Becoming *Acalote*:

The Performance That Transformed a Road Into a Waterway

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CONTENTS

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ABSTRACT

Artistic practice today is uniquely situated to pose critical, alternative responses to contemporary ecological problems. A compelling example from Mexico City is the 2015 performance piece *Plan Acalote* by contemporary art collective Plan Acalli, which reenacted the journey of a traditional *acalli* boat across Mexico City, crossing highways and avenues that were once canals. This thesis examines the ecological potential of this artwork by studying the performance and its context through a framework of materialist posthumanism. I argue that *Plan Acalote* crucially enabled human participants to develop environmental skills and awareness and involved ritual, pilgrimage-like encounters. I propose that, in this way, the *acalli* boat's journey can thus be read as a material transformation or "becoming" of paved urban roads into an *acalote*, or Nahua waterway: a collaborative, situated and performative strategy towards research, environmental awareness and art. Therefore, *Plan Acalote* ultimately demonstrated the potential of a shift in cosmovision through art as a viable approach to furthering ecological goals.

INTRODUCTION

Ecological problems are perhaps the most urgent of our age, and are often found intertwined with equally pressing historical and social issues. This is certainly the case in contemporary Mexico City, one of the largest urban capitals of the world. Pre-Hispanic inhabitants of the area, a people known as the Nahuas, forged a biocultural landscape of edifices, islands and lakes connected by avenues and canals, where traditional boats or *acallis* were vessels for economic, social and political flows. Nahua cosmovision—the community's way of understanding the place of humans in the world and their relationship to it—developed with close ties to the land and water. Today, most of the capital city's water has been drained, rerouted or consumed, but the pre-Hispanic cultural/natural landscape has survived in the southern borough of Xochimilco. The local population maintained their agricultural livelihood for centuries, supporting themselves by transporting crops and other goods to the city center by boat; in this way the Xochimilcas developed and preserved their own idiosyncratic identity. Major changes, however, occurred in the last century. The city's expansion accelerated, reaching Xochimilco, and simultaneously cutting off its last aquatic routes, Canal Nacional and Canal de la Viga. Waterways were covered or disappeared as the supply and quality of water diminished due to urban spread, pollution and extraction, affecting the environment and people.[1]

Confronted with this paradigm, artists and academics today are increasingly turning to alternative modes of thought and practice in order to address ecological and social problems. On such effort was *Plan Acalote* (2015), a project by contemporary art collective Plan Acalli, based in Xochimilco and consisting of Ehécatl Morales and Carlos Maravilla.[2] Over the course of six days, the artists and a team of volunteers dragged and poled (i.e. rowed with a pole) a traditional *acalli* boat from Xochimilco to Ex-Teresa Arte Actual Museum in the Historic Center of the city, across pavement and highways which were once canals. The project was developed by Plan Acalli with curators Pedro Ortiz and Sofía Carrillo, but also with a variety of community organizations: the *acalli* stopped at different neighborhoods in its path, and served as a catalyst for conversations between volunteers, locals, artists and

1 Martínez, "Cosmovisiones, Rituales y Simbolismo," 52–53; Bannister and Widdifield, "The Debut of Modern Water," 38; Losada at al., "Urban Agriculture," 42–43; Narchi and Canabal, "Subtle Tyranny," 95–97; Losada at al., "Urban Agriculture," 47–48, 52; Legorreta, *El Agua y la Ciudad*, 154–159.

2 Note that throughout this thesis I will refer to the similarly named artwork, *Plan Acalote*, and to the artist collective, Plan Acalli. The Nahua words *acalote* and *acalli*, plural *acalotes* and *acallis*, are improper nouns.

activists about ecological struggles. Crucially, the piece was framed and enacted as a sort of ritual pilgrimage, and its objective was to "re-create" the waterway of Canal Nacional, La Viga and Roldán.[3] To this end, *Plan Acalote* evoked key elements of the area's pre-Hispanic past: its aquatic environmental conditions, and the cosmovision of its human population.

Plan Acalote became relatively well-known after its conclusion; the artwork won first place in the 2016 edition of the international contest *Premio Iberoamericano de Educación y Museos* (Ibero-American Museum and Education Award), and has been preserved and disseminated in the last few years via a documentary film and a recently published book. The artwork also brought renewed visibility to the efforts of ecological and social activists, and strengthened social and political ties between different groups and organizations. Though an artwork's political success is always difficult to measure, *Plan Acalote* surely contributed, among many other factors, to recent ecological milestones: in 2019, the government announced an ecological rescue project aimed at rehabilitating the waters of Canal Nacional.

There is surely much to learn from *Plan Acalote*'s environmental tactics. The main research question guiding this enquiry is: how might the use of Xochimilco's Nahua cosmovision in *Plan Acalote* by Plan Acalli contribute to a better understanding of Mexico City's environment from a posthumanist perspective and, therefore, of ecological problems and their possible solutions? In order to answer the main research question, I begin in Chapter 1 by developing the theoretical background that will support the rest of the thesis. Seeking a framework that might prove more ethical and theoretically flexible, I begin with a broad range of theoretical responses to the problems of humanism. I then concentrate specifically on materialist ontological premises from a selection of posthumanist authors. Subsequently, I apply these towards developing an ecological approach of inquiry. I end the chapter by conducting a brief literature review focusing on previous studies at the intersection of contemporary art and alternative cosmovisions, in order to situate this thesis and its contribution to the field. By threading together notions from posthumanist theory, ecology, anthropology and art, I also explore and justify the relevance of this theoretical basis for studying an artwork that activates the Nahua past and its alternative cosmovision.

Chapter 2 explores how the Nahua elements of *Plan Acalote*'s environmental and historical context reveal ecological insights when they are examined through a posthumanist lens. I begin by briefly overviewing how *Plan Acalote* refers to Xochimilco's Nahua past, highlighting the concepts of *acalli*, *acalote*, and *altepetl*, as well as the action of ritual

3 Colectivo Plan Acalli, *Plan Acalote*, 15.

pilgrimage. Following this preliminary identification, I explore these elements by situating them within a history of Mexico City and Xochimilco framed as a becoming of people-with-their-environment. I concentrate on two historical moments with different ecological configurations: the Valley of Mexico's Nahua past (up to the Spanish conquest in 1521) and the capital's modernization from the early nineteenth century to the present day. This approach enables a better understanding not only of the relationship between *Plan Acalote* and the specific Nahua elements mentioned, but also of the artwork's position in a broader historical and environmental context.

In the third chapter, I turn to the artwork to examine, firstly, how precisely *Plan Acalote* performed a particular set of environmental relations through the use of Nahua cosmovision. What sort of transformative becoming was enabled with this performance? I focus firstly on environmental skills developed in the work, and secondly on the broader social and political dimensions of the ritual, pilgrimage-like character of the piece. I also explore how these performative strategies extend our understanding of Xochimilco's environment, its ecological problems, and their possible solutions. Particularly, I am interested in the way in which pre-Hispanic and contemporary environmental agencies were activated, and which insights of Nahua cosmovision they might point to. This consideration will aid in uncovering the contemporary relevance of reactivating a Nahua worldview through performance in *Plan Acalote*.

In addition to the methods of theoretical scholarship which form the backbone of this thesis, in August 2019 I interviewed the artists of Plan Acalli, Morales and Maravilla. In their company, I also visited the canals and *chinampas* of Xochimilco, and recreated the last segment of the *acalli*'s journey by walking from Roldán to the Ex-Teresa Arte Actual Museum in the historic center of Mexico City, where the performance culminated. These visits were conducted in order to better understand the methods and strategies of Plan Acalli's artistic practice: much of their work particularly emphasizes the importance of learning by doing and being in an environment. A second motivation derived from the posthumanist framework I adhere to in this work; namely, the recognition of my own situated and relational immersion in the environment. This realization also leads me to acknowledge that my perspective on Xochimilco and its current social and ecological situation is shaped by personal experience: my father's family originated in Xochimilco, and I myself have lived there for roughly 20 years of my life. Through this investigation, then, I engage not only with scholars, theoreticians and artists, but also directly with the environment of *Plan Acalote*

itself. This strategy allows me to bring my own academic and subjective perspective into conversation with many voices raised in concern about Xochimilco's urgent ecological and social problems. I hope to demonstrate with this work the potential for intervention and response to these issues with art.

CHAPTER 1

A Posthumanist Perspective on Environment and Art

> "On an agential realist account…matter is not a fixed essence; rather, matter is substance in its intra-active becoming—not a thing but a doing, a congealing of agency."
>
> —Karen Barad, "Posthumanist Performativity"

> "Deleuze and Guattari nail it: the 'human' is just a vector of becoming; we need to compose a new people and a new earth."
>
> —Rosi Braidotti, "A Theoretical Framework for the Critical Posthumanities"

In 2015, *Plan Acalote* carried out a historical, ritual journey through contemporary Mexico City; a boat, described with the Nahua word *acalli*, starred in this performance. The vessel departed from the shores of the southern borough of Xochimilco, where remnants of the city's pre-Colonial aquatic landscape still survive. The boat travelled by land for six days, along highways and roads which were once canals but today are inaccessible or have disappeared, to the historic center of Mexico City. With its passage, the *acalli* opened a way across a path of pavement that the artwork's title refers to as an *acalote*; i.e. a Nahua canal. Strikingly, the performance resembled a pilgrimage: human participants joined along the way, and stopped at specific neighborhoods to speak, eat and celebrate the boat's journey; a conch shell trumpet announced the *acalli*'s passage; and Nahua water gods were invoked in speech. In this way, *Plan Acalote* wove together social, political and historical layers into a profoundly ecological artwork: a highly localized artistic response to the environmental problems of Xochimilco and Mexico City. Moreover, *Plan Acalote* not only references conditions such as Mexico City's pre-Hispanic Nahua past; it actively performs specific Nahua elements of ecological relevance.

How to begin approaching an ecological enquiry into this artwork? We must first concede that in *Plan Acalote*, the realms of reality which we class as ecological relations, artistic practice, and sociopolitical action shift and intersect. So too, then, must the theoretical discourses which attempt to examine it. I propose that in order to understand this artwork, it is necessary to readdress the very notion of environment in such a way that accounts for its agency, or the agencies which comprise it, and the way in which relations come to be and transform in such a context. It is also helpful to question why and how these agencies have

been muted and deleted from modern Mexico City in the first place, if we are to more effectively recover knowledge from their participation in *Plan Acalote*. These are the theoretical notions which I will explore in the following pages.

To this end, in this chapter my aim is to overview the concepts of agency, matter and becoming, forming the basis of a posthumanist ecological perspective and conceptualization of the environment. The following section begins with a broad perspective on posthumanism, in order to establish a sense of direction and intentionality of this approach (namely in response and comparison to modern humanist metaphysics), with a historical account of its academic origins and some general positions and problems. I will then narrow the scope of posthumanism to a materialist, performative line of thought, through a focused overview encompassing the work of key theorists. Drawing from and synthesizing various proposals, I sketch the notions of agency, matter and performative becoming and begin to explore the ways in which they might be applied to this case. In the third section, I will apply this framework to construct a more specific and justified ecological approach. Subsequently, I will briefly explore the position of contemporary art in relation to the aforementioned theory by conducting a literature review of recent scholarship, thus situating the contribution that this thesis may offer to such discussions. The chapter concludes with a summary of the aims of this thesis, the theoretical framework I will employ, and its methodological consequences.

1.1 An Introduction to Posthumanism

In order to introduce the position and relevance of a posthumanist framework for this investigation, I refer to its historical academic and philosophical lineage: posthumanism can be described as an upheaval and reconsideration of classical humanism; namely, the European ideal of reason and enlightenment which privileged and separated humans from the world through reason. Such a perspective corresponded with an exaltation of language, science and abstraction, seemingly existing on a different sort of plane than that of material reality; it was this which humans, or more accurately, Man, the privileged knowing subject of culture, could exceptionally access. In the same move, such a separation of Man effectively inaugurated the complimentary category from which he was distinct: the objects of nature available for consumption and conquest. Furthermore, as postcolonial and feminist critics point out, this passive landscape of everything less-than-human not only included land,

animals, and resources, but various "others" of Man, such as women, indigenous populations in European colonies, and queer people.[4]

Understood this way, the anthropocentrism and metaphysical division between nature and culture can be argued to have ushered in today's urgent problems of ecological devastation and climate change, as well as the historical roots of the subjugation of entire human populations. As such, various authors convincingly argue that it is ultimately unsustainable to continue upholding this metaphysical archetype (which I will henceforth refer to as modern humanism), and instead advocate that a drastic upheaval of the underlying assumptions of contemporary life is due. This claim is supported by the wide array of contemporary circumstances that have interceded and contradicted the paradigm of classical humanism, leading to a variety of reflections from various disciplinary angles.

A few examples are pertinent in providing a sense of scope for this position, though the following is far from a complete overview: feminist scholar of science studies Donna Haraway points out that technological and biological advances have blurred the lines between "human," "life" and "machine," such that the boundaries of species can be reworked, dissolving differences between humans, cyborgs and animals.[5] Climate change, according to French philosopher Bruno Latour, reveals that "nature" is not inert, but designates powerful forms of agency ignored with the inauguration of "culture," revealing these terms to be historically located and disputable concepts, both logically and tangibly inseparable.[6] Science studies and particle physics, shows American theoretical physicist and feminist theorist Karen Barad, imply that scientific measurement does not constitute an act of pure reception. Rather, it is an inter- or "intra-action" between measures and measuring entities, a reflection which resonates with Latour's suggestion for a grounding or "terrestrialization" of scientific knowledge.[7]

This general displacement and disavowal of an exceptional, anthropocentric privilege over the world heralds a cross-disciplinary shift of perspective that permeates a wide range of topics and practices (not to mention provoking variety of evocations in popular imagination and culture) in a heterogeneous movement broadly referred to as posthumanism. Such a

4 See Braidotti, "A Theoretical Framework," 8–9; Braidotti, The *Posthuman*, 201; McClintock, *Imperial Leather*, 24, 43–44; Barad, "Posthumanist Performativity," 801–805.

5 Haraway, "A Cyborg Manifesto," 151–152; Haraway, *The Companion Species Manifesto*, 4–5.

6 Latour, *Facing Gaia*, 13–19.

7 Barad's agential realist ontology draws from the epistemological work of Bohr, who challenged not only classical Newtonian (implicit meta-)physics, but also the deeply set Cartesian dualism of subject/object, in response to discoveries made in the first quarter of the twentieth century in particle physics. Barad, *Meeting the Universe Halfway*, 118–129. On terrestrialization, see Latour, *Facing Gaia*, 180.

perspective will considerably extend the possibilities for analyzing the *Plan Acalote:* in this piece the *acalli* and *acalote*, as well as the pavement, water and cityscape, all acquire qualities of liveliness and agency. They present social, political and spiritual traits; and human "subjects" in the artwork do not appear to relate to merely passive "objects" of culture or of "nature." These hybrid aspects of the performance, I will argue, are indicative of a relational logic harking from the Valley of Mexico's pre-Hispanic cosmovision, in which dynamic and lively relations existed between Nahua humans and gods embodied in the environment. This worldview, however, was quelled and transformed after the Spanish conquest of the Valley of Mexico in 1521, and the imposition of humanist logics prevailed, underlying the city's modernization over the next five hundred years. My proposal, then, is to theoretically re-animate the agency of the nature, or furthermore, of the natural and cultural environment of Mexico City in a contemporary setting; in this way, posthumanism will serve to shift our assumptions out from under this conceptual shadow. To accomplish this turn, I will first return to the most basic ontological understandings of the entities and things that compose our world.

1.2 Agency, Materialism, Becoming and Intra-Action

In this section I will develop the ontological base of my approach, that is, the explicit elemental assumptions about existence and its basic components from which I depart. The Nahua cosmovision I wish to access is generally studied through historical sources or ethnographic and anthropological studies of contemporary populations whose customs contain hybridized echoes of the pre-Hispanic past (Xochimilco is, indeed, one such population of study).[8] Yet *Plan Acalote* poses a uniquely performative way of incorporating this metaphysical construction into artistic practice: it actualizes a theoretical worldview through tangible action. Therefore, a (new) materialist and performative point of view in this thesis will precisely allow an examination of the causal effects of and around the artwork by focusing on material phenomena.[9] The present overview draws from a collection of

8 Other contemporary Nahua populations exist in different states of Mexico, having evolved in particular ways. However, I limit my consideration to a) the historical legacy of the Nahua population located in the center and south of the Valley of Mexico and b) the contemporary idiosyncratic landscape and culture of Xochimilcas, a subset of people directly descended from this particular group.

