AN ABSTRACT OF THE DISSERTATION OF

Jenny F. de la Hoz for the degree of Doctor of Philosophy in Science Education presented on February 26, 2016.

Title: UNCOVERING THE CULTURAL NARRATIVES AND ENVIRONMENTAL IDENTITIES OF LATINA/O ENVIRONMENTAL PROFESSIONALS AND BEYOND

Abstract approved:

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Shawn Rowe

Abstract

The environmental movement needs people from communities of color and the differing perspectives they provide. Latinas/os are one of the largest communities of color in the US, and their numbers continue to grow. However, mainstream environmental organizations have failed to engage this community in authentic ways. The lack of meaningful opportunities for activation of existing resources for Latina/o environmental identity, specifically Latina/o values and perspectives, may be the reason why this has not happened. This research project incorporates three elements reported in three manuscripts: 1) a critical review of the last decade of research (N=39) that brings together into one publication what is known about Latina/o environmental identity in both the peer review and "gray" literature of polling. A LatCrit theoretical framework shapes that review and serves to identify key constructs

necessary for any analysis of Latina/o environmental identities, specifically the constructs of intersectionality, multidisciplinarity, and interdisciplinarity. 2) Biographical interviews (N=28) employing a visible thinking routine – concept mapping -- explores firsthand the environmental identity and environmental values of Latina/o environmental professionals from around the US focusing specifically on the significant life events these professionals include in their narratives. The narratives of Latina/o environmental professionals are explored in light of similarities and differences with the "master narratives" of mainstream environmentalism in the US. Two themes that emerged from the narratives that are not traditionally part of the narratives of mainstream environmental professionals were the values of *familismo* and *conscientização.* Finally, 3) a widely used existing instrument, the Environmental Identity scale (EID), was modified to include questions about significant themes that emerged from the interviews and literature review. This expanded instrument was administered to Latinas/os living in the Pacific Northwest (N= 149) and the results are analyzed in light of whether the EID in its current or expanded form can be a useful tool for documenting the experience of Latinas/os in the US. In order to authentically engage the Latina/o community and thus to remain relevant, the mainstream environmental movement must acknowledge how different Latina/o identities intersect with structures of privilege in the US and provide proenvironmental behaviors that affirm these identities.

UNCOVERING THE CULTURAL NARRATIVES AND

ENVIRONMENTAL IDENTITIES OF

LATINA/O ENVIRONMENTAL PROFESSIONALS AND BEYOND

by

Jenny F. de la Hoz

A DISSERTATION

submitted to

Oregon State University

in partial fulfillment of

the requirements for the

degree of

Doctor of Philosophy

Presented February 26, 2016

Commencement June 2016

Doctor of Philosophy dissertation of Jenny F. de la Hoz presented on February 26, 2016.

APPROVED:

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Major Professor, representing Science Education

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Minor Professor, representing Marine Resource Management

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Dean of the College Education

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Dean of the Graduate School

I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

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Jenny F. de la Hoz, Author

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Chapter 1: General Introduction

LATINAS/OS AND THE ENVIRONMENTAL MOVEMENT

Introduction

My journey into environmentalism began many years ago in a small apartment in urban New Jersey. Shows like *Wild America* and anything Jacques Cousteau related took me away from the problems of my life and into a world of adventure and science. I dreamed of seeing those wild places and making connections to mysterious creatures. The freshwater river dolphin captured my imagination and I vowed I would go one day and explore it.

At first, reaching my dream seemed absolutely possible. My high school science teacher, Ms. Oresta Ferrito, nurtured my curiosity with books and projects. She, like many others of my teachers, made me believe that if I worked hard enough, it would be easy to accomplish. So I did. But as I entered college, I was presented with new barriers that had nothing to do with my ability to work hard. It had to do with a cultural capital about doing science and being in the field that no one had taught me and I didn't know I needed until it was too late. But I kept fighting and winding my way until I found myself working in the environmental field at a wonderful aquarium.

I don't remember the first time I noticed I was one of a handful of people of color working at the aquarium that didn't work in the custodial or maintenance departments, but I know it wasn't long after I started. It surprised me. I was sure I wasn't the only one interested in this environmental stuff. But as time progressed I began believing that there were not many like me who grew up in an urban

community and were interested in nature. This belief persisted until I started going to conferences and meeting others similar to me. And just like me, they thought they were the odd ones out and were happy to discover this was not the case. As we talked, we discovered we had some similar milestones and barriers to overcome. But were there others like us? And could those barriers be removed to welcome more people like us into the environmental field?

The Societal Relevance

The environmental movement needs people from communities of color and the differing perspectives they provide. Global issues such as anthropogenic climate change, rising coastal waters, and depleting biodiversity require a globally informed citizenry with a desire for change who understand resiliency and adaptation. Issues such as plastic pollution, diminishing fisheries, and point-source pollution necessitate individuals who are looking to create positive change. People of color often come from the communities most often impacted by these issues and are often overrepresented in jobs where they have a high exposure to toxins and other pollutants. Their insights and experiences could prove valuable in creating true environmental change.

A recent study prepared by Taylor (2014) for Green 2.0 – an initiative dedicated to increasing racial diversity across mainstream environmental NGOs, foundations and government agencies – found that even though there has been "growth in the ethnic minority population in the U.S., the percentage of minorities on the boards or general staff of environmental mainstream nongovernmental

organizations, foundations, or government agencies does not exceed 16% in the three

types of institutions studied" (p. 4).

POPULATION AND EMPLOYMENT TRENDS OF PEOPLE OF COLOR
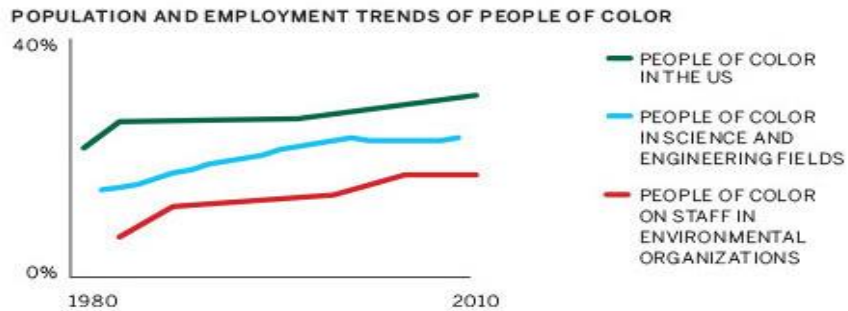
Figure 1. Population and employment trends of people of color. These are the findings of Green 2.0 (Taylor, 2014).

This low representation extends even to the number of volunteers in these

organizations (p. 35). Reasons cited include unconscious biases in recruitment

practices that "replicate the current workforce" (p.5) and the underutilization of any

internship pipeline to find workers.
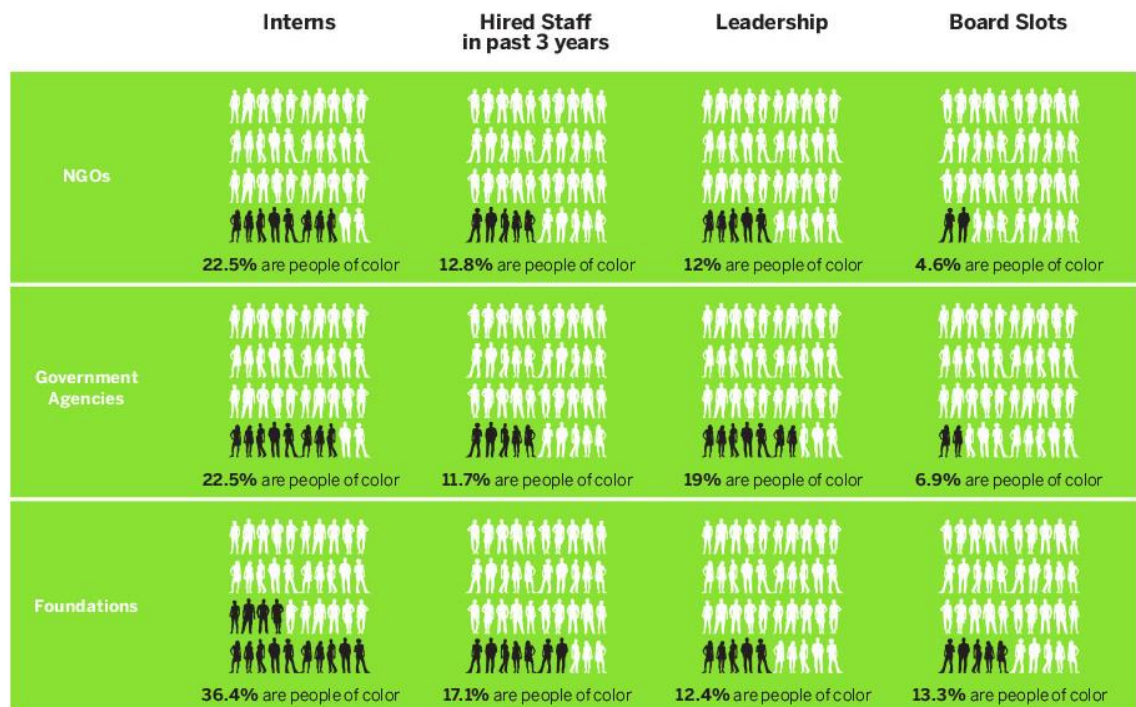
Figure 2. The percentage of persons of color employed in different sectors of the environmental movement. These are findings by Green 2.0 (Taylor, 2014).

Despite this trend, there are some ethnic minorities working in these organizations. By examining more closely the experience of ethnic minorities with a strong environmental identity, we may gain some important insights about how they came to the environmental movement and what experiences shaped their environmental identity. In turn, these insights can help the environmental education movement create more authentic programming for future and similar audiences. This could address my initial question about how to remove barriers and make environmentalism more welcoming to "people like us."

Research has shown that a strong environmental identity often accompanies pro-environmental behavior (Sparks & Shepherd, 1992; Mannetti et al., 2004;

Whitmarsh & O'Neill, 2010), and pursuing a career in environmental movements may be argued to be a significant pro-environmental behavior. While environmental identity is a complex and relatively poorly understood construct, we do know that all identities, and environmental identities in particular, are often expressed in the form of a narrative (Bruner, 1993; Lejano, Ingram, & Ingram, 2013).

Personal narratives are often at the heart of environmental work. From Jane Goodall's biography to the stories of the marine mammal trainers in the popular documentary, *Blackfish*, the narrative is the most evocative form of expressing a personal connection to nature. As Bruner (1993) suggests is the case with families, it is the telling and retelling of these narratives that often helps environmentalists identify and connect themselves to other environmentalists. Our narratives, especially biographical ones are built out of highly personal even idiosyncratic biographical features and experiences, but narrative researchers have shown that narratives also usually are built around particular cultural structures, stories and ideas of what is normal (Bruner, 1993; Wertsch, 2002). The personal biographical narratives of environmentalists are often built around the notion of a significant life experience (or experiences) that changed the way an individual saw herself connected to nature (Gough, 1997; Pellow, 2003).

Because they must draw on culturally and socially situated structures, symbols, and tools, all narratives, including these environmental narratives, are "historically and culturally contingent" (Harris, 2014, p. 802) and generally express the dominant cultural perspective in some way. In the environmental movement, like in any other movement, one would expect that the dominant culture would shape the

narratives one would most likely hear. Yet, what about individuals who are not part of

the dominant culture because they come from an ethnic group underrepresented in the

mainstream environmental movement? Do they also express similar narratives in

what Bhabha (2004) would call *mimicry* or the "replication of the colonizers'

practices"? Or are there other common elements in the narratives among these

individuals that are (or are not) present in the dominant narrative? Can these elements

be quantified and studied in order to better understand what attracts a diversity of

people to the environmental movement? Could they be used to attract more like-

minded individuals to the environmental movement? Can understanding these

elements help create more robust survey instruments based on existing environmental

identity scales that capture differences related to systems of privilege at work?

    The goal for this dissertation is to explore the concepts surrounding these

questions, specifically what is meant by environmental identity for Latinas/os – a

typically underrepresented ethnic group in the environmental movement who

nevertheless represent close to 50% of the population in most of the Western United

States (Taylor, 2014). By examining these constructs, and how systems of privilege

may intersect with this identity, the work will provide important information for

environmental professionals who wish to make authentic connections to this

audience.

Conceptual Framework

<u>Environmental Identity</u>

    Environmental identity is a research topic in many fields including sociology,

anthropology, and psychology. This project is grounded conceptually in the work of

environmental psychology, which emerged as a specific field in the 1950's. From an environmental psychology perspective, environmental identity is how an individual orients herself to the natural world (Clayton, 2001). The terms used in the environmental psychology field to discuss identity are "environmental identity" (Clayton & Opotow, 2003; Weigert, 1997); "ecological identity" (Thomashow, 1995); "environmental self" (Cantrill, 1998); "environment identity" (Stets & Biga, 2003); and "ecological self" (Bragg, 1996; Naess, 1989). Because of Clayton's work developing the Environmental Identity Scale (EID), a scale used in this project, I use the term environmental identity throughout.

From a psychological perspective, environmental identity is associated with a wide range of cognitive, emotional, and personal characteristics. An environmental identity can be described as the way in which an individual takes abstract global issues related to nature and the environment and makes them immediate and personal. This can have specific cognitive effects. For instance, identity has been shows to affect "attention, memory, and evaluation" (Clayton, 2012). An environmental identity is also thought to prescribe courses of action in life that are compatible with an individual's sense of who they are and what they feel empowered to do, whether that be on the sociopolitical or personal level (Clayton, 2012). And a strong environmental identity also brings with it a membership or identification with a

THOUGHT - abstract global issues related to nature and the environment and makes them immediate and personal.

Strong moral code that includes ideas and values such as sustainable living. Others & compatible with (Aragones, 2011). These overlapping environmental components and make them a complex topic with varying approaches

ACTIONS - Others are compatible with an individual's sense of who they are and what they feel empowered to do (Clayton, 2012).

environmental identity a complex of this identity and its

different facets.

Can prescribe

BEHAVIOR - predictor of current and future pro-environmental behavior (Clayton, 2003).]

Figure 3. Environmental identity is only a portion of one of many identities an individual holds. Environmental identity can prescribe thought, actions, and behavior.

The EID is a 24-item scale that measures "the extent to which the natural environment plays an in important part in a person's self-definition" (Clayton, 2012). It also has items which relate to "competence, autonomy, and belongingness, and to engaging in outdoor activity" (Clayton, 2012). The purpose of the EID is to measure environmental identity as a phenomenon that operates at the scale of individual psychology, and it is this scale that forms the quantitative portion of my research. At the same time, because its constructs have primarily been develop through work with undergraduate students at US universities (a "captive audience" that does not necessarily represent the population of the US more broadly) I believe that the EID itself may have a Western, white, middle-class bias, perhaps even rooted in larger scale Discourses about what it means to be an environmentalist in the US (Gee, 2000). For this reason, I will be pairing its use with qualitative interviews in the hopes

of either validating it across cultural settings or adding items to capture cultural and social differences.

Narrative and identity

Narratives are often used by environmentalists to help identify each other and to help make a coherent identity among the environmental movement. In fact, environmentalists pitted against developers is often used as an example of a *master narrative* when discussing conflict narratives ("What is a Master Narrative", 2007). A master narrative refers to "pre-existent sociocultural forms of interpretation" which define the way that individuals and institutions refer to themselves as social entities (Bamberg, 2005).

For this dissertation, literature in the anthropological and sociological fields helps situate the psychological work of the EID. In particular, I am using the work of Chawla (1999, 2001), a sociologist who did similar work around significant life experiences for environmental educators. Others, such as anthropologists Harper (2001) and Checker (2010), who studied environmental justice and communities of color through ethnographic lenses, have informed the work. This situating of psychological phenomena within social and cultural contexts becomes particularly important in reviewing the narrative literature since it is my belief that what is currently considered "environmentalism" is, in fact, a hegemonic master narrative. A hegemonic narrative may be defined as a narrative which maintains only one perspective and does not permit another perspective to alter the discourse. Some critical theorists believe the master narrative to be hegemonic and promote what they call the counter narrative (Bamberg, 2004). Analyzing the counter narrative or

narrative of fringe communities for the intersectionality of culture, identity, and the

environment is at the heart of this project.

Intersectionality

Crenshaw (1991) defined intersectionality as "the various ways in which race

and gender interact to shape the multiple dimensions of Black women's employment

experiences" (p.1244). From this work on Black women, research evolved to include

other peoples' differing identities and how the intersection of those various elements

of identity adds or diminishes power and privilege (Collins, 2012). This concept of

intersectionality goes beyond a simple research construct since it addresses multiple

identities and how they are held simultaneously. This idea is important for any kind

of research with immigrants who can "simultaneously hold marginalized and

privileged identities" (Nuñez, 2014, p. 85). Nuñez's (2014) model of intersectionality

helps explore "multiple and socially constructed identities" (p.85) such as gender,

class, and multi-raciality that may or may not be unpacked or considered salient by

the individual. It also helps situate the research beyond the individual by positioning

the perspective in historical, cultural, and social contexts. The concept and framework

of intersectionality will help develop these papers beyond the basic constructs and

inform environmental leaders and educators about how to apply the findings.

Intersectionality also is a key component of the guiding theory used for the

project – LatCrit. While LatCrit is explained in greater deal throughout the project,

its background is born of using Critical Race Theory (CRT) in relation to the Latina/o

experience in the United States, similar to other theories that take other experiences

into consideration (i.e. FemCrit and AsianCrit). It has similar tenets to that of CRT

but builds on these and adds tenets that speak to the Latina/o identity. Below is a

figure that lists all of the tenets, prominently including intersectionality.
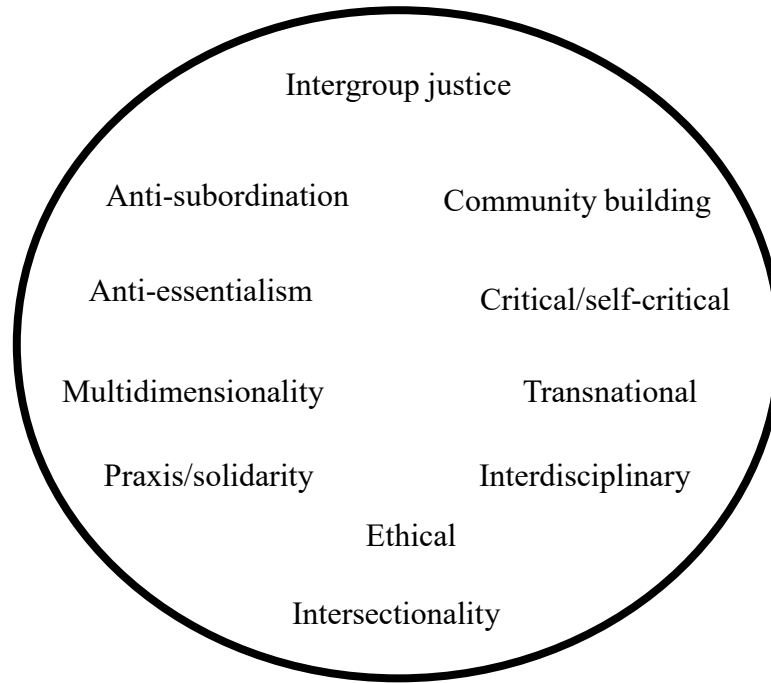
Figure 4. Tenets of LatCrit Theory. Intersectionality is a prominent aspect of this theory.

Intersectionality was used to help focus the research and situate the findings to the

Latina/o experience.

Guiding Questions

This three-article dissertation explores Latina/o environmental identity in hopes of

addressing the following questions:

- What does research tell us about what US Latinas/os are saying in regards to the

  environment?

- What factors and experiences are common to Latinas/os working in the

  environmental movement in the US? Which aspects of their ethnic identity play

a role in forming their environmental identity? Which, if any, aspects of systems of privilege seem to play a role in forming their environmental identities?

- Do existing measures of environmental identity capture those aspects of ethnic identity?

- Are existing systems of privilege manifest in existing measures of environmental identity?

- Can existing measures of environmental identity be updated with factors identified from this study to account for the identities and experiences of Latinas/os outside of the environmental movement?

- Do the experiences of Latinas/os cause us to reevaluate existing models for recruitment of Latinas/os into environmental movements and models of their trajectories through environmental behaviors and identities?

Methods

The study was conducted in three phases. Each phase has other parts nestled within. For Phase One, a review and analysis of environmental literature relating and pertaining to Latinas/os in the environment was conducted. The literature was then coalesced and organized in order to explain what is known in this area. Table 1 shows all of the terms searched and the results obtained for each search.

Table 1

Terms Used for Search and Results

Terms used	Results	Articles which met search criteria *
Farm worker	6,199	

Farm worker Hispanic	400	
Farm worker Hispanic environment	35	1
Farm worker Hispanic sense of place	0	0
Farm worker Latina/o	363	
Farm worker Latina/o environment	34	1
Farm worker Latina/o sense of place	0	0
Farm worker Chicano	52	
Farm worker Chicano environment	1	0
Farm worker Chicano sense of place	0	0
Farm worker Puerto Rican	13	
Farm worker Puerto Rican environment	2	0
Farm worker Puerto Rican sense of place	3	0
Factory worker	3,976	
Factory worker Hispanic	59	
Factory worker Hispanic environment	56	0
Factory worker Hispanic sense of place	0	0
Factory worker Latina/o	8	0
Factory worker Latina/o environment	1	0
Factory worker Latina/o sense of place	0	0
Factory worker Chicano	1	0
Factory worker Chicano environment	2	0
Factory worker Chicano sense of place	0	0
Farm worker Puerto Rican	3,576	
Farm worker Puerto Rican environment	102	4
Farm worker Puerto Rican sense of place	1	0
Land grant communities	761	
Land grant communities Hispanic	1	0
Land grant communities Hispanic environment	586	7
Land grant communities Hispanic sense of place	5	1

Land grant communities Latina/o	3,297	
Land grant communities Latina/o environment	148	4
Land grant communities Latina/o sense of place	2	1
Land grant communities Chicano	2	0
Land grant communities Chicano environment	1	0
Land grant communities Chicano sense of place	0	0
Land grant communities Puerto Rican	4,179	
Land grant communities Puerto Rican environment	129	4
Land grant communities Puerto Rican sense of place	0	0
Acequia farmers	45	
Acequia farmers Hispanic	1	
Acequia farmers Hispanic environment	0	0
Acequia farmers Hispanic sense of place	0	0
Acequia farmers Latina/o	1	
Acequia farmers Latina/o environment	0	0
Acequia farmers Latina/o sense of place	0	0
Acequia farmers Chicano	0	
Acequia farmers Chicano environment	0	0
Acequia farmers Chicano sense of place	0	0
Acequia farmers Puerto Rican	115	
Acequia farmers Puerto Rican environment	3	0
Acequia farmers Puerto Rican sense of place	0	0
Urban barrio residents	60	
Urban barrio residents Hispanic	3	1
Urban barrio residents Hispanic environment	43	2
Urban barrio residents Hispanic sense of place	1	0
Urban barrio residents Latina/o	5	1
Urban barrio residents Latina/o environment	50	0
Urban barrio residents Latina/o sense of place	1	0

Urban barrio residents Chicano	2	0
Urban barrio residents Chicano environment	1	0
Urban barrio residents Chicano sense of place	0	0
Urban barrio residents Puerto Rican	2	0
Urban barrio residents Puerto Rican environment	41	1
Urban barrio residents Puerto Rican sense of place	1	0
Rural colonia residents	31	
Rural colonia residents Hispanic	5	0
Rural colonia residents Hispanic environment	1	0
Rural colonia residents Hispanic sense of place	0	0
Rural colonia residents Latina/o	4	0
Rural colonia residents Latina/o environment	1	0
Rural colonia residents Latina/o sense of place	0	0
Rural colonia residents Chicano	173	2
Rural colonia residents Chicano environment	23	3
Rural colonia residents Chicano sense of place	0	0
Rural colonia residents Puerto Rican	252	3
Rural colonia residents Puerto Rican environment	34	2
Rural colonia residents Puerto Rican sense of place	0	0
Rural colonia residents	31	0

The results shown are only for the EBSCOhost database. Some of the same articles appeared in multiple searches. The actual number of useable articles are listed but may include an article found in a previous search; thus, the actual number of articles is not cumulative.

