes or bags for their groceries. Each store seemed to have different policies surrounding bags and discouraging the consumption of single use plastic. In one Vivanda, there were no plastic bags available on the first Wednesday of each month, forcing customers to bring their own or purchase reusable products in store. At the Metro,

there was a check-out designated for reusable bags only, and single use plastics were not offered there. During my time in Lima, these efforts ramped up, in part because of an upcoming legal change. Law #30884, or the ley de plasticos, is a national law put in place to charge for single use bags and reduce environmental impacts. The law came into effect in Lima on June 15th 2019, and spread to the remainder of the country on August 1st. The law and accompanying government messages rely heavily on environmental arguments to justify the change, including those cited in an *El Comercio* article that Peru produces 23,000 tons of waste per day (10% being plastic) which has negative impacts on a variety of ecosystems and industries (Sanchéz 2018). In an effort to reduce consumption, the law sets a price for plastic bags that will be scaled up over time, starting with s/0.10 in 2019 and rising to s/0.50 by 2023. Under this legislation, retailers are allowed to absorb this cost, which would come in the form of an annual fee, or to charge consumers per bag. Additionally, the law calls for a transition to biodegradable single use options that do not produce microplastic or toxic waste. The law was expanded to include some provisions around single use plastic straws as of December 2019.

There was certainly some tension when the law rolled out in June, with long lines and some raised voices at the grocery store. This was not unexpected, because for many plastic grocery bags were a normal part of shopping that went unquestioned, with an *El Comercio-Ipsos* poll reporting that 78% of Limeños regularly used plastic grocery bags for their shopping (El Comercio 2018). When I spoke with Luis about the changes, he explained that for many Limeños, like young men and older people, the idea of using cloth or other reusable bags had not crossed their mind. Many of his friends did not like the idea of having to remember to bring a bag with them, especially if they just wanted to stop for a few items on the way home from work, and his parents felt it was an inconvenience. Despite these challenges, he insisted the law was a

good idea or perhaps necessary, saying, "many Peruvians are not accustomed to bringing their own bags… But if [plastic bags] cost s/0.20 I'm sure the very next day all the people would bring their bags to the market." The introduction of the law was also supported by a social media campaign and a number of NGOs, including hashtags like #menosplásticomásvida (#lessplasticmorelife) and a reimagining of the classic Peruvian song "Y se llama Perú"[2].

However, despite these efforts, like many government-led environmental initiatives, the scope or impact of these initiatives were seen as too narrow or limited and the efficacy of the measures came under question. Shortly after the law came into effect across the country in August, one journalist noted that, "the ley de plasticos impacts only 30% of the packaging used in daily life," and "more than 2.4 million plastic bags are unaffected by the regulations" (Castillo 2019).

In addition to these everyday forms of environmental practice, there were also community events and activities advertised as environmentally themed or sustainable. Some of these events focused on straightforward environmental projects, like annual park and beach clean-ups or gathering groups of volunteers to promote recycling at local sporting events. One such organization, *Hazla Por Tu Playa*, is a Lima based initiative that organizes beach clean-ups during the month of march, which marks the end of the summer season, and supports other beach clean-up projects around the country and in other parts of Latin America. The initiative is run by local representatives in conjunction with the NGO *Conservamos Por La Naturaleza* and the United *Nation's Life Out of Plastic* (LOOP) initiative, which is a part of the United Nations Framework Convention on Climate Change. When I spoke with the representatives, they explained that the organization relies on donations and the work of volunteers and volunteer

[2] The video can be found at https://vimeo.com/351480055.The video contrasts a classic Peruvian song about the beauty of the country with stark images of material waste and pollution.

leaders who coordinate and run clean-up events (see Figure 6). According to the organization, they have run more than 1000 clean-ups which included over 100,000 hours of volunteer work, and have collected more that 174 tons of waste since they began their work in 2015. In addition to their clean-up efforts they also produce educational materials on the waste they collect each year to help raise awareness about the volume of single use plastics and other litter. As I stood at their information booth, I learned that *Hazla Por Tu Playa* had collected 75,176 plastic bottles, 72,506 plastic bags, and 70,254 plastic straws in just five years, the vast majority of which was Coca-Cola products (Balducci et al. 2019).

Fig. 6: *Informational material for HAZla por tu playa, an annual non-profit beach clean-up initiative, at the Festival Conservamos in Barranco. Photograph by author (2019).*

Other environmental events in Lima focused on educating and spreading awareness. There were a number of "eco-friendly" markets each weekend that sold organic and local products, as well as local bike days and festivals which promoted emissions reductions. Other prominent events emphasized environmental themes and ideas. At the annual Corso Wong, a parade through Miraflores celebrating the national holiday in July, environmentalism was a key feature in a number of floats and displays. Banners and flags proudly read that they were made of

recycled materials, while large sculptures made entirely of recycled plastic were installed in local parks to advertise the event (see Figure 7).

Fig. 7: *A recycling station and sculpture made of recycled materials installed as part of an annual Fiesta de Patrias parade sponsored by Wong grocery stores. Photograph by author (2019).*

Online forums, particularly social media, were also a space for information campaigns and calls to actions from both the government and local NGOs. Using campaigns and hashtags such as #perúlimpio and #perúnatural, the government and NGOs promoted a variety of environmental events, actions, and news stories ranging from Amazon conservation to urban recycling efforts. Across platforms, these messages were met with a mixture of support and backlash from Peruvians. The latter questioned the efficacy of the programs and the ability of governmental efforts to address a large scale and widespread problem, such as pollution or climate change. In response to a December 2019 post announcing a ban on the production of

plastic bags, bottle and straws, many responded questioning the purpose of a ban without meaningful education and the presence of robust recycling programs, with one user asking, "Without a transition plan? just like that? What do they want? To promote a black market?"

Fig. 8: *A promotional booth for Patagonia, which offered information and free textile repairs, at the Festival Conservamos in Barranco. Photograph by author (2019).*

In highlighting these specific examples of environmental practices, I would like to underline a few key points. First, the focus on individual contributions can be read as an effect of the neoliberal political ideology which has informed many aspects of life in Peru since the rise of neoliberalism in the 1990s. This political shift prioritized individual efforts over governmental interventions and helped to shift the obligation to care for the environment onto individual actors and communities while minimizing the need for large scale systemic change, which is discussed further in chapter three. Second, in the absence of significant government intervention, corporations and NGOs often become important actors in promoting environmentalism (see Figure 8). The involvement of corporations in environmentalism promotes consumer environmentalism, or the practice of individuals using their buying power to support sustainable brands and demand better environmental action from retailers (Sandhu 2010). This is seen in the

work of groups like *Oceana Perú* who run educational campaigns or local stores that must create systems to reduce plastic bag use. Finally, these specific efforts around recycling and reducing plastic consumptions are presented as novel efforts that are strongly motivated by the increased pressure of global environmental problems, such as pollution and climate change. However, despite this focus on these responses as new or firmly located in the present, they can and should be thought about in relation to the past given the immense impact of history on contemporary life and the numerous ways that the past is mobilized in discussion of the present.

Temporally Situating Environmental Practices

I began this chapter with a retelling of Julio Ramón Ribeyro's *Los Gallinazos sin Plumas*, a story that illustrates that persistent problems of urbanization, such as environmental degradation, economic inequality, and socio-spatial segregation, have plagued Lima for generations. However, when I set out to investigate pollution and climate change, I did not expect the past to emerge so significantly in my research. Environmental problems are frequently presented as current or rapidly emerging, thus I imagined my project would be focused on issues in the present and predictions for the future. To some extent this is true. A focus on the present and the novelty of environmentalism can be seen in the practices described above. Yet, throughout my time in Lima, my questions about contemporary environmental problems or day to day life in the city were often met with stories of the past.