9 Primarily Barad's agential realism and Latour's Gaia theory. I also draw, for further clarification or insight, from the work of American environmental humanities Stacy Alaimo, American new materialist philosopher and political theorist Jane Bennet, and Italian philosopher Rosi Braidotti. Alaimo, in turn, identifies two lines of common antecedents to posthumanist, materialist perspectives: a turn away from language in the work of philosophers Baruch Spinoza and Gilles Deleuze (with Félix Guattari), and a rereading of poststructuralist theorists such as Jacques Derrida, Michel Foucault and Judith Butler. Alaimo, *Bodily*

contemporary sources; though different authors offer particular proposals, I aim to delineate a generally concordant framework as follows.[10]

I begin by taking up from Latour the radical possibility offered by posthumanism to address environmental problems by re-examining the notion of agency. Etymologically, agency is derived from the Medieval Latin *agentia* and its root in *agent-*, *agens*, meaning "something capable of producing an effect."[11] The discussion of what exactly constitutes agency has long been pondered from various disciplines; I focus here exclusively on theoretically materialist perspectives. Latour points to the fact that although it is more common to speak of the agency of humans, we can easily conceive and describe nonhuman entities—such as a river, a molecule or a country—as doing, effecting, affecting and sensing. Similarly, American philosopher and political theorist Jane Bennett describes matter's "vitality" as "the capacity of things—edibles, commodities, storms, metals—not only to impede or block the will and design of humans but also to act as quasi agents or forces with trajectories, propensities, or tendencies of their own."[12] Anthropologist Tim Ingold also focuses on the relation between agency, matter and vitality. He notes that the agency which we describe as belonging to living things does not sit on top of, but within the fluxes and configurations of matter, such that "things are in life rather than life is in things."[13] Indeed, the edibles which Bennet suggests are exactly the same sort of matter which give life to the animals which consume them; fruit and crops, in turn, depend on the vitality of the weather in order to grow. Therefore, we can conclude that there is no truly fundamental difference; and while finer distinctions may still be made between life and other forms of agency (and will be explored in the following section), it becomes clear that even on the most basic level, agency and matter cannot be separated.[14] Indeed, Barad's materialist proposal of agential realism suggests thinking of agency, then, not as a property which happens to be attached to matter:

Natures, 6.

10 New materialism is used to distinguish this approach from a traditionally Marxist understanding of materialism. Materialist posthumanism defines the approach I consider here in contrast to teleological or transcendent "trans-humanism" which shall not be addressed in this work. Feder, "Ecocriticism, Posthumanism," 226. See also Hayles, *How We Became Posthuman*, 3–4.

11 "Agent," Merriam-Webster, accessed October 25, 2019, https://www.merriam-webster.com/dictionary/agent#etymology.

12 Bennett, *Vibrant Matter*, viii.

13 Ingold, "Materials Against Materiality," 12.

14 Even in modern physics, matter and energy can be understood as interchangeable: that something is material means that it can and does interact with the world through various mechanisms (electromagnetic charge, mass, etc.). Indeed, thinking about flows of energy is perhaps a useful tool for thinking about this problem as a sort of monadism compatible with contemporary science.

matter, she states (as can be read in this chapter's epigraph), does not exist before or separate from agency.[15] In other words, matter is immanently agentive.[16]

In *Plan Acalote*, then, it becomes possible to reconsider the proposal that the *acalli* boat, as mentioned previously, can be described as drawing an *acalote*. Latour argues that this evocation is not at all a property of language or an issue of representation; rather, this description of effect is a reflection of the reality of things in the world. If we were to attribute the agency of the *acalote's* creation in the artwork only to humans, we might miss an important step of the process: the capacity and agency of the *acalli* boat itself in the landscape of Mexico City. We might indeed further explore the agency of any material thing or configuration; for example, of the artwork itself. Fundamentally, Latour argues that it was only modern humanism's over-animation of "human subjects" that created the illusion of de-animating non-human "natural objects," although these are all the time acting.[17] Thus, he argues, if the stripping of agency of natural entities indeed contributed to facilitating their exploitation, then a re-thinking, in effect a "redistribution," of agency may be in order to change the basic theoretical premises of any environmental discussion.[18] This will be one of the central guiding premises in the following chapters.

With this strategy in mind, what are the further implications of a strictly materialist investigation of agency? If matter and agency do not precede each other, following Barad, an agent is defined by nothing other than its agency. That is to say, the only thing which gives any material configuration an identity or meaning are its actions.[19] An *acalli* boat is only an *acalli* because it acts in some *acalli*-like way; not because it has some inherent *acalli*-like essence. Barad argues that the metaphysical structure that supports humanism, in contrast, is not materialist: it holds truth to exist in the realm of reason, which does not manifest in the real world. But in a posthuman materialist account, humans, animals, or "inanimate objects," do not have either a scientific or divine essence.[20] Their performances, in this way, are ontological: how things behave is what they are, and vice versa; existence is always a material phenomenon. I will elaborate on two key insights derived from this strictly

15 Barad, "Posthumanist Performativity," 828.
16 Barad further states: "Matter is neither fixed and given nor the mere end result of different processes… Matter is agentive, not a fixed essence of a property of things." Barad, *Meeting the Universe Halfway*, 137.
17 Latour, "How to Better Register the Agency," 102–103.
18 Latour, *Facing Gaia*, 120, 235.
19 Barad also explains that this is what gives "meaning" to the world, thus bridging discursive and ontological realms. Barad, "Posthumanist Performativity," 817–820, 826–827.
20 Barad, *Meeting the Universe Halfway*, 137–138.

materialist account of agency: on the one hand, it implies an ontology which is both temporal and changeable; on the other, this ontology is necessarily relational.

Firstly, the temporal/changeable dimension of agential matter can be traced to the Greek philosopher Heraclitus of Ephesos, who, as quoted by Plato, stated that "We never step into the same river twice."[21] This aphorism can be taken to critique the atemporal notion of *being*: in this case, some eternal essence of river-ness. A materialist posthumanist account, instead, considers not the concept of being, but of *becoming* a river. This notion of transformative existence was central to French scholars Deleuze and Guattari's *A Thousand Plateaus*, in which they explored the idea of becoming as a material configuration. Taking another example, they explain that one can direct one's agency towards "becoming dog" by barking. Becoming is understood not as an imitation or reference, but in the sense that actual molecules of matter are reconfigured such that a barking sound is emitted (the position of one's body and mouth, the air drawn in and expelled by one's lungs, the material phenomenon of sound waves moving through air, etc.).[22] They explain: "Do not imitate a dog, but make your organism enter into composition with something else in such a way that the particles emitted from the aggregate thus composed will be canine as a function of the relation of movement and rest, or of molecular proximity, into which they enter."[23]

In the example of "becoming dog," it is clear that not only is the identity of matter changeable and transformable through performance; it is also always relational. The molecules with dog-like qualities are such because they touch other molecules, producing dog-like effects which can be attributed to the barking agent. Philosopher and feminist scholar Rosi Braidotti notes that in materialist posthumanism, the notion of becoming dislocates individuality and reason (i.e. the classically defined "enlightened" human) towards an ontology of process or relation: we do not exist singly but are bound to others in our very material existence, which is not permanent but always a process.[24] Indeed, nothing truly *is* in a void, but in the world; nothing acts alone but against or with other things. Barad proposes the term "intra-acting," (to replace the notion of interaction) a concept which emphasizes the fact that agency does not precede relation: rather, agency emerges with intra-action, an inseparable and collective material becoming. Any phenomenon is always the result of intra-acting components; that is, the phenomenon/relation is caused by both of them.

21 See for more in-depth analysis and attribution issues Stern, David G., "Heraclitus' and Wittgenstein's River Images," 2.
22 Deleuze and Guattari, *A Thousand Plateaus*, 272–273.
23 Ibid., 274.
24 Braidotti, "Nomadic Ethics," I.–II.

The key consequence of this second, relational quality of reality is methodological: Barad further argues that a possible way of investigating agency, then, is by studying not independent objects, but relations.[25] A rower and a boat, for example, define each other: a rower is such because they row a boat, in an ontological and transformative, albeit temporary way. In a materialist perspective, identifying this sort of relation in the artwork does not mean that either one of its components is fundamentally active or passive with respect to the other; i.e., that it is essentially a subject or an object. Rather, "rower" and "boat" are different configurations of matter, and these differences allow for a causal intra-active phenomenon to unfold, that of "rowing" which produced movement. But ontologically, both "rower" and "boat" enabled each other's becoming.

Two main considerations derive from this framework of performative becoming (i.e., existence as temporally changing and relational) in my analysis of *Plan Acalote*. Firstly, just as a rower and boat can be understood to enable each other, did the artwork provoke some section of the paved city landscape to actually transform and become an *acalote* when the *acalli* boat traversed it? To answer this, it will be necessary to investigate how an *acalote* actually performs, and then evaluate if the pavement acted in this way. That is to say, it will be necessary to discover what sort of agential relationships are evoked when the word *acalote* is used to describe a particular material participation in a phenomenon. For example, what sort of relations have been identified in the past as occurring between *acalotes* and *acallis*, or *acalotes* and humans?

Secondly, this framework of fluid and ephemeral identity will enable me to take a different approach to *Plan Acalote*'s historical context. In the following chapter, I will revisit the notion of the history of the Valley of Mexico and of the Xochimilca as a story of becoming: rather than explore periods of fixed bodies, buildings and nature, I will pay attention to the flows of matter which enabled Mexico City to continuously develop as the natural/cultural environment of today. I will particularly examine the origin of *acallis* and a*calotes,* and the ways in which such performances have been significant in this context. This will allow me to situate *Plan Acalote* within these flows, and thus to better understand the factors it responds to as well as the response it poses. In other words, I will be able to base my enquiry on the assumption that the agency of the environment and of the artwork are engaged in an intra-active relationship.

25 Barad, "Posthumanist Performativity," 814–815.

1.3 Ecologies and Environments

Certain basic ontological precepts of materialist posthumanism have been discussed up to this point. How might an ecological perspective be adjusted by incorporating these premises, and how might the ensuing framework contribute towards investigating *Plan Acalote*? Conventionally, a study which concentrates on the relationships between organisms and their environment is known as an ecology.[26] But if, following Barad, agencies do not have fixed properties which precede their relation but emerge in intra-action, then it becomes difficult to determine a priori the identity of these components. Instead, attention might be focused on the types of relations which cause us to construct the categories of organism and environment. I suggest, to this effect, considering the natural/cultural relation proposed by Ingold: he starts from the premise that human beings (including those investigating ecologies) are not composites of body, mind and culture, but that a person *is* a type of organism, in fact, an organism-in-its-environment. The perception of living things, then, is not inside or layered onto an organism's pre-determined form (their genetic code or the shape and mechanisms of their body). Instead, perception is a "creative nexus of development and awareness" *in* a field of relationships, the organism/environment continuum in which form emerges: the process which constitutes life itself.[27] In other words, life cannot exist without the agency of both the environment and the living organism: perception lies not in organisms, but in the boundary of their relations with "environmental" matter, which is also agential. Life, therefore, is intra-active. This kind of dynamic connectivity and flow might become the focus of a materialist ecological enquiry.

My premise is that by studying *Plan Acalote*, which contains a fascinating array of creative relations between organisms and environmental agencies, we might learn about the ecological relations of Mexico City. As the artwork originates more specifically in the Southern area of Xochimilco, studying the ecology of this area and its history through the artwork might also lend particular insights which then reflect upon the greater urban area. How precisely might an investigation into the ecological relations of the Valley of Mexico change when we assume ourselves to be organisms-in-an-environment? Ingold states that an environment can be understood temporally and relationally as "a world that continually unfolds in relation to the beings that make a living there." Its properties then "are neither objectively determined nor subjectively imagined but practically experienced."[28] So to study

26 Park and Allaby, "Ecology."
27 Ingold, *The Perception of the Environment*, 19.
28 Ibid., 14.

the environment of the Valley of Mexico, in the terminology of this paper, we might examine the way in which it becomes an environment-to-organisms and vice versa. Two proposals follow.

Firstly, I suggest that ritual becomes a potential candidate for ecological research. In the materialist turn of anthropology and religious studies, scholars John McGraw and Jan Kraty argue that rituals can be studied as events of heightened human response to the agency environmental elements or objects.[29] A comparison between *Plan Acalote* and pre-Hispanic Nahua pilgrimages to the water god Tlaloc, then, becomes more interesting: apart from formal similarities, *Plan Acalote* perhaps also performs the relation of humans and boats to water, recognizing their agency. This is a relation which is ecological, because it enables life to continue. How, we might ask, is the vital dependence of humans on water performed in each of these cases? What can we learn about the environment by focusing on the ritual performance of perceptive human organisms? A second and more specific tactic I will employ is also suggested by Ingold. He further strives to bridge the gap between the biophysical and the sociocultural by re-working "cultural" differences into variations of "skills." Rather than technical abilities, skills for Ingold are biological/cultural capabilities of action and perception in an environment. They are not inherited by organisms, but developed through a field of relations between human and nonhuman entities.[30] I will also, then, examine the perceptive potential of *Plan Acalote* through the skills developed in the artwork.

More generally, the vital connection between environment and culture leads to a pivotal ecological premise from materialist posthumanist authors: the existence of a cross-cultural, cross-organism ethical obligation towards an enhancement and enabling of life. Braidotti, for example, recognizes the ethical consequences of an understanding of humans not only as culture or polity but also as species, obligating us to confront a wider range of topics in a natural–cultural continuum. She argues that we must expand our ecological knowledge both affectively and critically/intellectually, including the reconsideration of the humanist "we" and its relationship to "other" "cultures."[31] Indeed, since humanist metaphysics implied an otherness not only of nature but of entire indigenous communities within colonial contexts, the displacement of this premise is essential to ethically addressing

29 McGraw and Kratky, "Ritual ecology," 237–289.

30 Ingold has effectively applied this framework in approaching the ecological knowledge of Cree hunters of northeastern Canada, to understand different descriptions of interaction not as analogies, symbolisms or mere cultural construction, but as arguably immanent and ontologically profound. *The Perception of the Environment*, 29–31

31 Braidotti, *Posthuman Knowledge*, "Introduction" para. 7, chap. 1 para. 10–11.

multiple ecologies. As Braidotti suggests, drawing from Deleuze and Guattari, "we need to compose a new people and a new earth."[32]

An important methodological consequence and example of such ethical engagement coincides with the approach of Brazilian anthropologist Eduardo Viveiros de Castro towards non-Western cosmovisions and ecologies. If these types of knowledge are taken, he argues, as mere representative or symbolic systems, it implies judging them against a single enlightened truth of Western science. Such a gesture would reiterate an attitude of colonial imperialism and is ultimately unproductive and unnecessary.[33] Therefore, an ontologically broader and transversal framework must be established in order to deal with multiple situated cosmovisions or worldviews; my proposal is to establish such an approach through a posthumanist ecological view, as presented here. My aim is precisely to avoid the transcendental assumptions of humanism while actively bridging and engaging different ecological knowledges: facts of contemporary science and scholarship, and the performed knowledge of Xochimilca people, their Nahua ancestors, and contemporary inhabitants of Mexico City. The question which remains, then, is the following: what does contemporary art performance bring to the table in investigating and responding to cross-cultural ecological problems (specifically, with Western and non-Western elements; contemporary and historical, factors)? What has been the relationship between contemporary performance art and non-Western Mexican cosmovisions, and how—if at all—has this convergence been explored as conducive to ecological change?

