A Quest For Environmental Sovereignty

Chicana/o Literary Experiences of Water (Mis)Management and Environmental Degradation in the US Southwest

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Para Alberto
en memoria

“Water is like life. It is life”
— Frank Waters,
People of the Valley

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Note on Paper IV: I am the main author of the paper; I conceived and wrote it with comments and improvements suggested by Susanna Lidström. Susanna also provided the analysis and corresponding translations of the Swedish novel *Överskrida Gränser*, by Lars Svonni.

Tables, Figures, and Illustration

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Isabel Pérez - Stockholm, April 2017

Abstract

The U.S. Southwest is a semi-arid region affected by numerous environmental problems such as overgrazing, deforestation, water mismanagement, toxic pollution, and anthropogenic climate change. Chicana/o communities, traditionally linked to agriculture, ranching, and forestry, have been directly affected by such problems, especially ever since the region was annexed from Mexico by the United States in the mid-nineteenth century. From this moment onwards they lost their environmental sovereignty, mostly through their dispossession of the natural resources, losing the power to influence the environmental ethics and practices that have been shaping the region for more than 150 years now.

This environmental humanities dissertation explores the ways in which Chicana/o culture is interconnected with environmental practices and sites in subaltern literary works about the Chicana/o experience. It does so from an ecocritical perspective articulated in terms of environmental justice through postcolonialism and decolonial theory, and informed by environmental history, regional/ethnic studies, and political ecology. The analysis focuses on the ethics, politics, and practices around water (management), for water is a key natural resource (especially in the semi-arid Southwest) and a central element of Chicana/o cultural identity. This dissertation also investigates how the hegemonic Anglo-American environmental, political, and economic practices have challenged and undermined Chicana/o culture, identity, and wellbeing, and how this has been addressed in fiction. It questions whether establishing such a connection adds any useful insights to the larger discussion on the global socio-environmental crisis, and how does literature contribute to deconstructing and countering the crisis. This research also analyzes the writer activist character of the subaltern narratives of the corpus, with attention to the relevance of rhetoric in subverting and constructing environmental discourses and ethics. Furthermore, it analyzes regional and border narratives, as well as fiction and non-fiction narratives about the socio-environmental struggles of other ethnic minorities in the Southwest and in other parts of the world,

putting literature about the Chicana/o experience in a regional, national, and transnational context.

The four research papers address ongoing debates about the developmental paradigm at work in the U.S. Southwest, and its impact on communal and traditional irrigation systems; futuristic projections of current water management legislation and practices in Southwestern urban ecologies; pollution, toxicity, and resource dispossession affecting the environmental health and wellbeing of ethnic minorities in the Southwest; and subaltern (writer) activist narratives deconstructing and subverting the rhetoric that legitimizes dam construction around the world. They explicate how social and environmental dimensions are interconnected in the thinking and identity of Chicanos/as and other subaltern cultural groups. They moreover explore the pivotal role of literature in reclaiming environmental sovereignty, in asserting cultural identities, and in countering the environmental crisis by imagining alternative managerial practices and socio-environmental relations, as much as in challenging cultural hegemonies.

Keywords: Environmental humanities, ecocriticism, environmental history, comparative literature, U.S. Southwest, Chicana/o, subaltern literature, environmental justice, water, political ecology, postcoloniality, decoloniality.

Sammanfattning

Kampen för rådighet över miljön:
Litterära uttryck för chicanokulturens erfarenheter av vattenförvaltning och negativ miljöpåverkan i sydvästra USA

Sydvästra USA är en semiarid region med omfattande miljöproblem. Till dessa hör överbetad mark, avskogning, vattenbrist, och misshushållning av vatten, giftigt avfall, och människoskapade klimatförändringar. Dessa problem har påverkat chicana/chicano-grupper i regionen som ägnat sig åt traditionellt jordbruk, boskapsskötsel, och skogsbruk. När USA annekterade regionen, som tidigare tillhörde Mexiko, vid 1800-talets mitt förlorade chicanos sin självrådighet över miljön, främst genom förlusten av naturresurserna. Under de mer än 150 år som gått sedan annekteringen har man också förlorat en stor del av den makt man förut hade att påverka den etik och praktik som formar regionen.

Denna miljöhumanistiska avhandling utforskar hur chicanokulturen är sammankopplad med miljöpraktik och geografiska platser. I centrum står en serie subalterna litterära arbeten om chicanos erfarenheter. Dessa litterära arbeten studeras utifrån ett ekokritiskt perspektiv. Centrala begrepp är miljörättvisa och postkolonial/”dekolonial” teori. Analysen sker inom ramen för fält som miljöhistoria, regionala/etniska studier samt politisk ekologi. Analysen fokuserar särskilt på etik, politik och praktik kring vatten och vattenförvaltning, eftersom vatten är en avgörande naturresurs i denna semiarida region och ett centralt element i den kulturella identiteten hos chicanos. Avhandlingen analyserar hur hegemonisk angloamerikansk praktik inom miljö, politik och ekonomi utmanat och undergrävt kultur, identitet och välstånd hos chicanos samt hur detta har bemötts i fiktionslitteratur från regionen skriven av chicanoförfattare.

Den undersöker också om och hur fiktionslitteraturen bidragit till en bredare diskussion kring den globala miljökrisen och hur litteratur kan bidra till att dekonstruera och motverka dess effekter. Forskningen analyserar vad som här benämns den litterära aktivismen och studerar författaren som aktivist och som en möjlig karaktär inom s.k. subalterna

narrativ. Tonvikten ligger på retorisk relevans, dvs. hur litterära och aktivistiska uttryck kan användas för att både undergräva och bygga upp miljödiskurser och miljöetik. Vidare analyseras narrativ formering av regioner och gränser liksom fiktiva och icke-fiktiva berättelser om miljökonflikter och sociala konflikter hos andra etniska minoriteter inom samma region och i andra delar av världen. På det sättet placeras litteraturen om erfarenheter hos chicanos i en regional, nationell och transnationell kontext.

De fyra artiklar/texter som jämte en längre inledning tillsammans bildar denna sammanläggningsavhandling utgör bidrag till aktuella debatter om: pågående utvecklingsparadigm i sydvästra USA och dess påverkan på gemensamma och traditionella bevattningssystem; futuristiska projiceringar av nuvarande lagstiftning för vattenvård och praktik hos urbana ekologier i sydväst; nedsmutsning, gifter och förluster av resurser och hur detta påverkat miljöhälsa och välstånd hos etniska minoriteter i sydväst; narrativ om den subalterna författaren/aktivisten och hur dessa dekonstruerar och undergräver retorik som legitimerar dammbyggen i floder i olika delar av världen. Avhandlingen förtydligar hur dimensioner av miljön och samhället är sammanlänkande i tänkandet och identiteten hos chicanos och andra subalterna kulturella grupper. Vidare utforskas den nyckelroll som fiktionslitteraturen har i strävan hos chicanos att återerövra självständigheten över miljön, att hävda kulturella identiteter och att motsätta sig miljökrisen genom att föreställa sig alternativa sätt att förvalta naturresurser och forma nya relationer till både samhälle och miljö genom att utmana existerande kulturella hegemonier.

Nyckelord: Miljöhumaniora, ekokritik, miljöhistoria, litteraturhistoria, sydvästra USA, Chicana/o, subaltern litteratur, miljörättvisa, vatten, politisk ekologi, postkolonialitet, dekolonialitet.

Preface:
Who I am and from where I speak

My first encounter with Chicana/o fiction took place during my last year as an undergraduate in Spain, in a course on American literature with a focus on ethnic minorities' writings.[1] I found Chicana/o novels highly appealing, and I particularly enjoyed the storytelling, magical character of Rudolfo Anaya's works. I was captivated by his descriptions of New Mexico, which had nothing to do with the barren, hostile environment commonly associated with the area in the popular U.S. or European imagery. The more I learned about the subject the more I liked it. Chicana/o literature offered me a whole new perspective of both the Southwest and Mexican-Americans. The former stopped being the setting of Western movies in order to become the ancestral homeland of the Aztecs, not barren but full of discreet life and bright colors, the kind that can only be found in a desert. The latter happened to be a complex mestiza/o community called by numerous different names, formed by some who never crossed the border and some others who did. Through literature I also happened to learn about the negative effects that the intense resource extraction and exploitation, and the infrastructural development practices had on this vast geographical area. This prompted me to start doing research on the ways in which these practices might have been affecting Chicana/o communities.

I am aware that not being a Chicana, not belonging to any other ethnic minority native to the Southwest, and not being a longstanding inhabitant of the region, I find myself in a delicate position as author and conveyor of this research. As Paula Moya states in her article "Who We Are and From Where We Speak," it is important to define and position one's own

[1] Throughout most of this work—some inconsistencies can be found in the already published papers—I use the gender-marked form "Chicana/o," in line with recent publications addressing Chicana/o issues, such as Priscilla Ybarra's *Writing the Goodlife*. In Spanish, a gender-marked language, the "correct" neutral form would be "Chicano." This inherent linguistic *machismo* (male chauvinism) is being challenged more and more often at all social and cultural levels in Spanish speaking communities. An alternative, gender-neutral form that is becoming quite popular is "Chicanx."

identity in relation to her/his research.[2] My reason for starting this research project was that I felt European literary scholarship was mostly unaware of the environmental history of the Southwest and of the literary legacy of the Chicana/o community, and that the environmental dimension of Chicana/o literature deserved some in-depth analysis in academia at large. In these times of anthropogenic climate change, environmental uncertainty, and growing reactionary politics it is necessary to analyze other perspectives from outside the hegemonic Western discourses in academia in order to establish meaningful discussions. The intended audience are therefore European and U.S. academics from disciplines such as literary studies/ecocriticism, environmental history, political ecology, environmental humanities, post/de-coloniality, cultural studies, and ethnic studies with an interest in literature about the Chicana/o experience, politics of articulation, and/or socio-environmental dynamics in arid landscapes, such as the United States Southwest. There is a need for more research on the interconnection of Chicana/o literature and environmentalism. In Europe the Franklin Institute, from the University of Alcalá, has been organizing biannual international conferences on Chicano/a literature and Latina/o Studies in Spain since 1998, but there is still little discussion of socio-environmental issues at these meetings. Equally, there is a need for more U.S. scholarship on the topic, following the important work of Chicana scholars such as María Herrera Sobek or Priscilla Ybarra.

There are important environmental lessons to learn from the Chicana/o experience, mostly about resilience and communal sustainability. With my research I therefore hope to be able to narrow further the knowledge gap in academia and to give more visibility to the environmental justice concerns that affect this community and region, and to the alternatives proposed in the literature. At the same time, I have aimed to broaden the scope of my research by linking the environmental concerns related to Chicana/o literature to other literary works produced by ethnic minorities in the Southwest, the rest of the United States, Canada, and overseas case studies relating to Swedish Sapmi as well as India, through some

[2] I have to thank Professor Priscilla Ybarra for letting me know about Moya's research on identity and academic practices.

comparative work. As a non-Chicana I am aware of the challenges of writing from an outsider position. My aim therefore is not to take the voice away from the Chicanas/os or any other ethnic minority community, but to undergo a respectful and insightful analysis of their literary manifestations, contributing to give their voices more relevance in academia, particularly in Europe. Furthermore, I would like to enhance the knowledge in academia about the significant role of literature in creating new narratives based on alternative environmental knowledges, exposing and countering the economic and political practices that have led Chicanas/os and the Southwest, as well as other parts of the world (each with their cultural and environmental specificities), into a deep socio-environmental crisis. These narratives, if put together, can not only inform specific socio-environmental struggles, but also the global crisis the planet is going through.

Further results

Other than this dissertation, my time as a graduate student at KTH has produced numerous other results. I have been the main organizer of workshops, part of the Environmental Humanities Laboratory events at the Division, such as "Challenging the Status Quo: Research, Writing and Activism," with Rob Nixon as invited scholar in April of 2014; and the ELC Postgraduate Forum Workshop "Environmental Utopias and Dystopias as Forms of Resistance, Oppression, and Liberation," with Adeline Johns-Putra as keynote speaker, in December of 2015. I have also co-organized the workshop "Writing with Undisciplined Discipline: An Environmental Humanities Workshop" on January of 2017, funded by Seed Funding for the Environmental Humanities, from the Seed Box – A Mistra-Formas Environmental Humanities Collaboratory. I have presented my work at those and other workshops, as well as at conferences organized by EASLCE, ASLE, ASLE UK-I, ASEH, ENTITLE, and at the International Conference on Chicano Literature and Latino Studies, proposing pre-formed panels for the EASLCE conference from 2016 and the upcoming ASLE conference of 2017. In two occasions my attendance to ASLE conferences has been facilitated by generous travel grants: on 2015 I was awarded 500 dollars by ASLE;

and this year, 2017, I have been awarded 10.000 Swedish crowns by the Åforsk Foundation. On 2013 the ELC Postgraduate Forum generously covered my travel costs for the first ELC workshop at Goethe-University Frankfurt/Main, Germany. During these years I have moreover been course coordinator, course assistant, and seminar and excursion leader of several undergraduate courses, and I have been asked to co-supervise a Master thesis.

At the Division I have been introduced to such relevant scholars as Laura Pulido, Robert Bullard, Donald Worster, Libby Robin, Erik Swyngedouw, and Bill Adams, among numerous others. Thanks to the Division's funds I have also had the opportunity to travel around the United States Southwest for a few weeks in the spring of 2015, visiting different academic and non-academic institutions and libraries as well as meeting different scholars working on Chicana/o studies, and/or environmental justice and ecocriticism. I have spent a month at Arizona State University in February 2016, invited by my third advisor Joni Adamson. During the fall of 2016 and the spring of 2017 I moreover spent two months writing parts of the dissertation at the *Universidad de Oviedo*, in Spain, invited by the Professor of American Studies/Centre for Feminist Research Esther Álvarez López.

I have published several articles, other than those comprised in this dissertation, on a range of different topics. On 2014 I co-authored a paper on the interdisciplinary challenges and promises of the Environmental Humanities with a group of outstanding scholars from the disciplines of environmental history and ecocriticism: Hannes Bergthaller, Rob Emmett, Adeline Johns-Putra, Agnes Kneitz, Susanna Lidström, Shane McCorristine, Dana Phillips, Kate Rigby, and Libby Robin. The paper is "Mapping Common Ground: Ecocriticism, Environmental History, and the Environmental Humanities," and was published in the academic journal *Environmental Humanities*. Also on 2014 I participated in the interdisciplinary Anthropocene Campus at HKW (Haus der Kulturen der Welt), Berlin. As outcomes of the Campus I contributed with some experimental written works to the online Anthropocene Curriculum with the collaborative project "Deconstructing

Fences," and the piece "Lake Chad Narratives," for the project *Lake Chad: Sharing a Diminishing Resource?* On 2015 I co-authored the paper "Invasive Narratives and the Inverse of Slow Violence: Alien Species in Science and Society," published on the *Environmental Humanities* journal, together with Susanna Lidström, Simon West, Tania Katzschner, and Hedley Twidle. This was one of the outcomes of a research project on Urban Environments, and a research stay at the African Center for Cities of the University of Cape Town in 2014, funded by the Swedish Foundation for International Cooperation in Research and Higher Education (STINT). Currently, the special issue "Social Media in the Anthropocene," co-edited with Johan Gärdebo, Anna Svensson, and Tom Buurman for the journal *Resilience*, is accepted for publication.