I begin my effort to temporally situate environmental practices in Lima by tracing the historical continuity between environmentalism, the colonial history of Peru, and the establishment of Lima as the colonial capital of the territory in the 16th century. When the Spanish settled in the historic city centre of Lima in 1535, Francisco Pizzaro established the city as the Ciudad de los Reyes or City of Kings and future capital of the Viceroyalty of Peru (Masterson

2009). Over time, groups of internal and external migrants fuelled the growth of the city and the formation of pueblos jovenes or informal settlements. Two persistent characterizations of the city have emerged from this history. The first is a view that the city is dirty, disorganized, and in a perpetual state of disarray. Upon its founding, Garcilaso de la Vega noted that although the city was perhaps not beautiful, it was carefully organized and well laid out (De la Vega in Aguirre and Walker 2017). This positive view of the city was short lived. Lima quickly became a frequent target of derision amongst European colonial authors like Spaniard Bernabé Cobo and Prussian Alexander von Humboldt who described the city as dirty, poorly maintained, and lacking in cultural and artistic merit, particularly in comparison to other major capitals (Cobo and Humboldt in Aguirre and Walker 2017). These characterizations of Lima are rooted in a colonial and Eurocentric idea of the global south, as well as a negative view of informal settlements and those who inhabit the urban peripheries (Aguirre and Walker 2017; Zeiderman 2016). However, despite their problematic roots, these ideas have persisted and have produced a moralized connection between material improvements and perceptions of the city's overall character. The legacy of these critiques can be seen in what Gandolfo describes as a contemporary view of Lima as, "dangerous, full of thieves and scammers, the buildings ready to crumble at the slightest earthquake and always on the brink of a devastating fire" (Gandolfo 2013, 279). This reinforces that idea that Lima's moral failings, such as crime, are related to the physical state of the city, and further entrenches the idea of urban improvement as an ethical project. Similarly, this view of the city as somehow both physically and morally corrupt challenges an overarching narrative of cities as spaces of civility and progress that is rooted in our ideas of the earliest of human civilizations, even though the universality of this claim has come under scrutiny (Scott 2017).

The second characterization is of Lima as a divided city. The city was shaped by internal migration and changing demographics throughout its colonial and post-colonial history. Like many colonial cities, at the time of its founding the city center generally housed the mostly white or criollo colonial elites, and almost entirely excluded local populations (Juan and Ulloa in Aguirre and Walker 2017). However, waves of migration from the Andean region meant that by the 1930s many of the city's most affluent and influential residents, often directly descended from colonial settlers, had relocated to Lima's southern coast, where they chose to resettle in the Cono Sur rather than live alongside indigenous Peruvians (Gandolfo 2009). It was during this post-colonial time period that the city began to grow rapidly, with migrants occupying both the city center and newly formed pueblos jovenes or barriadas - sprawling informal settlements on the outskirts of the city and the hills of the Rimac river. For the city's elites, these waves of migration were seen as an uncontrolled overflow of people, leaving the "the 'formal' and official worlds of Lima recoiled in fear and disgust" (Gandolfo 2009, 9). The rapid growth of the city led to the establishment of neighbourhoods and communities outside of any formal urban planning efforts, creating a tension between different social and economic groups (Gandolfo 2009). In traversing the city, whether by car, transit, or even on foot in certain areas, it is easy to take in both the distinct character of different neighbourhoods, as well as more subtle differences in city planning, urban management, and demographics. These divisions, which I will come to in the next section, continue to shape environmental understandings and practices, and frame environmentalism and urban improvement as a moral imperative rather than a political project.

In addition to these official histories, the stories that truly caught my attention were the more recent ones recounted to me by Limeños. When I asked about the environmental problems that I saw around me, I was often told stories about the past. In July 2019, there was a scheduled

water shut off across a large section of the city as part of the ongoing construction of a public transportation rail line. In response to the shut off, the city set up a number of water collection stations in the effected neighbourhoods and had been sharing the information widely across conventional and social media. I first heard about the shut off through the many environmental organizations that took the opportunity to promote sustainable water use and reduced consumption. But, in the week leading up to the event, the shut off was the only thing people seemed to talk about. It began with complaints about the inconvenience and questions of the necessity of the shut off in the first place. As the date approached, many people seemed to grow nervous, scrambling to buy bottled water and canned goods at the local grocery stores. When I came home the night before the shut off, Elena had set out buckets of water around the kitchen, even though we had a large water collection tank on the roof. I began to wonder if I was missing something, but the weekend passed without incident.

When I asked Claudia about the nervous response of so many Limeños, she began to tell me a story about her childhood. During the 1980s, when Peru was contending with the internal violence between the Shining Path and state forces, the power plants and water sanitation plants in Lima became a frequent target of the guerilla force's attacks. Claudia recalled frequent power outages and seeing the Shining Path symbol burning in the hills. Another time, she remembered returning home to see the water management office in the first floor of her building had been bombed, leaving her family without a home and the community without access to water. It was experiences like these and memories of going without these critical resources, she explained, that made people nervous. When I asked others about this in the following days, similar stories came up about the past. Whether it was during the violence of the 1980s or the more recent flooding and landslides that the city had experienced in 2017, my interlocutors made connections that I

could not between the current events and past emergencies. This foregrounded how history and lived experience inform specific local understandings of contemporary events and provide an interpretive grid for the present. For my interlocutors it was important that I understand the ways that the past had created and contributed to these situations in the present, and recognize that these were not new problems or an isolated failure of the government.

By drawing on these specific retellings of history to explain the contemporary situation, my interlocutors were presenting a narrative of the past that emphasized an anxiety surrounding the absence of the state and the stability of urban life. Invoking these versions of the past in the present suggests that environmental practices may then be understood as a response to or a push back against this pervasive insecurity. Although environmental practices can be, and undoubtedly should be, understood in part as a reflection of global ideas about environmentalism and what forms it should take in the present, it is important to recognize the influence of these local histories and understandings on contemporary environmental action. Here, Hacking's concept of historical ontology allows for a closer examination of how environmental practices are temporally and spatially situated in a specific Limeño context.

Hacking proposes historical ontology as a method for analyzing concepts and considering how they come into being. Hacking's project is interested in understanding the emergence of objects of knowledge or practice as historical and situated, even if these object or ideas may not initially appear to be informed by historical context, arguing, "a correct analysis of an idea requires an account of its previous trajectory and uses" (Hacking 2002, 9). For Hacking, the historical sites of our concepts have to be considered in order to fully understand how they are presently functioning, because, "the logical relations among them were formed in time, and they cannot be perceived correctly unless their temporal dimensions are kept in view" (Hacking 2002,

26). Although I cannot make claims about the emergence of environmental objects, I can contribute to understanding their historical ontology, and thus my own analysis, by attending to moments in my fieldwork that reveal how the past has come to shape the present. For example, the ways in which Limeños chose to employ certain historic explanations suggested to me that environmental practices may be seen as a way of averting a return to a not so distant memory of disorder and instability, as well as a providing an opportunity to connect the environmental concerns of younger Limeños with the older discourses surrounding urban improvement. This history and its undeniable impacts on the present are why I began a chapter about contemporary environmental issues with a story of the past. Guided by my interlocutors, I was met with the strong sense that what seemed like responses to new or pressing issues were in fact deeply entrenched in the city's social and political landscape, and most importantly inextricably tied to the readings of the past that informed daily life.

Social and Political Dimensions of Environmental Practices

During the summer of 2019, the city of Lima was preparing to host the Pan-American and ParaPan-American games. The multi-sport event took place between July 26th and September 1st and hosted athletes and supporters from across the Americas. In the lead-up to the event, numerous sports and athletic facilities were built, mostly along Lima's Costa Verde, the pacific coast in the south of the city, and other popular tourist areas prepared to welcome competitors and spectators. As a part of these preparations, the city prioritized a number of urban improvement projects and efforts to clean-up the city. Environmental practices that targeted, pollution and material waste were a significant part of these programs, underscoring the ways in which environmentalism can be incorporated into urban revitalization. In Lima, many programs, such as clean-ups, bike lanes, or green space projects, are seen as having the dual function of

addressing environmental problems and making the city more livable. During this time of preparation, the city's material waste and pollution problem came under fire.

Scrolling through the environmental news section of El Comercio's website in early June, I came across an article entitled, "Extreme pollution: indifference and garbage poison the rivers of the capital," which raised concern about pollution in the city's rivers and waterways and how this would be perceived by visitors. According to the National Water Authority, there were 51 informal dumping points on the the Rímac and Chillón rivers in the metropolitan area of Lima, many of which would unavoidably be encountered by visitors travelling between the airport in Callao and the city centre or athletic facilities in the Cono Sur (Vasquez 2019). Author Juan Lara Vasquez described sections of the river in Callao as, "covered by such a quantity of garbage and clearing, that there is more waste in the river than water or vegetation until it reaches the sea" (2019). This article and others like it raised a concern held by many Limeños. How could Lima make a good impression on foreign visitors if it was seen as contaminated or dirty?