1.4 Alternative Cosmovisions and Ecological Perspectives in Art

The extent to which art may help generate productive encounters between different worldviews or cosmovisions to further ecological goals has swiftly gained attention in recent years. In particular, as a response to the problems posed by classically humanist metaphysics, alternative worldviews often stand in contrast to the Western ideals imposed in European colonies. While *Plan Acalote* is artwork that responds to the particular clash of Nahua and Spanish cosmovisions characterizing Mexico's contemporary situation, parallel proposals can be found in North American scholarship. Métis anthropologist Zoe Todd's chapter in the 2015 volume *Art in the Anthropocene* advocates for the necessity of integrating indigenous ecological imaginations into academic and artistic spaces for more ethical and effective

32 Braidotti, "A Theoretical Framework," 22.
33 See Viveiros de Castro's commentary in Bird-David, "Animism Revisited," 79–80.

environmental art.[34] Not only does this position suggest that art is a viable way of accessing different worldviews for furthering ecological objectives, it also frames this engagement as a necessity. In the same volume, Laura Hall—a scholar of indigenous knowledge and environmental sustainability—describes the care of her Mohawk/Haudenosaunee mother's garden as a form of artistic practice, by engaging indigenous aesthetics which dictate a particular relationship of responsibility to the land.[35] Some concordance between the worldview she discusses and posthumanist perspectives and theory can even be detected in her reference to the Lovelock's Gaia concept, which indeed inspired Latour's ecological proposal for redistributing agency.[36] Ultimately, though, Hall's take on Gaia (roughly, the interdependence of all material things on the surface of the Earth enabling life) resonates with the opinion of American scholars Jessica Horton and Janet Berlo: these authors crucially note that the "new-" and "post-" prefixes of new materialism and posthumanism, and their attached suppositions of radical newness, are qualifiers of Western thinking, as opposed to other intellectual traditions. This entails that the posthumanist perspective risks maintaining a boundary of otherness: unless it engages with indigenous people's intellectual traditions and contemporary artistic activities "on their own terms," it will remain a more self-reflective than transversal exercise.[37]

This is an important criticism of posthumanism which I hope this work can help address. Unlike their ancestors at the time of the Spanish colony, contemporary Xochimilca people are not classified as "indigenous" according to most official sources. Principally, this is because they no longer speak a native language distinct from Spanish. It can also be argued that they are not equivalent to their pre-Hispanic ancestors for many reasons, and are contemporary urban Mexican citizens; yet this is also true, of course, of many other officially indigenous populations, all of whom have gone through processes of adaptation and hybridizations in the five hundred years since the Spanish conquest of Mexico. Nevertheless, due to a long period of relative independence even after the conquest, Xochimilcas can be still argued to have inherited aspects of a unique cosmovision and relation to the land; a worldview which, indeed, does not fully fit into modern humanist metaphysics.[38] And it is this material context from which *Plan Acalote* arose. To bring *Plan Acalote*, and therefore its

34 Todd, "Indigenizing the Anthropocene," 248–249.
35 Hall, "My Mother's Garden," 284–285.
36 Ibid., 288.
37 Horton and Berlo, "Beyond the Mirror," 20.
38 This topic will be further explored in the second chapter. See Martínez, "Cosmovisiones, Rituales y Simbolismo," 26–28.

Xochimilca environment of human and nonhuman agencies, into dialogue with broader work on indigenous ecologies in contemporary art with a posthumanist approach may not only prove a productive discussion with novel elements—it may also present a relevant case for using this theory to approach and bridge non-Western worldviews, while admitting that these are always already both contemporary and hybrid. Further, this exercise may even help nuance and challenge the uses and definitions of the indigenous label or identity in the context of Mexico.

Indigenous cosmovisions are largely historical, anthropological and ethnographic topics in Mexico, and have been less readily approached in scholarship dealing with contemporary art. Perhaps this is because in Mexico, the use of indigenous or otherwise pre-Hispanic elements in modern forms of art began in the twentieth century, responding both to a politicized racial nationalism of the time as well as the global movement of primitivism.[39] The depiction of bodies with indigenous traits, for example, was elemental Mexican modernism. But even today, more contemporary forms of art have been more readily treated through relatively narrow theoretical lenses: art historian Fernando Rojo Betancur, for example, surveys the use of ancestral "ritual, myth and symbol" in Latin American art from the mid–twentieth century to the present. This sort of study is exemplary of iconographic approaches in which non-Western elements are taken as symbols and representations of history rather than active and performative agents, even if somewhat re-signified in their use in contemporary media.[40] Regarding the intersection of performance pieces and alternative cosmovisions, the theme of ritual in contemporary and performance art is a popular one, but its treatment in scholarship does not engage with environment and territory; meanwhile, these topics are flourishing in contemporary ritual landscape studies of Mexican ethnography, anthropology and archaeology. For example, in the popular subject of Ana Mendieta's performances in Mexican archaeological sites, theorists tend to anthropocentrically center the human body, and references to pre-Hispanic or indigenous worldviews are relegated to generic paradigms of primitivism.[41]

Plan Acalote, however, demonstrates that Mexican contemporary art can engage with alternative cosmovisions in surprising and creative new ways. It is urgent, therefore, to

39 See for example González Salinas, "La Utopía de Forjar una Sola Raza."

40 Rojo Betancur, "Artistas Lationamericanos," 153–154.

41 See, for example, the treatment of pre-Hispanic cultures in Blocker, *Where is Ana Mendieta?*; Moure, *Ana Mendieta;* Ceppas, "Ana Mendieta." For examples of other politically relevant but comparatively anthropocentric approaches to ritual in contemporary art see, for example, Ultan, "From Personal to Transpersonal," 32–33; Adan, "Matter, Presence, Image," 238–249.

update the theoretical treatment of Mexican indigenous or pre-Hispanic elements in art. A relevant theoretical study of similar work, but in Colombia, is Jorge Lopera Gómez's examination of the contemporary art of Abel Rodríguez; Lopera focuses on detecting and highlighting the importance of Nonuya worldviews in his understanding of social and ecological systems of the Amazon region.[42] However, his analysis is effected through a mainly post-colonial framework and thus unfolds on a primarily political and discursive plane, rather than ecological and ontological. Yet it points to the importance and radical possibility of native cosmovisions in art, especially in the context of Latin America's colonial history, as a way of addressing problems of intertwined politics and ecology. Further, this example is illustrative of the fact that artistic ventures associated to non-Western Latin American cosmovisions are often pictorial; in Mexico, art forms dealing with the pre-Hispanic past or contemporary indigenous culture often rely significantly on indigenous or native aesthetic traditions (associated to, for example, colorful weaving, ceramic or sculpting crafts). *Plan Acalote*'s use of Nahua cosmovision, on the other hand, manifests in an emphatically de-aestheticized, performative format. This strategy, indeed, is perhaps crucial to the artwork's ecological effectivity: already in 2008 John Thornes highlighted the importance of the transition from representational landscape art to performative environmental art in the face of ecological problems, as this shift in practice can be understood to be based upon the recognition of humans' inseparability from the landscape.[43] In other words, environmental art that still draws a distinction between nature and humans risks continuing to support the anthropocentric discourses underlying natural devastation. Artistic strategies that imply active participation of human organisms in their environment, on the other hand, might harbor potential for surpassing this dichotomy and building new environmental sensitivities.

1.5 Research Aims and Theoretical Framework Summary

It is now possible to locate the contribution of this thesis in relation to the aforementioned areas of enquiry. *Plan Acalote* brought together two key strategies which have been argued to be of great consequence, if not essential, for ecologically relevant art today. Firstly, the piece was an open-ended experiment in performative and participative art, *with* the environment. Secondly, *Plan Acalote* specifically had its origin in Xochimilco's natural/cultural landscape

42 Lopera Gómez, "Cosmovisión Nonuya e Imagen Poscolonial," 249–252, 267–268.
43 Thornes, "A Rough Guide to Environmental Art," 391–394.

inherited from the pre-Hispanic Nahuas, and so incorporated elements of the cosmovision of the Valley of Mexico's past. More specifically, the main research question guiding this thesis, as stated in the introduction, can now be revisited: how might Nahua cosmovision in *Plan Acalote* contribute to a better understanding of Mexico City's ecological problems and their possible solutions, with a posthumanist conceptualization of the environment? My aim with this query is to explore the ways in which the environmental relationships of Mexico City can be conceptualized *and* performed with *Plan Acalote*. A secondary objective in this thesis is to weigh the application of a materialist and posthumanist ecological approach to dealing with topics at the intersection of different metaphysical constructions.

With the framework I will inquire into the way in which human and nonhuman agencies co-create each other performatively through intra-active practices, becoming as organisms-in-their-environment and environment-to-organisms: the very process that allows for the creative nexus of perception and awareness which we call life. I will particularly examine the sensitivity and awareness of environmental agencies through localized ritual practices and skills. An important methodological consequence is therefore that thinking, knowing, sensing and experiencing are transversal material, embodied and entangled procedures. These relations occur always in localized interactions; relations are subject to change, but may gain potential or force with performative reiteration: for example, the strong agency of facts of science, consensus in scholarship, or retold or recreated stories and histories. I also assume that an ecological approach involves an ethical obligation to investigate the matters stated above intellectually, critically and affectively.

The posthumanist ecological approach described in this chapter is useful to the topic at hand because it traverses disciplines and categories, but also in that it permits a multiplicity of worlds and ontologies, through its basic premises, which are themselves ontological. Hence, in the following pages I maintain an open intentionality towards applying, but simultaneously expanding, specifying and diverging this theoretical framework with Xochimilco's Nahua cosmovision. I have argued that this worldview can be understood as arising intra-actively from an environmental configuration of the past yet still appears, to a degree, traceable in the present. In order to understand its actualization in 2015 with *Plan Acalote*, then, in Chapter 2 I begin by identifying the key pre-Hispanic elements of *Plan Acalote* and conduct a historical overview to trace their origins, as well as of the artwork itself and its material emergence, with other agents, in performative becoming. This will allow for a more concentrated exploration of the Nahua cosmovision to which these pre-

Hispanic aspects lead. With this knowledge, in Chapter 3 I will present and analyze the artwork in detail, particularly the way in which it performs ecological relations, and end by reflecting on the results of this exercise.

CHAPTER 2

Mexico City and Xochimilco: From Nahua to Contemporary Environment

> "We should not thus think of the properties of materials as attributes. Rather, they are histories…To understand materials is to be able to tell their stories."
> —Tim Ingold, "Materials Against Materiality."

> "When we gazed upon all this splendor at once, we scarcely knew what to think, and we doubted whether all that we beheld was real…before us lay the great city of Mexico in all its glory."
> —Bernal Díaz del Castillo (sixteenth century Spanish conquistador and chronicler) *Discovery and Conquest of New Spain.*

If we are never fixed, but are always in the process of becoming, as human organisms we constantly have access to history through our own materiality: we are the fleeting result of temporary accumulations, exchanges and configurations of matter which shape our bodies and relations. But in a more conventional sense, of course, we perform history in many ways. Through narrative and language, for example, history materializes in written accounts such as this one, or the sound vibrations of spoken words. History is also performed through rituals, ceremonies and re-enactments: characteristic material arrangement of bodies—the agential matter of humans, environmental features, objects—which are repeated and continued over time. *Plan Acalote* performs elements of the history of Mexico City in both these ways. Firstly, the title of the work establishes a narrative using the Náhuatl words *acalli* and *acalote.* The language of central Mexico's pre-Hispanic past, when an aquatic landscape spanned the basin, thus determines the principal agents who participated in the piece; the boat and waterway become historical entities.

This observation, of course, leads to the second and more significant historical dimension of the artwork: the re-enactment of the journey of an *acalli* along Canal Nacional, La Viga and Roldán. As a commercial and cultural aquatic route, the particular path chosen for the artwork also harks back to Mexico's pre-Hispanic era, when Xochimilca people exported crops to feed the entire valley; a situation which was maintained for centuries, until it was fundamentally transformed in the twentieth century. Therefore, the history of *Plan Acalote*'s path is situated within the story of becoming Nahua in the Valley of Mexico, a proposal of history which implies that the valley and its human population engaged and

formed each other in constant material exchange. More specifically, I am interested in the history or story of becoming Xochimilca, in which *acallis* and *acalotes* acquire material significance. Indeed, *Plan Acalote*'s point of departure from Xochimilco (materially, creatively and physically) highlights the fact that this neighborhood is the last of the city in which the aquatic environment survives. Tellingly, *Plan Acalote* also echoes spiritual rituals of broader social and political significance: the practice of pilgrimage, especially processions to water gods embodied in the mountains. I propose that this aspect of the artwork can be best understood with a particularly Nahua notion of territory, which bridges ecological and political conceptualizations: the *altepetl*. In order to understand *Plan Acalote*, then, it will be of great use to explore its historical and conceptual context.

The main question guiding this chapter is, how do the pre-hispanic Nahua components of *Plan Acalote* contribute to an understanding of Xochimilco's environment, its ecological problems and their possible solutions? Namely, I suggest considering the key elements of *acalli* and *acalote* and the action of ritual pilgrimage in the artwork; these in turn can be better understood through the concepts of Xochimilca identity and territory. To answer this question, I will apply the posthumanist materialist approach elaborated in the previous chapter in order to trace the stories—as Ingold suggests in the quote opening this chapter—latent in the matter which came to form the present Xochimilca bodies, boats and canals of the Valley of Mexico. In this way, I will sketch a history of a people-in-their-environment, following Ingold; or further, a history of people-with-their-environment, in which such a story can be understood as a multitude of relations of becoming through material intra-action.[44]

I will begin by presenting a history of the pre-Hispanic Nahua Valley of Mexico in the following section, which will include explaining the particular type of human/nonhuman polity or territory known as *altepetl*. This concept will also serve to situate and understand the practice of ritual pilgrimage. While I rely here mostly on a conventional historical and academic style and methodology, I will also point out the ways in which events of Nahua history might reveal greater ecological insight through a posthumanist lens.[45] I will then delve more specifically into the becoming of Xochimilco, in order to develop the histories of *acallis* and *acalotes* with humans and environment. In doing so, this section also introduces

44 Ingold, "Materials Against Materiality," 424.

45 I draw from a variety of sources in contemporary research, largely based on accounts from the Spanish conquerors and codexes, mixing native and European conventions. This is a necessity due to the fact that most native knowledge and histories were destroyed in their various forms.

key skills which humans developed with boats and water, which would later be taken up in *Plan Acalote.* Subsequently, I will examine the transformation of the environment, territory and people of Xochimilco and Mexico City after the Nahua era: particularly, I will focus on the modernization of water and disappearance of canals in the twentieth century. In this final section, I will also finally return to contemporary Xochimilco and its current environmental and social situation, from which *Plan Acalote* can be argued to emerge. This overview of the artwork's relational, historical and material becoming will lead into a more specific analysis of the artwork's mechanisms in Chapter 3.

2.1 The Pre-Hispanic Environment of the Valley of Mexico

The Valley of Mexico has a long history of enhancing and enabling environment–organism relations. It is located at a height of 2,429 meters above sea level and covers an area of 9,600 square kilometers; about half of this area is flat land (slopes of less than fifteen percent), enclosed by mountains with elevations of over 5,000 meters above sea level, from which water drains into the basin.[46] According to contemporary archaeological accounts, hunter-gatherer human populations first appeared 22,000 years ago in the valley; the first agricultural activity began around 8,000 BC, establishing the first long-term human settlers in the area around 700 B.C.[47]

The Nahuas, a people who shared the common Nahuátl language and organized into different self-governing groups, flourished in and with the valley between the years 1200 and 1500.[48] Sixteenth century codexes relate that the god Huitzilopochtli emerged from a mountain and instructed the Nahua tribes to set out and find new land to dwell in.[49] The Xochimilcas were the first of the Nahua tribes to arrive and settle in the Valley of Mexico; they were followed by the Chalcas, Tepanecas, Acolhuas, Tlahuicas, Tlaxcaltecas and, most notoriously, the Aztecs (later Mexicas). A system of five lakes covering about 920 square kilometers spanned the basin: marshes and brackish lakes Zumpango and Xaltocan to the North, Texcoco in the center, and to the South the sweet spring-fed lakes of Xochimilco and Chalco (fig. 1).

46 Legorreta, *El Agua y la Ciudad de México,* 18–20.
47 Different accounts propose different dates; this one is given by Losada et al., "Urban Agriculture in the Metropolitan Zone," 38.
48 Ibid.
49 Martínez, "Cosmovisión, Rituales y Simbolismo," 63.

Fig. 1. Map of the Valley of Mexico at the time of Spanish contact showing the system of five lakes spanning the basin: Zumpango, Xaltocan, Texcoco, Xochimilco and Chalco.

The lakes, and related environmental factors such as rain, moisture, etc., can be described as having had the material effect or agency of allowing the Nahua arrival and establishment through diverse life-sustaining agricultural activities: they determined the material constitution and shape of architectural features, but also of the very human bodies who ate, breathed, excreted, lived and died in material exchange with the environment. These human bodies, in turn, shaped the landscape, thus becoming, humans and nonhumans together, the Valley of Mexico, a natural/cultural continuum. Notably, the Aztecs were located at the center of the ensuing environmental arrangement; they built Mexico-Tenochtitlan, the seat of their empire from which they dominated the other human populations of the valley, on an island towards the Western bank of Lake Texcoco. Causeways bridged the capital to the lake shores, and canals crossed the city, which could be travelled by foot or by boat. The result was Mexico-Tenochtitlan's characteristically complicated surfaces of water and land, which the Spanish conquistador Bernal Díaz del Castillo marveled at upon the arrival of

European troops to the Valley of Mexico in the sixteenth century (fig. 2). Other significant hydraulic features were dams to help alleviate flooding, a frequent seasonal problem for the human population in the area.[50]

Fig. 2. Detail of a modernist mural depicting the pre-Hispanic aquatic city of Tenochtitlan. Diego Rivera, *La Gran Tenochtitlan*, 1945, mural painting (Mexico City, National Palace of Mexico).