INTRODUCTION

1

Water Justice: Aim and Research Questions

> Ethnic American literary studies must begin to take full advantage of the way an environmental lens calls attention to new ways of historicizing and contextualizing both the losses that our cultures suffered as well as the knowledge we have preserved in the realm of human and ecological relations.
>
> — Priscilla Ybarra, *Writing the Goodlife*

This dissertation investigates the connections between the environmental history of the U.S. Southwest, with particular attention to water management practices, and Chicanas/os struggle for environmental sovereignty and cultural survival. It moreover draws connections with other socio-environmental struggles affecting ethnic-minorities around the world. The analysis is an ecocritical study of a corpus of subaltern literature, with a focus on literature addressing socio-environmental issues affecting Chicana/o communities in Southwestern urban and rural contexts. The corpus consists of fifteen narratives produced in the twentieth and twenty-first centuries. Nine of them are narratives about the Chicana/o experience (eight novels and one theater play),[1] the other six (four novels, one article, and one documentary) are subaltern narratives about socio-environmental issues in the U.S. Southwest, U.S. Northeast, Canada's Southeast, Northern Sweden, and Western India.[2] This research explores the claims made in these fiction and non-fiction

[1] I often refer to literature about the Chicana/o experience, and not to Chicana/o literature, for some of the authors writing about socio-environmental issues affecting Chicanas/os are Anglo-Americans. These nuances are explored in section three (Corpus) and section four (in the subsection "Chicana/o 'Goodlife' Writing as Writer Activism").
[2] See section three (Corpus).

narratives about the unevenness of development in the U.S. Southwest and other parts of the world, as well as the aesthetic and discursive contributions of these narratives to the debate. These written and visual texts exemplify how hegemonic modern, colonial, and/or neo-liberal systems have historically undermined the socio-cultural cohesion and identity of several subaltern communities in the U.S. Southwest and around the world through dispossession, pollution, intensive resource extraction and exploitation, as well as through industrial malpractices. This research, in its main inquiry of how the environmental history of the Southwest and the erosion of Chicana/o culture and environmental knowledge are interrelated, thus resonates with Priscilla Ybarra's suggestion of historicizing and contextualizing ethnic socio-environmental cultural knowledge and losses. These questions become all the more relevant in the context of the Anthropocene, the proposed new geological epoch characterized by a human-induced global environmental crisis, for they position the different socio-environmental understandings and practices converging in the Southwest in this global context.[3]

This research asks 1) in which ways Chicana/o culture (and with it its traditional knowledges and livelihoods) is interconnected with environmental practices (particularly around water management) and specific locales in subaltern literary works about the Chicana/o experience; 2) how has fiction addressed the socio-environmental impact of the developmental paradigm—and the hegemonic Anglo-American ecological, political, and economic practices in particular—in the U.S. Southwest and around the word; 3) whether establishing such a connection adds any useful insights to the larger discussion on the global socio-environmental crisis; 4) and how does literature itself contribute to deconstructing and countering the global crisis. It does so partly by studying the ways in which the authors transmit socio-environmental

[3] Anthropocene related aspects such as climate change are specifically addressed in Paper II and mentioned in Paper IV. See also section four of this introduction. I use the term Anthropocene because it is widely accepted and recognizable, although I agree with Klein and Ghassan that this term invisibilizes the structures which have led to the current socio-environmental crisis, having unequal effects on different human groups. Some alternative terms that attempt to highlight these imbalances are Capitalocene (Malm and Hornborg; Moore), Anthrobscene (Parikka), Manthropocene (Raworth), Econocene (Norgaard), or Chtulucene (Haraway, "Anthropocene").

values and critiques to the readers, often also calling them to take a stance and/or to take action in real life. Their rhetoric is a key element in composing and also in subverting environmental discourses and ethics. The selected subaltern literary works are thus examples of writer activism for their socio-environmental engagement. This is most explicit in Paper IV, in an analysis of rhetorical devices common to writer activism and subversive socio-environmental narratives across the world, which puts literature about the Chicana/o experience, in a regional, national, and transnational context. Moreover, the narratives from the corpus blur fiction and non-fiction, as well as they subvert genre distinctions by historically grounding the socio environmental claims of the fiction narratives, which are infused with a high level of realism and produce messages that relate to real-life struggles. On the other hand non-fiction narratives use captivating rhetoric, sometimes with a lyrical style, to interest and engage readers in stories which otherwise might seem remote, geographically and/or emotionally.

At first my intention was to address the range of environmental problems affecting the U.S. Southwest, but I shifted the dissertation focus gradually to address the consequences of water (mis)management in particular. Special attention is thus given to the different ethics, politics, and practices around access, distribution, and management of the liquid natural resource. This is due to the prevalence of these topics in the literature and to the relevance of water in a semi-arid region such as the Southwest. Water is related to any socio-environmental problem in the region in rural and urban settings, e.g. the influence of the water rights politics in agricultural practices and livelihoods, the effects of deforestation and overgrazing in the watersheds and traditional irrigation systems, industrial and agricultural malpractices resulting in polluted water, or excessive urban sprawl overtapping water resources. Water moreover plays a key role in the environmental ethics—the "goodlife values" of "simplicity, sustenance, dignity, and respect" (Ybarra 4)—and the cultural identity of numerous Chicana/o communities (Rivera; Peña; S. Rodríguez). To use the words of Carmen Flys-Junquera in her analysis of Rudolfo Anaya's work, "Water, either as a theme or as a location, often guides the narrative[s] […], water constitutes an essential element of the political, cultural, spiritual and[/or] mythic dimensions" (190).

Water, basic for life on this planet, is moreover one of the most contested natural resources at global scale, being fought over in both paradigm and traditional wars, pitting those who regard water as a vital communal element, with those who regard it as a commodity (Shiva).

This research addresses how literature about the Chicana/o experience deals with issues ranging from irrigation techniques and the different ways employed to channel, divert, and extract water, to questions of water quality, and how all these factors directly affect the livelihoods, the cultural practices and identities, and the health of numerous Chicana/o communities. In so doing this dissertation relates environmental knowledge, values, and ethics, natural sites and resources, human (especially Chicana/o) bodies, minds, and cultural identities, and political and economic practices. It deconstructs the links between the systemic oppression of, and violence against, nature with systemic oppression of, and violence against, certain peoples. Both nature and people are previously "othered," designated as inferior, passive entities that have to be subjected to larger economic and political hegemonies (Klein 2016; Hage). According to the selected narratives, in the U.S. Southwest the developmental and neo-liberal paradigms have been translated into water (mis)management practices in the contexts of (macro-) infrastructural development projects, urban ecologies, and agricultural and industrial landscapes, at the expense of traditional knowledge and values, social cohesion, and wellbeing. In order to undertake a comprehensive analysis this research also explores how similar cases of water (mis)management are being dealt with in literature produced by/about other ethnic minorities in other parts of Southwest and the world. The analysis therefore moves back and forth between a local perspective—focusing on certain Chicana/o communities in specific places—and regional, national, and transnational perspectives—looking at other ethnic groups in the Southwest, in the U.S. at large, and in other locations in the American continent and beyond. Sometimes these connections are explicitly established in the analysis by comparing different literary works about the socio-environmental struggles of various ethnic minorities in different locales. In some other cases these tensions are already present and implicit in some of the literary works, which plots have a transnational scope.

2

Overview of the Research Fields: Ecocriticism, Environmental History, Regional/Ethnic Studies, Political Ecology, and Post/De-colonial Theory

> Changing the terms, and not just the content, of the conversation means to think and act decolonially.
>
> —Walter Mignolo, *The Darker Side of Western Modernity*

The theoretical framework of this research consists of an ecocritical examination of the corpus informed by environmental history, regional/ethnic studies, and political ecology, and articulated in terms of environmental justice through postcolonialism and decolonial theory, thus contributing to the "transdisciplinary matrix" (Heise) of the Environmental Humanities.

The environmental history background of this project is rooted on key works about the American (South)West (with a focus on the evolution of water distribution and management) such as Donald Worster's *Rivers of Empire: Water, Aridity, and the Growth of the American West*, first published in 1985, and Marc Reisner's *Cadillac Desert: The American West and Its Disappearing Water*, first published in 1986. A more recent study from 2011 that complements these historical works through a cultural analysis is Andrew Ross' *Bird on Fire: Lessons from the World's Least Sustainable City*, about resource mismanagement and excessive trust in techno-fixes solving the current socio-environmental crisis in Phoenix, Arizona. These works give historical context to the claims of environmental degradation and water depletion of the region made in the selected Southwestern literature and are prominent sources of this introduction, as well as of Paper II. A

proper knowledge of the environmental history of the Southwest—of how human actions have altered and shaped the natural conditions of the region—is moreover fundamental to this research for it contextualizes and/or substantiates many of the socio-environmental claims made in the corpus.

In terms of relevant critical works on Chicana/o culture and environmentalism, José Rivera's *Acequia Culture: Water, Land, and Community in the Southwest*, from 1998, is a key study of the traditional Chicana/o irrigation system. Another prominent scholar studying the *acequia* system and its relevance both in Chicana/o culture and for the Southwestern environment is Devon Peña. His two main books are *Chicano Culture, Ecology, Politics: Subversive Kin*; and *Mexican Americans and the Environment: Tierra y Vida*. Furthermore Sylvia Rodríguez's *Acequia: Water Sharing, Sanctity, and Place*, also explores the cultural relevance of the irrigation system and its connection to religious and social practices in the Chicana/o communities of the Taos Valley. All these works are relevant in the contextual history of this dissertation for their research on Chicana/o environmental knowledge and practices. S. Rodríguez's analysis of the social and cultural relevance of the *acequia* system moreover informs Paper III, and Peña's broader research is present in Paper I, II, and III, sustaining the socio-environmental arguments of some of the novels, which praise Chicana/o traditional environmental practices. Laura Pulido's *Environmentalism and Economic Justice: Two Chicano Struggles in the Southwest*, offers a critical analysis of the subaltern character of the Chicana/o environmental movement and is a relevant source in the intersectionality section of this introduction. Lastly, Jake Kosek's "politics of memory and longing," developed in *Understories: The Political Life of Forests in Northern New Mexico*, are relevant for the exploration they offer of the nostalgia and resentment behind the acts of defiance, resistance, and protest led by the Chicana/o communities of Northern New Mexico as a consequence of their loss of environmental sovereignty. Those feelings of nostalgia and/or resentment are common to most of the selected literary works about the Chicana/o experience. Kosek's research is also particularly relevant in the analysis of Paper III because of its interconnection of environmental issues and mental/physical health.

Most of these critical works fit in the analytical frame, or present traits of, political ecology "a field that seeks to unravel the political forces at work in environmental access, management, and transformation" (Robbins, 3), or as Sergio Marcone and Priscilla Ybarra claim, "the question of how the access, use, and control of environmental resources are decided by and shared among different social actors" (94). The way in which these critical cultural analyses expose and explicate how ecological systems are power-laden and therefore political makes them relevant sources for any socio-environmental study. This research is moreover inspired by the influential work of Ramachandra Guha and Joan Martínez-Alier on "ecosystem peoples"—"those communities which depend very heavily on the natural resources of their own locality" (12)—and Martínez-Alier's work on the "environmentalism of the poor"—"in ecological distribution conflicts, the poor are often on the side of resource conservation and a clean environment, even when they themselves do not claim to be environmentalists" (viii). All these sources complement the theoretical keystone of this dissertation, namely the literary analysis that has taken the form of ecocriticism for its focus on the role of the natural environment and environmental concerns in the selected narratives.

Initially, the discipline of ecocriticism dealt mostly with the analysis of nature-writing, often conservation-oriented, texts (Adamson "Environmental Justice:" 12) produced in Western 'first-world' countries, by economically accommodated white men. In time this period has been labeled the first wave of ecocriticism.[4] Nevertheless numerous ecocritics distance themselves from this narrow literary canon. Robert Kern proposes a broad scope of analysis:

> all texts are at least potentially environmental (and therefore susceptible to ecocriticism or ecologically informed reading) in the sense that all texts are literally or imaginatively situated in a place, and in the sense that their authors, consciously or not, inscribe within them a certain relation to their place (259).

[4] Lawrence Buell proposes the metaphor of the palimpsest and its multiple layers as an alternative to the waves, because the palimpsest better implies that the early modes of writing analyzed in ecocriticism are still ongoing and overlapping with new approaches (*The Future* 17).

Lawrence Buell defines "environmental texts" as texts that, among other things, depict the "environment as a process rather than as a constant or a given" (*Environmental Imagination*, 8). Maureen Devine and Christa Grewe-Volpp reflect on the potential political, didactic, and activist character of ecocriticism. They position the discipline as a form of policing, as well as a critical tool to deconstruct the epistemologies and ideologies behind the environmental crisis (2-3). They point to how it attempts to raise consciousness by deconstructing ideas and definitions which influence ideologies, norms, and practices (ibid.). Hubert Zapf moreover analyzes literature as cultural ecology. His analysis of politicized ecocriticism is particularly fitting in the context of this research. Zapf argues that activist ecocritical texts:

> imply a *critical* impetus in exposing exploitative, hegemonic, and pathogenic structures of dominance and technocentric mastery over human and nonhuman nature; they imply a *counterdiscursive* impetus in activating marginalized forms of biophilic culture-nature-experience and human coexistence with nonhuman life as imaginative counterworlds; and they imply a *reintegrative* impetus in bringing together these different forms and forces in "cultural and epistemological synergies" [Heise qtd. in Zapf] that are necessary for adequately complex forms of ecocultural knowledge. (60; original emphasis)

The evolution of ecocriticism into these meaningful dimensions has been partly fostered by texts such as Adamson et al.'s *The Environmental Justice Reader*, and Donelle N. Dreese's *Ecocriticism: Creating Self and Place in Environmental and American Indian Literatures*, both published in 2002. They inaugurated what is now considered to be the second wave of ecocriticism, characterized by looking at literature produced by ethnic minority groups and at environmental justice claims. Environmental justice emerged as a reaction to environmental racism:

> Racial discrimination in environmental policy making and the enforcement of regulations and laws, the deliberate targeting of people of color communities for toxic and hazardous waste facilities, the official sanctioning of the life threatening presence of poisons and pollutants in our communities, and the history of excluding people of color from the leadership of the environmental movement (B.F. Chavis Jr. qtd. in Cutter 112)

Reverend Benjamin F. Chavis Jr. coined this term in 1981 and in 1987 the Commission for Racial Justice of the United Church of Christ published a report entitled: "Toxic Wastes & Race in the United States."