However, this conversation also highlighted some of the deeper divides within the city, both spatially and socially. As discussed above, the city of Lima is divided into distinct districts or neighbourhoods with their roots in the establishment of Lima as a colonial capital and the subsequent urban migration and city growth. Similar to other major urban centres, these divisions have maintained ongoing inequalities that shape urban life and municipal governance. This resonates with a contemporary academic literature on postcolonial urban populations. Partha Chatterjee's concept of political society (2004) emphasises the prevalence of exclusionary citizenship and informal governance in marginalized communities. Anthropologists have argued that Lima's demographic change has created a tension between different social and economic groups and persistent social and spatial boundaries. (Gandolfo 2009; Gandolfo 2013, 278).

Although a number of government efforts have targeted this informality, inequality, and division through beautification and formalization programs, these divisions still persist. As such, the geographic regions of the city often represent distinct racial, economic, and educational groups.

Some Limeños pushed back against government efforts to clean-up the city solely for the games, arguing the government should take care of the city for the good of residents. Many residents were also skeptical that clean-up efforts would extend beyond typical tourist areas, even though low-income neighbourhoods were often the most in need. These positions highlighted a skepticism of government capacity to enact positive change for all, and considerable doubt about the political will to expand urban improvements to all areas of the city. In contrast to these calls for structural change or a large scale-intervention, others chose to focus their critiques on the perceived failings of poor and low-income residents. This perspective often arose from conversations around the different ways that waste was handled across the city, which prompted some to condemn poor or low-income areas for failing to care for their own community. These opinions were challenged by a recognition that unauthorized dumping "solved an immediate problem that is not solved by authorities" (Vasquez 2020). Yet, these seemingly contradictory positions were often held in tandem. Even among those who were critical of the lack of government action and support it was not uncommon to hear expressions of frustration directed at low-income residents. Notably, these were almost always quickly followed by a reassurance that these groups should not be blamed for their lack of environmental awareness and education. Despite these assurances, the belief that the city's pollution was in fact a failure of low-income Limeños instead of the government persisted in conversations surrounding the games, even as many recognized a lack of governmental efforts to attend to the needs of the city and its residents and the political implications of suggesting the poor were at fault.

These criticisms raised in the lead up to the Pan- and ParaPan- American games shine a light on three key points relating to Limeños' perceptions of their government's environmental response. First, as I have discussed elsewhere, there was a strong sense that the government lacked the capacity to make a meaningful environmental change or urban improvement. As Elena explained to me one evening while we cleaned up after dinner, the kinds of improvement being made would not be lasting or truly beneficial to the residents of Lima. Instead, she suggested, they were for show and she reminded me of the similar efforts to prepare the city for a visit from Pope Francis the year before. Second, was the belief that the government's efforts to address environmental problems were insufficient, which was compounded by a sense that the limited improvements would only benefit a select few privileged Limeños. Although environmental problems predominantly affect low-income and marginalized communities and the most environmentally contaminated spaces in Lima are often the poorest, the efforts in the lead up to the games instead targeted affluent tourist areas that were often already thriving (Landrigan et al 2018). Third, even among those who located the root cause of the city's underdevelopment and perceived failings as the responsibility of the government and pushed back against placing blame on poor communities, there was still an underlying belief that low-income communities were disproportionately contributing to the problem, which ultimately speaks to the deep social divisions in Lima. These contradictory perspectives surrounding the Pan- and ParaPan- American games serve as an example of one way that Lima's social divisions are present in and reinforced through environmental and urban projects.

However, the criticisms of the Pan- and ParaPan- American games preparations also bring our attention back to the idea that environmentalism and urban improvement can be framed as a moral imperative rather than a political project. As mentioned above, the failures of the state

and the wide disparities between different residents are seen by many as indicative of an overarching moral disorder in the city. This informs the discourse that urban improvement is an ethical act designed to improve the overall moral character of Lima. In this case, the political act of calling for large-scale structural responses to environmental problems is repositioned as an individual responsibility to do good. The repositioning suggests an anti-political dimension to these forms of middle-class environmentalism. Anti-politics, which is particularly associated with development efforts and humanitarianism, can be understood in part as an effort to de-politicize ostensibly political projects (Ferguson 1994). Limeño concern with how the city's problems of poverty, inequality, and environmental degradation may be perceived helps to distance environmental action from the political and pushes it towards the ethical. Although this depoliticization of environmentalism constitutes a political activity, this shift ultimately allows Limeños to treat environmental problems as a moral failing and the responsibility of individual residents rather than the state.

Therefore, as environmental programs grow and efforts to address the problems of pollution and climate change in the city become more common, they risk further entrenching socio-spatial segregation by repositioning the political project of refashioning the city as a moral necessity. As can be seen in the targeted improvements that accompanied the Pan- and ParaPan-American games or the prevalence of environmental organization and events, like the *Festival Conservamos* discussed below, efforts are located in and catered to wealthy, educated, and young Limeños. This has the effect of excluding many of Lima's most vulnerable residents from the benefits of environmental practices, but it also shapes local ideas of who environmental programs are intended to benefit. Simultaneously, this creates a belief that these environmental and urban projects are undertaken as a form of ethical or practical work on the city.

Locating Environmental Problems and Practices

On a typically grey July morning, I prepared to set off for an event I had been looking forward to for a few weeks. I had seen the advertisements across social media, including on the Ministry of Environment's official Twitter page and the personal Facebook pages of Limeños I had met during my time in the city. The *Festival Conservamos* was touted as an environmental and social event, and a space for those interested in environment and conservation to come together and learn more about the efforts taking place on a local and national level. As I made my way out of my apartment, I used my phone to find one of the increasingly popular "ride-share" style electric scooters that had popped up in the city. This not only saved me a long walk or the hassle of dealing with public transit, it also seemed fitting to try this purportedly "eco-friendly" means of transport, even though some doubts echoed in the back of my mind. Nonetheless, I made my way along the coast to the Museum of Contemporary Art, a hyper-modern glass building with impeccably maintained grounds in the heart of Barranco.

Fig. 9: *Festival Conservamos poster outside the event, which includes a list of event sponsors, and the event slogan, "take the beat of the amazon with you." Photograph by author (2019).*

After dropping off my scooter outside the front gates, which prompted my phone to notify me of my carbon emissions savings, I made my way into the event. At the front of the museum, a brightly coloured sign advertised the event, touting the slogan "take the beat of the Amazon with you" (see Figure 9). I was immediately struck by the feeling that I had walked into a carnival or fair. Most visitors wandered between booths selling eco-friendly products or sharing educational information, including a large tent with displays on the Peruvian Amazon and conservation efforts in the region. Tucked around the corner was a busy food market, selling different organic or environmentally conscious snacks and beverages. As I made my way around I stopped in at different booths advertising familiar programs run by well-known local non-governmental organizations or NGOs, as well as less familiar groups working in other parts of the country. Throughout the day I ran into a number of people I knew, many of whom were tourists or expats living in Lima, and spoke with others about the event and their interest in the environment. For many, although their concern about pollution and other environmental problems was clear, the day served primarily as a nice outing. Children ran and played in a designated "kids zone" off to the side, while a band performed cheery and family-friendly songs to a small crowd that had gathered around the front of the stage.

In many ways, the *Festival Conservamos* was typical of the environmental events I attended in Lima. The festival took place in Barranco, an area of Lima known for its relative wealth and popularity amongst tourists, and it was generally seen as catering to a young, educated or artistic, and liberal demographic. Like other eco-markets and environmental events, the *Festival Conservamos* took place in an area where environmental consciousness was already strong and was attended by people with an existing interest in these issues. This reinforces the idea that environmentalism and programs which cater directly to environmental concerns are the

domain of a certain "type" of Limeño, and in turn this can ignore those who are most greatly affected or seen as outside of the conventional idea of an environmentalist. The event also centered various forms of individual and consumer environmentalism, including the involvement of corporate sponsors, the opportunity to purchase "eco-friendly" products, and various campaigns to support collective environmental movements through volunteer work. However, moving beyond these points, the *Festival Conservamos* also provides a particularly poignant example of the ways that environmentalism is thought about within the space of the city.