The Nahua tribes understood that they were vulnerable to the hydraulic mechanisms of the valley: mountains were home to the gods, expressing and embodying their power; they were the owners of water and of seeds, as they controlled wet and dry seasons, and therefore the life of crops and people depended on them.[51] The Nahuas' ancestors spoke of a paradisiac place called Tlalocan, home to the god Chalchihuitlicue, from which all rivers came and upon which all mountains were built, full of water; when the god wished, the mountains would break open and flood the land.[52] In these ways, then, the agency and vitality of mountains and water was explicitly recognized by Nahua people in their cosmovision, and was therefore crucial to their identity; material but also historical and political.

This concept was summarized in the Nahua concept *altepetl*: literally, water mountain or mountain full of water, from the roots *atl*, "water" and *tepetl*, "mountain." This was also, however, the term which designated human settlements; later it would equally be translated by the Spaniards as "town," "community," or "polity," i.e. a collection of buildings, natural

50 Legorreta, *El Agua y la Ciudad de México*, 25.
51 Martínez, "Cosmovisión, Rituales y Simbolismo," 81.
52 Sahagún, *Historia de las Cosas*, 344–345.

landscape, and population.[53] Another definition of *altepetl*, then, might be a group of people descended from a specific ethnic lineage, governed by a dynastic ruler or *tlatoani*, and who possessed a particular territory.[54] In other words, it can be considered an inherently natural/cultural conceptualization of a people-with-their-environment. Adapted to posthumanism, the notion of *altepetl* might help us recognize not only social interactions, but intra-actions: the material relations between people, mountains and water that together allowed Nahuas to live and constitute a territory. Following a materialist line of investigation, we might further study the concept of *altepetl* as a relational phenomenon by examining how is it performed.

Contemporary authors such as Johanna Broda (Mexican anthropologist, ethnographer and historian) have emphasized the importance of the *altepetl* in the last few decades, precisely noting that Nahua's worldview view did not exist only on a symbolic level. Cosmovision, argues Broda, was performed and manifested through rituals performed in the landscape, projecting them into "real space."[55] Two examples from ritual landscape studies are of particular note to this investigation: sacrifices offered in strategic and significant locations, and ceremonial routes of pilgrimage. Italian anthropologist Sergio Botta specifically notes the importance of pilgrimages to the Nahua god of water, Tlaloc, he "who is made of earth" and may be considered to literally embody the landscape.[56] Tlaloc is the original, deeply rooted owner of mountains, land and lakes. As pre-Hispanic religions generally functioned with a logic of reciprocal exchange and giving, this rendered it necessary for Nahuas to please and negotiate with the god/water/mountain in order to survive. Sacrifice, offerings and gifts materialized this logic.[57]

Botta dissects, in particular, the ceremony of Huey Tozoztli, in which the leaders and nobles of the Valley of Mexico's greatest *altepetls* (Mexico, Xochimilco, Tlacopan, Tlaxcala and Huecotzingo) would journey to the top of Mount Tlaloc and ask the god for the return of rain and agricultural prosperity, marking the end of the dry season. The ritual not only included human offerings in the form of bodily exertion implicit in the journey, but was accompanied by sacrifices of human children, as well as offerings of jewels, crafts and goods on the mountaintop.[58] What Botta crucially notes is that this ritual is as political as it is

53 Fernández-Christlieb, "Landschaft, Pueblo and Altepetl," 339.
54 Lockhart, *Los Nahuas Después de la Conquista*, 34.
55 Broda, "Political Expansion," 119–221.
56 Botta, "De la Tierra al Territorio," 181, 194.
57 Ibid., 193.
58 Ibid, 182–183.

spiritual. Whereas previous studies have emphasized the religious and agricultural nature of this sort of pilgrimage, Botta observes that the responsibility of communicating with Tlaloc and assuring the continued livelihood of the Nahuas was the true power and responsibility of sovereigns. In other words, with these rituals, humans negotiated and exchanged power with agential environmental entities; thus Nahua territory always became a sociopolitical *altepetl* through a mutual engagement between humans and gods embodied in the mountains and water. The *acalli*'s journey in *Plan Acalote* now can be understood to take on ritual qualities by evoking a territorial authority similar to that of water pilgrimages: a performance recognizing relation and effecting a negotiation with the environment's agency itself.

2.2 Xochimilco, A*callis* and A*calotes*

Some broad phenomena of becoming Nahua have been presented up to this point. To narrow the focus of these concepts to their application in *Plan Acalote*, I will continue by exploring the specific becoming of the Nahua community of Xochimilco. The pre-Hispanic Xochimilcas were the first tribe to settle in the Valley of Mexico. On the southern shore of the lake, they constructed an urban center containing the main temple to Huitzilopochtli and other civil, political and religious buildings; the *pueblos* (towns or residential areas) spanning towards the edge of the mountains; and *chinampa* farmlands built into the lake, a system of agriculture unique to the Valley of Mexico (fig. 3).[59] Their material existence arose gradually and with the energetic input of a variety of agents: the beds themselves were made by piling mud from the bottom of the lake into raised islands, whose soil was therefore highly fertile and did not require watering, as it absorbed moisture from the lake; a localized ecosystem developed, allowing for labor-intensive, but also varied and high-yielding crops throughout the year.[60] The islands also afforded a habitat to mammals and birds, who populated the area and became integrated into human diets.[61] *Chinampas* can be conceived, then, as a decidedly

59 Martínez, "Cosmovisión, Rituales y Simbolismo," 80. The majority of the chinampas were in Xochimilco, but some were also built around Tenochtitlan, and in the northern lakes. Comparable pre-Colombian agricultural system are suggested by remnants of ridged or raised fields in Surinam, Venezuela, Colombia, Ecuador, Peru, and Bolivia. It is likely though that these relied not on permanent water supplies like the chinampas, but on seasonal flooding, and they present a significant array of differences which are not yet completely understood. The chinampas of Xochimilco which survive today are the only example of such a system in continuous use from pre-Hispanic times to the present, therefore preserving, to a significant degree, a historic Nahua agricultural landscape. Wetland farming today exists in other parts of the world in different configurations with multiple variations. Denevan, "Aboriginal Drained-Field Cultivation," 648; Comptour et al., "Wetland Raised-Field Agriculture," 2–3, 14.

60 Merlín et al., "Environmental and Socio-Economic Sustainability," 217.

61 Narchi and Canabal Cristiani, "Percepciones de la Degradación Ambiental," 9.

natural/cultural landscape of constructions, plants, water, soil and farmers, navigated by land and boat.

Fig. 3. A view of *chinampas* in Xochimilco, Mexico City, today, originally constructed by the pre-Hispanic Nahua population.

In effect, *chinampa* farming unfolded thanks to both human and environmental agency: the vitality of humans encountered the vitality of plants, and plants derived their vitality from soil and water. Further, this agricultural relationship allowed the Xochimilcas not only to develop but also to maintain their autonomy in political, cultural and social affairs. Through a series of wars and rivalries the Xochimilcas fought and were eventually defeated by the Mexicas in the early fifteenth century; but although they lost additional land area, the Xochimilcas were permitted to continue living on the shore and mountainsides and working the wetlands thanks to their agricultural prowess, under tributary obligation to Tenochtitlan. Xochimilcas remained an independent *altepetl* with their own sovereign and internal organization (a fact exemplified in the participation of Xochimilca leaders in the ritual pilgrimage to Mount Tlaloc). With the land, the Xochimilca *altepetl* continued to produce food for all of the Nahua population. The Xochimilcas transported and delivered their crops by boat or *acalli*, and causeways were built connecting the Southern *chinampas* to

the Templo Mayor, the largest of Tenochtitlan (some of which still exist today as major highways and avenues).[62]

Fig. 4. A late seventeenth century paining depicting boats and canals on Paseo de la Viga. Pedro de Villegas Marmolejo, *Paseo de la Viga con la iglesia de Iztacalco*, 1638-1642, oil on canvas, 143.3 x 171.4 cm (Mexico City, Museo Soumaya).

Perhaps even more significantly, the pre-Hispanic economic and political setup enabled by *acalotes* and *acallis* continued even after the Spanish conquest in 1521.[63] Xochimilco's Southern chinampas were relatively removed from the colonial capital that was being constructed on the ruins of Mexico-Tenochtitlan, and were an irreplaceable food source both for the native and Spanish population. For this reason, the Xochimilco-Chalco lakes were preserved and continued to be tended by indigenous farmers.[64] In fact, in the eighteenth century, the Nahua communities around these lakes were still flourishing; American historian Richard Conway argues that this was thanks to the boats and waterways which still connected Xochimilco to the city center, an extremely efficient means for transporting goods, compared

62 Martínez, "Cosmovisión, Rituales y Simbolismo," 79.

63 During the colony, new crops, farm animals and European technology were introduced to the agricultural sector; slash and burn techniques in other parts of the valley were replaced by permanent agriculture, and so deforestation as well as mining activities affected the environment. Losada et al., "Urban Agriculture in the Metropolitan Zone," 38.

64 Candiani, "Reframing Knowledge in Colonization," 243.

to land transportation prior to the industrial revolution (fig. 4).[65] *Acallis* bolstered the economy of the colony, but also of the indigenous people and their cultural and political life in various ways: farmers' crops could be distributed and sold, as well as the goods of fishers, hunters and other traders; boat makers and rowers made a living by providing transportation; and artisans were also able to go easily into the capital to sell their wares, contributing to the preservation of indigenous crafts and cultural production in Xochimilco.[66] The knowledge and service of Nahua rowers was even used as leverage in economic and political negotiations.[67] Not until the twentieth century would this change.

Acallis and *acalotes*, then, enabled Xochimilcas to develop crucial skills for their survival: rowing and sailing. In Ingold's terms, these can indeed understood as "capabilities of action and perception of the whole organic being (indissolubly mind and body) situated in a richly structured environment."[68] Learning to lead an *acalli* implies a continuous spatial, material understanding, as well as a response to the environment from moment to moment. A poler dips a long wooden pole into water, perceives its depth, the distances between the banks of the *acalote*, plans a path across the surface. The water, boat and plants carry the human agent; they might stop, block or negotiate a passage with the material bodies of poler and boat. The human must be actively aware and engaged with this agency. The skills of rowing, poling and sailing, like *chinampa* farming, were developed in close proximity and direct contact with aquatic and *acalli* agencies, and were integral to the Xochimilca becoming with the agricultural and aquatic environment. Together, they formed the material base of the particular constitution and continuation of Xochimilco as *altepetl*. The pre-Hispanic aquatic routes which enabled such a process are, in fact, the same ones which were re-activated with *Plan Acalote* in 2015.

Finally, the historical importance of boats and canals is also highlighted in Nahua language: *acalli* (fig. 4) literally means "water house," or a house which is in the water, from the roots *atl* or "water" and *calli* or "house." Today this term is generally translated as "boat."[69] *Acalli* and *otli*, "road," are the roots of a*calote*, which is sometimes translated directly as "canal," but is more accurately understood as "boat road," or "boat path;" perhaps, then "water house path," or, for some, "water path." However, if *acallis* and *acalotes* are to

65 The higher elevation of the Southern lakes also allowed an easier journey towards the capital with long, thin and shallow *acallis* laden with goods, and an easier sail back once unloaded. Conway, "The Aquatic Communities," 344–346.
66 Ibid., 549–551.
67 Ibid., 556–558.
68 Ingold, *The Perception of the Environment*, 5.
69 Siméon, *Diccionario de la Lengua Náhuatl*, 7.

be studied not as objects but as agential matter configurations, it is pertinent to explore them through the relations that define them. A useful consideration can be found in an early dictionary of Aztec language, which further explains that, "The lagoons of the Valley of Mexico are covered in *tule* and other aquatic plants, such that it is necessary to clear the way for the boats to pass, creating canals whose surface is clean of vegetation. These canals are called *acalotes*" (see, for a contemporary example, fig. 5).[70] Both *acallis* and *acalotes* can be identified within situated and intra-active performance of "*acalli* tracing *acalote*" or "*acalote* carrying *acalli*," implying that these agencies do not precede relational phenomena, but emerge with them. *Plan Acalote*, then, is based on a performance of this relational phenomenon.

Fig. 5. A contemporary *acalli* at the Urrutia *embarcadero* or pier in Xochimilco, Mexico City.

70 Robelo, *Diccionario de Aztequismos*, 43.

Fig. 6. The surface of an *acalote* between *chinampas* covered
in vegetation in contemporary Xochimilco, Mexico City.

2.3 The Modernization of Water and Contemporary Xochimilco

In order to understand the relevance of revisiting the Nahua past in *Plan Acalote*, it is pertinent to overview the changes in the Valley of Mexico following the conquest. How did the pre-Hispanic Valley transform into contemporary Mexico City? The encounter and cultural clash that came with the Spanish conquest of Mexico's land and people had extreme consequences for the reshaping of the environment, following the introduction of a drastically different understanding of ground, water, and territory.

The Spanish armies led by Hernán Cortés defeated Mexico-Tenochtitlan in August, 1521. The first and most drastic difference between the Nahua people and the Catholic Spanish colonizers was that the latter did not understand the need for a mutual political, religious, sociocultural and material environmental relationship with Mexico's lakes and rivers. The destruction of indigenous hydraulic constructions worsened flooding problems, and waterways were used as drains and the lakes for waste. The conquerors tore down the city of Tenochtitlan and drained the water from the central lake area through canals and tunnels, in order to build and extend the capital of New Spain in its place.[71] Further drainage projects were developed in the city over time, redirecting water from the mountains and lakes, although many of these rivers and canals continued to flow through the city. But after Mexico's independence in 1821, and even more significantly after the 1910 to 1920 revolution, the city's transformation picked up speed, expanding into a new era of modernization; the status of the canals, and with them Xochimilco's relation to the city center, changed once again. Further, the humanist metaphysics of modernity crystallized in the nineteenth and twentieth century, with consequences which still echo in the region's ecological and social problems today.

By the end of the nineteenth century, a complex array of hydraulic infrastructure had been put together somewhat haphazardly over several centuries and water supplies were simultaneously used for transportation, consumption and disposal.[72] After the Revolution, agricultural prosperity bolstered the population, as well as large waves of migration from the rural states to the capital in the 1930s. As a result, Mexico City grew dramatically in a relatively short time. Vertical construction in the capital was difficult due to the valley's sub-soils and high water table, so the city extended horizontally; due to this, and despite the ample aquatic elements in the city landscape, fresh water was less readily available and in

71 Legorreta, *El Agua y la Ciudad de México*, 25–31.
72 Banister and Widdifield, "The Debut of 'Modern Water,'" 36.

increasing demand.[73] The presidency of Porfirio Díaz (from 1830 to 1915) introduced and championed a vision of "modern" Mexico, whose architectural realization heavily relied on completing the construction of an aqueduct system to transport fresh water from Xochimilco's springs to the capital. Although this extraction was justified and framed as a permanent solution to the city's troubled water distribution, the supply of clean drinking water from this area was depleted by the 1940s.[74]

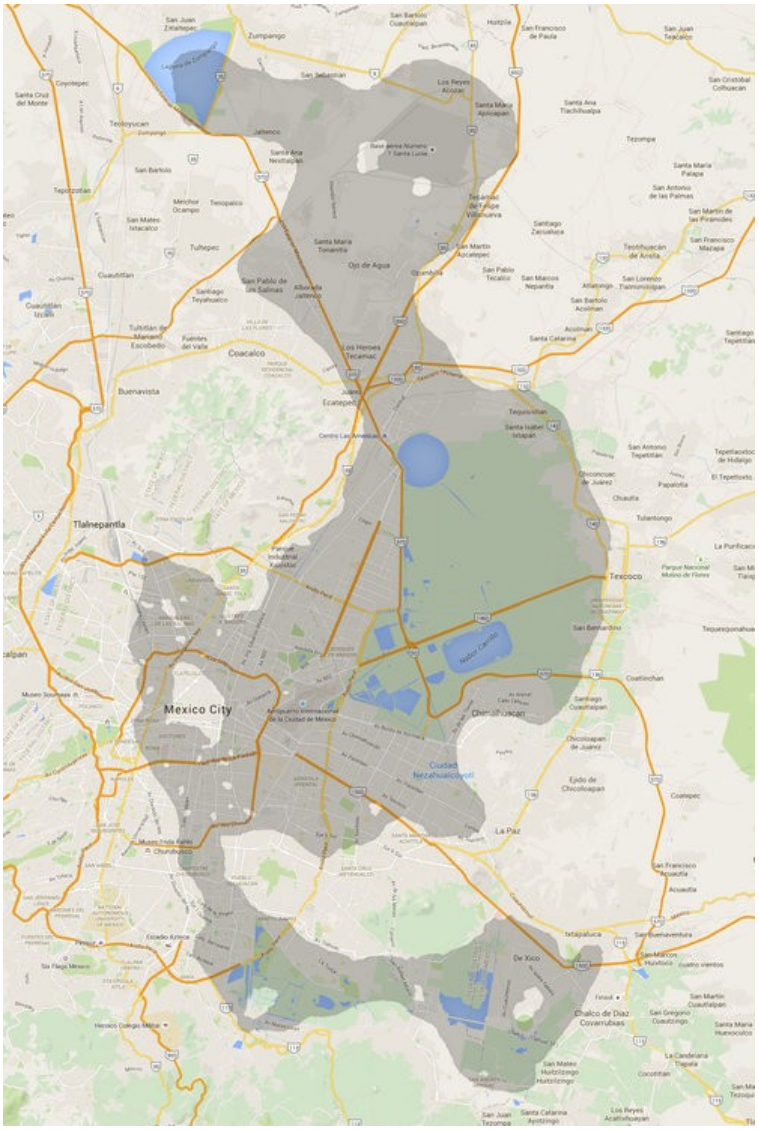

Fig. 7. The Valley of Mexico today. The grey shape indicates the areas which used to be lakes; blue areas show the remaining bodies of water.