For Phase 2, interviews were conducted of self-identified Latinas/os working in the environmentally-focused organizations. These organizations are comprised of small and large, as well as, federal, non-profit and private organizations and include but are not limited to US Fish and Wildlife, The Monterey Bay Aquarium, The Nature Conservancy, and Latina/o Outdoors. Possible participants from these

organizations were identified by articles or interviews in which they have identified

themselves as Latinas/os in the environmental field or by their positions as leaders in

their respective organizations. Eligible participants were asked to participate. If they

consented, they were interviewed about their significant life experiences which

impacted their environmental identity and how their Latina/o background played a

part of those experiences. These elicitation interviews were recorded and transcribed.

The research team then created a concept mental map (Jones et al, 2011) using

content analysis to identify themes and patterns which arose around the interview.

After the initial concept maps were created, they went through a second coding using

codes found in previous research in order to reduce bias and verify the findings from

the interviews (Marques & McCall, 2005; Chawla, 1999; Chawla, 2006). These final

concept maps were then sent to the participants for their review and were used in a

second participant confirmatory interview around the themes presented. These

confirmatory interviews were recorded and transcribed and concept maps corrected

and updated with feedback received in the second interview. These maps were then

analyzed and used to inform Phase 2 of the research project. Table 2 gives some

descriptive statistics of the sample population for this part of the study.

Table 2

Descriptive Statistics of Study Population for Interviews ($N = 28$)

Place of birth	Preferred Interview Language			Gender	
	English	Spanish	Bilingual	Males	Females
Born in the US	12	2	1	5	10
Born outside of US	5	6	2	3	10

In Phase Three of the study, paper surveys were administered to self-identified Latinas/os who may or may not work in the environmental field to test the strength of their environmental identity. A shortened version of the reliable and validated survey instrument, the Environmental Identity Scale (EID; Clayton 2003) was translated and used. Additional questions were constructed from the concept maps regarding Latina/o identity and added to these surveys. Table 3 shows demographic information about the participants in the survey portion of the research.

Table 3

Descriptive Statistics of Study Population for EID surveys (N = 149)

	Ages 18-19	Ages 20-29	Ages 30-39	Ages 40-49	Ages 50 +	n/a	Total
Language							
English	7	26	32	15	9	5	94
Spanish	1	11	30	12	1	0	55
Place of Birth							
Born in US	8	24	15	5	4	5	61
Born outside US	0	13	47	22	6	0	88
Gender							
Male	2	8	16	12	1	2	41
Female	6	29	46	15	9	3	108

Chapter Organization

The research study outlined above will be presented in five chapters. Chapter 2 is the literature review of Latinas/os and the environment. Chapter 3 is the qualitative study of Latina/o environmental professionals and the significant life experiences that created their environmental identity. Chapter 4 is the quantitative study of Latinas/os environmental identity who predominantly live in the Pacific Northwest. Chapter 5 is the concluding chapter that summarizes the findings and makes recommendations for future work.

Each of the chapters was created with an audience in mind. One of the main findings discussed in chapter 2 is that the research on this audience is rarely given to the Latina/o audience. For this reason, certain journals were targeted which can provide more access to these audiences and practitioners working with these audiences.

Journal Submissions

The first manuscript will be submitted to Environmental Justice, Mary Ann Leibert, Inc., 140 Huguenot Street, New Rochelle, NY 10801-5215. This journal is focused on environmental justice, with an emphasis on marginalized communities. It will be submitted for review, March, 2016. The second and third manuscripts will be submitted to Environmental Conservation, The Foundation for Environmental Conservation, 1148 Moiry, SWITZERLAND. This is an international journal dedicated to informing decision makers around the world about environmental issues. The manuscripts will be submitted for review, April, 2016.

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Chapter 2: Manuscript 1

NO ENVIRONMENTAL *DICHOS* FOR MY PEOPLE: A REVIEW OF
LITERATURE ON LATINAS/OS AND THE US ENVIRONMENTAL
MOVEMENT (2004 TO THE PRESENT)

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Abstract

Native and immigrant Latinas/os have long cultural connections to the environment.
Researchers have been documenting this connection and associated environmental
injustices against Latinas/os since the 1970s. This literature, however, is difficult to
find. This literature review proposes that a diaspora of knowledge and practice is the
reason for the lack of cohesion in the literature. Using LatCrit theory as a framework
and panethnicity as a focusing theme, this article makes suggestions in order to
coalesce future research and reporting of the findings, which are much needed by
Latina/o advocates, leaders, and communities.

Introduction

"*La tierra es vida*" (the land is life) is the *dicho* (folk saying) that Peña (2005)
used to begin his book, *Mexican Americans and the Environment*. Despite strong
historical and cultural roots in protecting the land, there is still a pervasive belief
among mainstream environmentalists that Latinas/os do not care for the environment.
As Kolankiewicz and Beck (2001) reported, "(V)arious Latino citizen's groups in Los
Angeles threatened not to cooperate with the [Sierra] Club on air pollution issues if it
were to actively oppose immigration. When you have ethnic spokesmen saying to
environmentalists that 'we won't work with you on clean air if you support
immigration restriction,' that is an admission that increasing their own numbers takes

precedence over all other considerations and that environmental concerns are secondary" (p. 46).

This belief that Latina/os do not care about the environment as much as other issues has shaped the way that the mainstream environmental movement interacts with Latinas/os and supports a deficit mindset regarding the relationships of Latinas/os to the environment and to the environmental movement. Common in education, communications research, policy, and even environmental education, a deficit mindset assumes that a given group or individual is lacking in something, making it impossible for them to learn, behave, believe or act as "normal" people do because they lack something that normal people have – the right values, beliefs, motivations, environmental stimulus, cultural capital, etc. Nothing indicates this mindset more than the lack of adequate data regarding Latinas/os and the environment. A cursory search for literature on Latinas/os and the environment reveals few studies and primarily yields polls and research done by community advocates. Given the number of people who self-identify as Latina/o in the United States, it is surprising that there is such limited information about their perspectives on the environment. However, when one looks deeper to examine the multiple dimensions of the Latina/o identity, more information becomes available. This paper begins to address this particular problem regarding the lack of a cohesive scholarly literature on Latinas/os and the environment by conducting a systematic review of the literature that is available from the last decade, 2004-2015.

Articulating a Critical Perspective: Tools for Analysis

Research about Latinas/os necessitates a discussion of the term used to describe people descended from the Iberian diaspora. The use of the terms *Hispanic* and *Latina/o* has been debated for many years (Garcia 2000; Pappas 2001). While there are differing opinions as to which term is best, scholars agree that the grouping is a social construct which has acquired "differing levels of status, disparities in access to resources, and discrepancies in achievement, health, and well-being outcomes" (Shih et al., 2007). This paper does not endeavor to add to the terminological discussion but instead relies on prior historical justifications and rhetorical explanations of these terms. For the purpose of this study, I use the term Latina/o or Latinas/os in place of Hispanic, Hispanics, Hispanic Americans, Latina/o Americans, Chicano/a, Chicanos/as, and Puerto Ricans. For me, this term speaks to the broader panethnic experience of Spanish-speaking individuals who have faced and internalized varying forms of subjugation. It is not possible, however, to completely ignore all these other terms. In fact, these terms were all used in the systematic literature review presented here, and I argue that this lack of common terminology (explained further below) provides a partial explanation for why there is limited literature on Latinas/os and the environment. Having so many terms does not allow for the information to be coalesced into one location that may be useable by this audience.

Use of the term Latina/o also speaks to the panethnicity of the Latina/o experience as expressed in the LatCrit theoretical framework, the framework used in this systematic literature review. While various schemas could be used to analyze and

frame the literature, including the schema of environmental justice, none of the frameworks capture the complexity and hybridity of the Latina/o experience with the exception of LatCrit. As Delgado Bernal (2002) explained, LatCrit is "concerned with a progressive sense of a coalitional Latina/Latino panethnicity," and it "elucidates Latinas/Latinos' multidimensional identities and can address the intersectionality of racism, sexism, classism, and other forms of oppression" (p.108). An example of why attention to intersectionality is important is the complex relationships that Latina/o New Mexicans have with the land and their identity. Anguiano et al. (2012) explained, "A deep history of colonization implicates New Mexican Hispanics as both colonizers and colonized, yielding a complex mixed race identity (e.g., indo-Hispanic, mestizos, and anglo-Hispanic) that results in interesting paradoxes and views about land ownership" (p.127). These types of complexities, where historically and socially constructed views of race, ethnicity, property, and power are intertwined in contemporary consciousness and problems, are only seriously addressed by LatCrit theory.

The specific tools from LatCrit theory that I will use to review the body of available work on Latinas/os and the environment are the constructs of multidimensionality, intersectionality, and interdisciplinary. Multidimensionality refers to what Hernandez-Truyol (1999) termed an "epistemic site that embraces rather than atomizes our multiple co-existing, indivisible identities" (p. 829). It refers to the recognition in research of the many identities that comprise an individual, the analysis of which is designed, as Valdés (n.d.) explained, "to unpack the many dimensions of interlocking systems of subordination" (A Collective Kind of Personal

Praxis section, para. 15). Multidimensionality underscores anti-essentialism, another

tenet of LatCrit (Bender & Valdés, 2012), both of which are tied to the critical notion

of race, which is based not solely on "the social construct of race but rather is

multidimensional and intersects with various experiences" (Delgado Bernal, 2002,

p.118). Anti-essentialism is the notion that there is not one lived experience defined

by the social construct of groups, but that it is the intersection of various identities

that defines individual and collective experiences.

Crenshaw (1991) defined intersectionality as "the various ways in which race

and gender interact to shape the multiple dimensions" of people's' lives, and further

research has demonstrated how intersectionality adds or diminishes power and

privilege (quoted in Collins, 2012, p. 1244). Nuñez (2014) explained that the concept

of intersectionality is important for any kind of research with people who can

"simultaneously hold marginalized and privileged identities and multiple and socially

constructed identities," such as gender, class, and multi-raciality (p. 85). It also helps

to situate research beyond the level of the individual by positioning the individual's

perspective in historical, cultural, and social contexts. Intersectionality also speaks to

the complex and undervalued epistemologies of experience often negated by

frameworks that rely heavily on quantitative methodologies or promote only

hegemonic epistemologies. The analysis of individuals' knowledge and experiences

of, as well as the discursive forms that create, intersectionality forms the basis of

much of the LatCrit research.

The last perspective, the interdisciplinary tool, is an important aspect of the

LatCrit theoretical framework. While multidimensionality and intersectionality speak

to the production of knowledge, the interdisciplinary portion addresses the social

relevance and praxis of the theory (Bender & Valdés, 2012). LatCrit has made a

"commitment to social transformation through knowledge" and a "cultivation of

community" (Bender & Valdes, 2012, p. 305-306). While the roots of LatCrit are in

jurisprudence, it acknowledges the contribution and perspective of scholars from

multiple fields and "the relationship of knowledge production to social action and to

social justice" (p. 307). An interdisciplinary approach allows for the different

methodologies needed to address both the interdimensionality and intersectionality of

the Latina/o experience.

　　　　Although there are other LatCrit tools, these three allow for the dissection of

literature across multiple fields and methodologies to help arrive at one concise

review (See Figure 1 below).
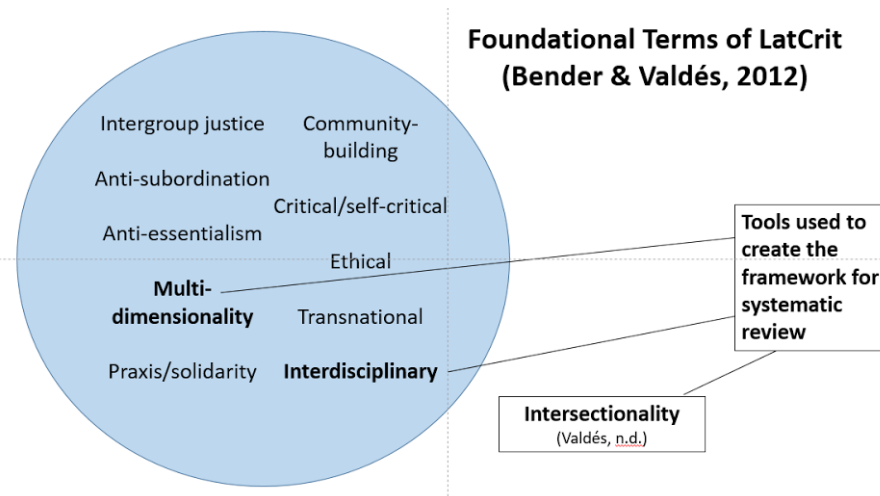
Finally, *environment* as a term must be unpacked because in providing a

definition for the environment (implicit or explicit), one determines the method by

which one relates to nature. If one views the environment as a place to be studied, one

defines it within those parameters. If one defines it as part of a personal identity, then one would use terms that have emotional and personal connections. The English word *environment* has a long history of varying views and perspectives weighted with political assignations: "'Nature' is the terrain on which power and challenges to power operate" (Pirkney, 2012, p. 75). The term can be defined in ways that range from the preservation of biophysical systems to digital architectures. In line with LatCrit theory, this paper uses Kudryavtsev et al.'s (2012) definition of sense of place for the term environment, since it is multidimensional and highlights the intersectionality which occurs in the environment, including the "social interactions, culture, politics, economics, and esthetic perspectives, a mix of reinforcing or contradictory personal experiences, as well as history of places" (p. 232). As a simplified definition, the environment can refer to the places where Latinas/os live, work, and recreate. This final definition sets the parameters for the review and focuses the paper to illustrate how these terms and other criterion have created disjointed research about Latinas/os and the environment.

Method/Parameters

I conducted a systematic review of the literature to determine the existing themes and perspectives in research regarding Latinas/os and the environment. Nicholson (2007) has recommended this approach as a way "to identify and appraise literature of relevance to a specific topic" (p. 357). I first initiated a broad search through Oregon State University's library catalog and utilized the basic terms listed below:

- Latina/o environmental issues

- Hispanic environmental issues
- Latinas/os and the environment
- Hispanics and the environment
- Latina/o environmental studies
- Hispanic environmental studies
- Latina/o environmental identity
- Hispanic environmental study
- Latina/o immigration and the environment
- Hispanic immigration and the environment
- Latina/o acculturation and the environment
- Hispanic acculturation and the environment

After arriving at a very limited number (N=9) of traditional peer-reviewed journal articles done in the last two decades via these initial, traditional academic searches, I broadened the search to include articles found on Google and Google Scholar using the same terms. This search yielded a variety of non-peer reviewed articles, reports, and surveys conducted by Latina/o-serving political groups. Mining these reports for authors and contributors indicated the widespread use of the term *Chicana/o* and the literature surrounding this Latina/o experience. I then repeated the academic search using the term Chicana/o in place of Latina/o or Hispanic.

This additional search yielded another small amount of literature (N=8), including Peña's (2003) piece, "The Scope of Latina/o Environmental Studies." This article not only provided an overview of the work done between1985 and 2003, but it also furnished a framework of terms that helped refine the literature search. I then used these "cluster terms" simultaneously to widen the field of the Latina/o experience and refine the search with the goal of yielding more results. Table 1 outlines the search terms and their results. While I also used the terms in an additional three databases (JSTOR, ERIC, and Web of Science) because of the extensive results, the table 1 only shows the EBSCOhost results.

I narrowed these results by reading each study's abstract and at times the entire article to exclude educational or architectural landscapes, political socialization or affiliation studies, and public health studies which looked into issues such as nutrition and obesity and did not fall in line with the parameters set forth in the background. In addition, I only included peer-reviewed articles between 2004 and 2015 in this review so as not to replicate Peña's (2003) strong, extensive review, which used a critical environmental justice framework and considered work done between 1985 to 2003 in both rural and urban settings, case studies of Latinas/os involved in environmental justice work, and analyses of the discourse used by Latinas/os around environmental issues. This paper seeks to build on his work rather than replicate it.

The Google and Google Scholar searches also brought to the forefront studies that included Latinas/os in a larger study or treated them as a subgroup in larger studies. Utilizing the LatCrit parameters, these studies were not included in this review because while they represent a useful tool to compare Latina/o audiences to other groups, these studies use a baseline set of assumptions that do not speak to the epistemologies of Latina/o experience. Studies included in this review focus on the Latina/o audience and try to elucidate this experience.

The final data set for inclusion in this study included 30 peer-reviewed papers and 9 non-peer-reviewed studies published between 2004 and 2015. In what follows, I present that literature by the locales where Latinas/os connect to the natural environment: urban places, rural locations, political territories, the southwestern states, and national views. The literature discussed in the urban and rural locales

referred to broad experiences of Latinas/os in areas across the United States and spoke to Latinas/os' quotidian experiences and intersection with the natural environment. The literature reviewed in the political territories and southwestern states often reflected the strong historical and political connections that Latinas/os have to these specific geographic places. The national locale covers research that has undertaken a broader view of Latina/o experience regardless of location. This classification identifies underlying assumptions and discourses typical of the body of work as a whole and elucidates research areas that require additional attention.

Findings

Southwestern and Western Locales

There is a long tradition of scholarship on the topic of Latinas/os in the states of California, Texas, and other areas that historically have been called *Greater Mexico* or *Aztlan*. The themes for this scholarship were varied, but resistance to injustice has been one of the more prominent ones (Peña, 2003; Zentella, 2014). This resistance stems from the enduring and complicated history Latinas/os have had with the land – a land whose loss conformed to their disempowerment and forfeiture of cultural identity (Zentella 2009). This complicated connection is further tangled by the arrival of new Spanish-speaking immigrants whose connection to the land is different from Latinas/os who have been there for many generations, yet whose ethnic identity is embroiled politically despite historical differences. While new Latinas/os immigrants often perceive the land as an economic resource with means to improve social mobilization, Southwestern heritage Latinas/os have a deep connection to the land beyond social mobilization (Nelson & Hiemstra, 2008). For both groups,

however, migration has produced a personal disconnection from the natural environment and, in the process, has involved a loss of identity. This is not to say that their loss of land has created a loss of environmental ethic, but rather there may be low place attachment caused by immigration, creating a reduction in the homeostasis between internal safety and fear of the external environment (Zentella, 2009). As we shall see with other Latinas/os in the United States, safety is a dominant barrier to connection to the natural environment, whether because the natural environment is toxic or because it is unknown (Ramos et al., 2008).

Zentella (2004, 2009, 2014) created a psychological model, *Multi-Dimensional Model of Hispano Attachment to and Loss of Land,* to address this loss of land and identity. While the focus of her research was on Latinas/os in the New Mexico area, there are some generalizations that can be applied to this loss of natural environment connection for all Latinas/os. Zentella (2009) outlined three core concepts: "*la tierra es madre* (land as the mother)*, el desmadre* (demothering, chaos and conflict at the loss of the mother)*,* and *our culture is imprisoned* (perceived victimization)" (p. 189).

The first concept, *la tierra es madre*, speaks to the cultural and spiritual connection the people have with the land. The land is the inheritance provided to the children and connects the prior generation to the next. This emotional connection is felt on a familial level and is not one of domination but rather of stewardship and communal responsibility (Peterson et al., 2008; Zentella 2014). Peterson et al. (2010) found a similar sentiment when interviewing Latinas/os on the Texas-Mexican border about private-land stewardship (PLS). They concluded, "Latinos were more likely

than non-Latina/o Whites to view PLS as property maintenance" and many respondents saw "pollution as a violation of that stewardship" (p. 417). In contrast, Lopez et al. (2005) reported that the familial responsibilities may prompt "wildlife conservation programs [to] be viewed by Hispanics as limiting economic growth since employment opportunities are generated by economic growth" (p. 560). However, they caution, "Wildlife professionals should not assume that Hispanics are not interested in wildlife conservation and should make efforts to engage this community in the process" (p. 562).

El desmadre is "characterized by perceptions and conceptualizations of colonization and general injustice reflecting in accessibility to land, marginalization, racism, poverty, exclusion, and migration from ancestral lands" (Zentella, 2009, p. 191). Salazar et al. (2004) and Postma et al. (2014) researched these perceptions with adolescents working in agriculture and how they viewed their exposure and risks in association with pesticides. The youth expressed experiencing first injustices and barriers tied to ethnicity and language (Salazar et al., 2004) and also to lack of literacy and advocacy skills (Postma et al., 2014). Examples of these injustices included employers not notifying workers of hazards, not providing protective gear, and workers not being invited to the table when policies were put in place (Salazar et al., 2004; Postma et al., 2014).

Other researchers working with border communities noted a compounding of issues, such as poverty, environmental hazards, and health issues, and provided examples of creativity and resilience as a reaction to this loss (Johnson & Niemeyer, 2008; Schwartz et al., 2015). Faver and Muñoz (2013) discussed how not addressing

the interconnected problems will perpetuate increasing rates of preventable diseases, "environmental degradation from industrial agriculture will go unchecked, and both human and animal exploitation within this system will remain unchallenged" (p. 353). Ramos et al. (2008) noted that the jobs in *colonias* were often the ones causing the very health issues and environmental degradation observed. Still, Johnson and Niemeyer (2008) reported that, while community workers came and saw environmental degradation, "residents painted quite a different picture of the *colonia* [sic], one that reflects the pride in transforming this empty land into a home" (p. 376).