Environmental practice is undoubtedly shaped by both local specificities and the impacts of international media and international environmental NGOs, which all help to shape local ideas of what environmentalism should look like. In her work in the Caribbean, Jaffe brings up one idea that is common in conventional approaches to environmentalism. She recounts that, "to practice environmentalism we had to leave the city, polluted as much of it was, to protect and purify nature and the non-urban," because urban pollution was seen, "as a regrettable but also normal situation, whereas pollution in or of nature was perceived as an offensive phenomenon that prompted collective environmentalist action" (2016, 3). This idea that "true" environmental work takes place in "pristine" natural settings, for example the Peruvian Amazon or the Andes mountain range, is prevalent in Peruvian environmental discourses. For many the idea of environmentalism immediately conjures images of saving the Amazon from logging, protecting endangered species, or cleaning plastic from the ocean. This is not entirely surprising, since as Jaffe notes, "cities have rarely been the focus of environmental anthropology, or of mainstream environmental activism" (2016, 8).

Taking the example of the *Festival Conservamos*, even though the event was held in the city, was supported by many NGOs doing work on urban environmental issues, and was attended

by residents living with the effects of poor air quality and pollution, the stated focus of the event was Amazonian conservation. This is not to say that there are not organizations and individuals supporting environmental projects in the city or that the benefits of these projects in everyday urban life are not recognized. However, even organizations doing work in Lima, often promoted the idea that their work not only benefited the urban residents, but that it also cared for the natural world outside of the city. In some ways, it seems events like the *Festival Conservamos* derive legitimacy from linking their work to a pristine natural setting, in this case the Amazon, which is in direct contrast to the physical location of the event in the city. The contrast between the rural or natural world and the urban is reminiscent of Raymond William's argument that the city and the country are constructed in opposition to one another with images of the countryside relying on a nostalgia for a simpler past and a return to land or nature (1973). This serves to reinforce the idea that nature and the environment are separate from the city, which can be linked to the broader nature-culture division (Latour 1993). Importantly, these examples place the threat of environmental destruction and the spaces worthy of saving as external to the city and the lives of most Limeños, even as urban residents continue to grapple with the effects of pollution and poor air quality. This means that although there is an insistence that Limeños must take environmental action, the benefit or results of those actions are understood to be external or far removed from their own lives. This reinforces the overarching idea that cities are spaces that are void of nature or environment, instead suggesting that they have an inherently harmful or detrimental impact on the environment that must be addressed. As is made apparent by events like the *Festival Conservamos* and the disconnect between the environmental practices of urban residents and their perceived benefits, environmentalism is often still shaped by conventional ideas of what environmental action should look like and where it should be located.

Conclusion

Through this exploration of environmentalism in Lima, I have endeavoured to connect environmentalism to the larger urban imaginary and highlight how historical, political, and social context shape contemporary environmental practices in the city. In doing so, I have made three key arguments. First, when thinking about environmental problems, which are often seen as current and pressing, it is important to remember the historicity of these concerns. Second, it is imperative to recognize the ways in which environmental practices are not only shaped by existing social divides, including race, class, or gender, they also reproduce and reinforce these same divisions. Finally, understandings of the environment, and more specifically how we locate environment in relation to urban and non-urban space, can dictate both responses and imagined futures. Critically, contemporary environmentalism is deeply rooted in place, closely tied to the urban project, and continually shaped by the past. Thus, this chapter highlights the influence of history on contemporary life, the importance retelling the past in the present, the ways social divisions are replicated in individual and collective actions, and the continuity between environmental practices and understandings and broader ideas about the city and how it should be inhabited.

Although for many Limeños the impact of the past on the present is assumed or taken for granted, it was vital to my own understanding that I begin to think not only about the city as it was at the time of my fieldwork, but also about why and how the city had become that way. For Limeños these understandings of the past and their effect on the present are seen as an ordinary part of daily life, but for myself they invoked an insistence that environmental practices could not be understood with any simple or singular explanation because this could not offer a complete picture. Instead, environmentalism must be understood as informed by a specific

history and local terrain that continues to shape all aspects of contemporary life. This focus on history raises a larger discussion that arises from chapters one and two regarding how we discuss the environment and how these narratives shape local perceptions of environmental problems and practices. Whether it is the ways that Limeños choose to describe their embodied experience of pollution or how they choose to re-tell the past in the present, the way we narrativize environmental experiences and understandings is central to how we then approach these issues. In chapter three, I look more closely at one of the forms environmental practice takes in Lima, specifically the ways environmentalism is framed as a practice of care, to consider how these histories of the city and understandings of the environment inform different approaches and actions.

Chapter Three – Exploring the Ethical Dimensions of Environmentalism

Introduction

I had been in Lima for about a week, enjoying the last of the summer sunshine and warm weather. However, as I hurried out of my apartment one morning, I was met with the cool morning air and misty gray skies that hang low over the city and mark the start of the long winter season. Hurrying down the stairs from my apartment into the courtyard of my building, I was careful not to slip on the morning mist that had accumulated on the tiled floors. The beige plaster walls were marked with streaks, where the dew drops had mixed with the accumulated pollution and airborne particulate matter as they ran down the sides of the building. I had noticed maintenance staff at other buildings washing down the exterior facades with hoses, mops, or cloths, but this never seemed to happen here. This was probably for the best, because I could hardly imagine my elderly caretaker Manuel perched on a ladder trying to wipe away the residue. The thought made me nervous.

I was already late for a meeting, somehow having managed to sleep through my alarm, my roommate leaving, and the rising noise of the city outside my window – laboring bus engines, honking car horns, the shouts of transit attendants, and the shrill whistle of the traffic conductor at the closest roundabout. On my way out, I fiddled with the aging lock on the front door, trying not to jam up the mechanism or let the door slam hard behind me. Despite my best efforts, the door slipped from my fingers, banging closed and rattling the worn glass panes and the rickety wooden frame. Having missed my usual bus, I decided to risk taking a taxi in the busy and often unpredictable morning traffic, and I watched the small car icon weave its way towards my location on my phone screen. While I waited, Manuel emerged from the building.

He pulled out the soggy waterlogged cardboard from under the welcome mat at the front door, meant to absorb the water and keep the interior foyer dry, and wrapped his broom in a towel to mop up the water on the front steps. He hummed along to an older song playing in Spanish on the radio, and I turned my attention to the busy street outside my building, where I noticed a brightly colored poster hanging at the intersection. The sign read "yo llego siempre puntual," or I always arrive on time, and had the slogan "mi ciudad, mis valores" printed underneath. I chuckled at what seemed like both an oddly specific message, as well as, ironically, a very fitting one since I was running late. At the time, though, I did not think much more of this sign, not knowing that it was part of a much larger campaign.

In this chapter, I will explore how environmental practices are informed by ideas of care and how to ethically inhabit urban spaces. First, I will outline how care is used in environmentalism and how this is tied into the growing literature on care in anthropology and the social sciences. Second, drawing on the example of *Mi Ciudad Mis Valores*, a municipal campaign that promotes shared values and aims to improve urban life through changes to individual actions and attitudes, I will look at how environmentalism in Lima invokes a neoliberal modality of care that centers individual contributions, responsibility, and self-regulation in the face of persistent informality. Finally, by problematizing the neoliberal idea of care used by the municipality, I will examine the tensions around every day environmental practices and how these feed into the ways Limeños imagine a sustainable future in the city. Ultimately this chapter will consider the complicated ways care is mobilized in environmental programs and discourses to shape individual actions and ideas about the city itself.

Care, Environmentalism and Mi Ciudad Mis Valores

While efforts to address environmental problems often employ scientific, medical, or economic arguments to explain the need to confront pollution and climate change, environmentalism is also framed as an ethical project. This connection between environment and ethics can be seen in an array of places, from philosophical literature that explores the moral relationship between humans and the physical environment to global policy documents. Some early academics opposed the fusing of ethics, sustainability, and conservation, arguing that the inclusion of morality in these discussions undermined economic and scientific rigor (Beckerman 1994). Despite this backlash, it is generally accepted that environmentalism is, "characterized by the opposition between instrumental values and aesthetic and moral judgments and convictions" (Sagoff 2004, 20). This implication of ethics in the realm of environment is certainly not new. A 1987 report by World Commission on Environment and Development recognized the "moral, ethical, cultural, aesthetic, and purely scientific reasons for conserving wild beings" (WCED 1987, para. 53). Building on this connection between environment and ethics, it is unsurprising that a language of care is prevalent in many environmental circles, both among individuals and organizations. Whether it is a friend's young son telling me about the recycling lesson he learned in school while explaining "it is our job to take care of the earth," a newscaster lamenting the lack of care and attention paid to public green spaces as he announces an upcoming park cleaning project, or the slogan printed on a reusable bag from a popular department store, the idea of care seems to appear frequently as a part of environmental messages (see Figure 10). The Spanish verb cuidar (to care), as well as other related verbs like protegir (to protect) and ayudar (to help), are commonly used in discussions of the environment, and they evoke a sense that to participate in environmental activities is to participate in a form of caring, even if it is as simple

as bringing a reusable bag or properly recycling a plastic water bottle. This raises the question of how we can think about and understand care conceptually.