More or less simultaneously, the government decided to further and more definitively drain or cover and hide canals within the city, which, contemporary researchers argue,

73 Losada et al., "Urban Agriculture in the Metropolitan Zone," 40–41.
74 Banister and Widdifield, "The Debut of 'Modern Water,'" 43.

disturbed the modern and clean vision of water as a resource, suggesting instead a pre-modern and undesirable aquatic facet of the city; these would be substituted by highways, encouraging a permanent shift from boats to cars.[75] The overall transformation of the city was sedimented, and the valley was remodeled from an agricultural and aquatic natural/cultural landscape into a modern, paved, urban capital (fig. 7). Of particular importance to the livelihood and environment of Xochimilco was the fate of the aforementioned Canal Nacional and Canal de la Viga, a waterway which had existed for centuries collecting water from the Iztaccíhuatl volcano and carrying it to the capital. This *acalote*—which *Plan Acalote* set out to recreate—is not only emblematic of the changes which the city suffered at this time, but directly tied to Xochimilco's material transformation.

Canal Nacional was the last and most important remaining open *acalote* for people of Xochimilco to transport goods to the Jamaica Mrket in the city center, also passing by the fish market of la Viga, the largest in Mexico. As more and more water was drained from the city, subsoil water levels fell, and ultimately the canal, which was already becoming blocked and difficult to navigate due to waste, was instead transformed into a highway between 1934 and 1940. The last 10 kilometers from the Southeast to the center, also referred to as Canal de la Viga, were directed into a covered pipe waterway, filled and paved over; the remaining visible section parallel to the new Canal Nacional highway, now polluted and unusable, was relegated to flowing in a narrow open stretch beside the paved road (fig. 8). The *acalote*'s relational agency as a mode of communication and transportation effectively disappeared, cutting off economic exchange between Xochimilco and the center.[76] Additionally, the neighborhoods which existed on the shores of this river and benefitted from its flow of goods, transportation and communication, became instead suburbs cut off from and largely abandoned by the government with little power to resolve the ecological crisis at their doorsteps. To this day a variety of important civil associations for environmental and social justice work on rescuing Canal Nacional; some of these, such as the Edmundo López de la Rosa Foundation, participated in *Plan Acalote*, organizing community meetings and holding conversations about the issues along Canal Nacional, and hosting the *acalli* along its journey.

75 Banister and Widdifield, "The Debut of 'Modern Water,'" 43; Legorreta, *El Agua y la Ciudad de México*, 154–156.

76 Terrones, "Xochimilco sin Arquetipo," para. 15.

Fig. 8. Contemporary view of Canal Nacional, Mexico City.

In order for some *chinampa* land to survive extraction and pollution, over the decades Xochimilco's water supply would be fed with water from treatment plants, leading to a shift in most cases from food to flower production by the twenty-first century, and the use of new technologies such as agrochemicals and greenhouses encouraged by external sources which further affected sustainability.[77] Additionally, the urban expansion reached Xochimilco and land use for building was prioritized over farming.[78] Thus, though they did not disappear completely, *chinampas* declined: modest calculations estimate that pre-Hispanic chinampas covered an area of about 120 square kilometers, while other authors suggest up to 400 square kilometers; today, only around 22 square kilometers remain.[79] Sections of the lake and canals are now abandoned, decaying or used for recreational boat rides for tourists as well as locals (fig. 9). In other sections, plants are still grown (fig. 10), families make their homes, and ecological research or social and political projects unfold.

77 Narchi and Canabal, "Subtle Tyranny," 96; Merlín et al., "Environmental and Socio-Economic Sustainability," 217.
78 Narchi and Canabal Cristiani, "Percepciones de la Degradación Ambiental," 10.
79 Ibid., 9.

Fig. 9. Boats used for tourism at the Nativitas pier in Xochimilco, Mexico City.

Despite the deteriorating quality of the water, the area is also still a host to around 140 species of migratory birds, as well as native species, some endemic and endangered. Invasive or recently introduced species have also caused ecological imbalances.[80] Attempts at preservation resulted in an ecological park known as Cuemanco, which has proved successful only to a degree; it has been criticized for ignoring the human and agricultural importance of the *chinampas*, and ultimately segments of the local population have suffered territorial dispossession and social injustice by motivating a longer term shift in the use of communal land towards residential occupation and privatization.[81] Another problem is that Xochimilco remains subject to seasonal changes; during the rainy season, the ecosystem extends with temporary wetlands and the urban area is at risk of flooding or suffering from sink holes which affect even the more urbanized areas. Most recently, the appearance of sinkholes in lakes and the September 19, 2017 earthquake have caused grave structural damage to both buildings and *chinampas.* In conjunction with the area's socioeconomic and infrastructural

80 Zambrano et al., "Spatial Heterogeneity of Water Quality," 150.
81 As chinampas are effectively a natural and cultural environment, without human elements their pre-Hispanic landscape cannot be truly "preserved." Narchi and Canabal, "Subtle Tyranny," 97.

problems, recovery has been long and slow.[82] These events brought to light the importance of attending to the danger and unpredictability of seismic events, worsened by the city's high water table in this area.

Fig. 10. Agriculture in contemporary *chinampas* of Xochimilco, Mexico City.

Further, wider problems of illegal land invasion and occupation hinder territorial disputes, which the government has not controlled; some locals, however, blame themselves for abandoning the land. With the city's modernization and environmental decline, many families renounced agricultural practice completely in the last century as it became less profitable—sometimes in exchange for fruitful new opportunities which arose thanks to public education reforms established after the Mexican Revolution (1910–1920).[83] In this way, Xochimilco went from being a relatively independent, if labor intensive, peasant farm land, to a peri-urban area of Mexico City; as did Canal Nacional and the various

82 See, for example: Efrén Flores, "14 Pueblos de Xochimilco Viven en Crisis Tras el Sismo; Este Olvido es el de Siempre, Acusan Habitantes," *Sin Embargo Mx*, 30 September 2017, accessed November 3 2019, https://www.sinembargo.mx/30-09-2017/3318924.

83 Narchi and Canabal Cristiani, "Percepciones de la Degradación Ambiental," 19.

neighborhoods which this highway traverses. While the people of Xochimilco are today, by all means, part of the urban circuits of Mexico City, the local community also maintains a particular and idiosyncratic identity in a variety of aspects: in an extensive and in-depth doctoral thesis investigation, social anthropologist José Luis Martínez argued that elements of a particular Xochimilca cosmovision can be identified in many aspects of social, cultural and religious life today.[84] For example, ritual celebrations consisting of pilgrimages and processions, music, dancing and community meals are an important part of everyday social life, designed and enacted according to a festive calendar which combines both Catholic and Nahua worlds, gods and agricultural seasons.

Pilgrimages to specific Catholic churches, most of which were erected on top of the ruins of pre-Hispanic temples, for example, are still common. So too are periodic ritual celebrations of Catholic saints and images in particular locations and neighborhoods of Xochimilco. These pose a point of comparison for the route traced by *Plan Acalote*, in which not a religious image but a boat traversed the city. Each *barrio* (parish) of Xochimilco also has its own saint and is celebrated on a particular day, when parties are held on public streets and food is served to anyone who arrives; the cuisine of Xochimilco is a matter of great importance and local identity, as is the act of sharing. Indeed, with a materialist view it is clear that food constitutes our identities and bodies in a fundamental way. Another important element of these celebrations are crafts which use flowers and leaves of various sorts, given as offerings to saints, or to departed loved ones on the Day of the Dead. In this way, bodily performances of various sorts also express creative vitality with plants in becoming Xochimilca.

Therefore, the tradition of enacting performative sacred social and political significance with what otherwise might be considered mere objective space or landscape is, I submit, continued and still highly relevant. Of course, not every contemporary Xochimilca is religious in the conventional personal, philosophical or even practical sense (though such views are expectedly more common in older generations). Even so, Nahua/Catholic practices determine most major collective social events. It is important also to note that many people of this area (as of other zones and neighborhoods of Mexico City who retain and enact idiosyncratic worldviews and traditions) are not at all innocent of various behaviors which lead to environmental problems (irresponsible waste management, for example). It would be wrong on various levels either to idealize their past or assume that they can be reduced to

84 Martínez, “Cosmovisiones, Rituales y Simbolismo,” 26–28.

some sort of direct link to pre-Hispanic times. Moreover, they are not passive agents who have stood by throughout all these changes, especially in the last eighty years.

In fact, a final but relevant factor in contemporary Xochimilco is a modern tradition of involvement in social and political activism. The strong social bonds of Xochimilca identity, preserved along with their natural/cultural environment, have also allowed the population to mount resistance to external forces. A complication in these circumstances is noted by anthropologists Nemer Narchi and Beatriz Canabal: before the drive towards urbanization and modernization in Mexico City, traditional agricultural livelihoods have been considered to be primitive or inferior and a cause of poverty. Yet, Narchi and Canabal demonstrate that poverty in Xochimilco is directly tied to the imposition of modern forms of production based on a dichotomy between nature and culture.[85] Indeed, discriminatory or simplified judgements of Xochimilco's political, cultural, religious and social idiosyncrasies are not only utterly unethical but uninformed, and cannot serve as the basis of any sort of productive solution to this borough's problems.

The problems mentioned in this chapter are of ecological, social and historical dimensions, for a people whose becoming is bound to this specific landscape, as well as with the larger, city-wide environment. How to begin approaching such issues and their multiple, complex and dynamic dimensions? There are no simple solutions. Certainly *chinampas* and canals, it is clear from the overview presented in this chapter, cannot be merely "preserved" under a mute and de-animated conception of nature; this has never been the case. In this situation, cooperative creativity, I suggest, is not idealistic but necessary, and it is in this sense that *Plan Acalote*'s strategy appears truly radical towards more ethical solutions. Thus, in the following chapter, I turn to the response posed to this situation by *Plan Acalote*, when a boat journeyed along Canal Nacional and La Viga for the first time in almost eighty years. Situated within the history presented in this chapter, it constitutes an emergent, cooperative effort with both human and nonhuman agencies of Xochimilco in response to a particular historical, ecological and social panorama. The details of how this happened, how it mattered, and what can be learned from such a strategy follow in the third and final chapter.

85 Traditional agriculture in particular, though it may or may not be considered an ideal solution, is more sustainable than current methods which have in large part resulted from the impositions and subsidies of power. Narchi and Canabal, "Subtle Tyranny," 97–98. Ibid., 95.

CHAPTER 3

Plan Acalote by Plan Acalli

> "Just as the city exports its shards to the lake, we export knowledge and sustainable sensibilities to the city."
> —Plan Acalli, *Plan Acalote: Bitácora de un Trazo*

> "And not until today, at ninety-five years of age, am I seeing one of these little boats again…I give thanks to God."
> —Don Emiliano García, a resident of San Francisco Culhuacán who poled the acalli in *Plan Acalote*

On the morning of Friday, October 23, 2015, an *acalli* boat and about fifteen people assembled in the parking lot of the Cuemanco rowing canal, Xochimlico. The artist collective Plan Acalli, consisting of Ehécatl Morales and Carlos Maravilla, announced their objective: to "re-create" the waterway or *acalote* of Canal Nacional, Canal de la Viga and Roldán. Morales played a ceremonial conch shell trumpet or *atecocolli* to announce their departure; the participants asked for the permission and blessing of the goddess Chalchiuhtlicue, Aztec deity of rivers, streams, canals, sea and water. The party set out, pulling, pushing and dragging the *acalli* over pavement and sidewalks, maneuvering around obstacles. Over the next few days, as the boat stopped at different neighborhoods along its path, the human participants of *Plan Acalote* would gather to eat, drink, and talk with locals. The *acalli* would spend the night under the watch of volunteer custodians, and pick up its route the following morning. Finally on the night of October 28, the *acalli* arrived to the Ex-Teresa Arte Actual Museum, in the historic center or Mexico City, a few blocks away from the former Roldán pier where boats used to dock and unload their goods. Upon arrival, the boat was installed in the museum, a remodeled church. The *acalli* was suspended in the old presbytery for two weeks, as part of the 2015 exhibition titled *Translating in Action, Drawing in Process* (*Muestra 2015: Traducir en acción. Dibujo en proceso*).[86]

The following pages seek to explore precisely how *Plan Acalote* enabled a performance between human, nonhuman and environmental agencies of Xochimilco and Mexico City. The principal proposal I will develop is that during this performance, the boat's path once again become *acalote.* Following a materialist line of investigation, in order to argue for this transformation I will examine the ways in which the road performed as an

86 Colectivo Plan Acalli, *Plan Acaolte*, 19–20, 26–27.

acalote. In other words, I will examine the agency of the physical path and the journey itself; that is, the way in which it affected other agents, and the consequences that this entailed. With this approach, I will also seek to explore a second question: how can this performance extend our understanding about the environment with Nahua cosmovision?

I begin the following section by presenting the artist collective Plan Acalli, and the nature of their practice arising from the *chinampas* and canals of Xochimilco, in order to situate the origin of the artwork. In the following section, I begin to develop the argument of becoming *acalote* by examining a first effect of the path drawn in the artwork: the development of environmental skills. I will show that during the performance, the participants learned how to pole and sail in a different way, a sort of experimental bodily investigation that can lead to ecological knowledge. Then, I turn to a second major way in which the path became *acalote*: by enabling material flows with social and political dimensions. Subsequently, I will suggest and examine the ecological consequences of another performative transformation in *Plan Acalote:* that the *acalli* became a sort of idol, between Nahua and contemporary worlds, capable of leading us to further environmental insight.

3.1 Plan Acalli Collective

Artwork is never independent of its context, including the natural and cultural environment in which a piece originates and unfolds; this, I shall show, is particularly true of *Plan Acalote*. A few words on the background of the artists are pertinent; this is not meant to imply that the artwork can at all be grasped merely through the intentions or biographies of the artists, but is relevant in the context of situating their creative output within the web of Xochimilca environment, natural and cultural. This context will also demonstrate that the artwork is, therefore, crucially built on Nahua cosmovision and material history, as well as contemporary ecological and social concerns.