The report supported Chavis' arguments, proving the interconnection between environmental pollution and race in the States. Ever since:

> Environmental justice initiatives specifically attempt to redress the disproportionate incidence of environmental contamination in communities of the poor and/or communities of color, to secure for those affected the right to live unthreatened by the risks posed by environmental degradation and contamination, and to afford equal access to natural resources that sustain life and culture (Adamson et al. 4).

Environmental justice is the common analytical framework of this research. Its toxic dimension can moreover be connected to the theories on trans-corporeality (Alaimo) from the new-materialist thinking. From an environmental justice perspective trans-corporeality can thus go beyond the porosity of bodies and the fluctuation of (toxic) matter, and become a tool to look for the power imbalances that often foster and direct the movement of toxicity. Following this critical approach Paper III analyzes the connections between toxicity and Chicana/o bodies in some of the corpus.

Two early scholarly examples which set a precedent in academic work at the intersection of Chicana/o studies, ecocriticism, and environmental justice are Kamala Platt's article "Ecocritical Chicana Literature" from 1996, with a focus on Ana Castillo's *So Far From God*, and María Herrera-Sobek's "The Nature of Chicana Literature," from 1998. Several other scholars from the United States and Europe analyze literature about the Southwest and the Chicana/o experience from an ecocritical perspective. Tom Lynch's book *Xerophilia: Ecocritical Explorations in Southwestern Literature*, published in 2008, analyzes literature from and about the U.S. Southwest with attention to some literature about the Chicana/o experience in its corpus.[5] In Spain there are several scholars working actively on Chicana/o literature and culture from an ecocritical perspective such as Carmen Flys-Junquera, Juan Ignacio Oliva, and Imelda Martín Junquera (editor of the book *Landscapes of Writing in Chicano Literature*)—all three members of the Spanish research group GIECO-Instituto Franklin, of which I am also a member. Another relevant research group based in Spain is REWEST,

[5] Lynch's book from 2012 *The Bioregional Imagination*, co-edited with Cheryll Glotfelty and Karla Armbruster, further explores the experience of place and identity in a range of desert places.

working on literature from and about the U.S. West, which has produced edited volumes such as *A Contested West: New Readings of Place in Western American Literature*, edited by Martin Simonson, David Rio, and Amaia Ibarraran and published in 2013, with two pieces on Chicana/o literature (including an article by María Herrera Sobek, "Writing the Toxic Environment"). The most recent and comprehensive analysis of Chicana/o literature from an ecocritical perspective has been written by Priscilla Ybarra in *Writing the Goodlife: Mexican American Literature and the Environment*, published in 2016. It analyzes Chicana/o literature from early writers such as María Amparo Ruiz de Burton and Jovita González, to contemporary writers. Ybarra's analysis of Chicana/o socio-environmental values, what she terms "goodlife values," from an ecocritical and decolonial perspective is a very valuable contribution to the field of Chicana/o literary analysis. It is moreover an important theoretical reference of Paper III, which analyzes the "goodlife" writing techniques present in its corpus.

This dissertation follows the same socio-environmental path of Ybarra's work, while it aims to take Chicana/o studies into what has been labeled the "third wave" of ecocriticism. In 2009, Adamson and Slovic's introduction to a special issue on Ethnicity and Ecocriticism, "The Shoulders We Stand On,"[6] defined what is considered to be the third wave in the field as: "a more comparative, trans-cultural approach to ecocritical studies" (Slovic, "The Third Wave" 6) "which recognizes ethnic and national particularities and yet transcends ethnic and national boundaries" (Adamson and Slovic 6). Paper IV in particular tries to accomplish this trans-cultural approach by analyzing narratives which challenge and transcend national borders, as well as narratives produced in different parts of the world. It takes the debate about socio-environmental sustainability, environmental sovereignty, and cultural survival of certain human groups into the global sphere and the cosmopolitical debate—considering a world that brings together a pluriverse of peoples and natures (Adamson and Monani 7). Some key sources of third wave ecocriticism are Adamson's wide corpus on environmental justice, cosmopolitics, and ecocriticism, relevant in Paper

[6] The title is a reference to the manifesto of Gelobter et al. "The Soul of Environmentalism," about the relationship between environmentalism and social justice.

II, III, IV; and Rob Nixon's *Slow Violence and the Environmentalism of the Poor*, for its transnational ecocritical and postcolonial analysis, for its coinage and theoretical explanation of "slow violence," and for its analysis of writer activism. Nixon's theory of slow violence is present in Paper I, II, and IV, while his work on writer activism is particularly relevant in Paper IV. Paper III moreover addresses the writer activist character of the corpus mostly through Herrera-Sobek's theory of "aesthetic activism." Nixon analyzes both fiction and non-fiction subaltern narratives produced by writers from affected communities in different parts of the world. This research follows a similar transnational path with a focus on fictional works about the Chicana/o experience in the US Southwest, articulated through postcolonial ecocriticism and decolonial theory. Some relevant works in these research fields are *Postcolonial Ecocriticism*, by Graham Huggan and Helen Tiffin, *Global Ecologies and the Environmental Humanities*, edited by Elizabeth DeLoughrey, Jill Didur, and Anthony Carrigan, and *The Darker Side of Western Modernity*, by Walter Mignolo.

Postcolonial ecocriticism deconstructs the Eurocentrism that promoted and justified colonialism, and exposes its links to anthropocentrism, which result in current forms of green imperialism over naturalized/animalized others, animals, and the environment (Huggan and Tiffin). It does so partly by analyzing narratives which expose and contest the colonial character of western ideologies of development, and which often also provide viable alternatives to them (27)—narratives such as the ones that compose the corpus of this dissertation, which continuously challenge the hegemonic (and technocratic) discourses of the imposed developmental paradigm. In so doing postcolonial ecocritical approaches provide visibility to the discourses of marginalized colonial subjects. They moreover acknowledge the aesthetic properties of the literary text "while drawing attention to its social and political usefulness, its capacity to set out symbolic guidelines for the material transformation of the world" (14). Elizabeth DeLoughrey et al. have gone a step further by editing a volume on "global ecologies," explicating the relevance of postcolonial ecocriticism thought and methodologies for the environmental humanities at large. In so doing they do not only focus on the literary

analysis of the socio-environmental repercussions of colonialist systems, but also relate these to current globalization practices. They thus provide "new perspectives on how environmental change is entwined with the narratives, histories, and material practices of colonialism and globalization […] [while] identifying possibilities for imaginative recuperation that are compatible with anticolonial politics." (2) These global ecologies moreover reflect on the tensions between local and global approaches to the environmental crises—tensions that this research also tries to negotiate by moving through local, regional, national, and transnational spheres. Lastly, decoloniality, as defined by Walter Mignolo, is not counter or opposite to postcolonial thinking, but rather complementary, and claims a different genealogy of thought based in Latin America (Mignolo, *The Darker Side* xxvi). It serves to counter what Mignolo terms the "geopolitics of knowledge" ("Geopolitics"), the decentering of the knowledge produced in the colonized loci which was substituted by the imposed colonial knowledge and thinking. It moreover reclaims the politics of articulation of colonized peoples, politics enacted in the literary works under analysis.

Chicana/o literature commonly criticizes the power imbalances that result from the colonial, neo-liberal logic, and the socio-environmental degradation that ensues. In that sense, Chicana/o literature, its "goodlife" values and writing (Ybarra), does not only fit into postcolonial environmental humanities and decolonial thinking, but also relates to the Latin American philosophy known as *Buen Vivir*. *Buen Vivir* (explored in Paper III in relation to Chicana/o literature) is closely connected to indigenous philosophies such as "*Sumak Kawsay*", the "good life" of the Quechua indigenous people of Ecuador; *shiir waras* of the Shuar people of Ecuador; *suma qamana* of the Aymara people of Bolivia; and *nandereko*, the "harmonious living" of the Guarani people of Bolivia" (Mercado).[7] These philosophies seek the encompassing (environmental) wellbeing of communities, which are most often "understood in an expanded sense that includes nature" (Marcone "Filming" 216). These alternative ways of perceiving the world, and humans' role within it, promote social equity, wellbeing, and

[7] See also "Sumak Kawsay: Ancient Teachings of Indigenous Peoples," *Pachamama Alliance*; and Marcone ("Filming").

(environmental) sustainability, trying to preserve cultural diversity and to ensure intergenerational and interspecies responsibility in a world that is globally affected by the environmental crisis, but where some are more exposed and vulnerable than others.

3

Corpus: Design and Methodology

In order to select the corpus I looked first for literary works about the Chicana/o experience and the U.S. Southwest which addressed socio-environmental struggles. I made a list of these struggles as portrayed in the literature and noticed that water issues such as pollution, exhaustion, and mismanagement were central to all the narratives. This made me rethink the focus of the dissertation from the specific perspective of water. Moreover, from early on this project was envisioned as shifting from a local, to a regional, a national, and ultimately a transnational perspective. This was initially due to the fact that some of the Chicana/o novels already had a regional or transnational scope, sometimes addressing other ethnic minorities as well. By broadening the scope of the literary corpus I could moreover analyze how literature deals with similar socio-environmental threats to ethnic-minorities in different parts of the world from the point of view of different subaltern (literary) cultures. Through a comparative study it would be possible to understand the differences and similarities among these literary works in order to find common ground, a middle place where to stand and "work for transformative change" (Adamson, *American Indian*: 83).

> Members of different groups must search for ways to cross the problematic divide between action that is deeply embedded in *place*—in local experience, power conditions and social relations—and action that seeks to confront and transform the large-scale economic and political processes that give rise to environmental problems. (Adamson, *American Indian*: 74; original emphasis)

The focus of the articles that form this dissertation therefore ranges from different Chicana/o communities in different parts of the U.S. Southwest (Paper I), to other ethnic minorities in the region (Paper

II), also moving across the U.S.-Mexico border (Paper III), as well as across oceans (Paper IV). Selecting literary works written by other ethnic minorities presented some challenges. Sami scholar, historian May-Britt Öhman pointed me to Lars Svonni's novel, about a group of Samis sabotaging a dam in Northern Sweden. In order to be able to include Svonni's narrative in the corpus, a novel written in Swedish, I asked my colleague Susanna Lidström to help me analyze it in the context of paper IV. I also explicitly looked for literary works dealing with environmental justice issues related to water (mis)management in India—mainly because of similar socio-environmental conflicts around dam-building. I conferred colleagues working on diverse environmental disciplines in India but none knew of any such literary works. Some of these colleagues nevertheless pointed out the non-fiction work of Arundhati Roy, which I eventually included in my analysis, broadening the scope of the paper not only across oceans, but also across non-fiction, which also allowed me to include a Canadian documentary. Moreover, the selected literary works can be found at the intersection of fiction and non-fiction. These are fictional stories which refer to real tensions, problems, and debates affecting the communities involved, as well as the environmental integrity of their home places, in order to inform and even mobilize the readers. Thus, all the selected narratives share the character of writer-activism.

Selected Narratives

Table 1: List of narratives analyzed by category and publication year with geographical reference
- Chicana/o literature from/about the U.S. Southwest: o *Alburquerque* (1992), by Rudolfo Anaya (NM) o *So Far From God* (1993), by Ana Castillo (NM) o *Heroes and Saints* (1994), by Cherríe Moraga (play; CA) o *Cactus Blood* (1995), by Lucha Corpi (CA) o *Under the Feet of Jesus* (1996), by Helena María Viramontes (CA) o *El Puente/The Bridge* (2000), by Ito Romo (TX, Mexico)
- Anglo-American literature about the Chicana/o experience and/or the Southwest: o *People of the Valley* (1941), by Frank Waters (NM) o *The Milagro Beanfield War* (1974) o *The Magic Journey* (1978), both by John Nichols (CO, NM) o *The Water Knife* (2015), by Paolo Bacigalupi (AZ, NV, CA)
- Narratives by other ethnic minorities about the U.S. Southwest / other locations: o *Almanac of the Dead* (1991), by Leslie Marmon Silko (AZ, Mexico) o *Solar Storms*: *A Novel* (1995), by Linda Hogan (MN/Canada) o "The Greater Common Good" (1999), by Arundhati Roy (article; India) o *Överskrida Gränser* (2005), by Lars Svonni (Sweden) [8] o *People of a Feather* (2011), by Joel Heath and the Community of Sanikiluaq (documentary; Canada)

[8] *Transgressing Borders*, title translation by Susanna Lidström.

Table 2: List of narratives analyzed per paper
- **Paper I** Progress and Development According to Whom? Reflections from the margins: o *People of the Valley* (1941), by Frank Waters o *The Milagro Beanfield War* (1974) & o *The Magic Journey* (1978), by John Nichols o *Alburquerque* (1992), by Rudolfo Anaya
- **Paper II** The Water Apocalypse: Venice desert cities and utopian arcologies in Southwestern dystopian fiction: o *Almanac of the Dead* (1991), by Leslie Marmon Silko o *Alburquerque* (1992), by Rudolfo Anaya o *The Water Knife* (2015), by Paolo Bacigalupi
- **Paper III** Lands of Entrapment: Environmental Health and Wellbeing in Literature about the U.S. Southwest and Chicana/o Communities: o *So Far From God* (1993), by Ana Castillo o *Heroes and Saints* (1994), by Cherríe Moraga (play) o *Cactus Blood* (1995), by Lucha Corpi o *Under the Feet of Jesus* (1996), by Helena María Viramontes o *El Puente/The Bridge* (2000), by Ito Romo o *People of the Valley* (1941), by Frank Waters o *The Milagro Beanfield War* (1974), by John Nichols o *Alburquerque* (1992), by Rudolfo Anaya
- **Paper IV** "Dam a River, Damn a People?" Subverting dams in/through subaltern narratives: o *People of the Valley* (1941), by Frank Waters o *The Milagro Beanfield War* (1974), by John Nichols o *Almanac of the Dead* (1991), by Leslie Marmon Silko o *Solar Storms*: *A Novel* (1995), by Linda Hogan o "The Greater Common Good" (1999), by Arundhati Roy (article) o *Överskrida Gränser* (2005), by Lars Svonni o *People of a Feather* (2011), by Joel Heath and the Community of Sanikiluaq (documentary)

The narratives under analysis can be divided in three categories: Chicana/o literature from/about the U.S. Southwest, Anglo-American literature about the Chicana/o experience and/or the Southwest, and narratives about the socio-environmental struggles of other ethnic minorities in the U.S. Southwest or other locations around the world. They have been created between the twentieth and the twenty-first centuries (from 1941 to 2015), and all of them refer to water issues in their plots, often suggesting that blood is to the body what water is to the landscape, both running through vital arteries/canals, invoking the adage "*el agua es vida*/water is life."[9] Most of the selected works are novels. I also analyze Cherríe Moraga's play *Heroes and Saints* in Paper III for the numerous connections its plot had with the other contemporary novels I included in the analysis. Moreover, in Paper IV I analyze the rhetoric around dam building in several novels, as well as an article and a documentary, in this way I extend my ecocritical analysis beyond fiction writing and into non-fiction narratives.