Fig. 10: *A line of reusable shopping bags released by Falabella, a popular department store in the city, which features environmental messages and slogans, such as "care for our Earth". Image retrieved from falabella.com.*

Care is a multifaceted, complex, and dynamic idea that has emerged as an increasingly popular theme in anthropological work, including discussions of environment, climate change, and pollution. Thinking about care can evoke ideas of morality, reciprocity, attentiveness, obligation, duty, and responsibility. Efforts to define care can also be challenging due to the multiple and at times contradictory ways in which it is used in everyday life and academic circles (Martin et al. 2015). The Oxford English Dictionary defines care as an act of thinking of, providing for, or looking after someone or something in a manner that is attentive and well-intentioned. Even though many have pushed back against this definition in ways I will outline below, care remains an important idea. In fact, Martin et al, suggest that care is an essential part of existing in the world, arguing that, "in our engagements with the worlds that we study, construct, and inhabit, we cannot but care" (2015, 626).

In her work on care in a medical setting, Mol rejects a distinction between "cure" and "care," instead conceptualizing care as a practice. Mol argues that care should not be thought about in the abstract, because it is "something that people shape, invent and adapt, time and again, in every-day practices" (2010, 4). Similarly, for Puig de la Bellacasa care is simultaneously, "an affective state, a material vital doing, and an ethico-political obligation," and discussions of care should emphasize "tasks that make living better in interdependence, but which are often considered petty or unimportant, however vital they are for lived relations" (2011, 90, 93). For both Mol and Puig de la Bellacasa, understanding care as a practice means focusing on the actions or activities that one undertakes in everyday life that are characterized by an affective sensibility of concern and thoughtful attention, even if the activities themselves seem inconsequential or insignificant (Mol et al. 2011; Puig de Bellacasa 2011).

In her work on the tuberculosis and suicide epidemics in the Canadian arctic, Stevenson builds on the idea of care as a practice, emphasizing that care does not need to be well intended, sentimental, or "caring" in a conventional sense. Stevenson defines care as, "the way someone comes to matter and the corresponding ethics of attending to others who matter," explaining that this shift allows for care to be used to understand actions that are harmful or at best ambivalent to the well-being of those that they purport to attend to, as well as bringing into view, "the messiness of our attempts to care… [and] the suffering those forms of care can produce" (2014, 3). This not only allows for a discussion of how Canadian colonial governance of the Inuit may seem indifferent to their well-being, it also illustrates how practices of care can co-exist at a bureaucratic or state level and an everyday or individual level in ways that both inform and contradict one another. Stevenson's conceptualization of care is useful because it decenters the

affective quality of care in favor of a focus on attentiveness and meaning, allowing for a reflection on ambivalent, harmful or imperfect forms of care.

For the purposes of my work, drawing primarily on the contributions of these scholars, I recognize care as a process through which someone or something, in this case the physical environment and the space of the city, is made to matter and given meaning through the practice of attending to it, in this case through organized and informal environmental practices, regardless of the intention or outcome of the act. This allows for an exploration of how practices of environmental care can be both productive and limited, how they can establish a sense of duty, obligation, or responsibility, and how they may also be exclusionary for many Limeños.

Turning back to the opening scene, after first seeing the "yo llego siempre puntual" sign outside my building, I also began to notice other signs posted throughout a number of the neighborhoods I visited, which eventually led me to the *Mi Ciudad Mis Valores* campaign. In March 2019, the municipality of Lima launched the campaign, which was a program intended to promote civic action and transform the city into a clean, safe, and orderly space. Using street signs, the campaign spreads short value-laden messages and calls on residents to make simple changes in their daily life (see Figure 11). With the messages ranging from the concrete, "I don't honk my horn" or "I always cross at the crosswalk," to the more abstract, "I help those who are most in need" or "I treat everyone equally," the slogans touch on a variety of topics and larger social issues. While not exclusively an environmental campaign, there are a number of messages that pertain directly or indirectly to the environment, including "I recycle because I care for my neighbourhood" and, "I care for green spaces." Additionally, this type of messaging was present in the more explicitly environmental campaigns taking place in the city, and is woven into the

urban improvement and renewal discourses that often encompass environmental programs (see chapter two).

Fig. 11: *Campaign materials from the municipality of Lima's Mi Ciudad Mis Valores campaign. Left: "I don't pollute my city." Right:" I care for green spaces."Images retrieved from the Municipalidad de Lima on Facebook.*

As a part of the campaign, the municipality released a series of short videos across their social media channels, including facebook, twitter, and instagram, using the #miciudadmisvalores hashtag. These social media posts targeted specific issues or featured prominent public figures, such as politicians, athletes, and celebrities, encouraging participation. In one video, Peruvian actor Gonzalo Revoredo stresses the importance of sharing priority seating on buses and trains with the elderly or pregnant women. In another, actor Santiago Suarez announces the need to be punctual as a sign of respect. In addition to these celebrity endorsements, the campaign was launched with a dramatic and heavily produced public-service announcement style video. In the video the narrator draws on a shared sense of community and cultural heritage to encourage Limeños to take up the challenge of improving the city, because, "in the end, Lima belongs to everyone." The video goes on to call for self-reflection on

individual civic duty, suggesting, "now is the time to look at ourselves and accept our mistakes…because corruption is not just something we see on TV, it is something we are all a part of".[3] In a speech that accompanied the launch, the Mayor of Lima, Jorge Muñoz, further highlighted these key points, saying, "it is important that we work together to change the attitudes that have hurt us so much, because we all deserve to live in a decent place ... let's reflect together on the problems we see on a daily basis, on what we want for ourselves and for our children - not tomorrow, but today."

Fig. 12: *Screenshots from the opening sequence of the Mi Ciudad Mis Valores launch video, which showcase the shots of the city and cultural heritage. Screenshots taken from the Mi Ciudad Mis Valores launch video.*

Both the video and other campaign materials invoke a strong sense of community and illustrate the use of a language of care to call on Limeños to attend to their city, an idea that is echoed by environmental organizations and individuals discussing their environmental contributions. Drawing on romantic imagery of Lima and its cultural heritage, the video positions the city as something that residents should take ownership of and step up to care for,

[3] The video can be found at https://www.youtube.com/watch?v=-rVtRCRib4I. The video begins by features drone-style establishing shots and images of Limeños partaking in cultural traditions and community service.

the same way they would a familial home and the family members inside it (see Figure 12). The campaign calls for wide-spread individual uptake of environmental practices and other behaviors that are seen as beneficial to the city, suggesting that large scale change could come from all Limeños simply embracing these calls to action. Additionally, the understanding of care that the video employs is one that is enacted through everyday individual acts of self-improvement and civic responsibility, which presents a version of care that is well intentioned, sentimental, and altruistic. The video calls on residents to act not just for themselves but for a common good. This introduces a responsibility or obligation to attend to the city and suggests that if enough individual contributions are made there will be a general shift towards a "good" city, ignoring the systemic nature of power and the gross disparities between many residents and the city's elites. This focus on individualism and a discourse that valorizes individual contributions over structural change led me to question the roots of this approach to environmentalism and consider how environmental efforts in Lima are deeply entangled with both a specific history and a distinctly local form of neoliberalism.

Neoliberal Modalities of Care and Governmentality

Thinking about care and its relation to environmental efforts in Lima highlights how care is context-specific and perspective-dependent. Mol et al. note that an attentiveness to care requires an interest, "in the details and subtleties of practices that are local, embodied and responsive," and asks us to contemplate how practices of care are rooted in the places that they emerge (Mol et al. 2011, 75). While thinking about environmentalism as a practice of care can illustrate how ethics and responsibility are implicated in everyday actions, it is also important to consider how these specific modalities of care are situated within the broader context of the city and the lives of the people who live in it.