The final core concept of Zentella's psychological model is *our culture is imprisoned*, which refers to "perceptions and conceptions of victimization" (Zentella, 2009, p. 193). This specifically refers to the continual disrespect shown by the U.S. not honoring promised lands as far back as the Treaty of Guadalupe Hidalgo. Latinas/os have both positive and negative methods for coping with this marginalization. Zentella (2014) noted a "learned helplessness [which] has been linked to substance dependence" as one of the negative approaches seen even across a broader Latina/o audience throughout the Southwest (p. 207). In contrast, activism is one of the positive coping methods used to counteract the disrespect, and some researchers have used participatory methods to engage and motivate Latinas/os to create the necessary change (Peña, 2010). Zentella hopes that this model will be used beyond psychological treatment of Latinas/os and in any program that truly wants to understand this audience. She explained, "It is necessary to remember that populations whose experiences have often been ignored in the standard histories of western expansion — those that describe the settlement of the West as being laden

with the Anglo-Saxon values of liberty, justice, and independence — have not and do not share the same vision and reality of the dominant culture… History is not just a chronological story of the past; it is embedded in political and psychological contexts that individuals live within and appear to be influenced by. The past is present in all we do as we live out our legacies as victims and oppressors" (Zentella, 2014, p. 208).

The final pieces of literature from this area are studies on educational programs and increasing the presence of Latinas/os in the environmental field. With many of the Southwestern states boasting a large Latina/o population, some of the largest in the country, the desire for more representation in environmental programs is not surprising (Lopez, 2014). Lopez et al. (2005) provided three recommendations for successful programming and community engagement: family programming, bilingual education, and "relating conservation practices with other culturally relevant 'quality of life' factors" (p. 561). They believe that utilizing these suggestions will reflect cultural competency and demonstrate the wildlife professionals' desire "to reject embedded biases and fully commit to accept and value cultures different than their own" (p. 561). In the same vein, Lopez et al. (2007) studied Latina/o college students' attitudes about the environment and recommended going beyond increasing "availability of Spanish-language materials" in order to engage the emerging Latina/o stakeholders (p. 1279). This included doing "future studies and programs [which] incorporate a combination of demographic, sociocultural, and sociopolitical characteristics" (p. 1279).

The literature from the Southwest speaks highly about Latinas/os' resiliency and strong connection to the land. The most important takeaway from the work being

done in these geographic and political borders is the theme of empowerment. Johnson

and Niemeyer (2008) cautioned environmentalists about imposing un-emancipatory

terms to describe the people whose "descriptions of themselves and their lives

foreground the ways in which they have been able to transform their situations" (p.

381). While it is important to highlight the environmental issues in these

communities, it should be done with a belief in the transformative power of

collaborative work that is possible in conjunction with other place-based movements.

In this way, the work is more impactful, since it is co-constructed with the community

in "a framework of productive environmental justice that attends to how spatial

inequalities are created" (Johnson & Niemeyer, 2008, p. 381).

Political Territories

Similar to Southwestern states, there are other locales in the United States are

areas where Latinas/os have had conflict over the land and their identity. The term

political territory refers specifically to Puerto Rico, from which all of the literature of

this section derives. However, because Latinas/os "are increasingly found outside of

places where they have traditionally resided," the broader term applies to Latinas/os

living in other remote U.S. territories, such as Guam (Saenz, 2008, pg. 1).

Comparable themes found in this work are Latinas/os' strong connection to

the land, a history of subjugation, and resistance to that subjugation. Baver (2012)

explained that "Caribbean environmental struggles typically involve tourism

development, control over coasts, and control over protected areas" (p. 15). She

examined "conflicts arising from privatization of coastal landscapes . . . [where] long-

time residents are not only being marginalized from the luxury communities growing

up around them but also living with the health consequences of more than sixty years of military toxics" (p. 31).

Wu and Heberling (2013) conducted research on toxic releases in Puerto Rico and found "even though the environmental quality seems to be improving in terms of level of releases to all media, the distribution of toxic releases remains unequal" (p. 129). Municipalities with young (under age 14) or older populations (over age 65) and with higher education had less releases than black Latinas/os and lower education locations (p.129). Yet, as Baver (2012) noted, "increasingly, local communities and environmental groups fight back" (p. 31). The resistance is for control of their lands and way of life.

One method of resistance García-Quijano (2009) found was when fishers underreported landings: "The misreporting of yields, profits, and activities is a commonly used method of resistance used by small-scale resource users to resist unilateral regulation from outside agencies" (p. 8). The resistance was to external control, otherwise known as resource management and imposed fishing limits. As García-Quijano (2007) also noted, the acceptance of fishermen's way of knowing or local ecological knowledge (LEK) "for resource management has been partly hindered by difficulties in translating local knowledge into a form that can be applied directly into Western scientific endeavors" (p. 529). Thus, fishermen see this outside management not only as an affront to what they know but also the teleological logic behind their way of life, which García-Quijano (2009) reported as, "(1) to be able to make a living and sustain a family from fishing … (2) to maintain positive reciprocal

relationships with their communities by bringing back fish from the sea, and (3) to be able to maintain a lifestyle that at least partly depends on fishing" (p. 6).

This LEK is mixed in regards to the accuracy of other ecological knowledge. García-Quijano et al. (2011) found in their research on Puerto Ricans' knowledge about green iguanas that half of their interviewees did not realize that green iguanas were invasive species. However, they correctly reported that iguanas of San Juan Bay estuary were herbivores, a fact that is specific to this population and not the overall species. The majority of respondents objected to killing the iguanas despite their being invasive, "citing the iguanas' *'right to live,'* the fundamental tenet of *'respect for life,'* and that *'they are also creatures of God'*" (p. 171). These sentiments are common *dichos,* which represent the cultural values of many Latinas/os and are ones that García-Quijano et al. (2011) acknowledged are an important part of a balanced debate for "research, management or policy considerations" (p. 175). In honoring these values, organizations and institutions will be honoring the identity of the people who are closely connected to the land. Baver (2012) concluded that future conservation and economic development must respect "their environment, their culture and understand that scale matters on small islands" (p. 31).

Rural Areas

Latinas/os are a growing segment of rural communities because "they are younger and giving birth at higher rates than their non-Latina/o counterparts in nonmetropolitan America" (Saenz, 2008, p. 1). Literature on Latinas/os in rural areas overlaps with studies on the Southwest because these states also have the largest Latina/o rural populations (Saenz, 2008, p. 1). However, there are also large pockets

of Latina/o populations in the rural regions other states – North Carolina, Washington, Oregon, Idaho, Nebraska, Kansas, Oklahoma, Michigan, and Georgia. These states each have "over 50,000 living in rural areas in the state" (Saenz, 2008, p. 1). The literature in this section addresses common themes for Latinas/os across the country.

The majority of this literature centers on agricultural workers and environmental issues relating to agricultural business. This is despite the fact that there are more rural Latinas/os working in transportation and construction than in farming (Saenz, 2008, p. 2). Youth and children are of particular interest when it comes to rural Latinas/os and the environment, such as in the work of Salazar et al. (2004). Using the Ecological Model, they identified four ecological levels of influence for youth agricultural workers: microenvironment, organization environment, social/community environment, and macroenvironment. These environments have "a high degree of interaction and interrelationship," (p. 153) which in the case of farmworkers also intersects with external power structures and cultural traditional values which "serve as major deterrents to self-advocacy in terms of health and safety" (p. 161). For the youth in this study, this limited perspective was tied into their personal identity, with the researchers encapsulating these limiting identity thoughts with the aphorism, "We are Mexicans; Mexicans are destined to live in the fields" (p. 161).

Ten years later, Postma et al. (2014) identified three main themes in their work with youth in rural Washington: 1) "lack of structured youth activities" (p. 512), 2) "poverty and stress" expressed in "drug and alcohol and drug abuse" (p. 512), and

3) the "benefits and detriments" of agricultural work for the community (p. 513). The researchers stipulated that while the "majority of issues identified contrasted with how EH [environmental heath, sic] is typically defined scientifically" (p. 514), it is important to see that "social position affects how issues are defined and may be addressed" (p. 514). In other words, there was little change in the way that youth perceived the power dynamic since Salazar et al. (2004) first published their study.

Schwartz et al. (2015) had similar findings around intersectionality of work and play and the social construction of environmental power in central California. They found that children and their families were surrounded by pesticides in the work, school, and play areas and that some of their participants experienced the feeling of "impotence" in regards to influencing policy (p. 90). They concluded by echoing the work of others that "the exposure among farmworkers and their families to pesticides is an injustice" and that only by Latinas/os receiving accurate information and a democratic voice in the agricultural process can this injustice be remedied (p. 90).

Accessing power to create desired change is more centered in community institutions than with Latinas/os' personal desires. Nelson and Hiemstra (2008) compared the regional political economic dynamics that shaped the acceptance of Mexican immigrants into two rural communities. They found that one group of immigrants confronted "entrenched social and spatial barriers to inclusion," while the other was able to "forge important social and political spaces, expanding their sense of belonging and connection to place" (p. 320). The reason for the lack of inclusion for the first group was the "incorporation of Mexican immigrants into the regional

political economy" but not the social aspects of the community (p. 323). This was evident by the distance between where Latinas/os lived in relation to their work, creating, in a sense, a parallel world where being Latina/o was accepted and another where it was not. In contrast, the more successful community embraced the historical context which brought many of the Mexican immigrants (the Bracero Program) into the community and created a "social mobilization capital – that is, existing grassroots political networks, organizing knowledge, and political ethnic/racial identities" which enhanced the immigrants' sense of belonging (p. 335). While "[l]ow-wage and highly insecure immigrant employment was (and is) the norm in both towns, a reality profoundly inhibiting social belonging and place-making" (p. 335) and there is a "privileging of whiteness" (p.335), there does seem to be a lessening of inequality if institutional structures are altered to allow more access to power. Nelson and Heimstra (2008) recommended attending to these geographic differences if we are to understand how to create a stronger connection to place for immigrants across the country.

Urban Areas

Research about Latinas/os and the environment in urban areas is dominated by four themes: acculturation, access to and recreation in green spaces, civic engagement in environmental justice, and a relatively new research focus on cultural identity through food pathways. The theory of acculturation has many modalities, including bi-dimensional and uni-dimensional models, which take into account various characteristics, such as host language, age, and citizenships status (Johnson, 2011). However, rarely has it been taken into account when researching ethnic risk

perception (Johnson, 2011). Johnson (2011) undertook this challenge when he conducted telephone interviews with residents of a northern New Jersey urban city with a large Latina/o population about the topic of air pollution. He measured attitudes, knowledge, and behavior in relation to air pollution. He found that concern "stood out as the only attitude toward pollution that was significantly associated with temporal acculturation (time spent in the United States)" (p. 994). He found that many of the different groups he analyzed "were less familiar with the Air Quality Index [which] reflects the government's use of communication channels to publicize it not being accessible to or used by these groups" (p. 994). "Behavior was unlikely to be associated with acculturation . . . because there seems no obvious way in which sheltering indoors during high pollution or the degree (as opposed to method) of being vigorously active outdoors can vary across ethnic or cultural norms" (p. 994). Overall, Johnson found, "Without knowing, trust, concern, and other views in origin-societies, we cannot conclusively privilege acculturation over adaptation stresses or structural constraints (e.g. in residence neighborhoods) as explanations of the differences between more and less acculturated groups" (p. 995).

Fernandez et al. (2015) also looked at acculturation but in relation to the use of "natural environments in urban areas" (p. 210). In the background literature, they found that "Latinas/os are motivated by strong family values, including the desire to share experiences with family members and to increase bonds among the extended family" (p. 212). They used the New Assimilation Theory by Alba and Nee and a model proposed by Keefe and Padilla "to investigate the determinants of participation in recreational activities in natural environments among Latinas/os" (p. 214). The

study found that "acculturation is an important predictor of participation in passive, physical, and appreciative activities in natural settings" (p. 224). Interestingly, they also found that "people born in Latin America display a closer relationship to nature than mainstream U.S. citizens and perceived themselves as part of nature rather than owners of it" (p. 224). Acculturation was also seen as a predictor of engagement in activities in the natural environments, with less acculturated Latina/os/as engaging in passive activities such as sitting in parks, which the researchers speculated may be due to the physical nature of their employment (p. 225). Another important predictor was access to natural environments and recreation activities, for "proximity to parks generally leads to an increase in participation" (p. 225). These latter findings were echoed by Burke et al. (2011) about Latinas/os and leisure time physical activities (LPTA).

Burke et al. (2011) found that many of the urban Latina/o population "did not participate in rigorous *or* moderate LTPA" with men engaging in higher levels of LTPA than women (p. 334). In addition, walking was the most common form of LPTA, with the researchers encouraging "(w)alking programs or spaces [which] may encourage Latinas/os to regularly participate in LTPA" (p. 336). Dolash et al. (2015) also noticed that space was one of the main motivators for use of natural resources in the San Antonio, Texas urban areas. They found that "renovated parks had higher levels of physical activity among park users," with "basketball courts, trails, and playgrounds" having the highest number of users and activity (p. 468). Contemporaneously in Chicago, Stodolska et al. (2011) found that parks lacking this aspect of renovation were viewed as "locations of crime and conflict, discrimination,

and often poorly maintained, overcrowded, and understaffed spaces that add little to the value of local communities" (p. 117). Stodoloska et al. (2009) also found in a previous study that "parks were seen as particularly dangerous places as parks were areas where the prevalence of gang activity was the highest" (p. 478).

In urban areas, green spaces not only constituted unsafe spaces but also "serve as 'green walls' between neighborhoods" (Stodoloska, 2011, p. 104). Moreover, the fear created in unsafe urban green spaces seemed to transfer to more remote locations, such as locations participants labeled as the "wilderness" (Stodoloska et al., 2009, p. 478). These unsafe natural spaces, as well as other toxic urban environments, served as catalysts to "community organizing and policy advocacy" research (Minkler et al., 2010, p. 808). Minkler et al. (2010) examined community-based participatory research (CBPR) in San Diego, and reported the success of other urban communities in involving the Latina/o public in environmental justice issues ranging from changes in transportation to toxic inequities (p. 808). There is more need for this type of scholarship documenting best practices, such as the use of "*promotoras de salud* [sic]," and other community engaging aspects deemed successful in reaching the Latina/o community (p. 797).

Finally, Mares (2012) introduced a new way of looking at identity and culture through plate and palate. In her work, she looked at "[w]hat networks, strategies and resources… Latina/o immigrant households utilize to define and act upon their food needs" and what "these strategies, practices, and policies and their underlying motivations tell us about the symbolic importance of food" (p. 340). She found "cases of resistance and autonomy that were central to their [Latinas/os'] desires to maintain

culturally based good practices" and also "experiences of letting go of food-related

desires and needs" (p. 351). Her findings echoed many of the ideas that Zentella

noted in her psychological model. One of the most important findings in Mares' work

was the connection between growing food and local produce, which she recognized

as "gaining traction with thousands of Americans who are committed to going local

organic or slow, [but] they undoubtedly carry a different meaning for immigrants

whose foodways, traditions, and materials realities are bound up with transnational

flows and spaces" (p. 351). In other words, allowing public spaces for immigrant

Latinas/os to grow some of the produce from their countries of origin would promote

a closer connection their newly adopted land and maintain the strong environmental

ethic that researchers have shown is already an important aspect of the Latina/o

cultural identity.

Relevant Non-Peer-Reviewed Work

Most of the early work found for this literature review were polls conducted

by advocacy groups. While these are not peer-review publications, it is important to

cite this work since it is the research that most of the public uses to gauge the

environmental ethic of American Latinas/os. These advocacy groups have

requisitioned literature reviews and summaries several times. In 2004, the Natural

Resources Defense Council (NRDC) commissioned a literature review of Latinas/os

and the environment. The report's focus was on the intersection of Latina/o health

and the environment, and it cited the absence of information "on the extent of the

impact of environmental conditions on public health of the Latina/o community,"

despite the environment being an important part of American Latina/o history and

heritage (p. iv). The review reported findings on air pollution, drinking water, pesticide exposure, lead poisoning, mercury exposure, and proximities to these hazards with the goal of providing Latinas/os with information "they need to evaluate the risks to their health from environmental contaminants in their jobs and in their neighborhoods" (vi). Like the Peña (2004) article, the report gathered data from disparate sources and coalesced it through a Latina/o perspective, providing additional historical context to environmental issues.

Similarly, Barreto and Wilcox-Archuleta (2015) prepared a summary of 2014 work on Latinas/os' voting for the Hispanic Access Fund (HAF) with the goal of looking at the relationship between belief and voting behavior around environmental issues. They created case studies of four states – Florida, California, Colorado and New Mexico - and found these "case studies provide evidence that Latina/o voters support environmentally related ballot measures that matches Latina/o preferences towards the environment" (p. 7). This is particularly true in regards to issues with air and water pollution, and the researchers reported that "environmental concerns closely matched the overall vote share on environmental related ballot initiatives" (p. 3-4).

Latina/o voters have been the focus of much of the work done by advocacy groups, with pollution being a recurring issue for Latinas/os. For example, the Sierra Club (2008) conducted a survey of 1,000 registered Latina/o voters on environmental issues in Florida, Nevada, Colorado, and New Mexico. Latinas/os were asked different questions about various environmental issues ranging from pollution to outdoor activities. The strongest dominant finding was the belief by 83% of

Latinas/os that "environmental issues have a significant impact on their quality of life

and the overall health of their family," with some of the participants reporting high

levels of air pollution, water pollution, and mercury and lead toxicity (para 4). This

perception of pollution and personal impact were reported again in another study

conducted by the Sierra Club (2012) and the National Resources Defense Council

(NRDC) (2011; 2013). This could be because, as the Sierra Club (2012) study found,

there was a "significant jump in awareness of proximity of toxic sites" by Latinas/os

(p. 1).

Latinas/os' concern about pollution is followed by concern about global

climate change. The Sierra Club's studies (2008; 2012) documented this concern with

77% of Latinas/os in 2008 believing that global climate change would have

catastrophic results for coastal communities, a number which increased in 2012 to 9

out of 10 voters believing that climate change is already happening. MacInnis and

Krosnick (2015) conducted a national poll of Latinas/os on this topic and found that

Latinas/os perceived a greater personal vulnerability in relation to global warming

when compared to Whites (p. 4). As previous studies indicated, this could be caused

by a lack of perceived locus of control or because Latinas/os have more global

interests. A poll by Latina/o Decisions for Earth Justice and Green Latinas/os (2015)

stated that "Latina/o concerns are transnational, including nations of origin.

Latinas/os are aware of environmental degradation and climate impact in their

countries of origin and consider this when developing their views" (p. 1).

Finally, the research by advocacy groups also looked at Latina/o recreation

and access to open spaces. The Sierra Club (2008) found Latinas/os enjoyed

recreation in outdoor spaces, specifically the beach (36%), national parks (31%), and picnicking (27%) as the top three outdoor activities. Subsequently, the Sierra Club's (2012) research found the majority of Latinas/os (91%) viewed "outdoor activities [which included hiking, camping, and fishing] as part of their communities' way of life." A 2014 study conducted by Latina/o Decisions for Hispanics, Enjoying, Camping, Hunting, and Outdoors (HECHO) found that "93% of Latina/o voters believe that government should protect public lands for recreation and the overall well-being of the environment," demonstrating a connection between land and recreation for some Latina/o voters (para. 3). It should be noted that most of this research was conducted in Western states, where, as mentioned above, Latinas/os have a different and more historical connection to the land than other Latina/o groups in other parts of the US.

Discussion

As with any literature review, it is important to ask of each study who is asking the research questions, what is the purpose of the research, and who is benefitting from the research? Asking these questions does not diminish the value of the research presented, but it does highlight the type of research that is missing, specifically qualitative, phenomenological research that allows for first-person points of view and which is grounded in research that considers what Bhabha (1998) would term the 'hybridization' of individuals' experiences. It is evident from the existing literature, while it is limited in scope and method, that there is interest among Latinas/os in environmental issues; however, what is not clear is what the motivators

are for Latinas/os to care about these issues and what the environmental outcomes desired by Latina/o communities are.

The literature presented here comes from various disciplines and fields. It is this very integration of Latina/o scholarship into mainstream research in multiple fields that causes issues when trying to find literature around Latinas/os and the environment. Peña (2010) alluded to this weakening of the scholarship due to the lack of a shared framework or field of focus: "Our scholarly work, curricula, and pedagogies have been integrated into many university and college academic programs, but the original militant act that led to this transformation has also been widely rendered nonthreatening" (p. 150). Indeed, the very act of not having a clear nomenclature for a disparate people with the same experience (i.e., Hispanic, Latina/o, Chicano) has added to the creation of another modern diaspora, but this time, of thought. We have produced a contradictory and fragmented consciousness that does not allow our community to access the knowledge being created (Peña, 2010).

There are also several further areas that the literature needs to address in order for it to be valuable to Latinas/os in the United States. First, there needs to be an agreed-upon nomenclature to help identify the literature. The literature has shown that there are different experiences based on immigrant status, geographic locale, English language acquisition, and historical connection to the land. Yet despite these differences, there are similarities in Latinas/os' connection to the environment, the loss of that connection due to migration or political contexts, vulnerabilities to pollution and other environmental issues, and discrimination based on language

(Ricourt & Danta, 2003). These similarities connect us in ways that can benefit us only if we use them as strengths instead of magnifying our differences. The idea of panethnicity, while it is a social and political construct, should be used to help coalesce our identity and mobilize around common needs and political action (Ricourt & Danta, 2003). As Pirkey (2012) put it, it is "a diverse and multi-voiced coalition [which can] result in successful activism against industrial practices" (p. 73). Research should take into account that it impacts all Latinas/os and bridge commonalities.

Second, there is a need to "secure autonomy and self-reliance within our own spaces and places" (Peña, 2010, p. 151), and we "have to learn how to cross boundaries and build bridges across the traditional divide between the social and the natural sciences" in order to extend the validity of our work (Peña, 2010, p. 156). The work presented in this review demonstrates that there is interest in various fields, but as researchers we must connect back to the larger community. As scholars, we need to not only connect to the broader academic circles, but also connect to the people who would benefit the most from our research. In doing our work, we should define the best parameters and who we are rather than try to fit into the already existing literature.