The reasons to select the literary works about the Chicana/o experience in the Southwest have been that 1) they focus on different moments in Chicana/o history and refer to different geographical areas, offering a broad overview of Chicana/o communities along time and across the Southwest; and that 2) they expose different forms of socio-environmental discrimination that have affected the wellbeing of Chicanas/os and the long term sustainability of the U.S. Southwest. Among these, the works by Anglo-American writers consist of some novels considered *literatura chicanesca* and one novel by Paolo Bacigalupi, published in 2015. Bacigalupi's work approaches water issues in the Southwest from a broad perspective, referring to three different states (Nevada, California, and Arizona, with a focus on the latter), and involving several characters from different ethnic backgrounds in the plot (two Mexican-American characters among them). On the other hand, the works of *literatura chicanesca* under analysis are *People of the Valley*, published in 1941 by Frank Waters—known as the grandfather of Southwestern literature—, and two

[9] The only novel I analyze without particular attention to water is *Cactus Blood*, which I selected for its relevance in the context of literary toxic trauma, environmental health, and wellbeing. Nevertheless, the novel does refer to some water issues.

novels by John Nichols, part of his so-called "New Mexico Trilogy," published in 1974 and 1978. According to Chicano academics Francisco Lomelí and Donaldo Urioste *literatura chicanesca* refers to the literary works composed by non-Chicana/os writing about Chicana/o issues from the Chicana/o perspective. Lomelí and Urioste moreover deemed the works by Nichols and Waters appropriate literary portrayals of the Chicana/o community.

Waters' and Nichols' works were published at a time when Chicanas/os had little means and visibility in the U.S. Anglo-American literary spectrum. Books like the *The Milagro Beanfield War*—which has been translated into nine languages—have received a lot of attention from the public in and beyond the USA (Nichols "John Nichols, The Urban Conga"). On the other hand, works of fiction like these, where Anglo-Americans write from the point of view of other ethnic minorities, have been highly questioned, especially by ethnic minority writers. Tom Lynch, in an article about Nichols, Waters, and Jimmy Santiago Baca, addresses this issue and refers Laguna writer and critic Paula Gunn Allen, who pointed to the "distress at the process by which colonialism is played out in the publishing world" (Lynch "Towards" 415). Although Waters and Nichols' perspectives are outsider views of Chicana/o issues, I would argue that they nonetheless offer valuable portrayals of the socio-environmental problems facing Chicanas/os in the Southwest. Both Nichols and Waters, same as Chicana/o writers, depict Chicana/o ethics as most desirable and better attuned for long-term sustainability and socio-environmental balance than the imposed neo-liberal paradigm. Their works show to the Anglo American society the potential of an alternative way of living that preserves community values and is better attuned to the local environment, while addressing a critique to the Western cultural values of progress and development. Nevertheless, in both cases these authors refer to Chicana/o culture as a disappearing culture where the neo-liberal system seems to be eradicating Chicanas/os and their values from the region.[10] Literary works by Chicanas/os, on the other hand, are more positive, presenting Chicana/o communities as

[10] In the case of Nichols this is particularly visible by the third book of his so-called New Mexico trilogy, *The Nirvana Blues*.

suffering but enduring units that still preserve traditional knowledges and ethics about the environment.

Finally, the works of fiction written by and about peoples from other ethnicities, which offer a transnational study of literary fiction resistance to environmental injustices, are (by publication date): *Almanac of the Dead* (1991), by Leslie Marmon Silko—who identifies herself as a Laguna Pueblo, a Mexican American, and an Anglo American—, linking the experience of suffering and oppression of peoples from Latin America to the United States, with a focus on the US Southwest, and references to Africa; *Solar Storms* (1995), by Linda Hogan—a Chickasaw—, about Cree and Inuit peoples opposing a hydro-electric project in Quebec; "The Greater Common Good" (1999), an article by Arundhati Roy, about dam opposition—mainly by indigenous peoples—in India; *Överskrida Gränser* (2005),[11] by Lars Svonni—a Sami politician—about Sami people sabotaging a dam in northern Sweden; and the documentary *People of a Feather* (2011), by Joel Heath and the Community of Sanikiluaq, about the impact of the James Bay hydroelectric project (the same that inspired Hogan's novel) on an Inuit community as well as on the eider ducks in the Belcher Islands of Hudson Bay.

The comparison of these varied narratives, written by authors of different ethnic backgrounds from different parts of the world, is made in terms of the respective invisibilization of the cultures they write about—a shared experience of cultural oppression, displacement, and loss of rights and access to natural resources.[12] Moreover, all the narratives are simultaneously deconstructive and reconstructive (Zapf 95) environmental narratives. They all expose the shortcomings of dominant systems of power, while at the same time they are "discursive space[s] […] articulating those dimensions of human life which were *marginalized*, neglected, or repressed in dominant discourses and forms of civilizational self-representation" (Zapf 90; original emphasis).

[11] *Transgressing Borders*, title translation by Susanna Lidström.

[12] The term "invisibilize" refers here to the act of turning a community invisible for the rest of society, mainly by not acknowledging it, and not addressing it in the political, economic, or social matters of the nation state (see for example Öhman; Gordillo and Hirsch). These issues are further developed in Paper IV.

4

Chicanas/os' Environmental Quest: Contextual and Historical Framing

U.S. Southwest

> The Southwest is a distinctive place to the American mind but a somewhat blurred place on American maps, which is to say that everyone knows that there is a Southwest but there is little agreement as to just where it is. […] The term "Southwest" is of course an ethnocentric one: what is the west to the Anglo-American was long the north of the Hispanic-American
>
> — Donald Meinig, *Southwest*

The expanse of the U.S. Southwest has often been a subject of debate (Meinig; Byrkit; Slovic *Getting Over*; see also Paper I). It can be described in various ways: from a geo-political perspective, looking at the states that nowadays constitute the southwestern corner of U.S. maps; from a historical one, recalling the Mexican-American war and the acquisition of territories with the treaty of Guadalupe Hidalgo from 1848 (see figure 1); from a bioregional one, as Tom Lynch does in his work *Xerophilia*, 2008 (see figure 2); or even from a literary one, looking at so-called Southwestern literature. In the case of this dissertation the corpus specifically addresses Southern Texas, New Mexico, southern Colorado, Arizona, Nevada, and Southern California.

Scott Slovic goes as far as claiming:

> I think of the Southwest as anywhere in the United States (and perhaps Mexico) where the general hue of the land is more brown than green, where one's lips crack from dryness and sweat dries almost instantly, and where cactus or tumbleweed or sagebrush abound. Or where it's so dry, or the drop-offs so sheer, that nothing grows at all. (*Getting Over*, xxi)

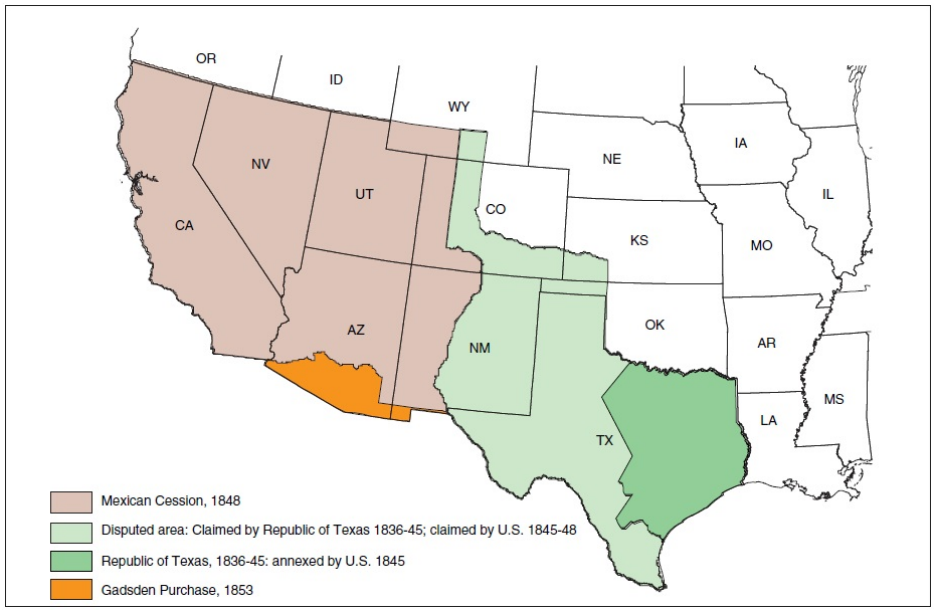

Figure 1: U.S. Land Acquisitions from México, 1845-1853. GAO / U.S. Geological Survey

It is generally accepted that the main characteristic of this contested region is its aridity. Four large deserts can be found there: the Chihuahuan, Sonoran, Mojave, and Great Basin (see figure 3). This vast area is moreover affected by several environmental problems, namely the exhaustion of resources or the alteration of natural areas through practices such as overgrazing, excessive logging, and water mismanagement, as well as through mega-infrastructural projects, extensive and excessive urban sprawling, toxic pollution, and anthropogenic climate change—which is currently affecting the precipitation patterns of the region and turning it even drier (Seager et al.). These problems are of course not exclusive of the area, but its geographic and climatic characteristics make it particularly vulnerable to environmental threats.

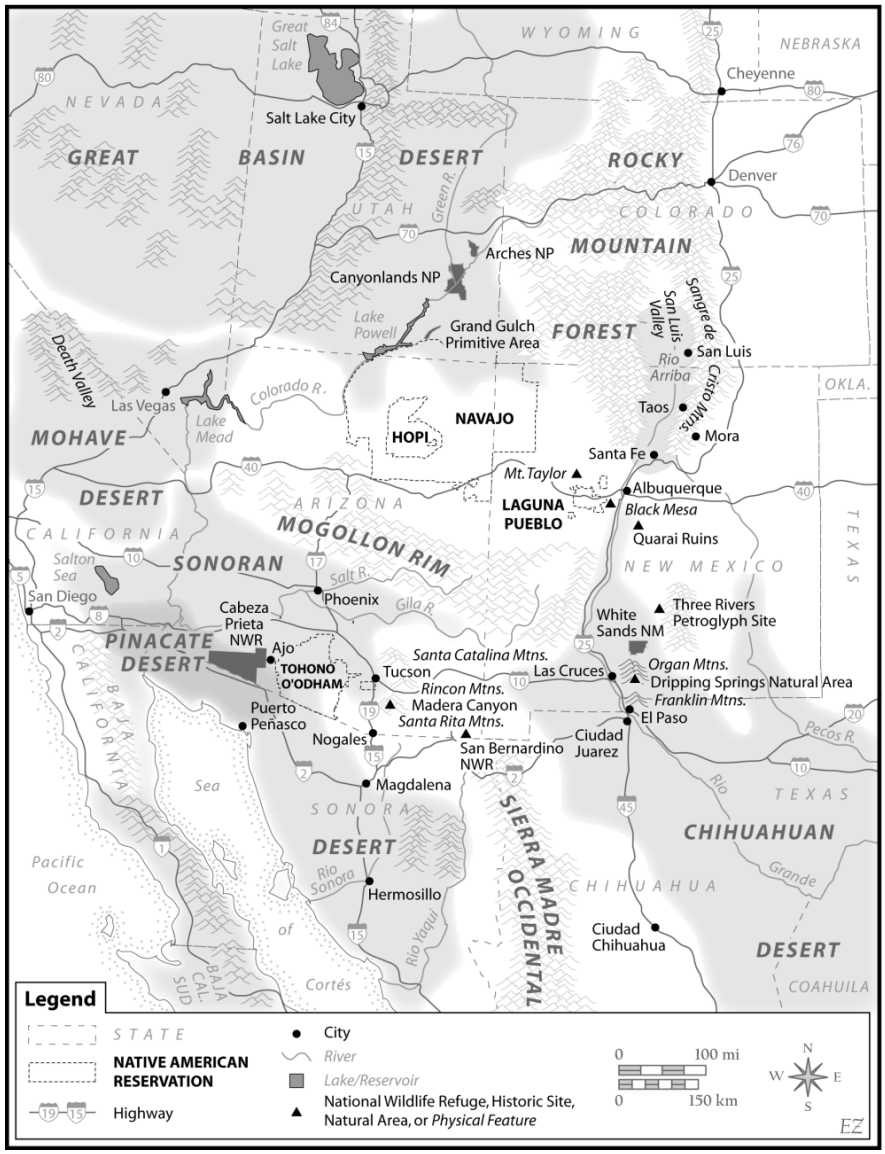

Figure 2: Bioregions of the Southwest, cartography by Ezra Zeitler

Figure 3: Map of the distribution of North American regional deserts. Modified—from Mantooth et al. 2013—by David Hafner.

If one superimposes these maps, descriptions, and perceptions they do not provide a homogeneous picture; they rather show varying diachronic political boundaries that do not necessarily match the existing bioregions or the cultural imperatives. Different temporalities and overlapping histories converged in the region: those of the ancestral inhabitants, those of the southern Europeans that arrived from South America, and those of the northwestern Europeans who came from the East of North America. Each of them in turn held different environmental understandings, shaped by their native ecosystems and cultural understandings of these. These different knots—historical,

political, and ecological—thus mirror the various cultures that shape the Southwest, and the layers of inhabitation and colonization. One might even feel tempted to talk about strata, although that would turn some of those cultures into fossil remnants, and that is far from the Southwestern reality. Cultural and environmental knowledges merge and clash in, and co-inhabit the Southwest, turning it into a multifaceted region.

The complexity of the US Southwest has nevertheless often been simplified in the Anglo-American collective imagination. From early Indian captivity narratives and frontier dime novels to the Western cinematographic genre, it has mainly been portrayed as a wild, dangerous region, populated by "cowboys and Indians," and extremely arid. This collective perception has sometimes been reimagined, as in the case of the state of New Mexico, known as "The Land of Enchantment," which in the 1960s and 70s became a mecca for artists and all those who wanted to move out of the city and "back to nature." What attracted most Anglo-Americans to the region at the time was its promise of ample land, untamed wilderness, and supposed remnants of native cultures and art, a quite idealized perspective of the place and its peoples that not always matched reality and that became unsustainable after the considerable migration from the East. Stephen Grace refers to this as "the region's pull of the imagination," which created "dreams of wealth and fresh beginnings in a world of bright sun and boundless possibility" (Intro.). Nevertheless the characteristic aridity of most of the region has always been a target of the Anglo-American idea of a desirable natural environment and the Jeffersonian yeomanism (Cassuto). "Rather than abandoning the myth of the garden in the face of looming ecological realities, Americans chose to redesign the land and carve a garden out of the desert" (15). Through the creation of a complex canal and dams system, and by making extensive use of underground water accumulated in acquifers during millennia, Anglo-Americans have transformed as much of the Southwest as possible into what they think is a desirable landscape:[13] with major cities sprawling where no water could originally be found (Ross), green lawns being irrigated and sprayed with toxic products in front of virtually every house (Robbins and Sharp), and

[13] For in-depth environmental histories of the hydrology of the U.S. (South)West see Worster (Rivers); and Reisner.