In Lima, like much of the rest of Latin America, notions of care have been informed by the prevalence of neoliberalism and neoliberal ideas. Broadly, neoliberalism is characterized by free market economic systems, deregulation, and decentralization of government. Importantly, neoliberal governmental rationalities are not strictly economic, and in Peru neoliberal reforms have had moral, political and social implications. Beginning in the 1980s, neoliberalism and market-oriented reforms swept through most of Latin America, and in the 1990s, during the presidency of controversial leader Alberto Fujimori, Peru underwent its own neoliberal transformation (Drinot 2014). During the 1980s, an internal armed conflict between the Shining Path (*Sendero Luminoso*), a communist guerrilla organization, and state or state supported forces broke out in Peru. The struggle stemmed from the entrenched inequalities in Peruvian society and forms of institutionalized exclusion, and this discontent and political disagreement served as a catalyst and fuel for the conflict (Drinot 2014; Hahn and Inhorn 2009). Violence associated with the Shining Path spread from the Andes and into the capital city of Lima, and resulted in nearly 70,000 deaths at the hands of both the guerilla and state forces (Starn 2005).

Following this period of internal violence and associated uncertainty, the transition to a neoliberal governance model was seen as a stabilizing force and an opportunity for economic growth, meaning that the new system faced little resistance. Although in recent years neoliberalism has faced backlash in other countries, neoliberal reforms have led to modest but continual economic growth in Peru, and some scholars have argued that this prolonged economic stability is the reason neoliberalism has continued expand within the country (Feldman 2011). However, critics have raised questions about the impacts of neoliberalism on government capacity, environmental protection, and social development. While it must be understood within a broader historical context, the weakening of the state, "can be traced back to the more recent

neoliberal hegemony that was established in the 1990s through the government of Fujimori—a populist and particularly ruthless and unregulated variety of neoliberalism, paired by deep corruption" (Drinot 2014, 135). For many scholars, the post-neoliberal future seems unclear, and Peru remains a work in progress or, "an idea or project that, somehow, and as yet, has not come to fruition" (Drinot 2014, 1). Some researchers have suggested that decentralization has severely diminished the relevance and efficacy of the national political system, instead refocusing citizen engagement on local and municipal politics (Vincent 2018). In his work, Drinot suggests neoliberalism in Peru can be best described as a political rationality that extends beyond the economic to shape diverse aspects of daily life. Drawing on the work of Wendy Brown, he argues that, "neo-liberalism is not simply a set of economic policies... neo-liberal rationality, while foregrounding the market, is not only or even primarily focused on the economy; rather it involves extending and disseminating market values to all institutions and social action" (2014, 171). This extension of neoliberal economic ideas to the social realm can be seen across Peru.

Neoliberal rationality can be seen in the everyday environmental practices of Limeños, specifically in a focus on individual obligations and a shift of responsibility from governments to residents. Whether it is by having Limeños recycle and shop with their own bags or by encouraging their participation in community driven clean-up efforts and environmental events, this approach centers individual contributions and places an ethical obligation onto residents to support environmentalism. This responsibilization of individual Limeños can be understood as tied to broader ideas of how to care for and inhabit the city, and it is at the heart of much of the environmental messaging from the government and local organizations. The example of the *Mi Ciudad Mis Valores* Campaign shows how, in addition to fostering a sentimental attachment to the city, the government can place a strong sense of responsibility on individuals.

In a special edition of *Social Studies of Science* focused on the politics of care in technoscience, Martin et al. remind us that care, "can set up conditions of indebtedness or obligation," in a way that, "organizes, classifies, and disciplines bodies" (Martin et al. 2015, 627). The campaign calls for small changes to everyday life and asks Limeños to take individual responsibility for their own actions. As such, the campaign suggests that in making small lifestyle changes individual residents have the power to transform the city for the better, as long as they have the ability to self-regulate. This idea that political change is a matter of aggregated individual agency may seem to empower Limeños to take charge of their city, but it also largely aligns with broader neoliberal efforts to minimize the role of the state and government regulation as responses to social, political, economic, or environmental issues. In her work in neighbouring Chile, Han raises concerns about a focus on individual responsibility, arguing neoliberal reforms divest "the state of crucial responsibilities for the well-being of populations," producing ideas of self-care or self-responsibility as a necessity (Han 2012, 12).

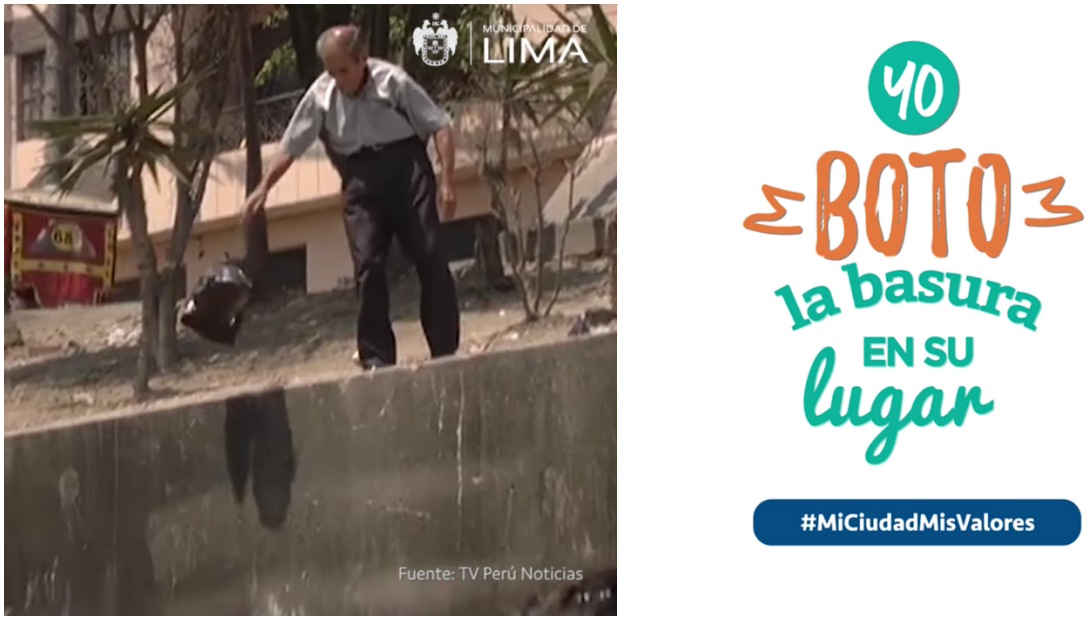

Fig. 13: *Screenshots from the "put trash in its place" video, including the surveillance style shots of trash dumping and the slogan included at the end of the video. Screenshots taken from the campaign video.*

Underlying these reforms in both countries is a presumption of the self as sovereign, morally autonomous, and transparent, which suggests that *Limeños* must transform themselves into self-sufficient and self-governing subjects. This presumption not only shifts responsibility to individuals, it also valorizes efficiency, individual agency, and a vaguely puritanical work ethic. By positioning hard work on the part of the individual as a moral imperative, care work is given value regardless of its impact on the overarching problem or its contribution to a possible solution. This can be seen in the videos and other campaign materials where there is an effort to appeal to a Limeño's desire to do good, but beyond that there is also an implication of a duty to put in the work on behalf of the community. In one short video, Limeños are encouraged to put garbage in its place, and the narrator can be heard saying, "you complain about society, but you continue to throw trash in the street - join us and be the change," which introduces the idea that garbage accumulation in the streets is a failure of individual residents (see Figure 13)[4].

This not only largely ignores structural factors that contribute to the issue, it also suggests that those who do not take up their duty to care for their city forfeit the right to complain or demand better conditions and have somehow failed to do what is expected of a "good" urban resident. Building on this, the video caption reads, "the streets are not garbage dumps, Lima is our big home, the place where our children grow and develop – take care of it together," which reiterates the sense that Limeños must take responsibility for their city, if not for themselves then for those, like children and future generations, who cannot.

Neoliberal modalities of care that center individual responsibility can also be seen in more explicitly environmental efforts. In June 2019, as part of Semana Ambiental, a week of

[4] The video can be found at https://www.youtube.com/watch?v=xfTxgU9Z47k. In the video you can see security footage style shots of Limeños dumping garbage. For more on the issues of garbage dumping and the response in Lima, see Charles F. Walker's short piece "Green Vultures" in The Lima Reader: History, Culture, Politics.

activities organized by the Ministry of Environment (MINAM), there was a "plogging" event. According to *goplogging.org*, plogging is an activity that originated in Scandinavia which combines jogging and picking up litter. The activity has gained popularity on social media and has reached global audiences, with advocate Felix Hamilton explaining the motivation, saying that, "picking up litter is good for the planet's health…running is good for your health. Also, it's really good fun: you meet like-minded people and see immediately the good you have done" (goplogging.org). The activity had certainly gained some amount of traction in Lima by the time I arrived in 2019. In addition to the government sponsored event, there were at least 3 other plogging events held by local NGOs throughout the year, including the "Trota con propósito" and the Plogging Eco-Running event led by the Movimiento de Ayuda Peruana. I heard about these events too late to participate, but I did attend. It was an odd event to simply watch and I felt guilty for standing idly while others worked. I watched uncomfortably as a crowd of people carrying trash bags and donning running gear and work gloves made their way around the 5KM course collecting trash as they went. But from my own discomfort, I was also alerted to the ways in which this event made a public presentation of environmentalism, created a sense that individual contributions were making a demonstrable difference, and provided an opportunity for participants to perform practices of environmental care for all to see.