Finally, the non-peer-reviewed research is in need of standardization. Most of the research conducted was transparent, but some of the pieces lacked access to the instruments employed and lacked evidence of rigorous review by external experts. While formalized academic research may minimize the voice of marginalized groups, there is still a need for transparency in procedures and comparison to mainstream

voices. For example, of all the non-peer-reviewed studies, only two studies had an American Association of Public Opinion Research (AAPOR) rating. This is important because there is a standardization that is currently being used for surveys which delineates the strength of the amount of people asked versus the amount of possible people asked, a rough and ready measure of generalizability. Having this AAPOR rating allows for transparency and also allows for critique of mainstream methods if the community was not reflected correctly. Without standardization, Latina/o environmental research cannot quantify how the current mainstream research is not serving this population.

Conclusion

Despite the view that all Latinas/os are immigrants or newcomers, the fact is that there have been Latinas/os in the United States for centuries. This paper outlines some of the issues regarding environmental research about Latinas/os that we currently know, and highlights some of the areas that we do not. What we do know is that the Latina/o audience is growing, and attention needs to be paid to who they are, what motivates them, and how to engage them authentically in the environmental movement. Latinas/os have many *dichos* that show our strong connection to *la tierra madre,* our love of nature and the environment, and our connection with each other. It is time we researchers not only bring these connections to light but also help create better bridges between the existing research.

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Table 1

Terms Used for Search and Results

Terms used	Results	Articles which met search criteria *
Farm worker	6,199	
Farm worker Hispanic	400	
Farm worker Hispanic environment	35	1
Farm worker Hispanic sense of place	0	0
Farm worker Latina/o	363	
Farm worker Latina/o environment	34	1
Farm worker Latina/o sense of place	0	0
Farm worker Chicano	52	
Farm worker Chicano environment	1	0
Farm worker Chicano sense of place	0	0
Farm worker Puerto Rican	13	
Farm worker Puerto Rican environment	2	0
Farm worker Puerto Rican sense of place	3	0
Factory worker	3,976	
Factory worker Hispanic	59	
Factory worker Hispanic environment	56	0
Factory worker Hispanic sense of place	0	0
Factory worker Latina/o	8	0
Factory worker Latina/o environment	1	0
Factory worker Latina/o sense of place	0	0
Factory worker Chicano	1	0
Factory worker Chicano environment	2	0
Factory worker Chicano sense of place	0	0
Farm worker Puerto Rican	3,576	
Farm worker Puerto Rican environment	102	4
Farm worker Puerto Rican sense of place	1	0
Land grant communities	761	
Land grant communities Hispanic	1	0
Land grant communities Hispanic environment	586	7
Land grant communities Hispanic sense of place	5	1
Land grant communities Latina/o	3,297	
Land grant communities Latina/o environment	148	4
Land grant communities Latina/o sense of place	2	1
Land grant communities Chicano	2	0
Land grant communities Chicano environment	1	0
Land grant communities Chicano sense of place	0	0
Land grant communities Puerto Rican	4,179	
Land grant communities Puerto Rican environment	129	4

Land grant communities Puerto Rican sense of place	0	0
Acequia farmers	45	
Acequia farmers Hispanic	1	
Acequia farmers Hispanic environment	0	0
Acequia farmers Hispanic sense of place	0	0
Acequia farmers Latina/o	1	
Acequia farmers Latina/o environment	0	0
Acequia farmers Latina/o sense of place	0	0
Acequia farmers Chicano	0	
Acequia farmers Chicano environment	0	0
Acequia farmers Chicano sense of place	0	0
Acequia farmers Puerto Rican	115	
Acequia farmers Puerto Rican environment	3	0
Acequia farmers Puerto Rican sense of place	0	0
Urban barrio residents	60	
Urban barrio residents Hispanic	3	1
Urban barrio residents Hispanic environment	43	2
Urban barrio residents Hispanic sense of place	1	0
Urban barrio residents Latina/o	5	1
Urban barrio residents Latina/o environment	50	0
Urban barrio residents Latina/o sense of place	1	0
Urban barrio residents Chicano	2	0
Urban barrio residents Chicano environment	1	0
Urban barrio residents Chicano sense of place	0	0
Urban barrio residents Puerto Rican	2	0
Urban barrio residents Puerto Rican environment	41	1
Urban barrio residents Puerto Rican sense of place	1	0
Rural colonia residents	31	
Rural colonia residents Hispanic	5	0
Rural colonia residents Hispanic environment	1	0
Rural colonia residents Hispanic sense of place	0	0
Rural colonia residents Latina/o	4	0
Rural colonia residents Latina/o environment	1	0
Rural colonia residents Latina/o sense of place	0	0
Rural colonia residents Chicano	173	2
Rural colonia residents Chicano environment	23	3
Rural colonia residents Chicano sense of place	0	0
Rural colonia residents Puerto Rican	252	3
Rural colonia residents Puerto Rican environment	34	2
Rural colonia residents Puerto Rican sense of place	0	0
Rural colonia residents	31	0

The results shown are only for the EBSCOhost database. Some of the same articles appeared in multiple searches. The actual number of useable articles are listed but may include an article found in a previous search; thus, the actual number of articles is not cumulative.

Chapter 3: Manuscript 2

"I AM AN *ECOMESTIZO*:"
SIGNIFICANT LIFE EXPERIENCES OF
LATINO ENVIRONMENTAL PROFESSIONALS

    "I am an *ecomestizo*:"

"I AM AN *ECOMESTIZO:*"
SIGNIFICANT LIFE EXPERIENCES OF
LATINO ENVIRONMENTAL PROFESSIONALS

Abstract

Despite the growth of ethnic minority groups in the United States, they are

still severely underrepresented in the environmental movement. Research on

significant life experiences (SLE) can help to reveal what brings environmental

professionals of color to the movement. In this study, I interviewed 28 Latina/o

environmental professionals about their environmental identities and their SLE, the

results of which were graphically represented on a concept map, which was in turn

presented back to interviewees to verify and expand upon original interview findings

as well as serve as a type of member checking. Prominent SLE included experiences

in nature as young children, as well as opportunities provided through education,

mentors, or vocation. This study introduces the concepts of f*amilismo* and

conscientização as important constructs to understand the Latina/o environmental

experience. Acknowledging these concepts and providing opportunities for Latinos/as

to openly discuss and share all of their identities makes environmental careers more

appealing to members of this underrepresented group.

Introduction

A report by Taylor (2014) found that "(e)thnic minorities are severely

underrepresented in the environmental workforce" (p. 4). The low representation

extends even to the number of volunteers in such organizations. Reasons cited include

unconscious biases in recruitment practices that "replicate the current workforce" and

the underutilization of internship pipelines to find workers from underrepresented groups (p. 5). This "lack of engagement with the environmental mainstream movement [among ethnic minorities] is sometimes mistaken for lack of engagement with the environment" (Graudins, 2016). There are, however, members of ethnic minorities who have joined the environmental movement at various levels within the full range of different environmental organizations. This study seeks to understand what has motivated these individuals, specifically Latina/o environmental professionals, to join and stay involved in the movement. Can the experiences of these environmental professionals help the mainstream environmental movement understand what motivates Latinos/as to work within the movement?

This study examined the environmental identities of these individuals as formed through significant life experiences and retold through autobiographical narratives. As McAdams (2005) said, "The *self* is many things, but *identity* is a life story" (p. 187). Life stories are important in social science research as they cross multiple levels of analysis – from the individual and their development across the lifespan, to the organizations they belong to, to the larger societies and cultures those organizations and individuals are part of. Since life story narratives are always a combination of idiosyncratic personal biographical experiences AND the culturally learned patterns and tools of narrative and narrative sense making (Bruner, 1990), the life stories people tell when we ask them to narrate their environmental identity can tell us "as much about the culture and society wherein the narrator lives as they do about the narrator's life itself" (McAdams, 2005, p. 250). This narrative identity "is a *psychosocial construction* (ibid.) – a joint product of individual and society"

(McAdams, 2005, p. 251). Thus, analysis of the stories of Latinos/as recounting their significant life experiences may allow the environmental movement to understand the choices, barriers, and opportunities that contributed to these individuals having a desire to work in the movement.

There has been a great deal of work done around significant life experiences and proenvironmental behavior, but as demonstrated by two decades of literature reviews (Peña, 2003; de la Hoz, this volume) there is limited work done on ethnic minorities and the environment. This study hopes to add to the limited scope of work and broaden the discourse by using nontraditional methods to introduce new ways of looking at environmental identity. Following Chawla's (2006) recommendations for conducting this type of research, this study: "records estimated age at time of events," looks for gender and cultural differences," "checks for intercoder reliability," and measures levels of perceived impact (p. 370).

Theoretical Framework

Significant Life Experiences (SLE) and Autobiographical Narrative

In the 1970's, the environmental education research field began looking at significant life experiences (SLE) as a way to replicate the experiences of adult environmentalists in the educational experiences of youth with the goal of creating a more proenvironmental citizenry (Tanner, 1998). As Tanner (1998) argued, "if we find that certain kinds of early experience were important in shaping such adults, perhaps environmental educators can, to the degree feasible, replicate those experiences in the education of the young" (p. 399).

SLE are defined as important events that have formatively influenced individuals in their environmental choices and foster positive environmental attitudes (Tanner, 1998; Chawla 1999; Hsu, 2009). Previous SLE research found that environmentalists tended to recount several common experiences such as "extended time spent outdoors in natural areas (often in childhood), loss of a beloved natural place, adult role models, involvement in environmental organizations and education" (Hsu, 2009, p. 498). These SLE are remembered by individuals as significant milestones in the thread of their life story, and for environmentalists, they coalesce the 'calling' some felt towards protecting the environment. SLE provide "a central thread in cultural transmission" (Chawla, 2001, p. 453) of what is important for those who perceive themselves as environmentally conscientious and in the retelling of their narratives they reproduce and maintain those cultural norms.

Autobiographical narratives help us understand those milestones and highlight the intersections of SLE with emotions, thoughts, and evaluations (Fivush, Habermas, Waters, & Zaman, 2011). Research has shown that weaving a coherent rather than accurate narrative is more important to identity and the conception of self (Bruner, 1990; Grysman and Hudson, 2011). In other words, the retelling of a personal narrative follows suit with the identity the person has created for herself rather than actual recollections. As Grysman and Hudson (2011) explained, "Thus, in analyzing narratives of personally experienced events, we view autobiographical memory as episodic memory that is elaborated on by other memory mechanisms in line with a person's conception of self. Events are recounted as they occurred and are then imbued with a more personalized meaning that connects them to a broader

framework" (p. 503). In this way narratives reflect personal biographical experience. Yet narrative structure, the rules for what makes an acceptable narrative, and even the symbols, images, and tropes that help us shape the emotional and evaluative tenor of the story all have to come from the larger historical, social, and cultural contexts individuals belong to (Bruner, 1990; Wertsch, 2002). In this way, every narrative is made up of both elements. For this reason, autobiographical narratives provide essential clues to the society and culture that surround the teller and inform their self-definition. Because they simultaneously provide evidence for personal experience and evidence for larger cultural patterns, narratives are a crucial tool in research on environmental identity, especially since narratives are an important discourse and identity tool in environmental work itself (Gough, 1997; Pellow, 2003).

Environmental Identity

According to Devine-Wright and Clayton (2010), "Identity is a complex topic. At its core, it refers to some way of describing or conceptualizing the self, which may incorporate personal roles and attributes, membership in social group or categories, and connections to geographical locations" (p. 267). This complexity makes identity difficult to study, but understanding individuals' identities and how they see themselves as connected to nature elucidates what motivates people, in this case Latinos/as, and what draws them to the environmental movement. Stets and Biga (2003) explained that "[i]n addition to having both cognitive and emotional processes, identities also function at both conscious and unconscious levels. It is clear that much of what we do, we do so deliberately and with conscious awareness. We choose our words carefully to reflect the meanings we intend, and we attend carefully to the

words and symbols used by others" (p. 61). Identity, how people perceive themselves and how they want others to perceive them, helps people to make daily choices, even if identities contradict or overlap. Stets and Biga explained how social structures guide those choices:

> Individuals have as many identities as there are social networks of relationships and roles to which they are linked (by virtue of their commitment to them) in the social structure (Stryker and Burke 2000). The many identities a person possesses are hierarchically organized into a prominence hierarchy (McCall and Simmons 1978) and a salience hierarchy (Stryker 1980), with more prominent and more salient identities guiding behavior to a greater extent than less prominent and salient identities. (p. 399)

Thus, if a person sees his or her environmental identity as more relevant than other identities, then the actions and behaviors associated with this identity will be more prominent than other behaviors, even if those behaviors may seem at odds with other identities. Figure 1 is a model that Stets and Biga provided to help understand how environmental identity guides behavior.
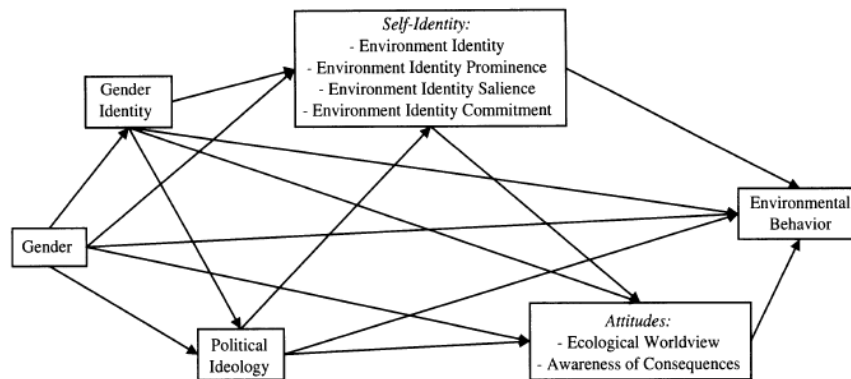
Figure 1. Stets and Biga's (2003) environmental identity model.

It is important to note that in the model other identities are of equal importance to

environmental identity, and they interact with each other. While the model is not in

inclusive of all identities, for example it does not include cultural identity, it does help

to explain how a person's identities could prompt environmental behavior.

Quantifying an environmental identity and the SLE that created it (or that are

perceived by individuals to have created it) can be difficult. While these SLE may be

successfully revealed through collecting life stories, the analysis of narratives and

aligning narrative analysis with more traditional types of analysis can be challenging

(Riesmann, 2007). Mental models and their representation in concept maps can help

to articulate internalized identities by making elements of identity stories visible and

salient to both the researcher and research participant.

Concept Mapping

Concept mapping is a widely accepted and widely used construct in social

science research (Novak, 1990; Halbrendt et al., 2014). Concept maps allow for

flexibility in representing organization and connections that would be difficult to do

with other, more quantitative tools. Concept maps allow for the articulation of mental

models, including shared mental models, which Halbrendt et al. (2014) noted, "are

essential to the way societies structure their environments and build expectations and

are therefore an important part of an organized society, including the establishment of

norms and laws which influence decisions" (p. 52). If we are to understand how

individuals see themselves as part of the larger society, in this case Latinos/as in the

environmental movement, it is important to understand how they perceive themselves

in relation to other members of this group.

Falk (2003) pointed out that one of the main flaws in concept mapping is the

need for participants to "undergo considerable training so that they would know how

to 'correctly' construct a concept map" (p. 11). This can become a barrier when

working with illiterate stakeholders or if study contributors live in different

geographic locations, as was the case in this study (Halbrendt et al., 2014). Co-

creating concept maps allows for the participants to communicate their SLE in a

comfortable narrative form and for the researcher to confirm later with the

participants the correctness of representation, thus creating a strong intercoder

reliability (Chawla, 2006).

Finally, concept maps provide a graphical representation of information which

may be more easily digested by non-social scientists and provide graphical

representations to "relational, structural, and semantic point(s) of view" (Ifenthaler,

2008, p. 82). As Ifenthaler (2008) explains, "mental models and schemata are

theoretical scientific constructs which are not directly observable. Accordingly,

researchers can only learn about mental models or schemata if (1) individuals

communicate their internal systems and if (2) valid and reliable instruments and methodologies are used to analyze them" (p. 81-82). Concept maps thus provide a tool to help externalize some of the internal schemata.

For this study, self-identified Latina/o environmental professionals were interviewed about SLE that shaped their environmental identities and led to their becoming environmental professionals. Concept maps were developed by the researcher based on thematic analysis of those interviews. The concept maps themselves provided a shared document for a second interview.

Methodology

Participants

Participants were recruited via email, social media outlets (i.e. Facebook, Twitter, etc.), and in person via snowball sampling beginning with previous professional contacts the author had. If the individual met the criteria of being an environmental professional and identifying as a Latina/o, they were asked to set-up a time to be interviewed. At the end of the interview, individuals were then asked to recommend other individuals to the study thus creating a snowball sampling of the population. The researcher ceased collecting contact information about possible interviewees when names started being repeated and recruitment emails were not answered.

Twenty-eight Latina/o environmental professionals - 20 women and eight men - were interviewed about their significant life experiences as they pertained to the creation of their environmental identity. The demographics of this group is a bit skewed since the current gender characteristics of environmental organizations is

55.5% female vs. 44.5% male instead of the 71.4% female vs. 28.6% male of this study (Taylor, 2014). However, when comparing this percentage to female dominated positions held in environmental organizations, the demographic is a better fit since more than "70% of community organizers, secretaries, human resource directors, fundraisers, and accountants were female" (Taylor, p. 77). It is interesting to note that none of these positions require any type of science degree. Many of the study's participants held these types of positions in their organizations, but the sample also included field biologists, an economist, a lobbyist, and many environmental educators. Overall, Latinas/os hold only 6% of all the possible full time positions in these organizations nationally so, while the sample size is small, the number may be representative of the actual population of Latinas/os in the environmental field (p. 101).

The individuals came from all parts of the US predominantly from the Eastern and Western states. One participant was from Chicago, Illinois and another was from Puerto Rico. The ages ranged from 24 to 60 with various years of involvement in the environmental movement. Table 1 gives some descriptive statistics of the sample population.

Table 1 *Descriptive Statistics of Study Population*

($N = 28$)

Place of birth	Preferred Interview Language				Gender	
	English	Spanish	Bilingual	Total	Males	Females
Born in the US	12	2	1	15	5	10
Born outside of US	5	6	2	13	3	10

Procedure

Similar to Chawla's (1999) foundational study, this is a descriptive phenomenological research study. Phenomenology asks questions about "what is the meaning, structure, and essence of the lived experience of this phenomenon for this person or group of people?" (Patton, 2002, p. 104). This type of research elucidates an individual's everyday experiences as well as the meaning she may associate with those experiences (Patton, 2002). It gives voice to marginalized groups or people that have been underrepresented in the research (Patton, 2002). There has been a great deal of research done regarding SLE in environmental education; however, there is also a limited amount of existing research on ethnic and social minorities who are environmental professionals (Chawla, 2006). This has created the need for additional foundational research "grounded in people's own understanding of their experiences and actions" (Chawla, 1999, p. 23-24).

The researcher conducted semi-structured telephone interviews which were recorded and transcribed. The first interview focused on significant life experiences. Before the interview, the researcher prompted the interviewees to think about the ideas, places, people, and experiences that they felt shaped their environmental identities. During the interview, participants were asked to list and discuss each item. Towards the end of the interview, the participants reviewed the experiences and then rated each item based on the impact they believed it had had on their environmental identity on a scale of one to five: one being no impact, and five being a high impact. From the list of experiences and ratings, the researcher created a concept map using a research program called Mental Modeler (http://www.mentalmodeler.org/). Mental Modeler uses fuzzy-logic concept mapping to quantify maps and define relationships

between components. Environmental identity was placed in the center of the concept map, and the SLE were chronologically listed (earlier in life to current day experiences) in an elliptical shape around the center, starting from the upper left. Lines with one-way arrows were drawn to connect the SLE to the environmental identity box, with the thickness of line denoting the rating given by the participant. The researcher exported these ratings to Excel for further analysis and to PowerPoint for presenting the findings. Figure 2 is an example of a participant's concept map.
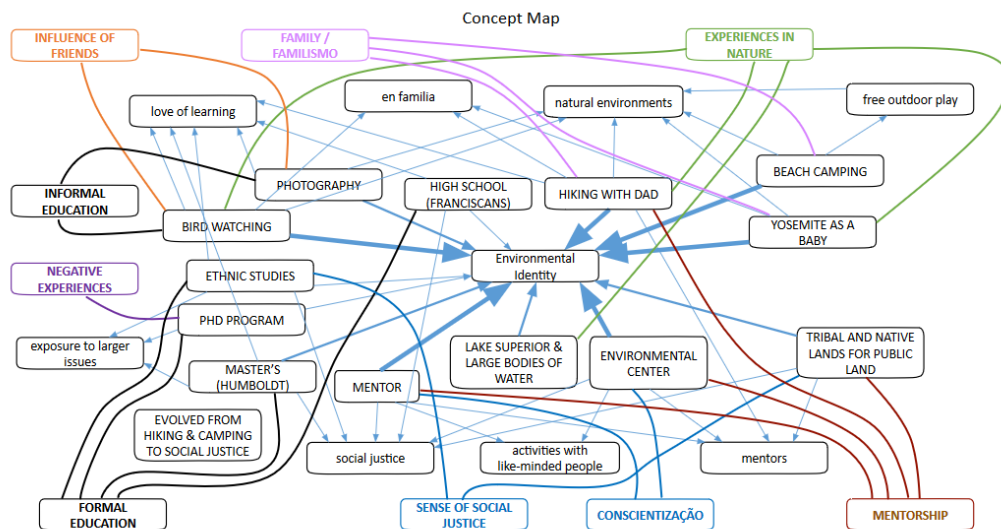
Figure 2. Example of a participant's concept map.

In the second interview, the researcher shared the map with the interviewees and asked for corrections and changes. This created an opportunity for interrater correction and created stronger reliability in the coding. After reviewing the concept map, the researcher asked the interviewees if they had any further thoughts and how they thought their ethnic and/or cultural identities impacted their environmental identities. The researcher made any required changes after the interview and

resubmitted them via email to the participant for any additional corrections and final approval. This additional change was done 13 times out of the 28 interviews.

Initial iterative, thematic coding derived 23 codes of the author's creation. Chawla's (1999; 2006) research on SLE was employed to further refine the codes, and the researcher re-coded the interviews using her identified categories with some changes. For example, the category 'book or author' was changed to 'Environmental role model, book, TV program, etc.' Table 2 lists the final 13 categories.

One important difference to note with Chawla's codes is the term *familismo,* which the researcher added to the 'Family' category to expound upon the Latina/o notion of family. *Familismo* refers to "a strong sense of identification with, and loyalty to, nuclear and extended family. It also includes a sense of protection of familial honor, respect, and cooperation among family members" (Gallardo & Paoliello, 2015). *Familismo* values collectivism and group-oriented activities and is imbued with expectations, rules, and social boundaries which extend beyond the family and into society, such as valuing the family's interests over personal interests (Carteret, 2011; Gallardo & Paoliello, 2015). Family also goes beyond the biological definition and extends to close friends, whom Latinas/os often see as family members. Examples of *familismo* will be given in the results below.