California becoming the orchard of the United States. Thanks to irrigation and water pumping an "illusion of profusion" was created and water started being taken for granted (Grace, Intro.; Cassuto 11). A strong strand of environmental thinking has tried to dismantle this perception. Wallace Stegner famously claimed in 1972 that in order to appreciate the West one has to "get over the color green," something that resonates with the work of well-known environmental writers such as Edward Abbey. This has been attempted in literary Western studies through anthologies such as *The Desert Reader* from 1991, by Peter Wild and *Getting Over the Color Green: Contemporary Environmental Literature of the Southwest* from 2001, by Scott Slovic, although, as Christian Hummelsund Voie claims in "From Green to Red," the "fine phrases [from Slovic's introduction] promise broader scopes and more diversity in this regard than the literature generally delivers" (68).

Initiatives such as "painting your lawn green," in vogue in drought-stricken California as a response to governmental limitations over water use, still suggest that the inhabitants of the Southwest are far from getting over the green obsession.[14] Furthermore, "getting over the color green" by embracing the semi-arid Southwestern landscape as beautiful and moving is not enough. As Joni Adamson argues, the Western environmentalist tendency of extoling some landscapes and sites for their sublimity falls short of what the present (socio-) environmental crisis needs; moreover the tendency to fence away tracts of "wilderness" from human contact is actually counter-productive (Adamson *American Indian*). As an alternative, Adamson provides insights from Native American thought and traditions regarding certain areas (ibid). These socio-cultural, mythical landscapes become alive as signifiers of different cosmologies that regard nature in dialectic rather than contemplative terms, acknowledging its agency, instead of simply being the means for (male) self-realization through physical activity (ibid).

There is a need for an alternative understanding of the U.S. Southwest as something other than the scenery of Western films, a place

[14] "Painting the Lawn Green", web: www.economist.com/news/united-states/21618891-californians-find-novel-ways-cope-drought-painting-lawn-green. For more on the green obsession and lawns in the U.S. see Steinberg (*American Green*); Robbins; Robbins and Sharp; and Scott Jenkins. See also Paper II.

that needs to be improved ("developed") by turning it green, or a sublime landscape where to escape the evils of civilization. This perception should expose the common mechanisms by which nature and certain human groups have been 'othered' and oppressed, as well as it should inform the general understanding of nature and culture as co-integrative parts of the human essence and experience. Literary works on the Chicana/o experience offer such an insight by presenting the Southwestern landscape as intricately linked to, and nuanced by, the experience and actions of its inhabitants, and the Southwestern urban areas as constitutive parts of nature and therefore interlinked in terms of socio-environmental concerns.

Chicanas/os: (Environmental and Literary) History

> we were here when here was there
>
> —Richard Rodríguez, *Brown: The Last Discovery of America*
>
> we didn't cross the border, the border crossed us
>
> —old Southwestern adage

Chicano journalist Ruben Salazar claimed that "the word Chicano is as difficult to define as "soul."" (Salazar). I would add that defining people of Mexican heritage living in the United States is as complex as defining the Southwest. On the one hand, there were over twenty-five different Native American Nations (such as the Apache, the Comanche, the Navajo, the Tohono O'odham, and various Pueblos, to name but a few)[15], as well as Spaniards, and Mexicans already inhabiting the territories that nowadays constitute the U.S. Southwest before any Anglo-Europeans settled in the continent, and certainly long before the region was annexed by the United States.[16]

After the Mexican-American war that ended in 1848, when the Treaty of Guadalupe Hidalgo was signed, a new border between the nations was established, its particularities stipulated in Article V of the

[15] See Waldman. Note that I am counting some nations which did inhabit areas of the Southwest but which Waldam categorizes under the Great Basin and Great Plains culture areas.

[16] See R. Rodríguez and Foley. See also R. Rodríguez's epigraph to this section.

Treaty ("A Century").[17] According to Articles VIII and IX, the Mexicans residing in the annexed area could automatically acquire (unless they stipulated their wish to keep their Mexican nationality) the title and rights of citizens of the United States (ibid.). On the other hand, since the annexation of the territories took place there have been numerous Mexican citizens who have crossed the so-called Tortilla Curtain, migrating (legally or illegally) to the northern neighboring country in order to work. Ybarra historicizes these flows, and their hegemonic ethnocentric connotations, noting that:

> The Europeans who moved north into Sonora were hailed as conquerors, those who landed on the east coast of North America were revered as pilgrims, and the Europeans who moved West were admired as pioneers. […] Undocumented travelers [nowadays] are labelled "illegal aliens" (183).

Since 1848 the border has been the witness to different labor/economic agreements, and to the subsequent human flows those agreements have fostered. One well-known example is the Mexican Farm Labor Program (popularly known as the "Bracero Program"), in place from 1942 till 1964, which allowed many Mexican men to go to the United States to work, supposedly short-term, primarily in the fields ("About" *Bracero History Archive*). Alongside these agreements the United States has always tried to control migration coming from Mexico with measures such as the 1917 Immigration Act, and the creation of the Border Patrol in 1924, or more recently the Secure Fence Act of 2006, a 700-mile fence along parts of the border (Foley, 2). The latest of these measures is the "wall" the new elected president of the United States, Donald Trump, wants to build along the border. No matter these actions the United States has not been able to stop Mexican immigration, and certainly no counter immigration measures can erase the history of the region or deny the Mexican influence of the Southwestern states.

In this context of annexations and migrations different members of the Mexican-American community identify themselves in different ways: as Mexican-Americans, Spanish-Americans, Hispanics, Hispanas/os, Latinas/os, or Chicanas/os.[18] The terms Chicana and Chicano, although accepted by academia, are still controversial terms for many

[17] The border shifted again in 1853 after the Gadsden Purchase.
[18] See Richard Rodríguez for a critique of the terms Hispanic and Latino.

Mexican-Americans.[19] In social terms it often refers to those who recognize and feel proud of their indigenous roots and *mestiza/o* nature, and who take a political stance against what they often perceive as the United States imperialistic attitude towards their community. It is also the term used to label academic fields such as Chicana/o Literature or Chicana/o Studies, and most of the writers with Mexican roots analyzed in this study identify themselves as Chicana/o. In this research the term Chicana/o refers to people of Mexican descent living (and writing) in the United States, and showing a critical stance against what is perceived as an imposed Anglo-American cultural hegemony. At times I also use the term Mexican-Americans when this political character is not explicit, and Hispanos in relation to the subjects of Jake Kosek's research in the Upper Rio Grande Bioregion, for it is the most commonly used term in that area (Kosek 291).

Intersectionality

Chicanas/os defy the very idea of race due to their *mestizaje* (miscegenation) (Pulido 43; Anzaldúa), as well as their mixed origins defy the idea of national borders, blurring the geographical and cultural divide represented by the U.S.-Mexico border (Anzaldúa). These aspects shape their collective identity, which in turns shapes their environmentalism, a "subaltern environmentalism […] embedded in material and power struggles [determined by class differences], as well as questions of identity and quality of life" (Pulido xv).

In Borderlands/La Frontera, a key work on Chicana/o identity from 1987, Gloria Anzaldúa starts and ends "Atravesando fronteras/Crossing borders" by talking about the land—from accounts about Chicanas/os loss of territories based on historical research, and the personal recollections of her family's experience in southern Texas, to Chicanas/os' surviving agro-pastoral tradition and knowledge. Anzaldúa's critical analysis of Chicana/o identity, their struggle for self-

[19] Luis Leal, writing in the 1970s, analyzed the social tensions suffered by Chicana/os, who were not accepted by Anglo-Americans for they were regarded as unassimilated immigrants, and who were regarded with disdain by Mexicans, who considered them pochos, for denying their Mexican roots and trying to become "North Americans" (Leal 15-16).

determination which subverts established ideas of gender and nation, is thus neither disentangled from Chicanas/os history of dispossession, nor from their persistent agro-pastoral knowledge. Nevertheless, the nostalgia of agricultural societies often comes with heteronormative discourses of nature that naturalize certain practices as well as sexual behaviors, and deem others as deviants (Marcone "Pastoral" 200). Numerous Chicana/o agro-pastoral practices are gendered—traditional irrigation systems have historically been male-dominated (see S. Rodríguez 8)—, while toxicity has taken a big toll on female bodies and minds, affecting their reproductive and nurturing capacities, as several Chicana writers (analyzed in Paper III) expose in their works. Cherríe Moraga acknowledges these entanglements in both her fiction and non-fiction writing, opting for an inclusive environmental justice critical stance: "For immigrant and native alike, land is also the factories where we work, the water our children drink, and the housing project where we live. For women, lesbians, and gay men, land is that physical mass called our bodies" (*The Last Generation* 173).

Anzaldúa and Moraga thus:

> perform the same discursive analysis that has become familiar in political ecology, environmental justice, postcolonial ecologies, and queer ecologies. Such an approach pays attention to the cultural construction of nature (including within environmental movements) and the marginalization or exploitation of women, gay men, lesbians, ethnic minorities, [migrants,] etc., that such constructs support. (Marcone 195)

Regaining environmental sovereignty therefore not only consists on regaining the power to manage natural resources, but also on asserting an affirmative and inclusive identity as the first step to achieve a good quality of life for the community. "For oppressed communities, a dignified life means being able to live free of cultural oppression and racial and ethnic inequality" (Pulido xx). Literature about the Chicana/o experience is instrumental in the reconsideration of Chicana/o identity, actively contributing to shape and communicate a collective identity that challenges colonialism, nature/culture divides, race, class, and/or heteronormativity.

A Quest for Environmental Sovereignty: land grants and water rights

In the mid-nineteenth century approximately one hundred thousand Mexicans resided in the territories that today constitute the Southwest (Ybarra 37). They enjoyed environmental sovereignty, ensured by land grants acquired from the Spanish king and ratified both by the Mexican, as well as by the United States governments—also stipulated in article VIII of the Treaty of Guadalupe Hidalgo, which claims that Mexican property in the territory would be inviolably respected ("A Century"). Some of these land grants were nevertheless soon revoked by the United States by different means and for different reasons. Several commissions and committees were created to revise the land claims in the region such as the Public Land Commission in California in 1851, the Surveyor General of New Mexico in 1854, or the United States Court of Private Land Claims in 1891 (GAO 5). Due to unclear/undefined land demarcations, lost documents, population unawareness of legal requisites, and private economic interests speculation and fraud ensued and numerous Chicanas/os lost their land claims.[20] In New Mexico:

> the U.S. Surveyor General's Office and the Court of Private Land Claims often dismissed such preexisting claims [from before the annexation of the territories by the U.S.], citing as justification the "inexactitude" of Spanish and Mexican records and the resulting legal "ambiguity." […] Between 1854 and 1891, only twenty-two of the more than two hundred Hispano communal land-grant claims were verified by court, leaving 35 million acres of New Mexico's richest lands in legal limbo. Almost 80 percent of these remaining land-grant claims were never ratified. […] [Moreover, in Northern New Mexico] much of what had been communal land found its way into the hands of the Forest Service (Kosek 9). [21]

On the other hand, there were powerful Anglo-Americans with economic interests in the region that manipulated the legal system to their benefit. A well-known example is the Santa Fe Ring, often depicted

[20] Beck and Haase (*American West*; *New Mexico*). See also Paper I. For a personal account of the racism and discrimination that ensued from the U.S. annexation of Texas, resulting in Chicanas/os loss of territory see Chapter 1 from Anzaldúa.

[21] The United States Accountability Office conducted an investigation in 2004 of the land grants confirmation procedures in New Mexico. Although it acknowledges some of the facts claimed by Beck and Haase (*American West*; *New Mexico*) and Kosek, it presents different figures and maintains the compliance of the procedures with the statutory and constitutional requirements (GAO).

by historians as a shady informal network of primarily Anglo elites who "organize[d] territorial New Mexico in their collective political and economic interests" (Correia).[22] Another system to acquire land unethically/illegally was to take advantage of the two different kinds of ownership present in community grants. Traditionally each member of a community grant owned a small piece of land to build a house, together with some land by the *acequia*—an earth irrigation canal that channels melt-down water from the mountains—to grow crops. On the other hand there was some common land, known as the *ejido*, belonging to the community as a whole. The pastures, water, and firewood were part of the *ejido*, and were therefore used and managed communally. Some Anglos bought small portions of grants, later claiming a proportional percentage of the common lands and fencing it away (Kutz 58). These kinds of practices, unethical and unlawful in Mexican times, were not condemned by the US courts. The frustration that ensued from the US legislative passivity led some grantees in Northeast New Mexico to form *Las Gorras Blancas* (The White Caps) in 1889 (61). After numerous acts of banditry—mostly consisting on cutting away fences—they formed *El Partido del Pueblo Unido* (the United People's Party) and managed to "introduce and pass a bill making it illegal to erect fences on land not owned in fee simple" (62). The party also tried to pass other measures, such as modifying the tax system that was impoverishing the locals and making them lose their land, but did not succeed (ibid). Similar conflicts erupted around the Tierra Amarilla land grant, also in Northern New Mexico, when another group known as *La Mano Negra* (The Black Hand) started cutting away fences in 1919 to protest what they perceived as the illegal subdivision of the land grant.[23] These events continued intermittently until 1940. The controversy around this land grant never subsided for the Chicana/o community and acquired national attention in 1966, when *La Alianza Federal de las Mercedes* (The Federal Alliance of Land Grants), led by Reies Lopez Tijerina, occupied Echo

[22] For a book-length historical account of the Santa Fe Ring see Caffey, for a critique—partly based on Caffey's reliance on established documentary evidence, which discriminates against Native American nations and Spanish-speaking communities—see Correia.

[23] For a condensed history of the conflicts around the Tierra Amarilla land grant in the nineteenth century see Torrez.

Amphitheater, in the Carson National Forest, in their quest to reclaim the rights of the Chicanas/os to former community land grants in the region. Moreover, in 1967 this group carried out the Tierra Amarilla courthouse raid.[24] These land grants were not restored to the Chicana/o communities despite all the local resistance, but this same resistance gave visibility to the frustration caused by the injustices and irregularities behind land speculation in the Southwest.[25] A large amount of Southwestern land nowadays belongs to the Federal Government (see figure 4).

Land, however, has not been the only resource subject to intense conflicts in the region for land, especially in a semi-arid region such as the Southwest, is not valuable without water. Irrigation in numerous Chicana/o communities has traditionally been done through *acequias*. The system still remains in numerous communities of Northern New Mexico and Southern Colorado. *Acequias* are communally managed by the figure of the *mayordomo*, who has to ensure everybody gets their fair share of water, especially in times of drought. José Rivera in his well-known work *Acequia Culture* from 1998 stresses how equity, fairness, and a concern for the common good and long-term sustainability, have always shaped *acequia* regulations (38, 86). Water management in this system, therefore, is an issue of equal sharing.