Maravilla moved to Xochimilco from the eastern area of the capital and has now been living there for roughly seven years. He explains that in arriving in and beginning to work artistically with Xochimilco, he found himself attracted to and accepted by the area and environment, and so decided to stay. Much of his inspiration comes from his father, who leads *temazcal* rituals, a modern adaptation of pre-Hispanic sweat lodge ceremonies which today are popular among both Mexicans and tourists. Describing his artistic practice, he explains that when he began experimenting with immersive ecological knowledge in Xochimilco, he discovered that in knowing the environment he has learned about himself in

the environment. He also explains that, therefore, *Plan Acalote* is not about "rescuing" the environment; instead, it demonstrates that the environment can rescue people. Interestingly, this reading of the work already implies a recognition of the agency of the environment itself, and emphasizes that its effects can be uncovered through human selves.[87]

Morales is a local from this region and lives with his family in Xochimilco. He is largely motivated by his family background and particularly his father, who has participated in political activism against the government's seizing Xochimilca water and land. An important source of inspiration for *Plan Acalote* was Morales' grandfather, who helped deliver vegetables to the market by *acalli* when he was a young boy. Morales interviewed him and transcribed his story as an antecedent to *Plan Acalote.* He instigated, in this way, the beginning of a material performance of history—narratively, in the case of the interview, which would later be translated into action. Like Maravilla, Morales highlights the specific type of knowledge gained in moving attentively through the natural and cultural environment of Xochimilco. In this way, he points to the potential of *acalli* boats for changing the way we relate and respond to our surroundings. He and Maravilla both understand poling in the waters of Xochimilco as meditative experiences; for Morales, learning to pole and to farm has been an integral part of engaging with his heritage. Through these activities he has become more attentive to the way this identity is intertwined with the food he and his family eat, and with the ways in which they traverse the city.[88]

This being so, it is not surprising that most of the collective's creative methodologies relate to collaboratively and experientially investigating the landscape of Xochimilco; for example by organizing collective walks and explorations of *chinampa* lands.[89] Another convergence with the theory laid out in this work is the framing of their artistic practice as a "plan," both in the collective's name, Plan Acalli, and in the artwork title *Plan Acalote* (fig. 11). This choice of words indicates a continuity of intention which appears, already at first glance, very much in line with Braidotti's emphasis on the methodological importance of becoming posthuman. Mapping this shift in theoretical and critical studies, Braidotti notes that this implies "on the one hand the sharp awareness of what we are ceasing to be (the end of the actual) and on the other the perception – in different degrees of clarity – of what we are in the process of becoming." *Plan Acalote* mirrors this theoretical turn in practice: from the start, the artists did not offer any particular or correct form of ecological "being" in Mexico

87 Maravilla, Carlos. Interview by author. Personal interview. Mexico City, August 2019.
88 Morales, Ehécatl. Interview by author. Personal interview. Mexico City, August 2019.
89 Maravilla, Carlos. Interview by author. Personal interview. Mexico City, August 2019.

City or in Xochimilco. Instead, the art's invitation was more akin to a proposal of "becoming." The artwork began with a call for volunteers to join and help transport the boat, mostly through Facebook and directly among friends, family, individual artists and collectives; additionally, throughout the entire performance, people interacted and joined along the way freely.[90] In this way, *Plan Acalote*'s collaborative realization perhaps offers to this proposal a solution for markedly transversal ecological art. While there was a direction and purpose to *Plan Acalote*, the focus of the piece was on the process itself, and each movement of the boat responded to a complex array of decisions and agencies.

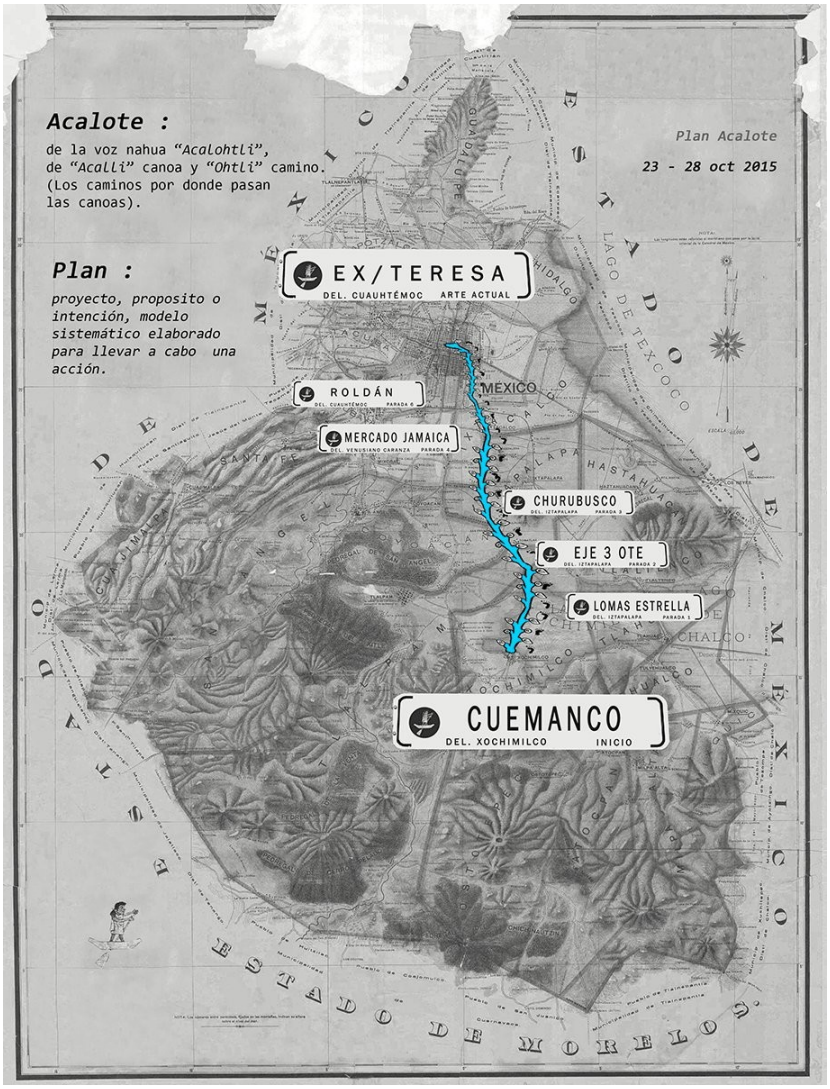

Fig. 11. An image by Plan Acalli which presents the route of *Plan Acalote* and frames the artwork as a "plan." This map was also used to promote the event and call for volunteers. Plan Acalli, *Plan Acalote*, 2015, performance (Mexico City, Mexico).

90 Morales, Ehécatl. Interview by author. Personal interview. Mexico City, August 2019.

The key antecedents mentioned here point to a connection to environment and history which is materially bound, yet far more pragmatic than vague categorizations of “native” or “indigenous” artistic practices, which often presuppose the possibility of objective racial classification or idealized or propagandistic views of history. *Plan Acalote,* I suggest, actualizes historic Nahua practices and elements of pre-Hispanic cosmovision, yet avoids a simplistic or idealistic form. Instead, I shall show that Plan Acalli’s practice relies on “exporting” the local knowledge and sensitivity of Xochimilco through material relations and bodies, in all their complexity.

3.2 Environmental Skills

My principal proposal in this chapter is that during *Plan Acalote,* the artwork’s path along Canal Nacional and La Viga once again became an *acalote*. This was achieved by shifting the relationship of the road to the *acalli* boat and to humans, revealing the fact that it harbors potential for transformation. I will begin to explore this transformation from a materialist point of view by analyzing the mechanics of navigating an *acalli* boat on pavement; these are, I suggest, among the most interesting and striking elements of the performance. My argument is that, just as *acalotes* historically enabled the material existence of Xochimilcas by way of developing certain environmental abilities, Canal Nacional performed in a similar way by allowing the participants of *Plan Acalote* to learn new, updated skills (using Ingold’s term). This is the first way in which the path performed the agency of an *acalote*.

Morales and Maravilla had originally planned to drag the *acalli* most of the way, hoping that this would serve to emphasize the physical sacrifice involved in the journey. They were also curious about the effect that such a long period of contact between the pavement and boat would have on both bodies. However, this intention was hindered by a variety of obstacles in the cityscape, and by the cumbersome weight of the boat itself: it became unnecessary to underscore the difficulty of what was already a strenuous task. Various “sailing” techniques and aids were, therefore, developed: a wooden base, for example, was used to help the *acalli* move more smoothly, counteracting the friction between the boat’s base and pavement. At times the *acalli* was also pulled with rope, for example when it was first hoisted it out of the water, and to clear bumps and ramps (fig. 12). Sometimes the *acalli* had to be entirely lifted, in a joint effort, in order to clear obstacles. The party learned along the way how to best clear different terrains, developing methods for dealing with sidewalks,

light posts and other obstructions. Speed and maneuverability were particularly useful in moments where they had to cross highways busy with traffic (fig. 13).

Fig. 12. Ropes and a wooden base were used to drag the *acalli* boat over a speed bump in the Cuemanco parking lot. Plan Acalli, *Plan Acalote*, 2015, performance (Mexico City, Mexico).

Fig. 13. The *acalli* stops traffic as it crosses Periférico, a principal highway of Mexico City. Plan Acalli, *Plan Acalote*, 2015, performance (Mexico City, Mexico).

In this way, over the course of *Plan Acalote*, the participants developed and learned a curious new environmental skill: the ability to sail over pavement. I have suggested earlier that poling in water, and particularly in the canals of Xochimilco, can be understood as an embodied skill. It requires sensitivity and the capacity to read environmental factors and conditions: spatial layout, the weight of water, the movements of the *acalli*, the turbulence or stillness of the water, and even awareness of seasonal or weather changes. The agency of the water and landscape, we might say, causes humans and boats to pay them attention, and respond to them. In *Plan Acalote*, poling on pavement was also revealed to be a skill of this sort, requiring a similar perceptive and creative action of human organisms, this time in response to an urban environment. The volunteers even discovered that pushing off of the ground with a pole was also an effective way of propelling the *acalli* by land; particularly on flat stretches of pavement, in combination with the wooden base (fig. 14). Those who had learned to pole the canals of Xochimilco, like Morales and Maravilla, taught others, thus exporting and reworking this local knowledge.[91]

Fig. 14. A volunteer poles the *acalli* as other pull and push.
Plan Acalli, *Plan Acalote*, 2015, performance (Mexico City, Mexico).

91 Morales, Ehécatl. Interview by author. Personal interview. Mexico City, August 2019.

The participants and boat, therefore, became sensitive to other elements of the landscape: the urban surfaces, barriers and openings which the volunteers had taken for granted, for example when walking or driving through the city. In this sense, we might also think of the development of skills in *Plan Acalote* as a form of experimental intra-action, a form of research that reveals information about the agency of its components. Barad's notion of intra-action has critical consequences for the way in which experiments are conceived: in a materialist sense, *Plan Acalote* is not understood as an experiment established by subjects in order to gain abstract and detached knowledge about certain passive objects. Instead, the humans who participated in dragging, pushing and poling the *acalli* were neither objects or subjects; they simply became temporarily "feeling" agents, and the landscape became a "felt" agent. The sensation which was achieved, "feeling" the power of the pavement, sheds light on the Nahua practice of ritual pilgrimage in order to activate a relationship to Tlaloc, the pre-Hispanic god of mountains and water. A relationship between close-up material relations of bodily exertion, and our place as human organisms in and with the landscape of Mexico City, begins to appear.

In short, this "skill performance" was an intra-active experimental setup that allowed agents to sense and discover other agencies with their material bodies. Developed through experience and immersion, the skills involved in this activity were also transmitted throughout the performance in different bodies. Participants came and went along the journey, responding to the open call or joining spontaneously along the way, and as they learned and transferred these skills a collective knowledge was shared. What can be learned then, about the agency of the urban environment in this situation? On the one hand, it is important to stress that some of the knowledge developed in *Plan Acalote* cannot be translated into words, but must be felt and experienced in the environment; this is clear when considering the importance of the physical, material intra-active relation I have described above, the basis of any and all skill-learning. But reflecting on *Plan Acalote*'s navigation skills can reveal certain insights.

My first proposal stems from contemplating the physical phenomenon of human volunteers pushing the *acalli* boat (and indeed can be extrapolated to poling, pulling, etc. simply by considering more physical components). Drawing from classical mechanics, when the human participants pushed the boat, they applied a force to it. The physical boundary of the *acalli*, its exterior hull in contact with human hands, in turn, effected a force of the same magnitude in the opposite direction. The boat simultaneously pushed against the pavement,

and the pavement pushed back with an equal mechanical force which we call friction. The surfaces of these bodies held together due to the electromagnetic forces binding their matter, thus allowing them to act upon each other as single bodies; which in a posthumanist account, ontologically became bound entities in this interaction. That is to say, rather than a continuum of wood, pavement and flesh, these bodies actually performed on each other as boat, road and humans. Due to the combination of forces, and in opposite proportion to the mass of each of the aforementioned bodies, the *acalli* accelerated.

Therefore, it is entirely possible to say that the boat's movement was effectively caused by multiple parties; in effect, by the utterly necessary agency of each of these bodies. The *acalli*'s path was cleared by the boat and ground; but also by the perceptive and creative engagement of human organisms with the urban landscape, as they made decisions using newly developed skills. Environmental agency is revealed not only as latent energy in matter; it is also something which we perceive and access as organisms, complex and temporary material configurations of creative sensitivity and action. Put another way, because we are human organisms, when we speak of a particular agency it is implied that we are speaking of our perception of this agency. Agency is a useful and meaningful word for humans because it always affects us (as well as other agents) to begin with: this is how we know of it.[92] Thus, *Plan Acalote* was necessarily an intra-action of multiple agencies, including humans, that enabled a joint and relational becoming *acalote*. *Plan Acalote*'s route was, effectively, a route opened up in order for the boat to pass, as the Nahua term suggests. This was a material path, which existed as the physical body of the boat crossed roads and sidewalks, and traversed the city's air and exhaust fumes. The key characteristic of this *acalote*, of course, is that it is not made out of water.

Thus, I propose a second reflection: by sailing a boat on highways rather than water, *Plan Acalote* urges a comparison between canals and paved highways. We can deduce, by observing its role in *Plan Acalote*, that pavement is not necessarily a passive object or landscape feature, simply because it is something that generally appears still on a macroscopic scale. It is agential matter in a temporary state of equilibrium, thanks to a momentary truce of forces at its physical boundaries, which nevertheless has great capacity and sway in material ways. Yet a moment's reflection reveals that in Mexico City, pavement *always* shapes human perceptions, decisions and bodies; humans become with pavement in

92 This argument may appear anthropocentric, and it is to the degree that our perception will always rely on a perceiving "us," or "I." The utility, however, is that it situates human organisms among other agents, instead of above or beyond, as occurs in the metaphysics of science.

the urban landscape. From learning to drive a car and navigate sidewalks to choosing adequate footwear for a day's activities (will I walk long distances on pavement, or will rain cause water to pool on the sidewalk today?), humans are continually attending to and responding to their environment. *Plan Acalote* seems to suggest that we ask which environmental agencies we wish to bring into our future; do we wish to continue becoming with pavement and petroleum-fueled cars, for example, or with water? What would such a difference entail, and how might we imagine a water-enabling future incorporating contemporary technology and environmental sensitivity?

3.3 Ritual Pilgrimage

Acalotes are not only defined by their proximate effects on the bodies of people and boats; in their function as pathways, (i.e. joining distances) they have also characteristically enabled broader spatial, historical, political and social relations in Mexico City's history. In which ways, then, did the *acalote* traced in *Plan Acalote* further relate to, and perhaps transform, the city? For one thing, the *acalote*'s length disrupted the social and material flow of paved roads and highways in fairly straightforward ways. Passersby with no knowledge of the performance found their paths interrupted, and would approach the procession with curiosity and interest; elderly people, especially, were likely to express excitement and support. To others, the boat presented an obstruction; particularly to commuters in cars inconvenienced by the traffic, though reactions ranging from surprise to incredulity were sometimes modified when they approached the party or caught sight of the boat (fig. 14).[93] The skill-based experiment of navigating through the city, then, did not only have an immediate effect on the bodies of the participants, but also on humans, roads and cars that crossed its path.

In recounting a variety of different encounters along the way, Morales recalls a particularly striking moment. Each night the boat was left under the care of different local volunteers along the way, to continue the following day. While the first days were more or less planned, towards the end of the performance shelter had to be found with some spontaneity. One morning when the volunteers arrived to find the *acalli*, which they had left overnight under a highway bridge, a hose had been left running by the boat, so that water was seemingly emanating by or from it. Morales speculates that it was most likely a government employee, with the task of watering the plants which grow in small beds by the road, who perhaps was inspired in a moment of creativity to "water" the boat as well; or, perhaps, it was

93 Colectivo Plan Acalli, *Plan Acalote*, 15.

mere coincidence.[94] It is possible to say, then, that the presence of the *acalli* effectively transformed this landscape. Perhaps it did motivate a human in order for a flow of water to appear under its body; but, even if it did not, the *acalli* changed the way in which this configuration was perceived. Morales, like other participants, was moved—by his relationship with the *acalli* and by its presence in the landscape—into a different state of environmental sensitivity. A relational understanding of a landscape (i.e. as an environment-to-organisms, rather than a still space or surface) suggests that it can indeed be changed in its perceptual boundary with organisms. This shift in perception may then have other material consequences, by influencing the organism's future actions.