Although neoliberalism should not be seen as all-encompassing or taken for granted as a global system, in many ways these plogging events are a clear example of a particular neoliberal governmental rationality that is at play in environmental efforts in Lima. Foucault's work on governmentality provides a useful approach for research on subjectivity, power, and governance in a variety of settings, and allows us to consider diverse contemporary issues even in recognizing this approach as an analytic perspective rather than an authoritative theory that can

be applied directly as a sort of universal truth (Zeiderman 2016). Governmentality provides a "broad sense of techniques and procedures for directing human behaviour," and the concept stemmed from an interest in understanding liberal political rationality (Foucault 1997, 81; Rose et al. 2006). Neoliberal governmentality is concerned with what forms of government and governmental action are possible, as well as with devising a new definition of the governmental domain by establishing, "a viable boundary between the objects of necessary state action and those of necessary state inaction" (Burchell et al. 1991, 18).

Although Foucault's discussion of governmentality is temporally and spatially situated in the context of 17th and 18th century Western Europe, it allows for a focus on population and the idea that population problems that are of concern to the government, such as health, birth rate, life expectancy, or, in my research, the detrimental effects of pollution and climate change, can be shifted to individuals, which reduces the need for state level processes to manage them (Foucault 1997). Using this approach, with a focus on the governance of populations, state action and intervention becomes a means of structuring possible actions or outcomes and creating, "a system of general conduct of individuals whereby everything would be controlled to the point of self-sustenance, without the need for intervention" (Foucault 1991, 241). Governmentality allows for the management of populations, and the establishment of societal values and guides for appropriate conduct that aim to create a self-sustaining system of governance where individuals self-regulate to align themselves with the norms of their society. In Lima, while neoliberal modalities of care and ideas of biopolitical governmentality coexist with other ways of being, this provides a framework for understanding care as focused on individual responsibility, since the goal is to create subjects who will act for the good of themselves and their communities without the intervention of the state. Plogging serves as particularly powerful example since it is

an activity that combines care of the self, through exercise and personal fitness, and care of the city or community, through the collection of trash, into one individual activity that centers a feeling of responsibility.

Critiques of Care and the Tensions of Everyday Environmental Care in Lima

Not long after learning about the *Mi Ciudad Mis Valores* campaign, I met Carlos at a local cafeteria in Barranco. We talked about our work as we sipped on coffee, switching casually between English and Spanish so that we could both practice our language skills. Carlos, a photographer who worked for a local newspaper but was trying to find a job with the government, was always happy to discuss politics, my research on the environment, or stories of growing up in Lima. Knowing he had a background in graphic design and film, I asked if he had seen the *Mi Ciudad Mis Valores* campaign. He told me it sounded familiar and he had noticed the signs during his daily bus ride, but he had not given it much thought. However, as I scrolled through the hashtag on twitter nearly every image would prompt him to launch into some sort of an explanation of the significance or complexity of the problem. He seemed amused with a number of the posts, making remarks like, "if it only were that easy." When I pressed play on the video that called on Limeños to 'put trash in its place" though, he took particular care to explain to me how unfair it all seemed to him. It was important for me to understand, he said, especially because of my interest in environment, that it was foolish for the government to be asking people to keep the city clean when they had not provided the tools to do so.

Carlos was not the only one who seemed to take some issue with the campaign. As Isabel and I walked through her neighborhood of Pueblo Libre, north of the city center, we passed under a sign that read, "I do not spit in the street." She laughed when she saw it, recounting a story of seeing a man spit as he had walked past the sign earlier, almost as if it was deliberately

prompted by the message. Isabel often complained about spitting because she found it a particularly gross habit, but we both agreed that a sign was unlikely to do much to change anyone's mind. I thought the conversation had passed when she continued on, explaining that she had also seen another sign that said, "yo respeto a las mujeres" or I respect women. This sign she said, really bothered her, because it seemed like it made light of the issues of gender violence in Peru. "How can you expect to fix a problem like sexism with a street sign," she asked, to which I had no good answer.

These neoliberal modalities of care and the ways they are invoked in certain environmental discourses create tensions for some Limeños who recognize the limits and imperfections of individual environmental actions but still find themselves drawn into these programs. As such, it is important to problematize these municipal environmental programs and the specific ways care is mobilized in environmental and urban improvement discourses. Certain modalities of care can perpetuate inequality and reproduce asymmetrical power relations. Martin et al, suggest that, "care is a selective mode of attention: it circumscribes and cherishes some things, lives, or phenomena as its objects. In the process, it excludes others" (Martin et al. 2015, 3). This critique is reflected in the reactions of both Carlos and Isabel to the campaign, and it is particularly relevant to Lima, where ideas of caring for the environment and the city are often deeply entwined with past violence and unequal social structures. Lima is deeply divided on the lines of race and class, and social inequality is physically mapped out onto the space of the city, at least in part due to the history of colonial rule and the waves of immigration during the 20th century. Environmental programs typically cater to educated and well-off Limeños in affluent neighborhoods, because they are seen as having the financial ability and personal desire to participate. As Antonio explained to me as we waited together at the bus stop, those who lived in

the cities most well-off neighborhoods had access to education, resources, and support from local governments who wanted to promote tourism and recreations in their areas, while much of the rest of the city had different priorities and lacked confidence that the government had the desire or ability to help. Due to these divides, environmental programs can be seen as catering to the desire for the city's wealthy and privileged residents to improve their own neighborhoods, while ignoring other areas of the city where pollution present significant issues.

Not only do these divisions highlight and reinforce existing socio-economic divides in the city, when coupled with a focus on individual responsibility environmental programs can often seem to ignore structural factors and the need for large scale change. In her work, Ticktin touches on this idea, cautioning that practices of care can be antipolitical or apolitical insofar as they fail to challenge the social order or generate radical political critique (Ticktin 2011). This resonates with the broader apolitical or antipolitical quality of environmental practice that could be seen in Lima. It can also be seen in the Mi Ciudad Mis Valores campaign, where calls to stop littering in the streets or care for green space ignore the lack of sufficient garbage collection and disposal in parts of the city or the absence of community green spaces entirely. This recognition of a substantial issue without providing any meaningful structural level responses is also what made Isabel uncomfortable with the sign calling for a greater respect for women. Ultimately, this means that environmentalism and practices of environmental care in Lima can perpetuate exclusionary practices that ignore many Limeños, while failing to provide a viable solution to addressing the problems they raise awareness of.

In this way, like Stevenson describes in her work, bureaucratic or governmental forms of care can often appear to be "uncaring" or unconcerned with the well-being of some or all of the people they proclaim to help. In the case of Lima, the limited scope of the programs and the

ways in which they highlight existing divides raises questions about both their efficacy and who they are intended to serve. For many Limeños I spoke with, environmentalism was a normalized part of daily life, and while they recognized some of the limits of the environmental efforts in the city, they often focused on the positive contribution of their actions rather than the larger structural issues. However, for some these issues created a tension between a desire to do good for the environment and a skepticism about the government's efforts and a lack of available alternatives.

I met up again with Carlos about a week before I planned to return to Canada. I had wanted to visit the Lugar de la Memoria, la Tolerancia y la Inclusión Social or the Museum of Memory, Tolerance and Social Inclusion, but I had not yet found the time. That Saturday we made our way through the museum which commemorated the history of violence in Peru between 1980 and 2000, and Carlos recounted his own memories of that period as we explored the exhibits. At the museum's exit there is a large outdoor space overlooking the Costa Verde and the Pacific Ocean. As we sat catching up and discussing the museum, I began to ask him about how he felt about the critique that environmental efforts in Lima were limited to individual contributions and small-scale actions. We had both discussed our thoughts on this before, but I had been thinking a lot about this idea, because it was a critique I had heard in both Lima and other parts of the world, including at home in Canada. It is frustrating, he told me, to recognize that what is being done is not enough, but also having to work with it. He explained that he did not want to write off the individual actions like recycling or reducing consumption, but he never felt like these were sufficient. As our conversation drew to a close, we were both left with unresolved questions about the value of our own environmental efforts and the difference we were making, but as Carlos had said, what choice did we have but to care? Carlos highlighted a

tension between wanting to challenge the limits of environmental programs in the city or take more meaningful action and a recognition of a need to keep working with the tools that were available. He spoke to the complexity of both environmental problems and possible responses.