Devon Peña describes the main five principles of *acequia* customary law in his work:

> The customary law of the acequia derives from Roman, Spanish, and Arabic sources. Five basic principles underlie acequia customary law: (1) the communitarian value of water, (2) the non-transferability of water, (3) the right of thirst, (4) shared scarcity, and (5) cooperative labor and mutual aid. (Peña *Mexican Americans* 82)

Sylvia Rodríguez, in her study of Taos Valley *acequias*,[26] *Acequias: Water Sharing, Sanctity, and Place*, explains how in times of extreme scarcity priority is given to animals, then to vegetable gardens and orchards (72), while seniority does not imply exclusive right over water (4). Moreover, *sobrante*—surplus water—can be petitioned in

[24] For a history of these events see Nabokov.
[25] This remaining frustration and feeling of injustice prompted the GAO report of 2004 on the land grant confirmation procedures in New Mexico (GAO 8-12; 44-45).
[26] Taos Valley is located in Northern New Mexico.

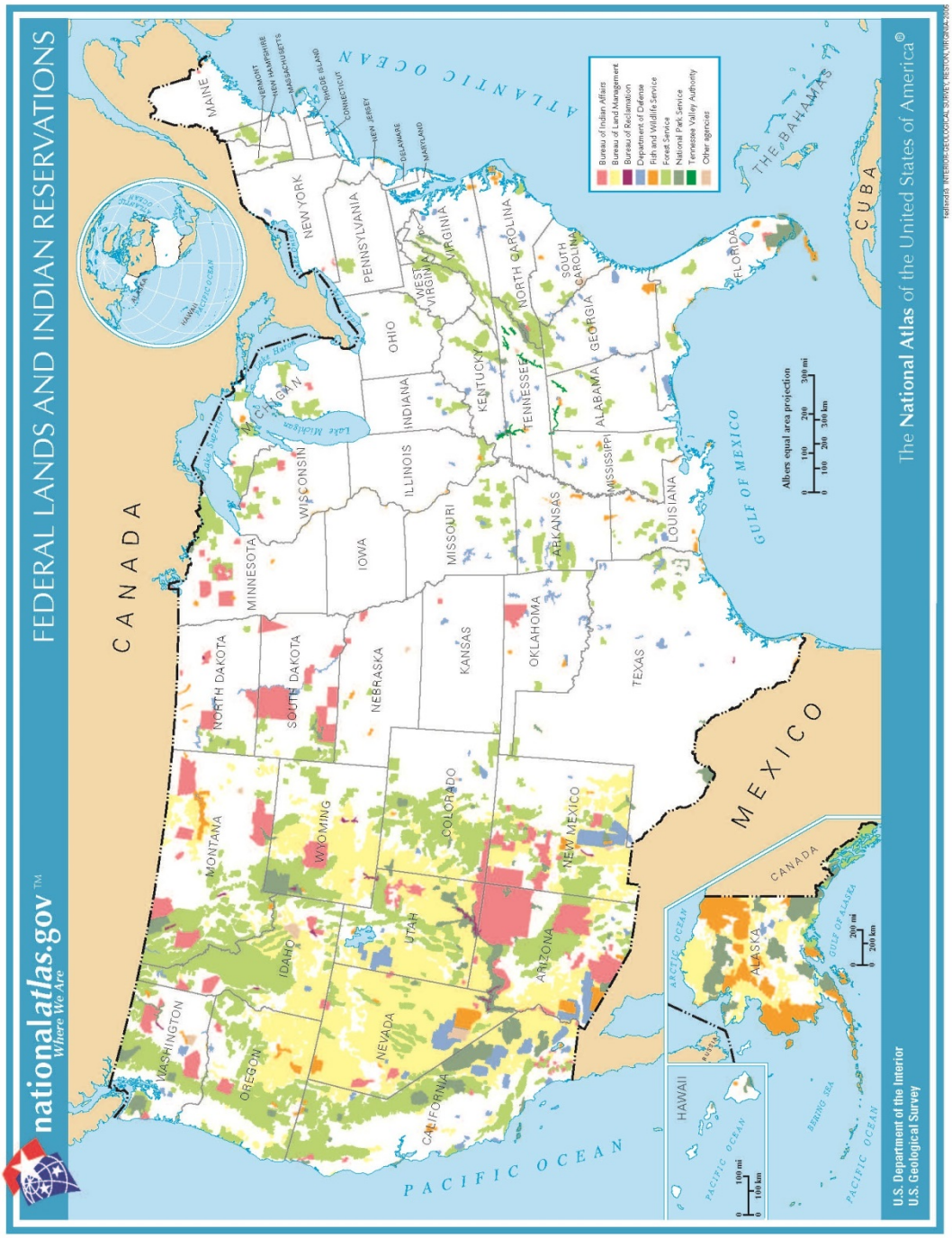

Figure 4: Federal Lands and Indian Reservations. U.S. Geological Survey

most acequia systems to be used by others, and auxilios—special dispensations of water—can be made during water crises. Peña's and S. Rodríguez's work further substantiates the claims in Rivera's research about the sustainability and fairness of the *acequia* system, which allowed human settlement and livelihood attending to the ecological needs of the environment at large. Overall, the *acequia* communal system with the *mayordomo* as key figure is described by these scholars as a fair and respected system that ensures social stability and environmental balance. Rivera's, Peña's, and S. Rodríguez's research moreover theorize and historicize how the resource base and the social fabric of Chicana/o communities dependent on the *acequia* system are intertwined. S. Rodríguez also explains how *acequia* systems used to be based on autonomy (controlling their own flow of water) but ever since the mid nineteenth century, with growing numbers of stakeholders and water uses, they have gradually become subject to larger management systems in which they are in "marginal and subordinated positions" (5).

Threats to this water management system started with the migration of Anglo-Americans to the West, fostered by policies such as the 1862 Homestead Act. Such policy, supported by the belief that "rain would follow the plow," originally allocated grants of 160 acres of surveyed Government land to Easterners willing to move West. In time, some Easterners also acquired sections of Chicana/o community land grants, acquiring as well the proportional share of water. It was common among newcomers to devote their piece of land to uses other than small scale agriculture. They rather practiced land speculation, or started logging the section they considered they owned from the *ejido*. Since *acequia* irrigation depends on channeled meltdown water two factors are key in the system: the maintenance of the ditches, done by the *parciantes*[27] every spring and supervised by the *mayordomo*, and the maintenance of the woodland, to keep the water from running outside the ditches. Major alterations to the woodland and/or failure to keep all tracks of the *acequia* clean and functional affect the whole watershed and irrigation system, and therefore the community dependent on it.

[27] *Parciante*: "A water rights owner and irrigator on a ditch; a member of a ditch association" (S. Rodríguez 157).

Such conflicts are captured in the visual storytelling of an embroidered piece by Josephine Lobato, from San Luis, Colorado. Through her embroidery Lobato depicts "collective memories of ancestral rights embedded in the landscape" (MacAulay 28). In her "*La Sierra*" embroidery (see figure 5) she depicts the socio-political struggle of a Chicana/o community against a lumber baron who bought a large tract of a land grant and fenced it off in the 1960s, not allowing the locals to exercise their communal grazing rights (ibid.).[28] "The people of San Luis view the history of the Spanish Land Grant as intertwined with issues of heritage and cultural autonomy that depend on the collective right to use resources (not necessarily "ownership" but the right to use)," an arrangement stated on a deed from 1863 (27). Moreover the lumber practices affected the region's watershed.

Another threat to the *acequia* system came with the establishment of the principle of severability—"where water can be transferred to alternative beneficial uses" (Rivera xviii)—, and the doctrine of prior appropriation.

> According to the doctrine of appropriation, the first person who came to a string and claimed its water, or a part of it, had priority to exploit it; he acquired, in other words, a vested right to the water, made it a form of personal property. Under the doctrine, it mattered not at all how far from the river he lived or how far he diverted the water from its natural course, mattered not at all if he drained the river bone-dry. There was only one rule in that appropriation: *Qui prior est in tempore, potior est in jure* – he who is first in time is first in right. (Worster *Rivers of Empire* 88)

Water rights eventually became another "property commodity[y] [which could be] bought and sold in the open marketplace" (Rivera xviii) as part of the Anglo-American Western-shifting frontier. In the words of environmental historian Donald Worster: "the adoption of prior appropriation was part of a larger shift in thinking about nature, a shift towards instrumentalism in resource law and property rights" (*Rivers of Empire* 89). The social and power relations changed accordingly in the Southwest, with the newcomers claiming most of the water rights while imposing not only their environmental practices, but also a new language, legal system, and social rules (see Paper II, 56-7). This shift, which attended to economic interests, was moreover related to the

[28] The grazing rights of the community were eventually reestablished in 2003 by a U.S. Supreme court decision (MacAulay 28).

extractivist practices that resulted from the gold rush, which depended heavily on having access to water (ibid.).[29]

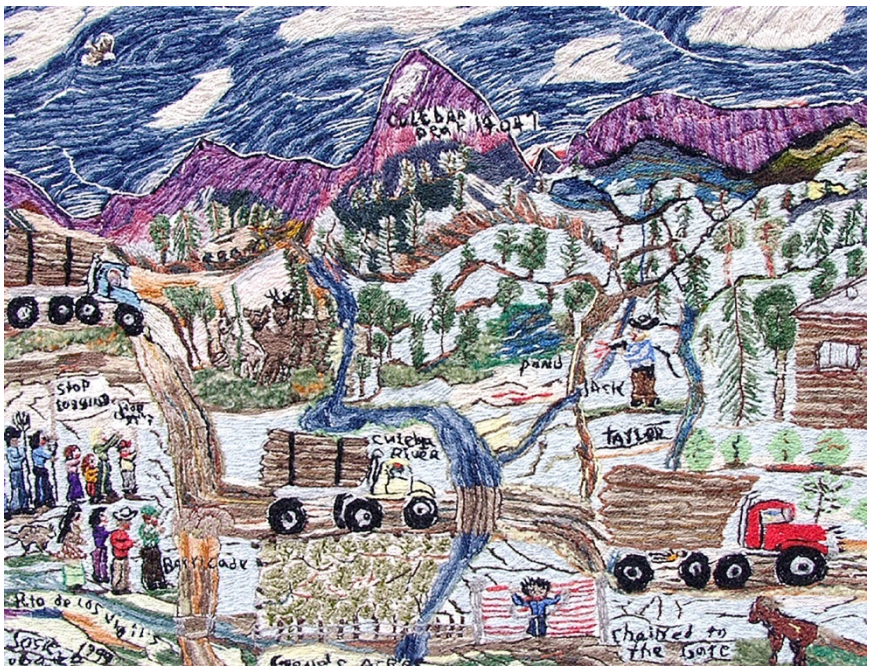

Figure 5: "*La Sierra*" *colcha* embroidery by Josephine Lobato

By the end of the nineteenth century, John Wesley Powell, the geologist in charge of the United States Geographical and Geological Survey of the Rocky Mountain Region, warned against the monopolies the current land and water allocation system would entice. He advised the U.S. Congress to settle the arid West with small-scale communities around existing watersheds instead, in the fashion of Utah's Mormon settlements—which irrigation system was similar to the *acequia* communal system. He did so through a series of reports, and most notably through the *Report on the Lands of the Arid Region of the United States*, from 1878. Congress nevertheless preferred the free flow of homesteaders West, which did result in the resource monopolies Powell

[29] Gold was discovered in California in 1848, the year that the Mexican-American war was ended.

foresaw. Two decades later a prolonged drought forced legislators to revise Powell's recommendations (Cassuto 18), and in 1902 the United States Reclamation Service, later to become the Bureau of Reclamation, was created and started to control water distribution ("Brief History…"). Through this bureau the federal government subsidized the systemic building of large dams and reservoirs in the Southwest, until "a need for Reclamation for its own sake became ingrained in the national consciousness" (2).[30] Moreover, "[w]ithout a revised system of land management [this] subsidization […] simply helped entrench corporate control of the region's water" (18). This is in turn made possible the sprouting of large desert cities such as Phoenix or Las Vegas, the emergence of corporate mega-farms, and the considerable rise of taxes which affected small-scale agricultural communities in the region, resulting in more land and water losses on the part of numerous Chicana/o communities.

The land grant and water right losses suffered by the Chicana/o communities still linger in their cultural memory and identity. The works of fiction analyzed in this research that are set in northern New Mexico and southern Colorado in particular all present these "politics of memory and longing" (Kosek). These events ultimately meant that most Chicanas/os lost their farms and ranches, as well as access to common resources such as forests or streams, and therefore they lost their environmental sovereignty. Chicana/o environmental knowledge, their "longstanding knowledge of aridity, irrigation, and the local dynamics of flora and fauna," could no longer influence the environmental management of the region (Ybarra 38). Environmental knowledge and practices are often an integral part of Chicana/o cultural identity, and therefore the loss of this knowledge and practices affects the social cohesion of Chicana/o communities (see Kosek; and S. Rodríguez). As Vandana Shiva claims, "the destruction of resource rights and erosion of democratic control of natural resources, the economy, and means of production undermine cultural identity" (xii).

Water sources in the Southwest are nevertheless not limited to rivers, dams, and irrigation canals (modern or traditional). Underground water also plays a key role in most states. The Midwestern

[30] For information about the dams built in the U.S. see National Inventory of Dams.

states—Texas, New Mexico, Oklahoma, Colorado, Kansas, Nebraska, Wyoming, and South Dakota[31]—take copious amounts of water from the Ogallala aquifer, which is drying up. Articles such as "The Ogallala Aquifer: Saving a Vital U.S. Water Source" by Jane Braxton, published in *Scientific American* in 2009, or "What Happens to the U.S. Midwest When the Water's Gone?" by Laura Parker, published in National Geographic in 2016, offer a brief history of water use from the aquifer, and a portrait of the current situation of water depletion and its repercussions on the livelihood and the economy of numerous communities. While back in 2009 Braxton offered some hope in the future of the aquifer, as long as drastic measures were taken at a large scale, Parker writes about resignation and "managed depletion" seven years later, in the absence of said necessary measures. The articles also point to the fact that data about the exponential depletion of the aquifer have existed since the 1930s, if not earlier.[32] Industrial agriculture, mostly the cultivation of corn—a water-demanding crop—, growing populations, and privatization of groundwater are finishing up the formerly abundant subterranean water, regarded by all stakeholders as an extremely valuable resource. In the state of Arizona the underground aquifers have been overtapped since the 1920s. This has been possible mainly because underground water sources were not considered "contained" sources and therefore fell in a different legal category, not contemplated in the State's constitution:

> The 1919 code made water in definite underground channels subject to prior appropriation, but water percolating through cracks and holes in the earth escaped unnoticed.
> The result was strikingly undemocratic: in Arizona all water was not created equal. By failing to mention percolating water, [George] Smith helped create a legal fiction. Under the law there were two kinds of water: one contained by definite boundaries (a lake or stream, even an underground one), and another that dribbled freely, unrestrained through the ground. (Steinberg 92)

The "unrestrained" water was in turn deemed as a private property which anyone could dispose of as long as she or he owned a piece of

[31] Although this region is considered the "Midwest," Texas, New Mexico, and part of Colorado are part of the territories that were once Mexico, with areas fitting in the semi-arid bioregion of the Southwest.