Apart from the journey itself, the other central element of *Plan Acalote* was that the *acalli* visited neighborhoods called *pueblos originarios* along its route: native towns or neighborhoods who trace their identity to pre-Hispanic polities which prospered due to their location along Canal Nacional shores. Plan Acalli planned these visits with the help of a variety of local organizations, such as the foundations Edmundo López de la Rosa and Bartola Axayácatl, social activism groups advocating for the environmental recovery of Canal Nacional. Beginning at the Cuemanco pier at the edge of the chinampas of Xochimilco, and moving along the highway towards the north and center of the city, water is still visible parallel to the road but cannot be sailed for the most part. Bordering this route are the pueblos which the *acalote* connected: San Simón Culhuacán, Santa María Tomatlán, San Andrés Tetepilco, San Juanico Nextipac, Magdalena Atlazolpa, Apatlaco, San Matías Iztacalco and Santa Anita Zacatlamanco. The volunteers and *acalli* boat were publicly greeted by at each stop by residents and activists of the respective region. Strikingly, *Plan Acalote* did not moderate the social and ceremonial gatherings which ensued in very explicit ways; rather, these gatherings unfolded in a decentralized fashion, in the style of social traditions which were already in place. Ortiz, one of the curators, comments that "The boat was received at the stops as if it were the pilgrimage of a religious image."[95] How so? And what sort of transformations did the *acalote* enable with this ritual dimension?

The gatherings which were held at different stops along the way were a crucial link in *Plan Acalote.* The demanding material work and skill of dragging the boat enabled these visits to occur. Through the lens of ritual pilgrimage, this work was understood and perceived by the local human populations as socially and spiritually significant. Indeed, the

94 Morales, Ehécatl. Interview by author. Personal interview. Mexico City, August 2019.
95 Colectivo Plan Acalli, *Plan Acalote*, 15.

combination of journey and visit enabled a ritual activation of the landscape, and the *pueblos* became more than objective locations on a map: they were points of encounter, where skills, knowledge and feelings were amplified. One crucial aspect was that these local gatherings included open discussions between neighbors, activists, artists and volunteers, covering a wide range of topics. Locals assembled and told stories from their grandparents who had sailed the canal, touching upon the place of water, *chinampas* and farming in their livelihoods. One memorable participation was that of Don Emiliano García, a resident of San Francisco Culhuacán almost a hundred years old who remembered having sailed himself on the same route that the *acalli* was drawing, told his story and took a turn poling the boat (fig. 15). Interestingly, participants who learned to pole on pavement were able, by way of this effort and skill, to encounter locals who had poled decades earlier upon water.

Other participants spoke of the traditions and festivities which characterized their localities, as well as the problems of their neighborhoods, their struggles and activism. A local told a story about a crock which he had found in his backyard through a dream. Thus, objects, stories, documents and photographs were sometimes shown or referred to, and discussed along the way. The *acalli* provoked the material assembly of a history, performed in a variety of ways, and the *acalote* threaded these together through successive locations. In this way, ecological changes were examined and reflected upon with full affective, social and historical weight, enabling the people most affected by environmental change to discuss these problems. Many of the social and political relations which were traced and performed would also continue to evolve beyond *Plan Acalote*, bringing together collaborators in different activist projects. For example, the artists would go on to collaborate with the Edmundo López de la Rosa Foundation in various activities: from cleaning sections of the surviving Canal Nacional to painting murals for the community. On the other hand, after several ground-up successes and demands by civil associations, in 2019 a government project was announced to rehabilitate Canal Nacional recognizing its ecological and cultural importance.[96] *Plan Acalote*, among multiple other visible activist movements, surely contributed in some degree to this success by bringing a different visibility to the issue, as well as by enabling meetings between different activist groups, artists, volunteers, and workers in the cultural sector.[97]

96 Adyr Corral y Agencia Notimex. “CdMx Invertirá 170 mdp en Primera Etapa de Rescate de Canal Nacional,” *Milenio*, 4 August 2019, accessed November 3 2019, https://www.milenio.com/politica/sheinbaum-va-por-rescate-de-canal-nacional.

97 The exact measures proposed and the effect that this project might entail remain to be seen. Morales, Ehécatl. Interview by author. Personal interview. Mexico City, August 2019.

Fig. 15. Don Emiliano García Silva poles the *acalli* on the third day of *Plan Acalote*.
Plan Acalli, *Plan Acalote*, 2015, performance (Mexico City, Mexico).

In this way, the *acalote* of Canal Nacional did recover some of its original social and political agency: with the passage of a boat, this path was able to once again affect the

identity of and relationships between communities in its path. Of course, the main difference was that the *acalote* traced in *Plan Acalote* was not a commercial route for transporting crops and crafts from the South to the center, as in had been from pre-Hispanic times to the nineteenth century. Nevertheless, each day, food and drink were shared among participants and locals: they drank sodas and *pulque*[98] and ate *tlacoyos*,[99] traditional foods which Xochimilco is recognized for today (fig. 16). The open and public character of these events is a characteristic of contemporary Catholic celebrations in Xochimilco; particularly the fact that food is available and free for anyone who comes by. Additionally, on the second day, neighbors decorated the *acalli* with *cempasuchil* (marigold) flowers (fig. 17), an offering characteristic of Day of the Dead celebrations (which would take place a few days after the performance, on November 2). In this way, the material exchange of food and flowers also echoed in the religious and spiritual performance of the *acalote*. Xochimilco was once again connected to the communities of Canal Nacional by way of a physical journey, material exchange and face-to-face encounters.

Fig. 16. Participants share a drink sitting on the *acalli*.
Plan Acalli, *Plan Acalote*, 2015, performance (Mexico City, Mexico).

98 A traditional alcoholic drink made with fermented maguey sap.
99 A local type of food made with corn flour and filled with potato, beans, cheese and *cuitlacoche*.

Fig. 17. The *acalli* boat was decorated with flowers and plant-based crafts, and Morales (right) carried and played a ceremonial conch shell. Plan Acalli, *Plan Acalote*, 2015, performance (Mexico City, Mexico).

3.4 Becoming Idol

I have discussed up to this point elements of ritual pilgrimage that can be understood through frameworks of social and political dimensions. However, other elements of *Plan Acalote* refer more specifically to religious or spiritual rituals inspired by Nahua cosmovision. Of course, social Catholic customs in Mexico are already a product of hybridization; but *Plan Acalote* proposes a fascinating new actualization of pre-Hispanic and contemporary times. A notable example can be identified in *Plan Acalote*'s departure, when the participants spoke to the Aztec goddess of water Chalchiuhtlicue. The ceremonial conch shell trumpet that Morales played to announce the start of the performance (and which he continued to use along the way) also drew from pre-Hispanic ceremonial rituals. Considered not as a representative gesture, but as an actual ontological engagement, it is entirely possible to say that in this way, humans actually sensed and thus responded to the agency of water. That is to say, the participants were influenced by these gods to act in certain ways (speaking and playing the shell are immediate consequences), and by doing so they performed their awareness of the material capacity of rivers, rain and lakes of the capital to interfere with or enable life.

Indeed, *Plan Acalote* itself can be understood as a response to the Nahua water gods, understood as the material agency of the landscape.

But just as interestingly, *Plan Acalli* also enlisted the help and permission of civil protection service and traffic police for the first leg of the journey in order to clear traffic and avoid disputes or problems with drivers.[100] Thus *Plan Acalote* recognized two very different kinds of authority: the old, original owners of Nahua land and water, as well as contemporary political structures. Yet by placing them side by side, they seem, perhaps, less distant. Indeed, it is in this way too that *Plan Acalote* is reminiscent of ritual pilgrimages to Tlaloc: the pre-Hispanic processions demonstrate that a public gesture of pilgrimage (moving through the landscape in a ceremonial and ritual fashion) is also a political statement; in this way, *Plan Acalote* appears as much a religious procession as a sort of political demonstration.

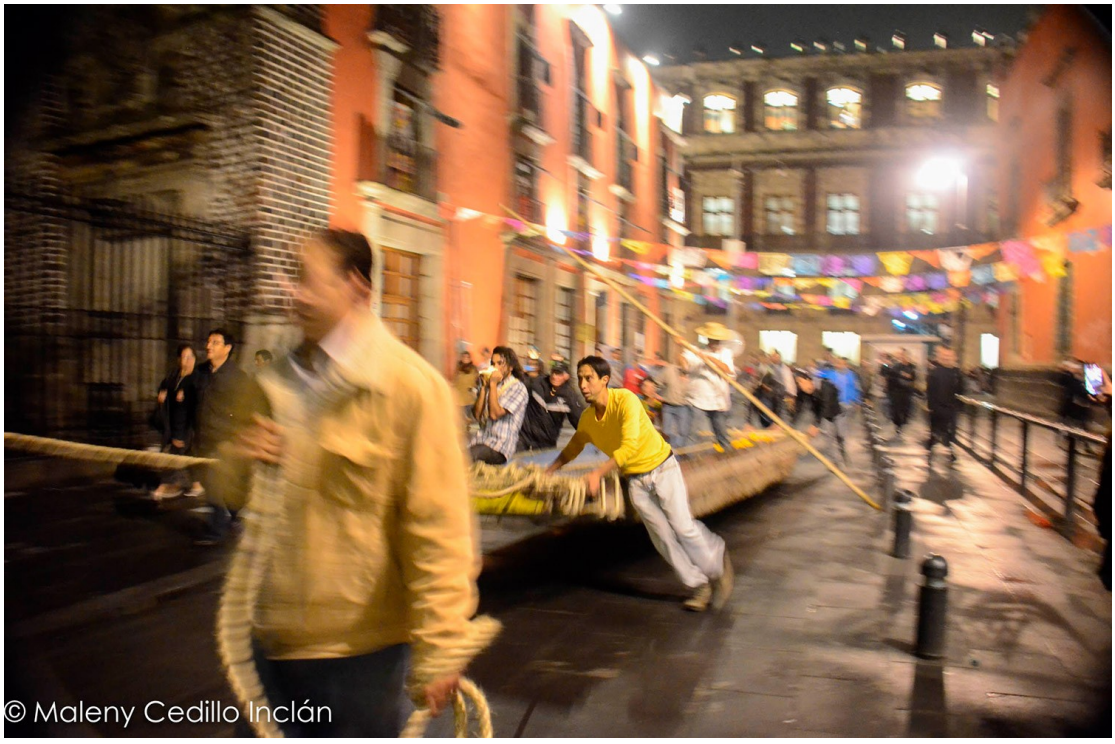

Fig. 18. The arrival of the *acalli* at Ex-Teresa Arte Actual Museum. Plan Acalli, Plan Acalote, 2015, performance (Mexico City, Mexico).

On the final day, the *acalli* boat seemed to summon celebratory festivities as if it were the image of a hybrid Catholic and Nahua saint. A few blocks away from the *acalli*'s final destination, Ex Teresa Arte Actual museum, a *banda de viento* or wind instrument musical band awaited. They began to play festive music, as is the custom for religious processions

100 Colectivo Plan Acalli, *Plan Acalote*, 28–30.

and pilgrimages of Xochimilco, and the volunteers began dancing as they advanced (fig. 18). Passersby joined in, also a common occurrence in traditional street festivities; as did the guests, artists, and general public who had assembled for the opening of the *Translating in Action, Drawing in Process* exhibition.[101] Upon arrival, the *acalli* was taken into the museum building, a seventeenth century church of Saint Theresa, which after the Reforms of 1857 was turned into a civil building by the government for various educational and cultural uses.[102] Numerous volunteers, once again, helped lift the *acalli* and it was suspended roughly a meter above the ground in the presbytery of the former church (fig. 19). To finalize the arrival, Maravilla and Morales spoke in the presbytery, telling the story of the journey from Xochimilco to the center. The matter and energy grown in the *acalotes* and *chinampas* of the South were deposited in the bodies, words and actions of the exhibition opening.

Fig. 19. The *acalli* arrives and is hoisted into place in the presbytery of Ex-Teresa Arte Actual Museum. Plan Acalli, *Plan Acalote*, 2015, performance (Mexico City, Mexico).

I argue that in this way, the *acalli* truly became an idol. With *Plan Acalote*, it was imbued with power from a ritual performance of the landscape: at the center of both personal

101 Colectivo Plan Acalli, *Plan Acalote*, 72.

102 "Historia del Temple de Santa Teresa." Ex Teresa Arte Actual, accessed October 6, 2019, http://www.exteresa.bellasartes.gob.mx/index.php/ex-teresa-arte-actual.

and collective skill development, and larger ritual events, the *acalli* threaded together significant moments, words, and objects. It was imbued with social and political power at different points of the landscape: the *acalli's* agency was precisely the capacity of pointing to the agency of water, or Nahua water gods—which, as I have argued, can be understood as both latent energy, and a sort of power or influence perceived by organisms in the aquatic landscape. The *acalli*'s effect was felt and transmitted in diverse ways by material multiple human organisms, who then continued to share this knowledge and perception. The boat completed its transformation by ascending in the presbytery of what was once a church, but has now morphed into a different social and cultural authority: what we call a museum. Here the boat occupied the space and position of a sacred figure in its relation to the humans who encountered it in this building, prompting visitors to ask questions, converse and share its story. Indeed, it took the molecular position of an idol, in Deleuze and Guattari's words, by acting and relating as such. In short, not only throughout the performance, but also during *Plan Acalote*'s culmination and later dissemination, the *acalli* united both Nahua and contemporary worlds into a new form of environmental authority.

This transformation speaks, once again, to the necessity of considering Mexico's history in order to begin discussing its ecological situation. The incongruity of an *acalli* boat hanging in a church speaks to the abruptness of the transformations that Mexico suffered during the conquest and colonization, when Catholicism quelled and incorporated Nahua religion. The drastic changes in the landscape after the conquest, in this way, are linked in *Plan Acalote* to another crucial moment in history: Mexico's modernization and transition from boats to cars. The other strange, jarring scene of *Plan Acalote* was, of course, the sight of the boat's body touching and traversing pavement. If we accept the metaphysical division between nature and culture as a critical factor for ecological destruction, *Plan Acalote* reveals such a shift in specific historical events. In this way, the artwork provides crucial insights for confronting the urgency of the city's problems, but also of Xochimilco. The devaluation of native ecological relationships and knowledge and the subjugation of water to pavement are critical turning points which can be questioned; perhaps the future of Xochimilco need not surrender to this modernist momentum. A related aspect of the work, in this sense, was its preservation in the form of a "logbook" or diary recounting the boat's journey, with which *Plan Acalote* effectively entered into written history; the book is interestingly reminiscent both of the memoirs of Spanish conquistadors and of Nahua codexes, even using both Gregorian and Nahua calendar dates.

Plan Acalote's historical focus, of course, need not mean that the answer is to simplistically turn back to the past. The fact that a social practice or convention is traditional does not necessarily mean that it is ethical or desirable; no one today would argue, for example, that it is a good idea to recover the practice of human sacrifice in order to please the Nahua rain god Tlaloc. Instead, by elaborating a subtle and poetic take on the Nahua past with contemporary art, *Plan Acalote* invites us to revisit the turning points of environmental problems with contemporary sensibilities, science and scholarship (rather than, for example, to return to more simplistic and racial narratives of Nahua history). We must re-think, for example, whose authority dictates urban construction and mobility. In this sense, the incorporation of Nahua water gods is crucial to *Plan Acalote*. It recalls the concept of *altepetl*, wherein the right to live in and with a territory must derive not only from social and political authorities, but also environmental agencies. The authority of environmental agencies, the liveliness of the landscape, and the spirituality of territory are all points that arise from pre-Hispanic knowledge, and might be fruitful if incorporated with seriousness (perhaps, with a materialist perspective) into political discourse.

The logic of Nahua cosmovision and its principle of mutual exchange can be easily understood, with a materialist perspective, to reveal the danger and necessity of recognizing the power of the Mexican landscape. But it is also crucial to ponder the degree of inaccessibility and unpredictability of the gods in the pre-Hispanic world. *Plan Acalote*'s approach, then, is extremely interesting as a political gesture, because it is not based on control. Counterintuitively, *Plan Acalote*'s invocations of Nahua authority were not acts of mastery, in the sense that the artists and activist leaders did not lead the journey in a hierarchical fashion. Instead, the figure that stood in for the pre-Hispanic *tlatoanis* was the *acalli.* Thus, the performance was based on a more distributive construction of awareness and responsibility; this was highlighted by the artwork's fluid and open nature. The *acalli* is thus a surprisingly material, down to earth idol, striking in its simplicity.