Conclusion

By looking at how ideas of care are integrated into environmental efforts in Lima, I have highlighted the ways that care is more than an affective desire to do good. Instead, I suggest that a particular brand of neoliberal care is mobilized in environmental discourses to create a sense of duty, obligation, or responsibility among residents. Specifically, in the context of Lima, this responsibility often falls on individual Limeños, leaving some to question the government's concern for the city and those within it. The implication of care as "caring" or well-intentioned, particularly in the realm of environmental efforts and urban improvement programs, can increase the sense of personal responsibility for the environment and hide certain inequalities and inefficiencies. However, by removing the altruistic quality and understanding care as a practice that gives meaning and attends to that which we have decided matters, we can better understand how environmental programs function in the city and the lives of Limeños. The practices I have discussed in this chapter, like recycling programs or green-space clean ups, are often critiqued for their small-scale nature or failure to address larger structural factors, both of which are valid critiques. However, if we set aside their instrumental value as efforts to combat pollution and climate change, we can begin to understand the ways environmentalism and other practices of care contribute to the identity of urban residents, ideas about how to ethically inhabit the city, and understandings of the larger system in place that prioritizes individual responsibility and contributions over state intervention.

Conclusion

While I was writing this text, the contagious respiratory disease COVID-19 began to spread around the world, further testing the livability of cities and the adaptability of urban residents. On March 11th, 2020, the World Health Organization declared COVID-19 a global pandemic, resulting in a variety of border closures, quarantine protocols, and other public health measures. The impacts of these measures seem to have been felt most acutely in urban centres, where high population density and existing problems of inequality led to more rapid transmission and at times more devastating results. In Lima, President Martín Vizcarra put in place one of Latin America's earliest coronavirus lockdowns, implementing border closures and stay at home orders that strictly adhered to international guidelines. However, the situation in Peru quickly and dramatically worsened, with the government suggesting the increasing number of cases of COVID-19 was the result of Peruvians failing to properly follow the rules and take necessary safety precautions (Collyns 2020). Despite a quick response and strict protocols, the country was not able to 'flatten the curve'. On June 24th 2020, amidst a rise in case numbers and COVID-19 related deaths, the government made the decision to loosen restrictions and reopen a number of public spaces (Briceno 2020). As of August 27th 2020, Peru had reported 28, 277 confirmed COVID-19 deaths, representing the highest number of deaths per capita from the virus and some of the worst COVID-19 outcomes in the region (Quigley 2020).

Both the rapid spread of COVID-19 and the growing threat of pollution and climate change illuminate the impacts of large global problems on the lived realities of people around the world. The pandemic has challenged the ways we perceive and inhabit the city, and has forced many to change their everyday activities. Social distancing and stay at home orders have become routinized parts of daily life, and public spaces have become areas of fear, suspicion, or at the

very least elevated levels of caution. Although the threat of the virus is seen as more immediate or acute than pollution or climate change, it similarly shows how a global problem can present distinctly different challenges in different places. Whether it is the overwhelmingly poor outcomes and high death rates across Latin America or the growing anti-mask and anti-science discourses in the United States, the COVID-19 virus has shown how underlying tensions and existing inequalities shape emergency responses. I would like to draw on one key comparison to the evolving COVID-19 situation, the individualizing and moralizing discourses (see Figure 14).

Fig. 14: *Campaigns like #LimaTeCuida and #EnLimaNosCuidamosTodos invoke individual responsibility to call on residents to reduce COVID-19. Screenshot retrieved from Twitter.*

As I have discussed throughout, the locally-specific neoliberal modes of governance that inform environmentalism in Lima have individualized environmental practice and shifted responsibility from the government to Limeños. Similarly, as the COVID-19 public health measures in Peru continued to fail, Vizcarra immediately shifted blame onto individual Peruvians, with one public health official arguing that rising COVID-19 case numbers during

quarantine show, "that those people got the virus while the country was in lockdown – which means they did not respect the law" (Collyns 2020). Peru is not alone in this effort to blame rising case numbers and high death rates on individuals. In the United Kingdom, where the government has implemented a strategy that relies heavily on self-responsibility, officials have repeatedly accused individuals of failing to take necessary precautions and abide by public health measures. British prime minister Boris Johnson warned that crowds at beaches were taking advantage of relaxed lockdown restrictions, while health secretary Matt Hancock blamed a spike in cases on youth and young adults with little regard for the most vulnerable groups (Triggle 2020; Rosney 2020). These individualizing efforts have faced criticism in Peru and in other countries around the world, but they remain a prominent part of discussions surrounding COVID-19. Ultimately, this has the effect of repositioning the situation as a moral failing of individual residents who have not done their part or been considerate of the well-being of others, shifting attention away from government inaction and other structural issues, such as a lack of resources and chronic underinvestment in public healthcare (see Figure 15).

Fig. 15: *This image is one example of the public critiques of governemtal responses and inefficiency. The image reads "Peru plans to build a hospital in 10 days and 30 years (in contrast to reports of Chinese hospitals being built in just 10 days). Image retreived from Facebook.*

Returning to my research, chapter one discusses the everyday medical and social impacts of environmental disease and explores the influence of pollution and poor air quality on local ideas about the environment. The chapter examines an ethnographically rooted understanding of the environment that is specific to Lima, as well as a reimagining how we may approach the topic of pollution and climate change. Here, I am arguing for a broadening of the discursive concept of the environment that is rooted in a recognition of local specificity and lived experience. This reimagining highlights the valuable role of embodied experiential knowledge of the environment for navigating complex and contradictory situations. Living with pollution and climate change imposes certain bodily capacities and sensibilities in response to the physical environment, and this focus on embodied experience gestures to the particular environmental subjectivities that may be taking shape in cities like Lima.

In chapter two, I consider how environmental practice is shaped by historical narratives about the city, social and political conditions, and global discourses about urban life. I argue that environmentalism in Lima is rooted in a specific local project of urban improvement and city making. This overarching argument is derived from three central points, the importance of the past in explanations of contemporary environmental problems, the recognition of the effects of existing political systems and social divides on environmental practices, and the ways that global discourses about urban and non-urban space merge with the local. In doing so, I have made a point of noting the ways environmental practices are temporally and spatially situated, and informed by existing ways of life, political formations, and social norms.

Finally, in chapter three, taking up the specific example of the *Mi Ciudad Mis Valores* campaign, I illustrate how environmentalism is framed as a practice of care and how a language of care is integrated into environmental efforts in Lima. Specifically, this chapter presents a

neoliberal modality of care that challenges conventional ideas of care as an affective desire to do good. Instead it creates a sense of obligation among individual residents to care for the city and absolves some of the government's responsibility to act. Framing environmentalism as a practice of care illuminates how different environmental understandings are mobilized in the city and the function they serve in the lives of Limeños.

In conclusion, what might this discussion of pollution and climate change have to contribute to ongoing considerations of how one is meant to ethically and sustainably inhabit the city? How may thinking about environmental threats and COVID-19 help envision potentially livable and equitable futures for urban spaces? This project reinforces the importance of attending to large global problems on a local scale and considering the historicity of contemporary life. Throughout, I have argued for a temporally and spatially situated approach to the study of the pollution and climate change in Lima that challenges environmental discourses that decontextualize or de-historicize the issue. I have ethnographically traced the ways living with pollution and climate change contributes to the development of local environmental understandings and practices that are rooted in both individual embodied experience and shared social, political, and historical context. This focus required me to locate myself in the space of the city, consider the various experiences of the city that existed for each of my interlocutors, and reflect on how my own vision of Lima was shaped by the stories they shared. My interlocutors' explanations of pollution and climate change challenged my pre-conceived notions and broadened my own understandings of the environment. Both the ongoing environmental crisis and the unprecedented global pandemic present an opportunity to reflect on how cities may approach the challenges that loom ahead, and in these reflections, there may be a potential path through the challenges of urban life amidst pollution and climate change.

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