Table 2

Categories of Significant Life Experiences

Category Code	Definition
Experiences in nature	• A valued childhood home or vacation place surrounded by a rural landscape or by forests, fields, mountains, lakes, or seashore
	• Attachment to valued family land, such as a farm
	• Enjoyment of outdoor activities in natural settings, such as canoeing, camping, hiking, bird watching
	• Adult exposure to valued natural settings
Family/*Familismo**	• Proenvironmental values learned from a family member through either examples of appreciation (walks in the woods with parents, a grandparent's gardening) or explicit teaching ("take care of your place")
	• Family examples of social justice, activism, the obligation to do what is right
	• In later life, support and cooperation from family members for environmental efforts
	• Proenvironmental values learned from a family member through either examples of appreciation (walks in the woods with parents, a grandparent's gardening) or explicit teaching ("take care of your place")
	• Having pets or raising animals in the home. *
	• Having cultural environmental roots taught through nature.*
Organizations	• Volunteering (i.e. not paid) participation in childhood outdoor groups such as the Scouts, teen or university environmental or social equity groups, and adult environmental organizations or neighborhood associations
Negative experiences	
Habitat destruction	• Build-up of a childhood area or other favorite place.
	• Destruction of a natural area or decline of a species or habitat.
Pollution, radiation	• Observation or fear of pollution, radiation, or waste dumping
*Incongruency with home culture**	• Desired environmental behavior at adds with family, friends, and/or community
Education	
Formal education	• Formal coursework or school
	• An inspiring teacher

	• School milieu of environmental activism or social service
	• Extracurricular activities such as internship or field trip
Free-choice learning*	• Purposefully seeking out information to learn about a topic – either through people, books, television, or other sources of information*
	• Reflective thinking that leads to a-ha moments*
Influence of friends	• Recruitment into an environmental organization or job position by a friends; discovery of an environmental problem through a friend
	• Solidarity with like-minded friends
Vocation	• Experiences in a paid occupation that initiate or deepened environmental commitment (not ongoing work in a profession that has been chosen because of already established environmental commitment
	• Experiences had while working for an organization, company, or for which one received monetary compensation*
Sense of social justice	• Indignation at polluters' or developers' unfair treatment of oneself, one's family, one's community, or the poor and vulnerable in general
	• Belief in fair treatment for all, including everyone's right to a healthy environment
	• Exposure to other people's poverty
Conscientização *	• An awakened critical consciousness in which the individual engages in questioning the nature of their historical and social situation, as well as, privileges within a society.*
Environmental role model, book, TV program, etc.*	• An influential environmentalist, book, television show, or other media with an environmental message
Principles or religion	• Belief in the creation's holiness, or intrinsic rights, or need for intact ecosystems
	• Belief that environmental work is one way to make life meaningful
	• Sense of obligation to do what one understands to be right
Concern for children, grandchildren	• Desire to provide healthy living conditions for children now and in the future, often motivated by a concern for one's own children or grandchildren or the children of one's city
Mentorship*	• People who have helped nurture an interest in a topic, activity, or vision of the world*
Communication*	• Sharing, teaching, and communicating with others about the natural world*

* These are categories that were changed or added to the original Chawla (1999) list.

Results

Twenty-eight Latina/o environmental professionals provided narratives about their SLE for this project. The participants ranged in age, places of birth, and positions within different environmental non-profit organizations, for-profit organizations, and federal agencies. Some have been in the environmental field for just a few years, while others have been working in the field for several decades. Table 1 above provides the numbers of females vs. males, native US vs. non-native born, and the languages in which the interviews were conducted. Puerto Rican natives are categorized as US natives.

Most of the environmental professionals were bilingual but used one dominant language throughout their interviews. However, the interviews were always peppered with *rasgos* (traces) of the other language not being used. To honor their identities, the quotes below are written in the chosen language of the speaker, and the English translation, if needed, is provided in the Appendix.

The total number of events and the mean of reported impact of these events were also recorded. Table 3 summarizes the SLE of the study participants and the life stages at which the SLE took place. There are three age categories including childhood, university and adult. 'Childhood' years are infancy to high school. 'University' years are any years that the individual indicated they were in undergraduate or graduate school, and 'Adult' years were any years after the upper academic years.

Experiences in Nature and Family/Familismo

Similar to Chawla (2006; 2015) and others, some of the Latina/o environmental professionals in this study identified experiences in nature as some of the most significant life experiences (impact $M = 4.36$) (see Table 3). They gave a total of 101 instances of experiences

Table 3

Significant Life Experiences Which Influenced Environmental Identity and the Life Stages Experiences Took Place

	Stage in Life						
Categories of Influences	Childhood		University Years		Adulthood		Total # of mentions
	# of Mention Rates	Mean Level of Impact	# of Mention Rates	Mean Level of Impact	# of Mention Rates	Mean Level of Impact	
Experiences in nature	54	4.30	27	4.30	20	4.48	101
Family/*Familismo**	57	4.12	0	0	4	4.00	61
Organizations	6	3.67	3	3.67	0	0	9
Negative experiences							
Habitat destruction	1	5.00	1	5.00	3	5.00	24
Pollution, radiation	5	4.00	0	0	1	5.00	11
*Incongruency with home culture**	7	3.71	4	3.50	2	4.00	13
Education							
Formal education	14	3.91	23	4.13	0	0	37
*Free-choice learning**	10	3.90	6	4.25	5	4.20	21
Influence of friends	0	0	8	4.06	16	4.38	24
Vocation	0	0	1	4.00	29	4.00	30
Sense of social justice	6	4.17	4	2.75	14	4.29	24
*Conscientização**	3	4.33	2	5.00	10	4.60	15
Environmental role model, book, TV program, etc.*	11	3.91	1	4.00	3	5.00	15
Principles or religion	2	5.00	0	0	3	5.00	5
Concern for children, grandchildren	0	0	0	0	2	3.50	2
Mentorship*	12	4.17	4	4.50	23	4.00	39
*Communication**	0	0	0	0	6	5.00	6

* Categories that have been changed or added to Chawla's (1999; 2006) research.

with nature, with over 50% being remembered from childhood. When asked to recount one of his earliest memories, one participant related, "Going to the Yosemite National Park when I was around six months old, and hiking with my dad in a backpack on my dad's back. Just the smell of the forest and the sound of the Steller's Jays is very embedded deep within me" (Interview TF). Many participants recounted these childhood experiences with nostaglia: *"Siempre teníamos la oportunidades de hacer actividades afuera. Siempre estábamos jugando y divirtiéndonos afuera, ya fuera que hiciéramos viajes. Siempre recuerdo hasta cierto punto con nostalgia las visitas a la playa y a los ríos"*[a] (Interview DP).

For many of these environmental professionals, having these experiences in nature went beyond childhood and into adulthood. One participant spoke about the need to have a trusted source introduce her to nature: "my husband is someone I trust, he took me on the trail, and he would stop at every flower and tree and point them out, and educate me." Having someone introduce them to nature was a repeated theme for participants who spoke about experiences in nature as adults. Specifically, the experience involved either family introducing them to nature or the participant introducing family to nature. For example, the previous participant continued,

> And after a while, I wanted to take my family and so I would do the same thing. I'd say,
> 'Mom, mom mira.' So it was something that, as a Latina, I feel like the way that we
> usually are - that when we see something really amazing, we want to share it with our
> community (Interview MA).

Other participants expressed similar sentiments with fathers teaching them to hike and camp, and they in turn taught this to other family members or other Latinos/as whom they saw as extended family members. This concept of *familismo* repeated itself in conjunction with other themes and is explained further in those categories but regarding experiencing nature, the family either

helped introduce nature to these individuals, or because of family and what they learned in regards to *familismo*, the participants were catalyzed into becoming more politically or socially active.

Organizations

Participants mentioned only a few organizations as significant in forming their environmental identities (N=9), and the majority of these were in childhood ($N = 9$). One participant credited the YMCA with providing the knowledge, skills, and community needed to learn climbing – a sport he credited with being an entry into exploring wild spaces. Another credited the National Outdoor Leadership School (NOLS) with helping her minimize the gaps in her camping skills and knowledge that others around her seemed to have acquired from their families. Still another professional heavily credited the twelve years he spent in Mexican Boy Scouts for his love of the environment:

> *Realmente te puedo decir de uno, porque incluyó gran parte de mi vida y yo le atribuyo*
>
> *a ser ambientalista al hecho de que yo pasé 12 años con los boy scouts. De ahí me viene*
>
> *el ser ambientalista, el tener una apreciación por los recursos naturales, por la*
>
> *naturaleza*[b] (Interview BG).

Overall, however, organizations did not provide much SLE for the majority of environmental professionals. Whether this was because they did not have access to them or because they did not know about them could not be determined from the available data.

Negative Experiences

Negative experiences, such as "destruction of a valued place and fear of toxic threats such as pollution or radiation," were seen as the motivating factors for participants in Chawla's (1999) study of SLE among Americans and Norwegians (p. 20). In this study,

participants mentioned eleven of these events, with over half occurring in childhood. One participant recalled,

> One of the earliest memories I have from family vacations is driving along Blue Ridge Parkway. And on that family trip with me in the back seat, I remember being impressed by the mountains - we don't have many down here [in Florida] - and I remember the fall colors that were on full display at the time that we were driving through, and that left a very big impression on me. But what lead the biggest impression of me was that the stretch of parkway that we were driving along, we had one vehicle in front of us that was ahead of us almost the entire length of the stretch to the park where they were driving and we were sort of hemmed behind it. And so we were watching this vehicle the whole time we were seeing the amazing scenery, and at one point that vehicle in front of us lowered their windows, and someone in the back seat hurled a can out the side. That memory is very vivid and has always stayed with me, and I wouldn't say it necessarily perhaps shaped my environmentalism so much as instilled in me a great disgust for that sort of behavior (Interview LP).

For this participant, as well as for two more, memories of people littering impacted them to the extent that in their professional and volunteer careers, they have tackled this aspect of environmentalism head on.

Two other participants spoke about the concrete jungle they lived in as children and how this led them to a greater appreciation for nature. One of them explained, "*Mi experiencia de vivir muchos años en una ciudad donde realmente no hay contacto con la naturaleza y ver que esta falta de contacto con la naturaleza realmente tiene efectos negativos en el ser humano, me llevaron a pensar que es necesario conservar la naturaleza para que otras personas puedan*

disfrutar lo que yo he disfrutado y respetarlo"[c] (Interview BG). Palmer (1993) reported similar

findings in her research of environmental educators.

> Another participant's negative experience motivated her to become a vegetarian:
>
> *Yo tenía como 12 o 13 y mi escuela resultó que la habían hecho como en un zona medio*
>
> *retiradita del centro de la ciudad. A un lado, cruzando la calle, estaba un matadero de*
>
> *marranos -a pig slaughterhouse- y la verdad es que a veces olía feo pero nunca le puse*
>
> *mucha atención. Hasta que un día me acuerdo muy bien, me acuerdo perfectamente que*
>
> *yo estaba en clase de matemáticas y empezamos a oír un ruido que yo sentí como el más*
>
> *horroroso de mi vida. Eran los marranos llorando, estaban matando marranos. Los*
>
> *escuché llorando y a mí me impactó muchísimo* [d] (Interview PC).

This negative event impacted this environmental professional so much that she eventually

became a vegan and does volunteer work for an animal rights organization.

> While these negative experiences were impactful, the most striking negative experiences

($N = 13$) were those that seemed to be at odds with the Latina/o home culture. There were two

versions of this incongruency. The first was seen mostly with Latinos/as born in Latin countries

who could not understand the separation of nature and basic human conditions. As one

participant explained,

> When I go back to my family in Ecuador and Colombia and I try to explain to them what
>
> I do, and the things that I have to try to defend against here [US], because . . . I'm a
>
> lobbyist . . . and I work on toxic waste issues, on occupational exposures to pesticides and
>
> when I talk about the very simple things that we try educate numbers of Congress about,
>
> the very fundamental things that we lobby with the administration, they're like, 'Wait,

you have to ask for that? That's not already a given?' It sort of blows their minds

(Interview AG).

These participants expressed feeling a lack of knowledge about environmental issues and an intolerance in the US that they had never experienced in their homes or families. One participant related, "I was often the only person of color in the room, and when I would talk about social justice or people of color, I would just get the blank looks from the majority white colleagues" (Interivew QG).

The second type of incongruency with the home culture actually occurred in the home when participants, mostly second- and third-generation immigrants to the US, participated in and embraced environmental ideas and practices. These ideas and practices were different from and new to their home cultures and put them at odds with their families and friends. As one participant recounted, "Even now my dad still tells me that I need to stop working so much. I need to stop focusing on my career, and I need to start being a wife, and taking care of my house and having babies. Which is all great, but that's not all I want to do. In Mexico, I always felt like I was put in this gender box with social and sexual roles that I needed to fill and I couldn't get out of that box" (Interview YS).

In this quote, some of the *familismo* expectations become evident. The family should come before all else, especially anything that is not of immediate benefit to the family. These Latina/o environmental professionals described having to explain environmental concepts to their families, such as how recycling benefits their families in the long run or how a balanced ecosystem is also good for human health. In the end, though, by embracing some of these ecological tenets and proenvironmental behaviors, their actions and identities were not understood by their families. One professional explained, "My father never found a snake he

didn't like to mow over . . . Throughout my 20 years he's known I've written, I've published, books [about snakes]. He knows that in the past I used to keep them and yet he revels for whatever reason in telling me, 'You know what I saw on the yard today? Snake.' 'Great.' 'Know what I do with it? I ran it over.' The disparity between his worldview and my worldview is surprisingly different" (Interview LP). Another participant explained that being an environmentalist in this type of Latina/o home culture requires one to be working all the time: "I definitely have found myself advocating not only to my parents, but my outside family - my aunts and uncles – and more than anything my friends. And sometimes I feel that I'm advocating even at the dinner table" (Interview YS). This type of incongruency hits some Latina/o environmental professionals hard, and they find that not only do they not completely fit in with their families, but they also do not completely fit in with those in the environmental movement. I found myself encouraging some of them after the interviews and assuring them that they were not alone. There were indeed others like them with similar cultural backgrounds and stories.

Education: Formal Education

Education was split into two categories because they provided different opportunities for Latinos/as. Formal educational experiences provided opportunities for Latinos/as who had limited access to natural environments and to practicing science in the field. One practitioner recounted the story of one of her teachers:

And ultimately, Ms. Smith - the big experience that we had that changed my life, was we got to go to the Channel Islands. We raised money to go and have an overnight trip at the Channel Islands. It was my first time on a boat. That was my first time away from home. That was my first time camping out without my parents. It was the first time I kayaked. It was the first time I ever saw a sea otter. It was the first time I saw a lot of ocean animals.

I don't think I had ever gone to an aquarium before then, so this was the first time I saw

ocean animals. And that's when I knew that this was what I wanted to do. I wanted to

study the ocean, I wanted to do what Mrs. Smith did (Interview CP).

All experiences reported about childhood formal education experiences (*N* = 14) spoke of wonderful teachers who provided participants with many first experiences. Many participants felt that their inspiration came from these early childhood experiences, which they carried into their adult lives.

Most of the participants (N = 23) especially discussed their university years as pivotal to learning more about the environment, the science behind environmentalism, and their place in the whole dynamic. As one participant said, "I thought it was very critical that I not only get a degree in environmental policy so that I could learn how the regulations are made and what that cycle is like, but also the business. Because I knew from working that the business side had such a strong impact on what our environmental ramifications were as a society, more so than even just our lives as individuals . . . I think the position I'm in now is helping me connect those academic dots and apply them to a more of a real world scenario" (Interview IB). For these Latina/o professionals, the learning acquired and the opportunities afforded through formal education played an important role in defining their environmental identity. Every participant (*N* = 28) spoke about how somewhere in the childhood or university years, someone ignited a love of learning in them. This love of learning carried through into their present-day careers, which some use to keep abreast of constantly changing science and policies.

Education: Free-Choice Learning

An extension of this love of learning can be seen in how these professionals engaged with learning outside of the structured school environment, or what some scholars call 'free-choice

learning' (Falk, 2005). Free-choice learning "recognizes the unique characteristics of such learning – free-choice, non-sequential, self-paced, and voluntary" and acknowledges that learning can happen in spite of barriers and limitations (p. 272). One participant discussed his love of snakes and where that interest has taken him: "It's been a personal interest of mine for almost the full 20 years that I've been in this field, and so I've written articles and books pertaining to snakes" (Interview LP). This free-choice learning is not limited by age. As one participant explained, "*En casa mis papás compraron una enciclopedia que se llamaba Enciclopedia Animal y era casi un tomo por letra. Era una cosa gigante. Yo me sentaba - dice mi mamá que cada día, no sé si cada día pero yo me sentaba seguido - a solamente abrirla, escoger algún animal y leer sobre ese animal*"[e] (Interview PC).

For many of the environmental professionals, the free-choice learning aspect of environmental work was one of the attributes that attracted them most to the work: "I realized that I like the combination of being able to learn about animals and learn about nature, and plants, and ecology, and weather, and climate, and how all of that comes together, and then sharing it with other people and getting them to care as well" (Interview YM). Every environmental professional mentioned some aspect of this free-choice learning aspect of their work and how it was a meaningful part of who they were as environmental professionals.

Influence of Friends and Vocation

The influence of experiences with friends was particularly acute in the adult years ($N = 16$), but for some those experiences began in their university years ($N = 8$). This was particularly true for Latinos/as who did not have a home structure that supported their new environmental interests. One participant explained how meeting new friends helped him nurture his love of climbing: "I looked for the local climbing gym . . . And that's where I kind of met with my

current friends or the current community of climbers, and that's where I met my friend Mario. And through that interaction with some local climbers I started going out to Hueco Tanks and places around New Mexico and the southwest. And from there, I fell in love with the feeling of going to a place and climbing, camping, and being outside for periods of time" (Interview AE). Friends often provided the cultural capital needed to participate in environmental activities, and for some it provided a support network that was not always available at home.

Participants expressed similar feelings the experiences in their work environments ($N = 29$). According to one participant, "I think [my environmental identity] has a lot to do with a lot of the people that I met because of working for the aquarium. There's been a lot of-- just the situations and ideas and that different people have instilled within me" (Interview YS). Work experiences not only instill an environmental identity, but also reinvigorate these environmental professionals. When one participant recounted taking 68 children on a river raft for the first time in Colorado, the children's enthusiasm reaffirmed the participant's choice of occupation: "I would rate it a five, because it keeps me motivated" (Interview MA). Working in the environmental field is therefore very important for these individuals, and the strength of the overall impact ($M = 4.40$) indicates how meaningful it is for them. For these Latina/o professionals, mentorship is an important part of how they got involved with the environmental, it is what keeps them working in the environmental movement, and they feel it is their responsibility to pass on their knowledge and passion to their friends and co-workers.

Sense of Social Justice

Chawla's (1999) work situated social justice as one of the "primary motives, which ultimately led [environmentalists] to the realization that a healthy environment is an essential component of justice" (p. 18). Some of the individuals who participated in this study experienced

social injustices firsthand, and others saw injustices being done in foreign countries. For all of

the Latinos/as in this study, social justice was an important aspect of their current work and

environmental identity. Some have been doing social justice work for many years, and others are

beginning to awaken to its impact in their lives, yet all have experienced aspects of social justice

in connection with the environment. One participant recounted her experience growing up with

having to turn off the water when bathing:

> *Aquí en los Estados Unidos, en la mayor parte de la ciudades, abres la llave del agua y*
> *siempre tienes agua, siempre hay alguien que pasa por tu basura, es difícil que no tengas*
> *luz. En cambio, cuando vives en países en vías de desarrollo, esos servicios no siempre*
> *están ahí, o faltan. Yo vivía en una casa en un área muy bien, un área bastante bien y*
> *aun así durante tiempos de sequía, nos quitaban el agua todos los días por un periodo de*
> *seis horas en el día. Estábamos acostumbrados en mi casa, que a la hora de abrir la*
> *ducha para darte un baño, ponías una cubeta para que se llenara en lo que se calentaba.*
> *En cuanto se calentaba el agua, te mojabas y cerrabas la llave, te ponías jabón y abrías*
> *la llave nada más para quitarte el jabón y la volvías a cerrar, porque eran escasos los*
> *momentos en los que teníamos agua. Y eso lo tengo en mi, lo sigo haciendo todos los*
> *días, jamás me doy una ducha, no puedo oír que se está desperdiciando el agua, que está*
> *corriendo porque me siento mal*[f] (Interview ME).

All participants spoke of situations like this in their personal lives, and if they did not have such

situations happen to them, they had extended family to whom it had happened. For this reason, I

added Freire's (1979) term *Conscientização* to describe this emerging self-awareness in relation

to the environment and social justice. As one participant put it, Latina/o environmental

professionals are a mixture of old and new: "It's part of the culture in the almost stereotypical

ways that we know - we recycle, we reduce, we reuse. You know, turn off the light, don't waste so much water and so forth. But, I think it's even deeper for me how I try to extract it. It's the relationship with the land as well and our understanding of natural spaces is part of the culture sometimes whether we're aware of it or not . . . Yeah, so I say [I am] *ecomestizo*" (Interview JG). As the study demonstrated, Latina/o environmental professionals see social justice as part of their work, and for them the work is more coming to terms with and understanding the *conscientização* aspect of their work. Most of the participants discussed how they had no one with whom to discuss this awareness in their places of work, since many were the only person of color in their department or sometimes organization. This is similar to the isolation some expressed when discussing being the only one of their friends and families in the environmental movement. From this sample of Latina/o environmentalists, isolation appears to be a pattern started in childhood and repeated in adulthood. They are in a very true way pioneers paving paths that are less trod and at times solitary.

Role Models, Books, TV Programs, Etc.

In the early childhood of some environmental professionals (*N* = 11), books and television shows, such as nature shows enjoyed with family members, played an important role in helping to develop their environmental identities. One biologist mentioned a book about a goose that someone read to her as a child. It impacted her on such a deep level that it was only in the interview process that she became aware that her current work as a bird field biologist could have some connection to that book. Another participant, who is an emerging environmental professional, shared that it was seeing Vice President Al Gore speak when she was an adult that stimulated her interested in the environment. Notably, of the seven individuals who identified this category, five spoke Spanish at home, and English was their second language. It appears

however that in this group of professionals, the adult experiences in this category were more powerful than the childhood experiences. This could mean that using media such as television could be a powerful tool to promote proenvironmental behaviors that were not activated when they were children in adults.