I return with this thought to the advantages of Latour's proposed "redistribution of agency."[103] To attribute life or vitality to "nonhuman" or "inanimate" things, as Viveiros de Castro explains, is generally considered a naive or mistaken exercise in Western society.[104] But rather than dismiss animism in Nahua religion as useful but ultimately mistaken cultural constructions, we might reconsider and learn from its recognition of environmental spirits or

103 Latour, *Facing Gaia*, 120, 235.
104 See Viveiros de Castro's commentary in Bird-David, "Animism Revisited," 79–80.

gods. Though water gods may seem strange if transposed or de-situated, Nahua cosmovision arises in the creative nexus of organisms in a particular environment. Its validity cannot be judged in relation to a single other, equally emergent, metaphysical and ontological system; for example, the ideals of reason and supremacy of man of modern humanism. In fact, the modern metaphysics of man separate from nature perhaps reveals itself as pertaining to simply one more cosmovision. Situated always in and with an environment, from a materialist perspective, it cannot be above or outside of the world to impose judgement on others. It is more correct to say that anthropomorphism or animism can be methodologically problematic for specific (often experimental) methodologies of science, designed to produce a particular type of knowledge. However, in many other aspects of life, to recognize the capacity of all material things to intercede in the world is extremely useful; the Nahua past exemplifies that this recognition was of great use in social and political spheres. *Plan Acalote*, in turn, demonstrates that today, the realm of art is perhaps an appropriate area of contemporary life in which to experiment with this recognition. In other words, the advantage of art in today's society is that it is not restricted by the methodologies of science, yet can still enable knowledge to be developed, and material transformations to occur.

Finally, I return to the argument that *Plan Acalote* can be understood as a material and ontologically significant event of transformation. Through an artistic action that creatively brought together elements of political and ritual pilgrimage, a road became *acalote;* and the *acalli* that traced it became, miraculously indeed, a spiritual idol channeling the agency of Mexico City's landscape. Performative art, then, can help us to not only imagine the unimaginable, but to do the unthinkable and enable the miraculous. A disturbance to our cosmovision, hints *Plan Acalote*, might travel through all sorts of material bodies and relations: in changing the performance of our relation to the environment we can actually change material ecological configurations and, in a reverse movement of sorts, alter our modern metaphysical assumptions. *Plan Acalote* ultimately suggests a methodology of material roads, pathways or, indeed, *acalotes* in the face of ecological problems. This is both an analogy and a real, material suggestion: hegemonic agendas or monotheistic cosmovisions in art cannot "save" the environment. Instead, *Plan Acalote* suggests that we focus on "planning" ethical and ecologically conscious directions, movement and encounters with as many humans and nonhuman agents as possible. A strategy of literal and figurative pathways in environmental performative art could, in this way, be critical for approaching ecological problems.

CONCLUSION

Plan Acalote is an artwork which strikes one, on first impression, as both poetic and bizarre. The startling picture of an *acalli* boat navigating a landscape of highways and pavement cuts blithely across the intermingled layers of Mexico City's contemporary urban life and pre-Hispanic Nahua past. From an ecological perspective, I have suggested that artwork thus poses a uniquely creative and inspiring response to the city's troubles with water. This thesis has therefore presented an attempt to uncover and understand the insight provided by *Plan Acalote* into the environment of the Mexican capital, in order to contribute to solving its ecological problems. In particular, I have examined the insights which arise from its ties to to Nahua cosmovision and to Xochimilco, the last area in which the pre-Hispanic natural/cultural landscape survives. In conclusion, and to offer a final reflection upon this question, I propose tying together the process and results of this thesis under a single concept summarized in the title of this work: "becoming *acalote*."

Firstly, in beginning to approach *Plan Acalote*, I have taken inspiration from the artwork's use of Mexico's Nahua past and cosmovision in my theoretical approach: namely, I have suggested that in order to address the historical depth and contemporary liveliness of this artwork, it is necessary to shift away from conventionally humanist frames of reference. Thus, in first chapter of this work, I have proposed to base this work in materialist posthumanism by concentrating on the notions of a redistribution of agency and an ontology of performative, relational becoming. Drawing from various authors, such as Latour, Barad and Bennett, I have sketched a perspective in which agential matter in the world exists always in relation, and so the boundaries dividing objects and subjects unravel and dissolve. I have argued that this redistribution of agency (following Latour in particular) as a methodological tool is useful for examining certain Nahua elements of *Plan Acalote*, as they do not appear de-animated in the artwork, but rather as agential participants.

Additionally, I have shown (particularly drawing from the work of Deleuze and Guattari, as well as Braidotti) that in a materialist posthuman framework no identity is fixed but is necessarily temporary; as such, identity can be understood as performance; i.e., reiterated action in and with the world. Thus all being is a) not fixed, but a temporal becoming, and b) intra-active (following Barad); that is, necessarily in ontological relation. Applied to the construction of an ecological approach of enquiry, I have developed a

conceptual framework for investigating diverse agents involved in *Plan Acalote.* I have also argued that recognizing that we, as human organisms, are always becoming with an environment is key to allowing the ecological knowledge of Xochimilco and its Nahua cosmovision to enter into dialogue with the contemporary landscape and its environmental problems. The notion of becoming, then, is firstly a methodological tool which I have drawn from from posthumanism, inspired by the artwork's themes and performative approach.

In Chapter 2 I have developed a first application of this framework in studying the artwork's background by framing it as a material history of people-with-their-environment. I have approached history as a relational becoming in two ways. Firstly, I have broadly considered both the agency of environmental factors (such as water, ground, weather) as equal participants in the establishment of Nahua civilization in the Valley of Mexico. With shifts in focus and language when writing about agriculture, transportation or construction, some capacities and actions of both humans and landscape have been revealed. This history has thus become intra-active. Secondly, and more specifically, I have focused on Nahua people as perceptive organisms-with-their-environment and so attempted to learn from their skills, following Ingold, developed in and with their specific natural/cultural landscape. As skills are based in perceptions and awareness, it is possible to trace the agency of environmental elements, such as water, by detecting their effect on human performances of skill: poling, for example, or farming.

I have also proposed to consider the ritual of pilgrimage, a form of human response to environmental agencies. I have shown that specific material skills and activities like poling and sailing, journeys to specific points in the landscape, and ritual offerings and sacrifice can thus be understood as politically, socially and spiritually relevant within the setting of *altepetl* (a unity of ecological and political territory, recognized both by humans and gods embodied as environmental agencies). In this way, the analysis of the artwork was able to draw from situated contextual Nahua knowledge, rather than to rely purely on Western ecological theories. A key result of this thesis is foreshadowed in this chapter: the type of phenomena identified in scholarship as ritual landscape can serve as a mechanism for linking close-up mechanical causality (intra-action and skill) to large-scale anthropological and sociocultural issues (ritual). I have identified this same gesture later in the artwork: the transformative performance of becoming *acalote* occurred on various scales, from microscopic forces to broad social and frameworks, and both of these necessitated analysis.

Thus in Chapter 3, by combining Nahua cosmovision and the ontological bases of materialist posthumanism, I have proposed that in *Plan Acalote* the path of the *acalli* effectively became *acalote*. This essentially means that it was a material configuration that performed the agency of a Nahua canal, in a few different ways. Firstly, I have shown that the *acalote* enabled humans to develop the skill of urban poling, a new way of sailing the city which highlights the difference between pavement and water. In this way, the *acalli* and *acalote* enabled the development of ecological knowledge, a type of knowing that was felt in the bodies of human organisms in their contact with the landscape: a perception of agency. I have also drawn in this section from classical mechanics in order to demonstrate that scientific methods and posthumanist conceptions of agency are compatible, and can help elucidate each other. Ultimately, I have shown that skill development constituted a form of intra-active investigation: specifically, it allows both the agency of water and of pavement to be felt in human bodies.

Secondly, I have suggested that the route traced by the boat renewed its function in bringing neighborhoods together and enhancing the vitality of the valley. In this way too, then, it became once again *acalote*: by recovering its social and political agency. The journey invoked the authority both of humans and communities along Canal Nacional, and of the water gods, the original owners of the ground and water of the Valley of Mexico. The *acalli* transmitted and carried their environmental agency, drawing old and new types of authority into ecological discussions. I have suggested viewing the culmination of the piece as another transformation: the *acalli* becoming a new spiritual guide and idol. In this way, *Plan Acalote* as ritual pilgrimage reveals the importance of bridging larger socio-political issues to close-up, visceral and affective experience in constructing solutions to ecological problems. It lends a political and ecological dimension to the joy and excitement of an old man poling a boat, or the physical effort and exhaustion of pushing wood against pavement, of dreams and stories. In regards to Xochimilco's future, here too lies a possibility for change: the critical humanist ideals of the city's "modernization" are decades old; a more contemporary, ethical and radical conceptualization of natural and cultural environments could instead help carry the vitality of Xochimilco's canals and *chinampas* into the future.

I end these reflections with a few broad remarks on the successes and limitations of applying a posthumanist framework throughout this thesis. I suggest that this methodology has contributed to diluting boundaries of otherness and selective historical blindness of posthumanism critiqued by Horton and Berlo; a problem which might arise when indigenous

cosmovisions are ignored. The theoretical discussions of this work have attempted to approach not only the Xochimilca people "in their own terms," but also the environmental agencies with whom they live; thus paralleling the approach of *Plan Acalote* itself. Yet my theoretical strategy of material becoming also stands in contrast to an explicit focus on indigenous art or indigenous aesthetics in art. While this term opens up a valuable range of themes and subjectivities, its use also risks the ethical and theoretical problems of essentialism. Namely, such perspectives may imply that there is such a thing as a fundamental being of indigenous bodies, a sort of essentialism easily conducive towards racist reduction and categorization. On the other hand, a strictly materialist conceptualization of becoming in this thesis has allowed a study of multiple and fluid boundaries over time of perpetually changing bodies. I suggest that this proposition goes crucially beyond situating, for example, the artists' position as descendants or inhabitants of Xochimilco, as well as my own position as a researcher, though they and I are materially bound to this natural/cultural environment through our lives and families, and have used immersive investigation techniques in Xochimilco. Instead, I have traced concern for Xochimilco and Mexico City's environment arising from the ecological configurations, experienced by complex perceptual organisms within this web; while these stories are threaded through a particular material history, this conceptualization is not a euphemism for racial explanations and essentialisms, which in this research case have become largely unnecessary.

Finally, materialist posthumanism has allowed an approach towards spirituality and ritual which is compatible with contemporary research and science; however, there is still some suggestion in Nahua cosmovision of an ultimately unknowable, inexplicable or at least unpredictable quality to our environmental entanglement. This does not mean that attempts to ameliorate this ignorance through research are therefore useless, but this recognition is perhaps essential if materialist posthumanism is to truly constitute an ethical break from humanist metaphysics. It is necessary to recognize that reality and experience are not currently fully reproducible or reducible in any contemporary technological, scientific or philosophical form or endeavor. Methodologically, this hints that in the face of complex ecological problems like those of Xochimilco and Mexico City—as well as, of course, larger concerns of climate change—it is especially imperative to accept that humans are never in full control. Predictability is extremely useful, but it is never perfectly absolute.

Becoming *acalote,* ultimately, refers both to the central transformation which took place during *Plan Acalote*, and to a general strategy towards art and ecology. Becoming

acalote implies that to know and study an ecological problem in creative and radical ways, representative or referential processes are not enough. Instead, awareness of our continuous relational unfolding and becoming with the world is crucial if we are to know the environment as perceptual and historical organisms. In tying these final thoughts together, I have found myself reminded of familiar terms in posthumanist literature, particularly Haraway's Cthulucene, or Deleuze and Guattari's rhizomatic knowledge: theories that advocate (broadly speaking) for knowledge and existence to be recognized as necessarily diversified, relational and multiple realms; as opposed to centralized and silencing methodologies of power.[105] The proposal of becoming *acalote,* however, recognizes the situated and historical nature of specific problems of Mexico City, suggesting that here in particular becoming "modern" (in the particular humanist sense of the Enlightenment) is not historically inevitable; we might instead mine our social and historical bases to become more contemporary, localized and ground-breaking populations-with-our-environments. Becoming *acalote* also, finally, amplifies the potential of actual, material pathways. Ecology and history are necessarily situated studies, in which we can be physically involved as human organisms; artworks like *Plan Acalote* can intersect these pathways in real space. Our material trajectories are ultimately revealed to have both significant value and costs; therefore, cross-sections and encounters between these disciplines are ideal physical and intellectual spaces for vital creativity to unfold.

105 See Haraway, "Anthropocene, Capitalocene, Plantationocene, Chthulucene," 160; Deleuze and Guattari, *A Thousand Plateaus*.

FURTHER RESEARCH

Various questions remain open in the topics that have been explored in this thesis; other arise from the results developed. A few brief mentions are pertinent here. The theoretical framework presented in the first chapter, based on materialist posthumanism and ecology, is by no means an exhaustive proposal of the concordance between these theories. I have chosen to focus on particular main concepts common to posthumanist thinkers in order to construct a practical and flexible framework for my case study, while avoiding relying too heavily on any single author. Yet each of the theorists mentioned (Latour, Barad, Braidotti, Bennett, Ingold, etc.) has developed particular theories with unique nuances that can be further explored and developed beyond this work. For example, the topic of subjectivity and situated knowledge in posthumanism from Braidotti and environmental perception according to Ingold, would be of great interest in discussing the ecological potential of alternative cosmovisions. Additionally, my proposal of "becoming *acalote*" as a way of thinking about research methodology is, in some ways, more of a starting point than a conclusion; as such, this approach (which is suggested by *Plan Acalote*'s artistic proposal) invites further development and engagement, perhaps with more specific elements of posthumanist and ecological theory.

Many elements of Nahua cosmovision have not been discussed in this thesis; for one thing, I have mostly based my analysis on accounts of the pre-Hispanic Valley of Mexico, but have not engaged with other contemporary groups of Nahua people or descendants apart from the Xochimilcas (other Nahua groups still exist in central and south Mexico). I have focused on the population of Xochimilco because I am particularly interested in their peri-urban situation, and because historical hybridization is clear and obvious in their social customs. Not only this, but my experience living in Xochimilco with my grandparents and family members has offered me insight which I have been able to use in this thesis. Yet it would be interesting to expand the work developed in this thesis to include the knowledge and situation of other Nahua people. Additionally, *Plan Acalote* points to very specific elements of Nahua history; for this reason I have mostly relied on scholarship from the area of cosmovision and ritual landscape. But this research has indicated that the study of other, broader topics of Nahua ritual and religion could be of great relevance to addressing current problems; not only

ecological, but also historical, political and social. A materialist or posthumanist framework can perhaps aid in this cross-disciplinary encounter.

Finally, as the potential for ecologically relevant transformation through performance is a key finding in this thesis, it would be of great interest to explore this notion in relation to specific theories of art or aesthetics. Further, I have argued that *Plan Acalote* is a unique example of performative art that draws from ritual, yet does not do so by relying on popular tropes such as altered states of consciousness or indigenous aesthetics. A comparison between these different ways of addressing different cosmovisions in art would be of great interest; as would the historical and political dimensions of these approaches. Theoretical approaches to the political importance of art or aesthetics might then offer further points of discussion for the ecological effectivity of *Plan Acalote* and similar artworks.

ILLUSTRATION SOURCES

Cover photo. Downloaded 1 November 2019. http://mald3ojo.com/planacalli.html.

Fig. 1. Downloaded 28 September 2019. https://labrujula.nexos.com.mx/?p=1363.

Fig. 2. Downloaded 28 October 2019. https://commons.wikimedia.org/wiki/File: La_Gran_Tenochtitlan.JPG.

Fig. 3. Downloaded 28 October 2019. http://www.andreareynosa.com/chinampa-gardens.

Fig. 4. Downloaded 28 October 2019. https://commons.wikimedia.org/wiki/File: 5829_Paseo_de_la_Viga_con_la_iglesia_de_Iztacalco.jpg

Fig. 5. Photo author, April 2012.

Fig. 6. Photo author, August 2019.

Fig. 7. Downloaded 28 September 2019. http://www.allthingslivingallthingsdead.com/ cartography.

Fig. 8. Downloaded 28 September 2019. https://psn.si/rehabilitar-el-canal-nacional/2019/08/

Fig. 9. Photo author, April 2012.

Fig. 10. Photo author, November 2011.

Fig. 11. Downloaded 1 November 2019. http://mald3ojo.com/planacalli.html.

Fig. 12. Downloaded 1 November 2019. http://mald3ojo.com/planacalli.html.

Fig. 13. Downloaded 1 November 2019. http://mald3ojo.com/planacalli.html.

Fig. 14. Downloaded 1 November 2019. http://mald3ojo.com/planacalli.html.

Fig. 15. Colectivo Plan Acalli, *Plan Acalote Bitácora de un Trazo*.

Fig. 16. Downloaded 2 November 2019. http://mald3ojo.com/planacalli.html.

Fig. 17. Downloaded 2 November 2019. https://www.good.is/features/saving-xochimilco-plan-acalli-yolcan.

Fig. 18. Downloaded 1 November 2019. http://mald3ojo.com/planacalli.html.

Fig. 19. Downloaded 1 November 2019. http://mald3ojo.com/planacalli.html.

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