[32] For in-depth academic studies of the Ogallala aquifer environmental history and the repercussions of its depletion in economic, agricultural, and social practices see Opie and Ashworth.

land over it.[33] The situation changed in 1980 with the drafting of the legislation that in time became the Groundwater Management Act.[34] This widespread tendency of private ownership, overuse, and exponential depletion contrasts with the sustainability and fairness of *acequias*, and with their underground replenishing system through seepage. On top of it all, climate change is affecting water levels, as Braxton notes in her article and as I briefly explain in relation to the decrease in precipitation (snow and rainfall) in Paper II.

Chicana/o "Goodlife" Writing as writing activism

After more than a century suffering from dispossession, discrimination, and growing invisibilization—partly a consequence of the loss of their environmental sovereignty—, countered by sporadic local acts of resistance and defiance, a new time started for Chicanas/os during the Civil Rights Movement in the 1960s.[35] In Delano, California, Cesar Chavez and Dolores Huerta were two key figures in the farmworkers protests against poor working conditions and pesticide poisoning in the fields. They led the 547 km protest-pilgrimage from Delano to Sacramento in 1966. Chavez moreover went on a 25-day hunger strike in 1972. Also in Delano Luis Valdez founded *El Teatro Campesino* (the farmworkers theater) in 1965, in support of farmworkers.

> the company created and performed "actos" or short skits on flatbed trucks and in union halls. Taking the "actos" on tour to dramatize the plight and cause of the farmworkers, El Teatro Campesino was honored in 1969 with an Obie Award for "demonstrating the politics of survival" and with the Los Angeles Drama Critics Award in 1969 and 1972. ("Our History," *El Teatro Campesino*)

All across the Southwest Chicanas/os moreover started organizing, protesting the high rates of Mexican-American casualties of the Vietnam War, as well as against police brutality, lack of political

[33] For more on the private character of underground water in Arizona see chapter 3 from Theodore Steinberg's *Slide Mountain: Or, The Folly of Owning Nature*.
[34] The history of water management in the U.S. Southwest is also explored in Paper I and more extensively in Paper II.
[35] It was at this time that the term Chicana/o was claimed by those leading the intellectual revolution in an attempt to undermine the previous pejorative connotations attached to it.

representation, poverty and dispossession, inadequate health care, and deficiencies in education. In Denver, Colorado, former boxer Rodolfo "Corky" Gonzales formed the social movement known as the Crusade for Justice in 1966 to deal with these issues (Vigil, 18), organizing the National Youth and Liberation Conference in March of 1969. Inspired by this conference Chicana/o students from a dozen university campuses formulated a plan for higher education in Santa Barbara in 1969, El Plan de Santa Barbara, which led to the creation of MEChA (Movimiento Estudiantil Chicanx de Aztlan), and of a Chicana/o Studies graduate program.[36] In 1967 Chicana/o youth from Los Angeles founded the Brown Berets (inspired by the Black Panther Party), to reclaim Chicana/o civil rights in California. In south Texas, José Ángel Gutiérrez founded the civil rights organization MAYO (Mexican American Youth Organization) in 1967, active in promoting voter registration among Mexican Americans. In 1970 Gutiérrez also founded the political organization Raza Unida Party, striving to get political recognition for Chicanas/os across the Southwest. Both were more militant formations than the already existing civil rights organization League of United Latin American Citizens (LULAC), created in Texas in 1929, the oldest Hispanic civil rights organization in the USA (League). Meanwhile in New Mexico Reies López Tijerina led a land grant crusading,[37] and all throughout the Southwest Chicana/o muralism developed in Mexican-American barrios—with its epitome in community projects such as Chicano Park in the 1970s, in San Diego. These social and cultural initiatives (some of which overtly had environmental implications, as in the case of the farmworkers campaigns against pesticides, and the New Mexican struggle for land grants), led to what is known as the "Chicano Renaissance" in the 1970s.[38] Since then, Chicanas/os have never stopped claiming their human and environmental rights as original inhabitants of the Southwest, which they started calling Aztlán.

Aztlán was the mythical, ancestral land of their Aztec ancestors located—at least in the imagination of the Chicanas/os who embraced

[36] MEChA is still an active student organization, with more than 500 chapters across U.S. campuses by 2012 (Estrada). See also MEChA.
[37] See page 34 for more on Reies López Tijerina land grant struggle in New Mexico.
[38] For more on the history and geography of these Chicana/o social movements see Estrada.

it—in the Southwest of the United States. One of the main texts during the Chicana/o movement in the 1960s was precisely a manifesto called: "El Plan Espiritual de Aztlán" (the spiritual plan of Aztlán), written by the Chicano poet and activist Alurista and promulgated at the National Youth and Liberation Conference of 1969. This text, together with "Corky" Gonzáles' celebrated poem *I am Joaquín* from 1967, and Alurista's book *Floricanto en Aztlán*, from 1971, served to bring Chicanas/os together in their struggle for social, cultural, environmental, economic, and political recognition in the United States. "Corky" Gonzales' epic poem delves into the many heritages and conflicting history of the Chicana/o community, with a mention to the U.S. annexation of what is currently the Southwest, and the broken promises:

> My knees are caked with mud.
> My hands calloused from the hoe. I have made the Anglo rich,
> Yet
> Equality is but a word–
> The Treaty of Hidalgo has been broken
> And is but another treacherous promise.
> My land is lost
> And stolen,
> My culture has been raped.
> (Gonzales 25-6)

"El Plan Espiritual de Aztlán," on the other hand, explicitly positions Chicanas/os history and heritage in Aztlán. By referring to their Aztec heritage and to Aztlán Chicanas/os established not only a physical, but also a symbolic link with the Southwest, in contrast to the Anglo-American political dominion over the region. Aztlán signaled a place of belonging, where "a Chicana/o individual or community dwells and embraces the ideals of dignity, sovereignty, freedom from prejudice, and opportunities for self-determination" (Ybarra *Writing* 21). "El Plan Espiritual de Aztlán" moreover presented a program to organize the Chicana/o community in a struggle to reclaim their sovereignty over the US Southwest, and called Chicanas/os into direct action arguing that: "Our cultural values of life, family, and home will serve as a powerful *weapon* to defeat the gringo dollar value system and encourage the process of love and brotherhood" [39] (Alurista, 2). In order to achieve this, writers and artists were asked to contribute with their work to the cause

[39] Emphasis added.

(ibid.). These two writers can therefore be considered to be writer activists, and their poetry examples of "*littérature engagée*." As Miguel Segovia claims:

> Alurista's "Floricanto en Aztlán" (1971) as well as Rodolfo "Corky" González's "I am Joaquín" (1967) are poems written in the spirit of raising social consciousness to create unity, collective solidarity, and cultural awareness. They describe the *raza*, the coming together of Chicana/os in spirit and collective oppression. (Segovia, 177)

Rob Nixon describes writer activists as those who are "…enraged by injustices they wish to see redressed, injustices they believe they can help expose. Silences they can help dismantle through testimonial protest, rhetorical inventiveness, and counterhistories in the face of formidable odds" (6). Numerous Chicana/o writers present socio-environmental critiques in their work. The novels under analysis in this dissertation (including those written by Anglo-Americans and by other ethnic minorities) can be considered examples of writer-activism due to their socio-environmental engagement. Their activism lies in the intersection of fiction and non-fiction, because of the stories' connection with and reference to recognizable contemporary issues, appealing to the readers' political engagement in socio-environmental conflicts, sometimes even calling them to action. Paper IV particularly explores the activism of some writers implicit in their work, and sometimes also explicit in the writers' statements, such as in the case of Arundhati Roy or Lars Svonni. Other writers such as Leslie Marmon Silko or John Nichols are also overtly political writers. Nichols has claimed that as a writer he "felt a need to be political in a way that can really affect people's feelings and change the nature of how they view the system that controls us" (Nichols, "John Nichols, John Backderf" 7:29-7:45). In another interview about his book *The Milagro Beanfield War* he claimed that he wrote the novel "basically to try and address all the social injustice, the cultural injustice, the economic injustice, the environmental injustice, that is essentially destroying the planet […]. I thought of the book as a universal statement" (Nichols, "John Nichols, The Urban Conga" 2:00-2:22). The analytical focus of this dissertation concentrates on the political critiques transmitted through the narratives themselves, and on the narratives' own rhetorical power. This dissertation moreover explores how Chicana/o literature in particular has played and still plays

a significant role in the resistance against Anglo-American domination and discrimination, exposing the social (and environmental) abuses taking place in the Southwest, and proposing alternatives.

Chicana/o literature can be considered in more or less inclusive terms. On the one hand it can refer to the broad spectrum of literature written by any Mexican in the United States; on the other hand, it could rather limit itself to a narrower perspective, that of literature written by Mexican Americans with roots in the Southwest, since its annexation in 1848. Finally, some scholars opt for a historical perspective including the colonial times and the texts of the first Spaniards who were in the region that is nowadays considered the Southwest. Luis Leal defines Chicana/o literature as:

> literature written by Mexicans and their descendants living or having lived in what is now the United States. We shall consider works, especially those dating before 1821, written by the inhabitants of this region with a Spanish background, to belong to an early state of Chicano literature. We are not overlooking the fact that before 1848 Mexican Americans legally did not exist as a group; they have, however, a long uninterrupted literary tradition. [...] Chicano literature had its origins when the Southwest was settled by the inhabitants of Mexico during the Colonial times and continues uninterrupted to the present. (18)

In this research Chicana/o literature refers to literature written in the United States since 1848, by people of Mexican descent, with a focus on works of fiction produced in and about the Southwest. Although there is certainly a continuum between the literature produced in the colonial times and Chicana/o literature, Mexican Americans (and therefore Chicanas/os) came to be with the annexation of the region by the United States in the mid nineteenth century, as Leal also points out. I would argue that this shift incorporated key new aspects and themes to the already existing literary tradition, which in time have come to characterize Chicana/o literature. These aspects and themes range from language variations such as bilingualism, code-switching, and "Spanglish," to new identity and social challenges, and the "politics of memory and longing" (Kosek). These politics in particular have been expressed in the "stories of origins and the injustices associated with the land [which] are both collective fictions and undeniable truths" (Kosek, 34). Chicana/o literature moreover often explores other environmental

injustices that result from the U.S. political and economic practices from which the Chicana/o community has traditionally been excluded.

Some (early) literary works that have contributed significantly to voice Chicanas/os socio-environmental concerns in more or less active/activist ways are María Amparo Ruiz de Burton's *Who Would Have Thought It?*, from 1872 and *The Squatter and the Don*, from 1885; Jovita González and Eve Raleigh *Caballero: A Historical Novel*, written in the 1930s—but published in the 90s; Fabiola Cabeza de Baca's *We Fed Them Cactus*, from 1954; and Tomás Rivera's *…y no se lo tragó la tierra*, from 1971 (later translated as *…And the Earth Did Not Devour Him*).[40] Priscilla Ybarra refers to Chicanas/os socio-environmentally engaged writing as "goodlife writing": "embrac[ing] the values of simplicity, sustenance, dignity, and respect. […] [I]ntegrating the natural environment as part of the community, and thus cultivat[ing] a life-sustaining ecology for humans" (Ybarra *Writing* 4-5).[41] On the other hand, some works of so-called *literatura chicanesca* date back to the 1940s. Some of this kind of "ally" literature has also contributed to raise awareness about Chicanas/os socio-environmental concerns. It has helped to present Chicana/o socio-environmental agency to the Anglo-American society (and beyond), hinting at the intrinsic value of Chicanas/os traditional environmental knowledge—already present (often in much more detail) in the Chicana/o literary works aforementioned.

Nowadays, as Ybarra notes, several studies and news articles point to Latinas/os/Mexican Americans as the ethnic group in the United States that is most concerned with the environment and with climate change, mainly because of the high exposure of their communities to toxic contaminants (3-4). Chicana/os preoccupation with the environment cannot be disentangled from their preoccupation with social justice, and this is reflected in their literary production. "Mexican American writings' engagement with environmental issues explicitly links environmental degradation to the larger oppressions of colonization, imperialism, modernity, and neoliberal globalization"

[40] For an ecocritical analysis of these early works see Ybarra.
[41] In line with socio-environmental philosophies like *Buen Vivir*. For more on *Buen Vivir* and its connection to goodlife practices see p. 31 and the article "Lands of Entrapment."

(Ybarra 18). Chicana/o literature therefore counters what Nigerian writer Chimamanda Ngozi Adichie calls "the danger of a single story" (Adichie). In a TED talk Adichie highlights the importance of the existence of multiple voices and stories in order to avoid simplification, prejudices, and cultural ignorance. In the same vein Italian scholar Stefania Barca claims that:

> Counter-hegemonic narratives have been instrumental in the construction of alternative regimes of truth, legitimisation of knowledge and, potentially, liberation – thus we should aim at uncovering those counter-narratives of resistance to environmental destruction that can be found in individual and collective memories, social movements' self-representation, fiction and non-fiction literatures and other forms of creative expression related to issues of environmental (in)justice. (Barca, "Telling the Right Story" 9)

The power of stories as a means of communication and the power of fiction as a means to imagine alternative social, economic, political, and environmental scenarios, allows for authors to transmit knowledges and address critiques in deep, meaningful, and necessary ways. Historian Dipesh Chakrabarty claims that "[a]n essential ingredient of the process by which humans make sense of crises in public life—or feel inspired to work towards solutions—is stories: narratives we tell ourselves in order to find our bearings in a new situation" (Foreword). Lawrence Buell on the other hand argues that the "environmental crisis involves a crisis of the imagination the amelioration of which depends on finding better ways of imagining nature and humanity's relation to it" (*Environmental Imagination*, 2), and Joni Adamson, in her reading of Sherman Alexie, asserts that "problems will never be solved until people begin imagining a new story, speculating about how things could be different. […] Imagination […] is the first step towards solution" (*American Indian*, 25). Imagination, Adamson continues, "plays a powerful role in the struggle for survival—for empowerment, recognition, and respect—and in peoples' emancipation from the oppression of material want, from domination by others, and from environmental degradation" (*American Indian*, 26).