Principles or Religion

This category was not strongly represented. A small number of experiences ($N = 5$) identified any aspect relating to religion as relating to their SLE. For those who identified childhood experiences related to religion most were in Catholic school settings. For the adult experiences, participants discussed more of a spiritual connection to the land than formal religion. However, one participant brought both worlds together: "I guess in more tangential ways, it's not like a direct connection. There's obviously a whole spirituality of nature and the spirituality of the body and finding the place of that; but I almost feel as often I bring my environmentalism to my spirituality, as much as spirituality, my Catholicism has brought something to my environmentalism" (Interview BG). For the few Latina/o environmental professionals of this study who mentioned this category, there was no separation between the environment and spirituality/religion. The two were linked and they received nourishment from both equally.

Mentorship and Communication

The final category, mentorship and communication experiences, was one about which participants spoke at great length ($N = 45$). For many of them, mentorship was one of the main reasons they were in the field doing what they felt passionate about. One participant shared how, without her mentor, she did not believe opportunities would have availed themselves to her: "*Como que, por ejemplo, David fue clave para que todo lo demás se diera. Si no hubiera estado*

esa persona para servir de mentor y para ayudar a abrir otras oportunidades, la oportunidad de

ir al Artic nunca hubiese ocurrido. Como persona fue clave para que estas otras situaciones

ocurrieran luego"[g] (Interview DP).

Other participants talked about how their mentors helped them see themselves and the work in ways they had not considered before: "[Tomas], the executive director. He's been a real source of, I guess, enlightenment for me in how to do this work. He founded [the organization] about ten years ago, and he's been a real excellent example of how you combine environmental protection and social justice, and then how to use social enterprise and policy advocacy and community engagement as the core operating pieces for carrying out that mission" (Interview TF). For other participants, it was not just one mentor, but many: "It was Erika that got me in the right path specifically in terms of turning my hazard engagement strategies to meaningful ones. And there was Roger that told me to actually go and do it and stop trying to put my effort into convincing my then boss to do the right thing, and just go and do the right thing. And it was a friend of mine who was a professor . . . who [taught] me about . . . being a social entrepreneur and that got me on the next path to do that" (Interview MG).

Most important, all of the environmental professionals spoke about mentoring others and how they saw that as an important part of their jobs. They often made connections between the mentors of the past and the legacy they hoped to pass on to others: "As a kid, I don't think I fully made the connection that my father showed me this, so it's my duty to show other people. I think a lot of it is just it's what I enjoy doing - what I enjoy being" (Interview EE). Again, we see *familismo* being an integral part of the Latina/o environmental professional and helping them to their define behavior. Family extends beyond the biological unit and includes 'adopted' family of co-workers or other Latinas/os they can influence. Passing on information, skills, and

perspectives that have made them successful environmental professionals is an important part of their Latina/o culture.

Discussion

In 2014, the Pew Research Center reported that Latinos had become the racial majority of two states, California and New Mexico, and the second largest ethnic majority group in at least four states (Lopez, 2014). Despite this fact, Latinas/os only represent a small portion of the professionals working in the environmental field. Interviewing Latina/o environmental professionals can provide insight to environmental organizations about what attracts and maintains these individuals in the movement.

While the nature of this study is descriptive and only samples a small portion of the Latina/o environmental professionals in the US, the individuals herein are exemplars of Latinas/os in the environmental and provide great insight into the barriers needed to be overcome and the opportunities that needed to be afforded in order to work in the environmental field. Latinas/os have been prescribed into a social construct that only works in the United States. Mexicans, Colombians, Cubans, and Puerto Ricans have varied ethnic backgrounds and cultures and have experienced different levels of subjugation in their countries of origin and in the US (Delgado Bernal, 2002). However, their use of Spanish and history of subordination relegates them to this Latina/o category which all of the participants have embraced and have made an essential part of their work.

One of the main findings in the study was the positive and negative impacts of *familismo* on participant's environmental identity. *Familismo* accounted for some of the isolation that some of the participants felt when their proenvironmental behaviors and ideas went against their home cultures. However, *familismo* also accounted for the kinship and mentorship that participants

identified as important in their work. I believe that *familismo* also explains why these environmental professionals remain in the field. They see the good that the work promises for their immediate family, for their transnational family members, and for the whole human race. Environmental work often intersects with social justice issues, so doing this work speaks to their Latina/o identity of caring for others more than the self. The concept of *familismo* can also be used by the environmental movement to connect Latinos/as to the movement. By stressing that these values are part of environmental stewardship, Latinos/as can start seeing themselves more readily as part of the movement and not feel the alienation that some of the professionals expressed.

Another key finding were the mentorship opportunities that afforded access to natural spaces and skills that enhanced enjoying the natural such as learning to climb. Without these individuals and the opportunities they provided, many of these people would have had as easy a time working in the environment. Some of the individuals felt they had a natural affinity with animals and natural spaces. However, it was key individuals that not only gave them a sense of what it looked like to enjoy nature but also provided a purpose to channel their passion for animals and wild spaces. One participant spoke about a picture that inspired her. It was of the silhouette of a woman who had just finished ascending Annapurna, one of the tallest peaks in the Himalayas, and her arms were stretched out in triumph. She said that picture inspires her, motivates her to "always do what I love." The participants in this study, these ecomestizos, love what they do and feel the joy of this work every day. They recognize and appreciate the people that have helped them do this work, and in turn around and mentor others in the process.

So what can environmental organizations do? Firstly, there were missed opportunities in these individuals' lives. There were very few organizations that played a significant role in

forming their environmental identities either in their youth or even their adult lives. Given their success with role models and mentors, organizations should be fostering the love of learning at much earlier stages and providing opportunities for Latinas/os to engage with nature. Engaging Latina/o youth early and often can nurture the environmental ethic that is inherent in Latina/o culture and for longer periods of time. For adults, organizations can provide opportunities for Latinas/os to learn with their family. As we have seen, the family and its values persists and can determine behavior and attitudes. Engaging the whole family will ensure that adults have access to mentorship opportunities and environmental networks that may not be part of their existing social structures.

Environmental organizations also need to acknowledge and support the *conscientização* that Latinas/os need to be part of the work. Some of the participants were just emerging in their awareness of social justice issues; others have made it central to their environmental work. Providing a space for environmental professionals to explore these concepts not only creates an atmosphere of acceptance but also fosters innovation. When individuals are allowed to honor and express all of their identities, they cannot help but bring all of their best selves into creating positive change.

Finally, it is very important that the environmental movement acknowledge that, for Latinos/as, environmental issues intersect with issues of privilege and race. Proenvironmental behaviors such as taking public transportation rely on external structures that privilege certain communities of which Latinas/os may or may not be a part of. Understanding how the Latina/o community, or any underrepresented community, is prevented from accessing green spaces or clean water will make the environmental work more authentic and meaningful.

The environmental movement has a lot of work to do in order to be truly representative of all of the audiences in the American public. But it has in its organizations some excellent mentors of individuals who are ready to share what they have learned.

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Appendix
Translated quotes

a	We always had the opportunities to do outdoor activities. We were always outside playing and having fun, even if were planning trips. Always I remember somewhat wistfully visits to the beach and rivers.
b	I can really tell you clearly about one, because it included much of my life and I attribute being an environmentalist to the fact that I spent 12 years with the Boy Scouts. From there sprung the environmentalist in me, the ability to have an appreciation for natural resources, for nature.
c	My experience of living many years in a city where there really is no contact with nature and to see that this lack of contact with nature actually has negative effects on humans, led me to believe that it is necessary to preserve nature so that other people can enjoy what I enjoyed and learn to respect about it.
d	I was about 12 or 13 and my school was built a little ways from the downtown area of the city. On one side, across the street, there was a slaughterhouse for pigs -a pig slaughterhouse- and the truth is that sometimes it smelled ugly but I never paid it much attention. Until one day I remember very well, I remember perfectly that I was in math class and I started hearing a noise that felt like the most horrible [noise] of my life. The pigs were crying; they were killing pigs. I heard them crying and that impacted me a great deal.
e	At home my parents bought these books called Animal Encyclopedia and it was almost one tome per letter [of the alphabet]. It was a huge thing. I sat down - my mom says that every day, but I don't know if every day but I sat down often – and I would open it, choose an animal and read about that animal.
f	Here in the US, in most of the cities, you open the faucet and you always have water; there is always someone picking up your trash; you always have electricity. But when you live in a developing countries, these services are not always there or missing. I lived in a house, in a very good area, and still during times of drought, water was taken away for a period of six hours in the day. At home, we were used to placing a bucket to catch the extra water when you turn on the faucet to take a bath while the water heated up. As the water heated, you pour some water over you and closed your key. You then soaped up and only opened the faucet when you were ready to remove the soap and then quickly closed the faucet because the times we had water were scarce. And that is something that is instilled in me. I still do this every day and never have a full shower. I cannot bear to hear water wasting or running because I feel bad.
g	Like, for example, David was key to everything else. Had it not been for that person to serve as a mentor and to help open other opportunities, the chance to go to the Artic would never have happened. As a person, he was the key in making these other situations happen.

Chapter 4: Manuscript 3

THE ENVIRONMENTAL IDENTITY OF LATINOS IN
THE PACIFIC NORTHWESTERN UNITED STATES

Jenny Fabiola de la Hoz

THE ENVIRONMENTAL IDENTITY OF LATINOS IN
THE PACIFIC NORTHWESTERN UNITED STATES

Abstract

The construct of environmental identity, or the sense of "how we orient ourselves to the natural world," is changing the way environmental education as a field perceives how people relate to the environment. Instruments such as the Environmental Identity Scale (EID) help us ascertain the strength of an individual's environmental identity. In the United States, these scales have been administered historically to college students, most of whom are from the dominant Caucasian population. This study focuses on Latinas/os, an underrepresented audience in the environmental movement, who predominantly live in the Pacific Northwest and who possess a broad range of literacy skills. Overall, the study sample ($N = 149$) demonstrated a strong environmental identity, with significant differences according to age, gender, and place of birth. Study implications position the lack of Latina/o activism back on the environmental movement and its inability to activate the Latina/o environmental identity.

The Environmental Identity of Latinos in the United States

In 1977, the Tbilisi Declaration established that one of the main goals of environmental education is "to create new patterns of behavior of individuals, groups and society towards the environment" (p. 26). Since then, environmental education (EE) has been interested in creating programs that increase pro-environmental behavior. Some EE programs follow the assumption that increased environmental knowledge leads to improved ecological attitudes, which in turn creates a greater desire for environmentally responsive behavior. However, "only a modest relationship has been reported between environmental attitudes and behaviors" (Stets & Biga, 2003, p. 398; Hungerford & Volk, 1990). The inability to acknowledge that behavior choice is embedded in social structures and cultural contexts results in EE programming that does not provide authentic, quotidian pro-environmental behaviors. Instead, EE must acknowledge and understand the social and cultural structures that enable or impede choice and behavior. One method to understand this embeddedness and what it means for EE is to study an individual's environmental identity.

Environmental identity or "how we orient ourselves to the natural world" takes into account the multiple internal and external identities that come into play when an individual makes choices about the environment (Clayton & Opotaw, 2003, p. 45). Clayton and Opotaw's (2003) pivotal edited book, *Identity and the Environment,* was the first to coalesce and present environmental psychological research findings about how "environmental and social identities intertwine" (p. 13). The book organized the research "based on the degree of social influence on environmental identity": (1) the relationship between nature and the individual (minimal); (2) nature in social and community contexts (moderate); and (3) nature as a member of social groups (strong) (p. 14). One of the main findings was that the environment and self cannot be

dissociated from other social contexts, and the book underscored the need to include factors such as the different types of identities in EE programming.

In the section on nature and the individual, Clayton (2003) introduced the Environmental Identity Scale (EID) with the goal of assessing "the extent to which the natural environment plays an important part in a person's self-definition" (p. 52). Clayton (2003) pointed out that environmental identity shows "some evidence that it affects our thinking or behavior, and does so better than other determinants, such as attitudes;" thus, measuring a person's environmental identity is a better predictor of current and future pro-environmental behavior (p. 51).

The original EID consisted of 24 statements, which were ranked by participants on a self-identification scale that ranged from 1 (not at all true of me) to 7 (completely true of me). The responses were then summed up into one composite score, with a higher composite score indicating a stronger environmental identity (Bremer, 2014). An exploratory factor analysis of the scale performed by Olivos and Aragones (2011) showed four underlying factors, which were identified as: (1) "Environmental identity"; (2) "Enjoying Nature"; (3) "Appreciation of nature"; and (4) "Environmentalism" (p. 70). The items in the 'environmental identity' factor refer to "a sense of belonging to the natural world," whereas the items in the second factor, 'enjoying nature,' "refer to contact with nature, mainly outdoor activities, and the pleasure or benefit derived individually" (p. 70). The 'appreciation of nature' factor "express[es] appreciation of the natural world," and 'environmentalism' spoke to a "moral code, an ideological commitment" found in other environmentalists (p. 70). These factors speak to the various actions and beliefs that comprise what is perceived as a strong environmental identity, so a person who possesses a strong environmental identity should score high on the EID.

The scale has shown strong internal validity in various studies, despite measuring what appears to be a multidimensional, complex concept and some issues with wording (Olivos et al., 2011; Olivos & Aragonés, 2011; Clayton & Kilinc, 2013; Tam, 2013). Bremer (2014) cited vagueness is some of the wording and expressed concerns about contextualization of some of the concepts. Yet as Tam (2013) deduced, the EID seemed to capture the "multiple aspects or dimensions of connection to nature, each of which has its own unique conceptual meanings but at the same time shares a substantial overlap with other aspects that warrants an identification of a common core" (p. 74). This consistency appears to be the same regardless of nationality (e.g., Turkish or Chinese) or language (e.g., Chinese or Spanish) (Olivos et al., 2011; Clayton & Kilinc, 2013; Tam, 2013). I was curious if this consistency held up with audiences who were not part of the dominant or mainstream culture of the country in which they reside.

We know from other areas of research in the United States that immigrant and ethnic minorities differ from the mainstream in their perceptions of certain aspects of society, such as educational opportunities and access (Gonzalez, 2003; Museus & Quaye, 2009). Environmental science research also consistently shows that US ethnic minorities are disproportionately more affected by environmental issues than mainstream White groups (Johnson & Niemeyer, 2008; Faver & Muñoz, 2013; Hseih, 2014) while being disproportionately underrepresented in environmental organizations. The question therefore naturally arises, would individual members of these minority groups show the same strong environmental identities that they seem to possess in their countries of origin, despite having more environmental barriers in their everyday lives in the US, or would their life experiences change the way they perceive the environment? It was expected that studying an ethnic group, such as Latinas/os, who are comprised of a mixture of US-born members and recently arrived immigrants, might provide some insight into both the

cultural appropriateness of the EID scale and subscales as well as answering these basic

questions about environmental identity in immigration and as an element of larger identity

formation among non-mainstream populations in the US.

In the United States, Latinas/os are the fastest growing ethnic group and are the majority

in some of the Western states, yet they are underrepresented in the environmental movement

(Lopez, 2014; Taylor, 2014). A report by Taylor (2014) showed that ethnic minorities comprise

only 16% of the workforce in the environmental movement, with Latinas/os holding only 2.3%

of the leadership positions (p. 50). One possible reason for this lack of representation is the belief

that Latinas/os do not have a strong environmental ethic or that they do not possess strong

cultural ties to the environment (Kolankiewicz & Beck, 2001; Graudins, 2016). While there is

strong anecdotal and even research evidence countering this belief, there is still a limited

representation of Latina/os around the environmental table (Peña, 2005; Barreto & Wilcox-

Archuleta, 2015). What if it is not that Latinas/os do not have a strong environmental ethic, but

rather that their environmental identity is not being activated in EE and in the environmental

movement more broadly? If that is the case, such a finding would impact how EE is practiced

and would have specific implications for the recruitment of Latinas/os into the environmental

movement as visible participants or as leaders.

The goal of this study was therefore to measure the strength of the environmental identity

of Latinas/os who predominantly live in the Pacific Northwest. The Pacific Northwest is a region

with relatively nascent Latino communities (Garcia, n.d.). Unlike other areas of the United

States, the Pacific Northwest does not have a strong historical Latino\a presence, which other

research posits as the reason for mixed feelings towards the environment and the ability to create

positive environmental changes among Pacific Northwest Latina/o populations (Zentella, 2004;

Zentella, 2009). The Latinas/os in this region of the country represent more recent immigrants, as well as some second and third generation members, and thus they may embody both environmental identities that are closer to their countries of origin, as well as identities closer to the mainstream environmental movement in the US.

The EID was chosen because of its use in different countries, specifically ones where Spanish is the dominant language, and because it consistently maintains a high reliability factor throughout all audiences. A heterogeneous group of Latinas/os were solicited to take the scale to gauge if there were marked differences between age, gender, language, or immigrant background. It is by looking at these socially distinct categories, and specifically, as Viruell-Fuentes, Miranda, and Abdulrahim (2012) pointed out, at the intersections of these categories, that we can learn more about the construction of identity. Particularly for ethnic minorities, it is at these intersections that the systems of privilege interact to limit access to knowledge and power (Viruell-Fuentes et al., 2012). In addition to measuring the study population's environmental identity, this paper asks whether the scale can tell us if these identities compound and if in turn the compounding diminishes or increases environmental identity.

Methodology

Participants

The study was conducted on a broad sample (n = 149) of self-identified Latinas/os in the Pacific Northwest of the United States (OR, WA, ID, and AK). I recruited participants using social media (i.e., Facebook), social networks (i.e., interest groups), and face-to-face recruitment events (i.e., church meetings). I recruited a small subset of the respondents (n = 23) from a previous study of Latina/o environmental professionals, and they were geographically situated nationwide.

The notice of rights of consent and the survey instrument were available in English and Spanish in order to provide participants a language option. This study considered survey completion as consent in survey participation. One hundred and one participants began the surveys online, and 71 participants were given the survey in person, for a total of 172 surveys. Eight people began the online survey but declined to finish; 15 onsite participants did not complete the survey. In the end, 23 surveys were ineligible for use, leaving 149 usable for the study. The mean age of the participants was 33.8 years of age ($SD = 9.58$; $SE = 0.07$), and the gender distribution was 28% male ($n = 41$) and 72% female ($n = 108$). Ninety-four responses were in English, and 55 were in Spanish. Fifty-nine percent of the respondents also indicated that they had been born outside of the United States, with the majority coming from Mexico, indicating some heterogeneity among the Latina/o population in the sample.

Instrument: Procedure and Accommodations

In personal communications with the author of the original EID, Clayton provided a shorter version of the EID which she had been using and which consisted of 11 statements around environmental identity and the same response scale. The Spanish version was adapted from Olivos and Aragonés (2011), with only a few terms changed to have a more American Spanish phrasing. The instrument also met Vaske's (2008) recommendation of fitting on one side of legal-sized paper.

The shorter EID accommodated the linguistic needs of the target audience. For example, a shorter instrument permitted briefer face-to-face interactions, which allowed for the researcher to administer the EID in combination with other events, such as church meetings or English Language classes. These events permitted recruitment of a larger Latina/o audience. The shorter

EID also allowed for the instrument to be read aloud, which provided accommodation for varying reading levels. The research team read the instrument aloud several times.

In addition to the existing EID, I was curious about two other themes that emerged in a previous study I conducted on the identity of environmental Latina/o professionals: (1) the desire to experience natural environments with family and/or loved ones; and (2) the love of lifelong learning about the environment. Therefore, I created four additional statements for this administration of the EID with the goal of measuring the accuracy of these beliefs within a larger Latina/o population:

- I prefer to explore nature alone.

- My idea of exploring nature includes my family.

- For me, learning about nature is a lifelong process.

- I think nature teaches us a lot throughout our lives.

Since the reliability of the EID is well documented, I added these statements to the end of the instrument in order to avoid compromising that validity.

Results

The shorter EID scale, as well as the combined EID scale and additional questions, both had a high internal consistency ($\alpha = .823$; $\alpha = .798$ respectively), suggesting that the added questions were not detrimental to the reliability of the EID instrument as a whole. The EID mean composite score for the sample ($M = 64.48$; $SD = 9.55$) suggested that, overall, the participants had a strong environmental identification (score out of a total possible 77). Table 1 provides the number of replies per category, including place of birth (either immigrant or born in the United States), age, gender, and language.

Table 2 utilizes the factors identified by Olivos and Aragones (2011) on the original EID and provides the composite mean score by gender, language, place of birth, and age. Cronbach's alpha tested the reliability within the subscales, and these scores are listed next to the title of each factor, along with the standard deviation for the mean composite score.

Table 1

Descriptive Statistics

	Ages 18-19	Ages 20-29	Ages 30-39	Ages 40-49	Ages 50 +	n/a	Total
Language							
English	7	26	32	15	9	5	94
Spanish	1	11	30	12	1	0	55
Place of Birth							
Born in US	8	24	15	5	4	5	61
Born outside US	0	13	47	22	6	0	88
Gender							
Male	2	8	16	12	1	2	41
Female	6	29	46	15	9	3	108

I also graphed the data in each category to determine collinearity and monotonicity. None of the data followed a normal distribution nor showed equal population variances; thus, it did not meet any of the necessary assumptions for parametric tests (Field, 2009). The data resisted transformation, so I reviewed and met nonparametric assumptions (such as similar shaped data) (Field, 2009). Because the data ranged between ordinal, nominal, and scale, I conducted Mann-Whitney U test analyses to determine if there were differences in sum total EID scores between

Table 2

Average Scores Categorized by Whole Population, Gender, Language, Place of Birth, and Age

	M	Female	Male	English	Spanish	Native born	Non-native born	18-19	20-29	30-39	40-49	50 +
Enjoying Nature (α = .648)												
Q1. I spend a lot of time in natural settings (woods, mountains, desert, lakes, ocean).	4.81	4.65	5.24	5.19	4.64	4.82	4.81	4.63	4.54	4.95	4.56	5.70
Q4. When I am upset or stressed, I can feel better by spending some time outdoors "communing with nature".	5.08	5.10	5.02	5.40	4.91	4.93	5.18	4.63	4.49	5.29	5.15	6.30
Q9. I would feel that an important part of my life was missing if I was not able to get out and enjoy nature from time to time.	5.82	5.90	5.61	6.02	5.72	5.59	5.98	5.50	5.76	5.89	5.59	6.40
Environmental Identity (α = .722)												
Q2. I think of myself as a part of nature, not separate from it.	5.79	5.81	5.73	6.03	5.57	5.38	6.07	5.63	5.43	5.94	5.81	6.30
Q5. I feel that I have a lot in common with other species.	5.84	5.86	5.78	6.05	5.69	5.62	5.99	6.00	5.32	6.05	6.00	6.30
Appreciation of Nature (α = .431)												
Q8. I would rather live in a small room or house with a nice view than a bigger room or house with a view of other buildings.	6.32	6.39	6.15	6.48	6.14	6.26	6.36	6.38	6.14	6.48	6.19	6.50
Q10. I have never seen a work of art that is as beautiful as a work of nature, like a sunset or a mountain range.	6.14	6.21	5.95	5.85	6.06	5.54	6.56	6.38	5.68	6.21	6.48	6.10
Q11. I feel that I receive spiritual sustenance from experiences with nature.	5.82	6.00	5.34	5.89	5.73	5.46	6.07	5.13	5.22	5.98	6.11	6.80
Environmentalism (α = .623)												
Q3. If I had enough time or money, I would certainly devote some of it to working to protect the environment.	6.19	6.19	6.17	6.33	6.00	5.98	6.33	6.00	5.65	6.40	6.26	6.60
Q6. Behaving responsibly toward the earth -- living a sustainable lifestyle -- is part of my moral code.	6.62	6.58	6.71	6.57	6.56	6.36	6.80	6.00	6.46	6.76	6.70	6.80
Q7. Learning about the natural world should be an important part of every child's upbringing.	6.05	6.12	5.88	6.15	5.80	6.08	6.03	5.38	6.11	6.02	6.07	6.20
$ Experience nature with loved ones (α =0.410)												
$ Q12. I prefer to explore nature alone.	3.92	4.00	3.71	3.73	3.98	3.62	4.13	3.13	3.89	4.16	3.96	3.80
$ Q14. My idea of exploring nature includes my family.	5.85	5.88	5.78	5.57	5.90	5.41	6.16	4.88	5.54	5.98	6.41	5.90
$ Lifelong learning about the environment (α = .680)												
$ Q13. For me, learning about nature is a lifelong process.	6.07	6.06	6.10	6.13	6.01	5.85	6.22	5.13	5.68	6.18	6.33	6.70
$ Q15. I think nature teaches us a lot throughout our lives.	6.50	6.55	6.37	6.36	6.52	6.15	6.74	5.88	6.08	6.71	6.81	6.50
Totals (N = 149)												
Composite EID score (out of a possible 77)		64.81	63.59	65.98	62.80	62.03	66.17	61.63	60.78	65.97	64.93	70

$ These questions were not part of the original shortened EID.

males and females, Spanish and English speakers, and native born and non-native

born participants. Table 3 shows the values obtained for each of the pairings.

Table 3

Mann-Whitney U Test Results – Comparisons of Median Totals

Pairing	*Median*		*U* value	*p* value	*r*
Gender	Female	Male			
Total EID score	5.89	5.78	2,321	.649	0.10
Subscale – Enjoying Nature	5.74	5.85	2,123	.696	0.10
Subscale – Environmental Identity	5.45	5.38	2,118	.678	0.10
Subscale – Appreciation of Nature	6.11	5.72	2,724	.027*	0.12
Subscale – Environmentalism	6.11	6.03	2,326	.628	0.10
Subscale – Experience nature with loved ones	4.89	4.70	2,460	.291	0.11
Subscale – Lifelong learning about nature	6.30	6.23	2,221	.977	0.10
Language	Spanish	English			
Total EID score	5.63	5.99	1,979	.017*	0.09
Subscale – Enjoying Nature	5.39	6.00	1,906	.007*	0.09
Subscale – Environmental Identity	4.95	5.72	1,794	.002*	0.08
Subscale – Appreciation of Nature	6.07	5.96	2,704	.635	0.12
Subscale – Environmentalism	5.88	6.22	2,050	.032*	0.09
Subscale – Experience nature with loved ones	5.22	4.62	3,262	.007*	0.15
Subscale – Lifelong learning about nature	6.35	6.24	2,740	.520	0.12
Place of birth	Native	Non-native			
Total EID score	5.64	6.02	3,400	.006*	0.16
Subscale – Enjoying Nature	5.69	5.83	3,054	.150	0.15
Subscale – Environmental Identity	5.16	5.63	3,169	.058	0.15
Subscale – Appreciation of Nature	5.69	6.23	3,468	.002*	0.16
Subscale – Environmentalism	5.86	6.25	3,287	.018*	0.16
Subscale – Experience nature with loved ones	4.52	5.06	3,429	.004*	0.16
Subscale – Lifelong learning about nature	6.00	6.48	3,208	.032*	0.15

p < .05

Distributions of the EID sum scores and subscale scores for males and females

were similar, as assessed by visual inspection. Median EID sum score and most of the

subscales were not statistically significantly different between males and females (see scores above) using an exact sampling distribution for U (Dineen & Blakesley, 1973). While the subscale "Appreciation of Nature" did show a significant difference between male and female medians, with women being slightly higher ($Mdn = 6.11$) than in males ($Mdn = 5.72$), $U = 2,724$, $p = .027$, there was not a significant effect between the groups.

Distributions of the EID sum scores and subscale scores for language, Spanish and English, were similar as assessed by visual inspection. Some of the subscales did not demonstrate a statistically significant difference between languages (see scores above) using an exact sampling distribution for U (Dineen & Blakesley, 1973). However, the EID sum score and the subscales "Enjoying Nature," "Environmental Identity," and "Environmentalism" did show a significant difference between the medians, with English having a slightly higher median in all of the subscales (respectively, $Mdn = 5.99$; $Mdn = 6.00$; $Mdn = 6.22$) than Spanish speakers ($Mdn = 5.63$; $Mdn = 5.39$; $Mdn = 4.95$; $Mdn = 5.88$). The subscale "Experience nature with loved ones" also showed a significant difference, but Spanish ($Mdn = 5.22$) showed a higher median than English ($Mdn = 4.62$). The effect between groups was non-significant. Similarly, the comparison between United States native-born Latinas/os and those born in other countries resulted with the sum total of the EID and few of the subscales demonstrating significant differences (see above). However, the effect size was minimal.

I ran a Kruskal-Wallis H test to determine if there were significant differences

between the five age categories: ages 18-19, ages 20-29, ages 30-39, ages 40-49, and

ages 50 plus. Distributions of the scores were similar for all groups, as assessed by

visual inspection of a boxplot. The median scores revealed a statistically significant

difference between the total EID score, $\chi^2(4) = 13.13$, $p = .011$, and the subscale

"Lifelong learning about nature", $\chi^2(4) = 13.290$ $p = .010$.

I performed ad hoc pairwise comparisons using Dunn's (1964) procedure with

a Bonferroni correction for multiple comparisons. Adjusted p-values are presented

with the pairings that demonstrated significant differences. The post hoc analysis

revealed statistically significant differences in total EID scores between ages 20-29

and ages 50 plus (*Mdn* = 5.44 and *Mdn* = 6.27) ($p = .042$).

Table 4
Results of Kruskal-Wallis for Ages

	$\chi^2(4)$	P	Age group comparisons with sig. dif.
Total EID score	13.13	.011*	20-29 & 50 plus
Subscale – Enjoying mature	8.30	.081	
Subscale – Environmental identity	11.56	.021**	
Subscale – Appreciation of nature	10.40	.034**	
Subscale – Environmentalism	8.05	.090	
Subscale – Experience nature with loved ones	6.04	.196	
Subscale – Lifelong learning about nature	13.29	.010*	18-19 & 30-39 18-19 & 40-49

*$p \leq .05$
** Pairwise comparisons showed that these were not statistically significant.

Additionally, the subscale "Lifelong learning about nature" showed

statistically significant differences between age groups 18-19 and 30-39 (*Mdn* = 4.13

and *Mdn* = 5.02) ($p = .046$) and between age groups 18-19 and 40-49 (*Mdn* = 4.13

and *Mdn* = 82.33) (*p* = 5.03). Other subscales appeared statistically significant on the onset, but pairwise comparisons demonstrated there was no significance.

I conducted an ANOVA to determine if there was an interaction between various categories. The first were gender and place of birth. There was homogeneity of variances, as assessed by Levene's test for equality of variances, *p* = .659. There was no statistically significant interaction between gender and place of birth for the total EID score, $F(1, 145) = .001$, *p* = .976, partial η^2 = .000. Similarly, I analyzed gender and language with the Levene's test, resulting in *p* = .960 and no statistical significance with $F(1, 145) = .065$, *p* = .798, partial η^2 = .000. Finally, I analyzed place of birth and language, and there was no statistical significance $F(1, 145) = .700$, *p* = .404, partial η^2 = .005.

Discussion

The study population of Latinas/os predominantly living in the Pacific Northwest (N = 149) attained a high environmental identity score (*M* = 5.86; *SD* = 0.52). The score is high even when compared to populations in other countries that have taken the EID: Spain (N = 282; *M* = 3.58; *SD* = .51); Turkey (N = 808; *M* = 5.57; *SD* = .93); and the US (N = 248; *M* = 4.55; *SD* = 1.08) (Olivos et al., 2011; Clayton & Kilinc, 2013; Davis, Le, & Coy, 2011). It is important to point out that these other published studies utilized the original 24-question EID scale. There are no other published studies that have used the abbreviated EID scale utilized in this study. Nonetheless, the high EID score supports the aforementioned research that Latinas/os do have a strong environmental identity.

Analysis of the data shows significant differences when language is compared to age and place of birth (native US vs. non-native). As mentioned before, I utilized a prior Spanish-language EID with minor changes made to accommodate for American Spanish; however, not making greater changes could account for the significant differences. A study by Schwarzer, Bäßler, Kwiatek, Schröder, and Zhang (1996) found mean differences in sum scores between languages (German, Spanish, and Chinese) when an established self-efficacy instrument was administered to over 1,700 individuals. Schwarzer et al. (1996) found that there were unexpected differences between Spanish and Chinese-language participants in that Spanish-participants demonstrated higher self-efficacy. They determined that "the factors that influence the endorsements are characteristics of the cultural context, those of item wording, and numerous biases, such as situational circumstances of test administration" (p. 82). This could also be the case with the EID in the current study. Terminology utilized within the scale could be more readily used in Spain than in the Latin American countries from which the majority of the participants of this study's participants derived.

For example, the research team often received questions during the face-to-face administering of the scale about the Spanish version of statement eight:

Preferiría vivir en una habitación o casa pequeña con una vista agradable, que en una habitación o casa más amplia pero con una vista de otros edificios/I would rather live in a small room or house with a nice view than a bigger room or house with a view of other buildings.

Participants reported being confused about what having a bigger place had to do with nature. Others asked if there was any way to have both. The cultural context here could have to do with the upward financial mobility that a bigger home represents for some Latinas/os. This financial sense of urgency is the reason many Latinas/os leave their countries of origin (Del Cid, 2011). Thus, the statement can be viewed as incongruent with their view of 'having it all' – both the house and the land – which financial stability provides. Studies conducted on acculturation and language demonstrated that higher English language acquisition exposes Latina/o youth to different social networks and new ideas that impact behavior (Allen et al., 2008). A factor analysis of the original Spanish scale, the Spanish scale used in this study, and the English scale could address this, as could administering the original 24-statement scale to a similar audience as this study.

This cultural context could also explain the significant difference between native and non-native born groups and gender in the subscale "Appreciation of Nature," which contains this same statement. A Cronbach's alpha analysis indicated a low correlation ($\alpha = .431$) for this subscale. This low alpha was also true for the added subscale "Experience nature with loved ones" ($\alpha = .410$). It is possible that this last subscale could have benefitted from an additional statement that asked more about outdoor activities with loved ones, an attribute that environmental psychologists believe is a strong indicator of environmentalism (Clayton, 2003). Additional statements would have provided stronger indications about the strength of this idea.

"Enjoying nature," "Environmental identity," and "Environmentalism" also manifested significant differences between the language groups. In the subscale "Experience nature with loved ones," Spanish-language participants scored higher than the English. This subscale was added to test the normative cultural Latina/o value of *familismo*, which refers to values that are collective and group-oriented and to test the hypothesis that Latinas/os would prefer to explore nature with loved ones and not alone (Carteret, 2011). Ninety-six percent of the Spanish-language participants indicated they were new immigrants to the US. The slightly higher score from Spanish-speaking participants may indicate that *familismo* is more intact with newcomers.

The "Experience nature with loved ones" subscale and "Lifelong learning about nature" constructs were added to the EID to test values that arose from another qualitative study as being true of many Latinas/os (de la Hoz, 2016). They both showed significant differences when tested between US-born Latina/o participants and those born in other countries. Both subscales scored higher with Latinas/os not born in the United States. Further research should investigate how fast this changes over time in the United States, or if other Latina/o characteristics of age, gender, education, income, and US geographic location change the way that this is perceived. What the research does show is that these experiences, especially learning about nature for the rest of one's life, rates high for both groups.

Age was the most interesting and complex of the categories investigated. Overall, it appears that younger Latinas/os had lower environmental identity (ages 20-

29, *Mdn* = 55.78) when compared to older Latinas/os (ages 50 plus, *Mdn* = 87.37).

Similarly, younger Latinas/os appear not to think lifelong learning is as important as

older Latinas/os. Some of this could be attributed to maturity and life lessons, but

only future research could bear this out. However, what this may point to is that some

aspect of the environmental identity of youth is not being activated by EE

programming, marketing, or ideas. While there does not appear to be a compounding

effect of language, age, and place of birth, future research should ask about the

amount of time spent living in the United States to see if this influences results.

Understanding how time of residence impacts perceptions about the environment

would give environmental educators data to create more audience appropriate and

effective programs.

The effect sizes for these subscales are small, but the fact that there is a

difference should be noted. In other words, something is happening here that must be

studied further in order to understand possible causation. One of the possible reasons

could be the cultural context already discussed, but more likely it is the inability for

Latinas/os to understand how to connect their existing environmental identity to

action in the US context (Sanchez, 2012). What these findings also point to is that

there is indeed a strong Latina/o environmental identity, but to this point mainstream

EE has not activated that identity in ways that are meaningful or empowering to the

Latina/o community.

Finally, despite qualitative and quantitative research demonstrating the

negative impact of compounding categories of gender, language, and immigration

status, the research here on this scale does not bear this out (Covarrubias, 2011).

There are a couple of possibilities; the first would be a more rigorous statistical

analysis of the data. Initial forays into analysis quickly demonstrated that a factor

analysis of the abbreviated EID would be of great benefit. In this way, reliability

factors could be compared more readily between the longer EID and the abbreviated

EID. However, a larger sample would be needed to conduct a strong factor analysis,

and that project exceeded the scope of this research. Working with Latina/o audiences

with varying degrees of literacy impacted the number of scales the research team was

able to administer. Future research should find ways to elicit data from this audience

that is underrepresented in previous research.

Future research should also consider a Bayesian analysis, which could help

find deeper correlations. As McGrayne (2011) said, "Bayes is a measure of belief.

And it says that we can learn even from missing or inadequate data" (p. 12). Given

the limited information about Latina/o environmental identity, a Bayesian analysis

would help fill some of that gap. This type of analysis would also benefit from larger

numbers, since Bayesian modeling uses prior data and "when only a few data are

involved, the outcome of Bayesian computation depends on prior opinion" (p. 263)

which could be supplied in the model from a meta analysis of existing research such

as that reviewed in chapter 2 of this dissertation or from other research on related

identity or environmental awareness topics.

Finally, this study would have benefitted from previous psychometric analyses

of the abbreviated EID and comparison with similar groups (non-collegiate, wider age

range, and wider literacy level). That would be beneficial in contrasting these findings with the ability of this instrument to measure Latina/o environmental identity effectively. It was my hope that this would be completed sooner, since this instrument could be very useful to understand the current environmental identity of minority groups when compared to the larger dominant group. My theory is that other groups underrepresented in the environmental movement have a strong environmental identity, of which this instrument can only capture a portion. Refining this instrument to not only capture environmental identities but also test levels of possible activation would give EE a very powerful tool.

One aspect of the shortened EID is worth mentioning. The shortened version permitted the questioning of an audience with lower than average literacy rates. In the in face-to-face interviews, there were some participants who asked that the scale be read to them because they could not read. Most previously cited EID studies were conducted in college classes with what can be assumed were high literacy rates (Clayton & Kilinc, 2013; Davis et al., 2011). Because of the nature of quantitative survey research, people with low literacy rates were not often queried in the past with this scale, nor are they queried often in environmental research more broadly. The beauty of the shortened EID is that it allows for a quick administration of the instrument if it needs to be read to the participant. Adding more statements could remove this underrepresented audience from future research.

Conclusion

This study demonstrates that Latinas/os in the Pacific Northwest have a strong

environmental identity regardless of age, gender, preferred language, or place of

birth. Given the evidence that Latinas/os possess a strong environmental identity, the

responsibility for catalyzing this identity into environmental activism falls squarely

on the environmental movement. As Tanner (1998) noted, "ecological integrity is

maintained *only* by politically active citizens. Those who wait passively for public

agencies, private corporations, or legislative bodies . . . to do the right thing are of no

help at all; those institutions must *always* be pushed, and often opposed, by active

citizens" (as cited in Chawla, 2001, p. 454). Politically motivating Latinas/os is not

completely out of the question. Historically, Cesar Chavez and Dolores Huerta

mobilized migrant workers in unprecedented ways. In more recent years, religious

leaders galvanized Mexican Americans and other Latinas/os in California and

repealed 2006's HR 4437, which would have criminalized undocumented workers

and any institution that provided them aid (Espinosa, 2007). Leaders in both of these

instances mobilized Latinas/os by using rhetoric that alluded to the strong religious

underpinnings of Latina/o culture (Espinosa, 2007). I am not recommending that

there needs to be a religious theme in EE programming, but ignoring the intricate

ways in which religion and culture have developed for some groups may actually be

creating greater alienation and ignoring powerful allies.

As environmental educators begin or continue their work with this audience, it

important to note that, for the most part, this group cares for the environment and sees

itself as connected to nature. Thus, the work has to be more about activating their environmental identity and creating opportunities for empowerment and activism. It is important for educators to remember, as the analyses demonstrated, that there are differences between the Latina/o subgroups, such as differences in age groups, gender, and whether they were born in this country or are originally from Mexico or other parts of Latin America. Researchers can help educators by better understanding these identities and what would trigger the necessary environmental activism.

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Chapter 5: General Conclusion

LATINAS/OS – CULTURAL RESOURCES FOR ENVIRONMENTAL SOLUTIONS

My journey into environmentalism began many years ago in a small apartment in urban New Jersey watching nature shows with my family. It has not been a direct path; instead it has been wrought with many twists and turns, challenges, and barriers. Despite the various forks, my environmental identity has not changed at its core. I still look at nature with wonder for its beauty and marvel at the secrets it holds. However, how I talk about my journey, about my environmental identity, has changed over the years. It now reflects a deeper understanding of how my other identities intersect with privilege and power and collide with belief and fear. This dissertation project has helped to further establish some of those thoughts and language and exposed new areas for rumination.

Researching the literature in the field left me with many mixed emotions. I felt elated with the research that had been done to this point but baffled at the unknown reasons why this research has not been communicated to the Latina/o environmental community. I also felt overwhelmed that there is still so much to be known and saddened that there appears to be very little money being put into this research. I felt frustrated that despite being part of the US culture from its inceptions, especially in the West, Latinas/os are still viewed as outsiders who threaten the status quo and whose cultural values are seen as antiquated and foreign.

Interviewing Latina/o environmental professionals was at times like holding a mirror up to myself and to some of my experiences. During these interviews, some of
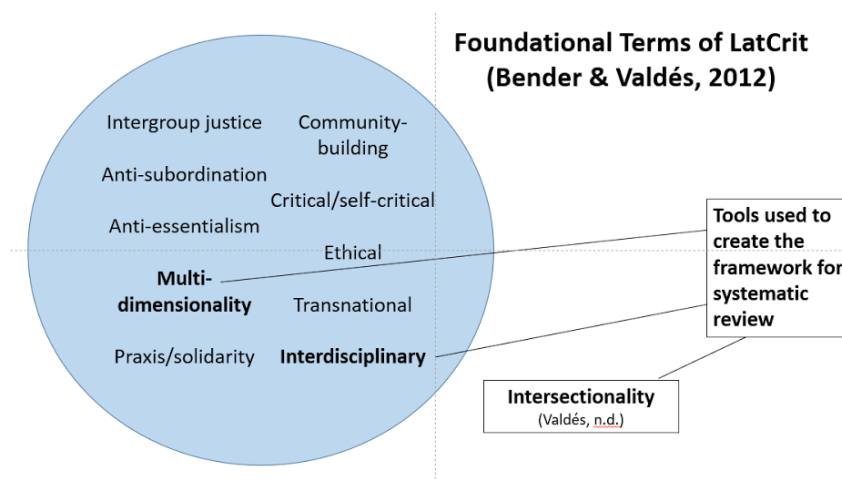
the same fears I held about isolation and loneliness were expressed as well as the hard

won lessons of whom to trust and whom to mentor. These same professionals also

filled me with great hope that change is coming because we Latinas/os are creating it

and are not waiting to be acknowledged. Hearing their stories led me to my own

moments of *conscientização,* challenging some of my own internalized oppression

about how we Latinas/os are seen and what we are truly capable of.

Surveying different Latinas/os in the Pacific Northwest about their

environmental identity brought me back to the roots of my biculturalism. Similar to

the Cristina character in the movie *Spanglish*, I wound up having to translate

environmental statements into everyday vernacular in both English and Spanish,

demonstrating that not only do I straddle the two cultural worlds of Latina/o

American and Euro American, but also that of environmentalist and non-

environmentalist. This dual consciousness is something that gives me great pride and

that I wish was an acknowledged skill that has taken my whole life to hone. Much

like skills of a musician or a writer, it is a talent that has been forged through life's

hardships, refined through self-reflection, and polished by everyday use. I think that

this dual consciousness is such a big part of my identity and the identity of so many

bi/multi-cultural individuals that we make it look easy and thus it may not get the

credit it deserves.

Finally, I have unsuccessfully searched for a metaphor that could encapsulate

the research and the process. What I can say is that the process has been enlightening,

and I feel that I am still learning from it. I am not sure where this research will take me, but I do know it will inform the work that I foresee doing in the near future.

One of the best parts of this project is finding scholars who have done significant amounts of work with the Latina/o audience. LatCrit has given me great insight into this work. However, I did not use LatCrit unreflectively, so one important set of conclusions from this work have to do with the portions of the LatCrit theoretical framework used to analyze the work and what has filtered out throughout the process.

Foundational Terms of LatCrit
(Bender & Valdés, 2012)

Intergroup justice   Community-building
Anti-subordination
                       Critical/self-critical
Anti-essentialism
                       Ethical
Multi-dimensionality   Transnational
Praxis/solidarity   **Interdisciplinary**

Tools used to create the framework for systematic review

Intersectionality
(Valdés, n.d.)

As explained in chapter 2, LatCrit is the only theoretical framework that adequately addresses the US Latina/o experience in its historical, social, cultural and lived totality. While some of the project work has utilized portions of other theoretical frameworks, the LatCrit tenets of multidimensionality, intersectionality, and interdisciplinary has underscored this work throughout. Each of the tenets and what it reveals about Latina/o environmental identity is discussed below.

Multidimensionality

A person's environmental identity never stands alone, but always exists dynamically within the larger constellation of an individual's identities. The LatCrit notion of multidimensionality allows the researcher to take this complex of identities seriously in analysis. Hernandez-Truyol (1999) defined multidimensionality as an "epistemic site that embraces rather than atomizes our multiple co-existing, indivisible identities" (p. 829). In this dissertation project, the interviewed participants discussed their multiple identities and how they contributed to their environmental identity. One interviewee called it being an *ecomestiza/o* or the ability to contain in a coherent way within one experience the panethnic Latina/o identity, the American identity, as well as, an environmental identity.

Multidimensionality also speaks to the *conscientização*, or the self-awareness in relation to the environment and social justice, that many of the interviewed participants reported. For these individuals, having an environmental career is more than just a professional passion for these participants. Their work has personal ramifications. Many of these individuals come from communities who have been impacted by environmental issues. They see the connection of their work tied closely to their personal lives and families. The multidimensionality of their identities cannot exclude one identity from the other and for many, identities impact others. *Conscientização* speaks to this and for some of the Latinas/os interviewed, activism was an important part of their environmental identity.

For these Latina/o environmental professionals, understanding their multidimensionality has been an important part of their environmental identity. It helps them define themselves and their proenvironmental behaviors just as previous identity research has shown (Sparks & Shepherd, 1992; Mannetti et al., 2004; Whitmarsh & O'Neill, 2010). For example, their Latina/o identity, particularly their cultural value of *familismo*, prompted in many of them a desire to mentor and share their passion for the environment with others. *Familismo* is associated with many other cultural values that, if honored, can and do go hand-in-hand with many proenvironmental behaviors.

Underlying multidimensionality is the notion of anti-essentialism or the idea that there is not one definitive Latina/o experience; rather, it is the intersection of various identities that defines individual and collective experiences. This is particularly true for Latinas/os in the US who are socially grouped together despite the fact that their cultural identities originate not only from different countries or social groups even within the US but also who experience racial privilege and discrimination differently. While there are many common significant life experiences among the Latina/o environmental professionals in this study, such as childhood experiences in nature, there are also many differences. Accepting that there are multiple Latina/o identities provides environmental educators with multiple entrees to connect with Latina/o audiences in meaningful ways.

Intersectionality

Throughout the dissertation project, Crenshaw's (1989) concept of intersectionality has been used to understand and interpret the Latina/o environmental identity. As explained before, Crenshaw (1991) defined intersectionality as "the various ways in which race and gender interact to shape the multiple dimensions" of people's' lives, and research has demonstrated how intersectionality adds or diminishes power and privilege (quoted in Collins, 2012, p. 1244). Each of the manuscripts addressed intersectionality in different ways.

The literature review looked at how different fields of research have tried to approach studying Latina/o identity and the environment. I learned not only that there has indeed been a great deal of research published, but also that each study was confined to a specific discipline of research. Research on Latinas/os in health, for instance, has done very little to address how local environments play a part in improving or damaging health. Only recently have a few researchers, such Stodolska et al. (2009, 2011), started looking at the intersections of other factors along with the environment. As discussed below, interdisciplinary research is crucial for documenting and understanding the Latina/o experience, but interdisciplinarity does not necessarily promote intersectionality. Research that considers the intersectionality of power, privilege, and race must be at the heart of interdisciplinary Latina/o research. Conducting research that looks at the Latina/o experience linearly may fit neatly into certain disciplines, but does not get to the heart of the historicity (and therefore the lived experience) of the Latina/o experience in the US. In addition,

this literature must be coalesced in ways that can be put into the hands of practitioners who can use the findings to improve their offerings and in turn provide the academic field with important insights into theory.

Interviews with environmental professionals quickly illuminated places where intersections happened in their lives. These intersections were not only lived experiences, but also points of transformation where two or more parts of their identity collided and created something new. One participant discussed one of these points – when her environmental activist person brought her sons, her maternal identity, to a couple of national parks.

> And it made me think, "Gosh," you know, seeing these boys so active and it's such a healthy thing, it's such a great learning experience, so that it also made me feel there was a little bit of transformation there with that experience of being in the parks . . . and seeing how that really impacts our relationship as a family (MA Interview).

She had multiple identities at play in this experience, and they intersected to help her learn and appreciate the moment. Many of the participants shared during their second interviews how the interviews had helped them articulate, crystalize, and appreciate in a new light some of those intersection points. Environmental educators might learn from these potential moments of transformation the importance of building guided self-reflective moments into programs where participants can contemplate these moments of intersectionality.

In the third manuscript I wanted to use the EID to explore in what ways it might or might not document what I had anecdotally identified: that Latinas/os have a strong environmental ethic, and that the strength of that ethic differs depending on experience based on age, place of birth, gender, and preferred dominant language. Among some of the findings, the research did show that older Latinas/os have a stronger environmental identity than younger Latinas/os. If this is due to identity affiliation with environmentalism, length of time in the country, or other factors is unknown. But what the findings did show is that there are differences that can only be explained with reference to the intersectionality of identities.

Interdisciplinary

The last perspective, the interdisciplinary tool, is an important aspect of the LatCrit theoretical framework. While multidimensionality and intersectionality speak to the production of knowledge through research, the interdisciplinary portion addresses the social relevance and praxis of the theory (Bender & Valdés, 2012). Praxis is an important part of working with the Latina/o community. In fact, I believe that there is a lot of good work with little to no documentation being carried out in the Latina/o community. When good work is going on, but is not documented in publication, especially peer reviewed publication, it has little chance of gaining serious academic, scholarly, or even political and social credibility. From the point of view of the production of knowledge, it also means that there is no chance to build a true base of knowledge as studies and programs have little chance to be duplicated. The work being done has developed practices that are not only successful but

authentic to the audience and context. Researchers from all fields would do well to engage practitioners to help illuminate some of these practices and also communicate these practices to all working with the Latina/o community. LatCrit as a community has made a "commitment to social transformation through knowledge" and a "cultivation of community" (Bender & Valdes, 2012, p. 305-306). LatCrit scholars and allies from all fields are needed to bring more prominence to the socially relevant work being done.

This aspect of praxis was something that resonated for the Latina/o environmental professionals in this study. *Conscientização* and social justice were strong motivators for many of the environmental professionals. This was evident in many of their environmental identity narratives and must be present in environmental educational programming wishing to do relevant work with Latina/o audiences.

Environmental Narrative

While I had a great desire to find an environmental narrative that was completely distinct from that of the mainstream US environmental movement, what I did learn is that there are nuances that are specific to the Latina/o environmental experience. An important part of this Latina/o environmental narrative includes *familismo* and *conscientização*. There are other cultural values known by the health field such as *simpatia* and *personalismo* that are probably also part of this experience, but they were not evident in my interviews and only future research might bear out how these ideas intersect. What these research findings do point to is that there is indeed a strong Latina/o environmental identity, and to this point mainstream EE has

not activated that identity in ways that are meaningful or empowering to the larger Latina/o community.

Implications

So what do these findings mean for environmental educators? Understanding multidimensionality helps environmental educators create programs that address the possible multiple dimensions which their audience may possess. For example, children of immigrant parents are bicultural and have to navigate identities that at times may be at odds with each other. Behaviors or attitudes presented in environmental programs may contradict or negate the behaviors and attitudes held by immigrant parents. A common one practice in environmental education is valuing individual conservation behaviors over collectivistic conservation behaviors. This value contradicts what Latina/o children are taught in their homes which is to put their family before themselves. Teaching conservation behaviors that do not honor home cultures and values creates dissonance for these children and the probability that the conservation behaviors taught in informal education environments will not be incorporated into their identities. Some of the environmental professionals spoke of this dissonances in the way that they feel like outsiders in their home communities when they embraced environmentalism. Instead, environmental educators are encouraged to include the behaviors that honor Latina/o cultural values which in turn can then be sustained beyond the informal learning experience.

For researchers, it became clear that we don't have instruments to measure all the experiences had in the United States. However, understanding how

intersectionality plays a part in identity creation may help us get a better handle with how to investigate its compounding effect. The EID is one instrument that gets at only one dimension of an environmental identity and from this research it doesn't really speak fully to Latina/o environmental identity. Other researchers cited throughout had used the EID in conjunction with other scales and questionnaires. Adding more questions could get to these additional identities and dimensions however it would prevent capturing the voices of the audiences spoken of before. As researchers, we can do better, but we must work across disciplines in order to incorporate best practices found in many fields. In this way, we can use advances in other research fields to ensure that all voices and experiences are being heard and documented.

Finally, the tenets of LatCrit theory can help elucidate the experience of not only Latina/o environmental professionals but also that of other environmental professionals whose experiences do not mirror those of the mainstream environmental movement. These *testimonios*, or verbal stories of life experiences, must be captured and authenticated as real data with real value (Hernandez, 2013). LatCrit gives us the foundations of the experiences as a theory but we must also put it forth to practitioners in order to create the praxis component of LatCrit. By revealing these *testimonios*, we are not only elevating the Latina/o condition in the US, but also the condition of many fringe communities around the world.

Lessons Learned and Future Research

Though I have been a practitioner in the Latina/o environmental field for over fifteen years, this research brought some interesting things to light for me. Firstly, even though I had been a successful practitioner in California, the Oregon Latina/o community is completely different with a unique past that extends into current day issues. In Oregon, the Latina/o community is mostly comprised of recent immigrants. The social networks that support Latinas/os, such as informal lending organizations, are much more nascent so as a group, Latinas/os are just socially and politically beginning to get mobilized. As with any new group being established, trust is fragile and so entering this work as a relative outsider required gentler and slower trust building skills than I have used in the past. I am grateful for local practitioners who were willing to share their knowledge and expertise with me about this audience. Anyone doing this type of work needs these types of community mentors. Often they are people who don't get the credit they deserve but are doing the best work. These people are selfless, passionate, and infectious in that passion. These unsung heroes are the ones that are truly creating the change the environmental movement is hoping to make.

Secondly, we as researchers must do more work to create tools that give voice to the experiences of those in the fringe. Using the EID demonstrated the need for this. Individuals with low literacy skills or those who don't understand research norms such as scales also have important thoughts and perspectives. As an educator, I have learned that in creating scaffolded educational experiences for my students with

special needs ultimately creates a better learning experience for all of my students. In this age of increasing technological solutions, we must do better to capture these voices. We need to engage researchers in other fields to help us come up with better solutions and in doing so create tools and research data that speak better to the actual lived experiences of people who are not part of the cultural elite in the US.

Finally, I think that unfortunately the academic field, the ivory tower if you will, continues to privilege only certain types of knowledge, specifically knowledge that can be quantified or has been captured in ways that they deem are acceptable. And in privileging this type of knowledge, other ways of knowing such as oral traditions and values are undervalued. We do ourselves a disservice when we discredit these other ways of knowing because we don't have adequate measuring tools. There must be some way to document and even measure these experiences while not removing the essence of what makes them special.

In the future, I hope that the research can look at a broader spectrum of Latinas/os and take a pulse of a broader Latina/o environmental identity currently at play in the country. It is important to go beyond the audiences that are typically studied and engage those audiences on the fringe. These audiences include those that are newcomers to the American experience and individuals who have low literacy in both English and Spanish. Expanding to these audiences will give us greater insight into not only the Latina/o environmental identity but also the Latina/o American experience.

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Appendices

APPENDIX A: Recruitment email

Hello,

My name is Jenny de la Hoz, and I am a graduate student researcher at Oregon State University studying free-choice, life-long science learning as it relates to environmental identities.

I am contacting you today because you have identified as a Latino and are working in the environmental field or because you were identified as an individual who may have specific information about Latinos in the environmental field. My study, entitled, "Documenting Latino environmental identities and connection to nature," would involve two interviews. This work is for my dissertation in Science and Math Education at Oregon State, and the Principal Investigator (PI) for this research is Dr. Shawn Rowe, Associate Professor in the College of Education at Oregon State University.

If you are interested in participating, the study would involve two telephone or teleconference interviews, each of which would take approximately 45 minutes of your time. If you agree to participate, you are not obligated to complete both interviews.

The purpose of this research is to understand the environmental identities and connection to nature of Latinos in the US. The findings from this research will be shared with other environmental organizations who wish to better serve their existing Latino employees and attract new talent into the environmental field and researchers who are want to learn more about environmental identities. Your name will not be associated with your responses when they are shared.

If you have any questions regarding this research, or would like more information, please contact Shawn at shawn.rowe@oregonstate.edu or Jenny de la Hoz at delahozj@onid.oregonstate.edu or 831-915-5164.

If you are interested in participating, please return your reply to this email.

Thank you for your time and attention.

Sincerely,
Jenny de la Hoz

APPENDIX B: Scale Consent Form

OSU
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Purpose. We want to document the environmental identities and connection to nature of Latinos in the US.

Activities. You will be asked interview questions about your involvement in the environmental field and your experiences as a Latina/o. Afterwards, the researcher will create a concept map from your interview and you will be contacted again to discuss the concept map and your response to the concept map. The map and the interview will be recorded for analysis and filed for 7 years after this study is complete.

Time. We estimate the initial interview will take 30 minutes and the final interview to last 45 minutes.

Risks. There are no foreseeable risks to you for participating in this study.

Benefits. Environmental organizations and researchers will use findings from this study so they can better work with Latino employees and clients.

Payment. You will not be paid for your participation.

Confidentiality. Only the researchers directly involved with the study will have access to the data you provide. The data you provide will remain confidential. Aggregated results will be shared with environmental agencies, researchers, and possibly in publications but your identity will not be linked to the results. There is a chance that we could accidentally disclose information that identifies you.

Voluntariness. If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering. You may also

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Propósito. Queremos documentar las identidades ambientales y conexión con la naturaleza de los latinos en los Estados Unidos.

Actividades. Se le entrevistara acerca de su participación en el campo del medio ambiente y sus experiencias como latina/o. Posteriormente, el investigador va a crear un mapa conceptual de la entrevista y se le contactó de nuevo para discutir el mapa conceptual y su respuesta al mapa conceptual. El mapa y la entrevista serán registrados para el análisis y se guardaran por 7 años después de este estudio se ha completado.

Tiempo. Estimamos la entrevista inicial tomara 30 minutos y la entrevista final para unos 45 minutos.

Riesgos. No hay riesgos previsibles a usted por participar en este estudio.

Beneficios. Las organizaciones ecologistas e investigadores utilizarán los resultados de este estudio para poder trabajar mejor con los empleados y clientes latinos.

Pago. No se le pagara por su participación.

Confidencialidad. Sólo los investigadores directamente involucrados con el estudio tendrán acceso a los datos que usted proporciona. Los datos que usted proporcione serán confidenciales. Los resultados agregados serán compartidos con las agencias ambientales, investigadores, y, posiblemente, en publicaciones, pero su identidad no estará incluida en los resultados. Existe la posibilidad de que podríamos revelar accidentalmente información que lo identifique.

Voluntariedad. Si usted decide participar en el estudio, debe ser porque usted realmente quiere ser voluntario. Usted no perderá ninguno de los beneficios o derechos que normalmente tendría si decide no ser voluntario. Usted puede parar en cualquier momento durante el estudio y aún así mantener los beneficios y derechos que tenía antes de ser voluntario. También puede saltar cualquier pregunta que no quiera contestar.

skip any questions you do not want to answer.

Contact information. If you have any questions about this research project, please contact: Shawn Rowe, 541-867-0190, shawn.rowe@oregonstate.edu, or Jenny de la Hoz, 831-915-5164. If you have questions about your rights as a participant, please contact the Oregon State University Institutional Review Board (IRB) Human ProtectionsOffice, at (541) 737-8008 or by email at IRB@oregonstate.edu.

Información del contacto. Si usted tiene alguna pregunta acerca de este proyecto de investigación, por favor póngase en contacto con: Shawn Rowe, 541-867-0190, shawn.rowe@oregonstate.edu, o Jenny de la Hoz, 831-915-5164. Si usted tiene preguntas sobre sus derechos como participante, por favor póngase en contacto con la Junta de Revisión Institucional de Oregon State University (IRB) Oficina de Protecciones Humanos, al (541)737-8008 o por correo electrónico a IRB@oregonstate.edu.

APPENDIX C: Elicitation interview instrument

Pre-interview prompt
The following question will be sent to the interview participant ahead of time.

Please be prepared to list the things/people/places/experiences you would say have shaped your identity into someone who cares for the environment? Most people have an initial list of 4-6, but feel free to include more if you want.

Interview script and questions:

Thank you for taking the time out to talk with me about your connection to the environment. If at any time during the interview you do not feel comfortable answering the question, please feel free to tell me and we will move on. Throughout the interview, you will be asked follow up questions for you to rate your relationship or experience to the topic. I will be asking you to rate it on a scale – 1 being no connection through 5 being a high connection. Do you have any questions about this?

To begin, how would you characterize your ethnic background?
- If multiple ethnic backgrounds are presented ask – on a scale of 1 to 5, which do you feel the strongest connection to?

How would you characterize your cultural background?
- If multiple cultural backgrounds are presented ask – on a scale of 1 to 5, which do you feel the strongest connection to?

How long have you been working in the environmental field? What do you do? What have you done?

How would you define an environmentalist? Do you consider yourself an environmentalist? Why or why not?
- How long have you considered yourself an environmentalist?

Please list things/people/places/experiences you would say have shaped your identity into someone who cares for the environment?
- Further prompts if needed: Any natural settings?
- Any experiences?
- Any behaviors that you learned?

I will now ask you more about each experience. Why do you think this thing/person/place/experience was important in your identity?
- Further prompts: How did it start? Did it end?
- Where you alone or with someone?
- Did you seek this out or did someone introduce you to it?
- How old were you?

- Does this still persist until the current day?
- What part of your cultural/ethnic background do you think contributed to your environmental perspective?
- SES?

On a scale from 1 to 5, one being the lowest and five being the highest, how would you rate the importance of this thing/person/place/experience in creating your environmental identity?

What is the mission of the environmental organization you work for? On a scale of 1 to 5, how connected do you feel to the mission of the environmental organization you work for?

Are there other experiences which were the instrumental to you becoming an environmentalist?
- Rate 1 to 5

Thank you for your time. Your information is very important. I will now go and create a concept map about the topics we discussed today. I will present this concept map for you to review and correct if necessary and we will discuss it a little further. The conversation should take no longer than half an hour. Can we set-up a follow-up meeting now?

Appendix D: EID INSTRUMENTS

Thank you for your help. Please indicate the extent to which each of the following statements describes you by using the appropriate number from the scale below.

	Not at all true of me			Neither true nor untrue		Completely true of me

1. I spend a lot of time in natural settings (woods, mountains, desert, lakes, ocean).   1   2   3   4   5   6   7

2. I think of myself as a part of nature, not separate from it.   1   2   3   4   5   6   7

3. If I had enough time or money, I would certainly devote some of it to working to protect the environment.   1   2   3   4   5   6   7

4. When I am upset or stressed, I can feel better by spending some time outdoors "communing with nature".   1   2   3   4   5   6   7

5. I feel that I have a lot in common with other species.   1   2   3   4   5   6   7

6. Behaving responsibly toward the earth -- living a sustainable lifestyle -- is part of my moral code.   1   2   3   4   5   6   7

7. Learning about the natural world should be an important part of every child's upbringing.   1   2   3   4   5   6   7

8. I would rather live in a small room or house with a nice view than a bigger room or house with a view of other buildings.   1   2   3   4   5   6   7

9. I would feel that an important part of my life was missing if I was not able to get out and enjoy nature from time to time.   1   2   3   4   5   6   7

10. I have never seen a work of art that is as beautiful as a work of nature, like a sunset or a mountain range.   1   2   3   4   5   6   7

11. I feel that I receive spiritual sustenance from experiences with nature.   1   2   3   4   5   6   7

12. I prefer to explore nature alone.   1   2   3   4   5   6   7

13. For me, learning about nature is a lifelong process.   1   2   3   4   5   6   7

14. My idea of exploring nature includes my family.   1   2   3   4   5   6   7

15. I think nature teaches us a lot throughout our lives.   1   2   3   4   5   6   7

What is your age?   _____
What is your gender?   Male   Female
Where is your born in the United States?   Yes   No

If No, where were you born?   _____

Gracias por su ayuda. Por favor, indique el grado en que cada una de las siguientes afirmaciones que describe utilizando el número apropiado de la escala de abajo .

	Nada cierto de mí			Ni verdad ni falso			Completa-mente cierto de mí
1. Paso mucho tiempo en sitios naturales (bosques, montaña, lagos, el mar).	1	2	3	4	5	6	7
2. Pienso en mí misma/o como parte de la naturaleza, no como separada/o de ella.	1	2	3	4	5	6	7
3. Si tuviera tiempo y dinero, dedicaría parte de ambos a trabajar por las causas del medio ambiente.	1	2	3	4	5	6	7
4. Cuando me encuentro disgustada/o o estresada/o, me siento mejor pasando algún tiempo al aire libre, en "comunión con la naturaleza".	1	2	3	4	5	6	7
5. Siento que tengo mucho en común con otras especies.	1	2	3	4	5	6	7
6. Comportándome de forma responsable hacia la Tierra, llevando un estilo de vida sostenible, es parte de mi código moral.	1	2	3	4	5	6	7
7. Aprender acerca del mundo natural debiera ser una parte importante en la educación de cada niña/o.	1	2	3	4	5	6	7
8. Preferiría vivir en una habitación o casa pequeña con una vista agradable, que en una habitación o casa más amplia pero con una vista de otros edificios.	1	2	3	4	5	6	7
9. Siento como si una parte importante de mi vida se perdiera si no fuera capaz de salir y disfrutar de la naturaleza de vez en cuando.	1	2	3	4	5	6	7
10. Nunca he visto una obra de arte tan bella como las obras de la naturaleza, tales como un atardecer o una cadena montañosa.	1	2	3	4	5	6	7
11. Siento que recibo alimento espiritual de las experiencias con la naturaleza.	1	2	3	4	5	6	7
12. Prefiero explorar la naturaleza sola/o.	1	2	3	4	5	6	7
13. Para mí, aprender acerca de la naturaleza es un proceso de toda la vida.	1	2	3	4	5	6	7
14. Mi idea de explorar la naturaleza incluye a mi familia.	1	2	3	4	5	6	7
15. Creo que la naturaleza nos enseña mucho durante toda nuestra vida.	1	2	3	4	5	6	7

¿Cuál es su edad?   _____
¿Cuál es su sexo?   Masculino   Femenino
¿Nació usted en los estados unidos?   Sí   No
Si No, ¿adónde nació?   _____