In their subaltern literary universes Chicanas/os works help uncovering power imbalances by giving voice to invisibilized communities, and to their alternative cultural ideas and ways to see and interact with the world. This literature has historically been critical of the hegemonic U.S. culture which has perpetuated Chicana/os as "figuras

peyorativas (bandidos, tontos, ladrones, perezosos) que viven en condiciones abyectas" [42] (Le Doux 86. Leal, 30; LeDoux, 17, 65-66, 86-7). It reclaims Chicanas/os' environmental sovereignty by challenging these stereotypes, presenting different depictions of Chicanas/os as actively involved citizens, caring for communal wellbeing, and of Chicana/o culture as steward of environmental values and knowledge. Donna Haraway conjoins nature and culture in her political semiotics of articulation, proposing a shift like the one enacted in Chicana/o literature, moving subjects traditionally depicted as passive from representation to articulation, for "representation depends on possession of a passive resource" (313), in a way that "all the patterns, flows, and intensities of power are most certainly changed" (314). Haraway, in her theory of regenerative politics for inappropriate/d others, reflects on the politics of "artefactual social nature"—"at every turn co-inhabited and co-constituted by humans, land, and other organisms" (309)—, which proposes a "different organization of land and people, where the practice of justice restructures the concept of nature" (ibid.). In this context the traditionally represented (and naturalized) others reclaim their relationship with the natural environment, their authority deriving "*not* from the power to represent from a distance, *nor* from an ontological natural status, but from a constitutive social relationality in which the [natural environment] is an integral partner, part of natural/ social embodiment" (310, original emphasis). Decolonialist scholar Walter Mignolo moreover theorizes the takeover of historically oppressed knowledges through the "geopolitics of knowledge," which debunk the imposed colonial understandings of the world in colonized settings, promoting instead to develop local and traditional knowledges produced by colonized peoples ("Geopolitics"; *The Darker Side*).

[42] Pejorative figures (bandits, dumb ones, thieves, lazy ones) who live in abject conditions (my translation).

5

Summary of Research Papers

The four papers included in this dissertation address ongoing debates about water (mis)management in the U.S. Southwest and other locations around the world, moving from a local to a global perspective. Paper I addresses how the developmental paradigm at work in the U.S. Southwest affects Chicana/o communities, and how the novels perceive that it has a negative impact on communal and traditional irrigation systems, altering the overall socio-environmental balance of the region. The novels denounce the lack of environmental democracy in the resource management of the region, particularly in relation to the administration of water. Paper II further reflects on the disparate environmental ethics behind water management that exist in the region, and the power imbalances that sustain certain practices to the detriment of others. It analyzes how several novels about the Chicana/o experience, as well as about the socio-environmental struggles of other ethnic minorities in the region, hypothesize about the transformation of this lack of environmental democracy into forms of urban eco-disparity and eco-apartheids through futuristic technologies. Paper III analyzes subaltern narratives that move across the U.S.-Mexico border in order to expose the power imbalances that foster toxic traumas. According to the corpus, these traumas affect the environmental health and wellbeing of numerous Chicana/o communities on both sides of the border. The paper analyzes the ongoing (writer) activisms that address these persisting problems, and traces the pervasive environmental injustices across bodies, borders, and policies. Lastly, Paper IV extends its geographical scope along the American continent and overseas, to Sweden and India, in an analysis of the rhetorical devices used in the dam and particularly

the anti-dam discourses and subaltern (writer) activist narratives. It analyzes the relevance and power of rhetoric not only in written and visual narratives but also in the environmental debate, deconstructing recurrent rhetorical strategies, their advantages and pitfalls.

Paper I: "Progress and Development According to Whom? Reflections from the margins."

"Progress" and "development" are two relatively contemporary terms, semantically (and often contextually) related to concepts such as advance, growth, or improvement. They are predominantly Western concepts, and consequently not all cultures perceive (or even conceive) these terms in the same way. Indian critic Vandana Shiva uses the alternative term "maldevelopment" to stress the negative socio-environmental costs that oftentimes result from the imposed developmental paradigm. Human ecology scholar Alf Hornborg, on the other hand, theorizes the power imbalances behind resource extraction and the developmental logic through concepts such as "unequal exchange" and "asymmetric flows of energy." The developmental paradigm can also be analysed from the perspective of "structural" and "slow violence," as formulated by Johan Galtung and Rob Nixon, deconstructing its "technospeak" rhetoric.

In the U.S. Southwest the principles of the developmental paradigm are juxtaposed with the alternative understanding portrayed in Chicana/o literature and culture, which offer a wider understanding of well-being encompassing the natural environment. In this context, dams, conservancy districts, and luxury Venice-style cities in the desert are thus compared to socio-environmentally sustainable irrigation methods such as the traditional *acequias*, in the writings of Frank Waters, John Nichols, and Rudolfo Anaya. Mindful of the risk of falling in the myth of the "Ecological Indian" formulated by Shepard Krech III, this paper analyses the affected Chicana/o communities (in literature and real life) from the perspective of what Ramachandra Guha and Joan Martínez Alier term as "ecosystem people," and explores how Chicanas/os knowledge and practices can contribute to ecological democracy.

Paper II: "The Water Apocalypse: Venice desert cities and utopian arcologies in Southwestern dystopian fiction."

Numerous stories have, and are being written in both criticism and fiction about the future of the United States Southwest, and nearly always that future is considered to be closely linked to the vicissitudes of water. In a multidisciplinary work that combines ecocriticism, environmental history, and decolonial theories, this paper analyzes the socio-technological complexities behind water (mis)management in the Southwest with a focus on urban environments, and their socio-environmental consequences.

A lush sprawl development called Venice is proposed in Arizona in Leslie Marmon Silko's *Almanac of the Dead*. In the same line, Chicano author Rudolfo Anaya presents struggles over water rights and plans for turning Albuquerque into a "'desert Venice'" city in his novel *Alburquerque*. Fictional plans like these become very real when one reads the posts and news about the water-demanding Santolina sprawl development currently proposed for Albuquerque's West side. On another note, Paolo Bacigalupi's last novel, *The Water Knife* presents arcologies (self-contained, self-sufficient buildings) as an option to escape what he perceives will be a hellish region when climate change worsens and water underground levels are eventually depleted. Migration, xenophobia, and environmental re-adaptation then become central issues to consider. A nuanced decolonial analysis of these dystopian narratives brings into question current decision-making around water management in the Southwest through the perspectives of these authors. If one argues that the environmental degradation of the arid Southwest is partly a consequence of the cultural oppression of the native local inhabitants, by imposing an inappropriate socio-environmental culture and ethics over the region, dystopian novels such as these become all the more relevant when proposing alternative futures.

Paper III: "Lands of Entrapment: Environmental Health and Wellbeing in Literature about the U.S. Southwest and Chicana/o Communities."

Through a broad overview of Southwestern literature this paper analyzes the environmental degradation of the United States Southwest and its connection to the health and wellbeing of Chicana/o communities (also addressing their Mexican and Pueblo neighbors). It does so in two steps, first it analyzes toxic narratives about agricultural and industrial areas from the perspective of (mental and somatic) "toxic trauma;" secondly it explicates the connection between the loss of land grants and water rights, environmental degradation, poverty, unemployment, and substance abuse in New Mexico. The analysis draws from Priscilla Ybarra's "goodlife writing," Maria Herrera-Sobek's "aesthetic activism," Linda Margarita Greenberg's "pedagogies of crucifixion," and Jake Kosek's "politics of memory and longing;" as well as from Sylvia Rodríguez's work on acequias and Joni Adamson's work on environmental justice, with references to Stacy Alaimo's theory of trans-corporeality.

The narratives—*Heroes and Saints*, *Under the Feet of Jesus*, *Cactus Blood*, *So Far From God*, *El Puente/The Bridge*, *People of the Valley*, *The Milagro Beanfield War*, and *Alburquerque*—echo the work of many activists and associations across the Southwest struggling for environmental justice. Their focus on water, in line with the popular motto "el agua es vida/water is life," moreover parallels the current opposition to the Dakota Access Pipeline. Through "goodlife" values these narratives, while proposing means of resistance and/or viable alternatives, unveil how the environmental health issues affecting the wellbeing of both the land and the peoples of the Southwest are an entanglement of social, cultural, political, economic, and environmental factors.

Paper IV: ""Dam a River, Damn a People?" Subverting dams in/through subaltern narratives."

This paper analyzes how the symbolism of dams as material representations of Nation and Progress can be subverted through literary tropes in a set of subaltern narratives: *People of the Valley*, by Frank

Waters; *The Milagro Beanfield War*, by John Nichols; *Almanac of the Dead*, by Leslie Marmon Silko; *Solar Storms*, by Linda Hogan; the documentary *People of a Feather*, by Joel Heath and the community of Sanikiluaq; *Överskrida Gränser* [Transgressing Borders, our translation], by Lars Svonni; and the article "The Greater Common Good," by Arundhati Roy. We show how in these narratives dams come to represent environmental degradation and cultural disintegration resulting from the slow violence brought about by the imposition of these infrastructures. The narratives, all examples of writer activism, portray what May-Britt Öhman terms "invisibilized" ethnic minorities in the Sami context—or "unimagined communities" in the work of Rob Nixon—resisting real and fictional dam projects in several different locations around the world: the U.S. Southwest, the U.S. Northeast/Canada's Southeast, northern Sweden, and western India.

6

Concluding Remarks

Mexican-Americans lost their environmental sovereignty, their capacity to freely access and manage the natural resources of the territories they inhabited, when the territories that nowadays constitute the Southwest were annexed by the United States. From that date onwards Mexican Americans, native or migrated, have been forcefully relegated to the role of witnesses, and often also victims, of the socio-environmental exploitation and degradation that ensued. They have, nevertheless, often challenged and even subverted such a passive role as the selected literature explores and proves. This dissertation exposes and analyzes the connections between the environmental problems of the Southwest (particularly those due to water mismanagement), the lack of wellbeing of numerous Chicana/o communities, and a threat to their cultural identity and traditional environmental ethics and knowledge, as portrayed in the literary works under analysis. It moreover connects these struggles to similar ones in other parts of the world. Through the perspectives portrayed in the corpus, it exposes and deconstructs the critiques of the failure of the modern, colonial, and/or neo-liberal ideals of progress and development as applied in the regions under analysis, understood as intensive exploitation of natural resources and people's labor.

The four different research papers explicate the subaltern and political character of the corpus. Paper I deconstructs how several counter narratives about the Chicana/o experience critique the imperative power imbalances, technocratic hierarchies, and lack of ecological democracy that are perpetuating maldevelopment in the Southwest. The literature becomes a platform to depict the environmental knowledge of

Chicana/o communities and the socio-environmental sustainability of traditional irrigation systems. In so doing it challenges the hegemonic environmental paradigm that abstracts nature into a commodity ignoring its cultural value and its environmental complexity. Paper II explores the potentials and deficiencies of dystopian narratives that hypothesize about the effects of socio-environmental inequality in present and future Southwestern urban ecologies, mainly in the shape of eco-apartheids. It presents dystopian narratives not only as admonishments but also as warnings, reminding the readers of past failures in resource management, and pointing to their reenactment in current policies. It moreover deconstructs the socio-environmental alternatives suggested in the novels, noting their common message, which proposes multi-ethnic alliances—ecological democracies—to counter the global socio-environmental crisis. Paper III unveils how literature manages to transmit the bodily and mental traumatic effects of resource mismanagement in agricultural and industrial areas of the U.S. Southwest and the southern border, through aesthetic visualizations and pedagogic representations that foster empathy and solidarity. Its trans-national analysis moreover connects international economic agreements, national borders, and human as well as toxic flows. On the other hand, this paper exposes how resource dispossession not only affects cultural identities but also human health. Lastly Paper IV analyzes the rhetorical strategies of literary tropes in socio-environmental discourses produced in different parts of the world. The paper explores how figures of speech are commonly used in order to justify as well as criticize infrastructural projects. In both cases a strong rhetoric is built, addressing the general public with powerful imagery. Pro-infrastructural discourses appeal to feelings of national pride and identity and promises of grandiose and democratic progress. The narratives from the corpus nevertheless dismount such discourses through tropes such as irony, allegory, and synecdoche. They turn each story into the narration of a violent imposition of hegemonic values that further invisibilize discriminated communities, and that shutter sustainable socio-environmental continuums. Moreover, they show how empathy becomes a powerful tool of subversive literature in its debunking of technocratic regimes.

As a whole, this dissertation benefits from encompassing fiction and non-fiction narratives with local, regional, and transnational scopes. The transnational scope of certain plots and the transnational analysis of some of the papers draw connections between resource exploitation and water mismanagement, economy, politics, racism, violence, and physical and mental health at a global scale. This transnational perspective debunks the regional character often associated with ethnic studies. The pro-active character of the narratives moreover helps countering the crisis of the imagination, which is part of the current environmental pessimism and crisis. Overall, this research asserts the interrelation of social and environmental issues in Chicana/o thinking and identity, as well as in the thinking and identity of other subaltern groups. It challenges traditional understandings of "environment" and "nature," which in the narratives become co-integrative elements of everyday social concerns. In this context literature becomes pivotal in reclaiming environmental sovereignty—recalling, perpetuating, and producing socio-environmental knowledge—, in asserting cultural identities, and in imagining alternative managerial practices and socio-environmental relations, as much as in challenging cultural hegemonies. Literature becomes a pro-active, creative strategy, and not simply a literary reaction to oppression. By exploring its power in shaping discourses, transmitting values, and practices, and even influencing the political positioning of the readers, this research conveys how literature articulates the Chicana/o community and other ethnic minorities as they shift their position from victims to agents of their own destiny. It moreover foregrounds nature, by depicting the active role of water in stories of socio-environmental injustice.

In general terms, an environmental humanities research with an environmental justice perspective can be used to encourage students not only to discuss the role and the power of literature, but also to look beyond the purely literary analysis into a politico-ecological reconsideration of the resource politics of a nation and their socio-environmental repercussions, while considering the power and effectivity of different rhetorical strategies. A transnational analysis, like the one in Paper IV, can moreover further the critical and comprehensive character of any such study. This is particularly relevant in light of the

numerous socio-environmental conflicts taking place all around the world. The nuanced readings and analyses from this research particularly challenge recent political events taking place in the United States by showing the complex social, cultural, economic, and environmental entanglements in manners and forms that are accessible and informative.

In light of the election of Donald Trump as president of the United States in 2016, this dissertation shows why building a "wall" will not erase the multicultural character of the Southwest or the nation or stop its dynamism, nor will it keep the global socio-environmental crisis away from the country with the biggest ecological footprint of the planet. This dissertation also helps deconstruct the complex socio-environmental repercussions at local, regional, national, and transnational levels of projects currently approved by the Trump administration, such as the Keystone XL and the Dakota Access Pipelines. In Europe, an environmental humanities approach can also be applied to socio-environmental struggles past and present, such as the Sami opposition to the hydropower project at Alta, Norway, in the 1970s and 80s, and the current Sami opposition to iron ore mining in *Gállok*/Kallak, to name two socio-environmental struggles led by ethnic groups. Environmental humanities projects, through their interconnecting endeavor, show how humanities disciplines, culture, and the arts are key elements in the reconsideration of hegemonic systems in the global crisis. Now they are reclaiming their space to come sit at the negotiating table.

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RESEARCH PAPERS

PAPER I

Progress and Development According to Whom?
Reflections from the margins

María Isabel Pérez Ramos

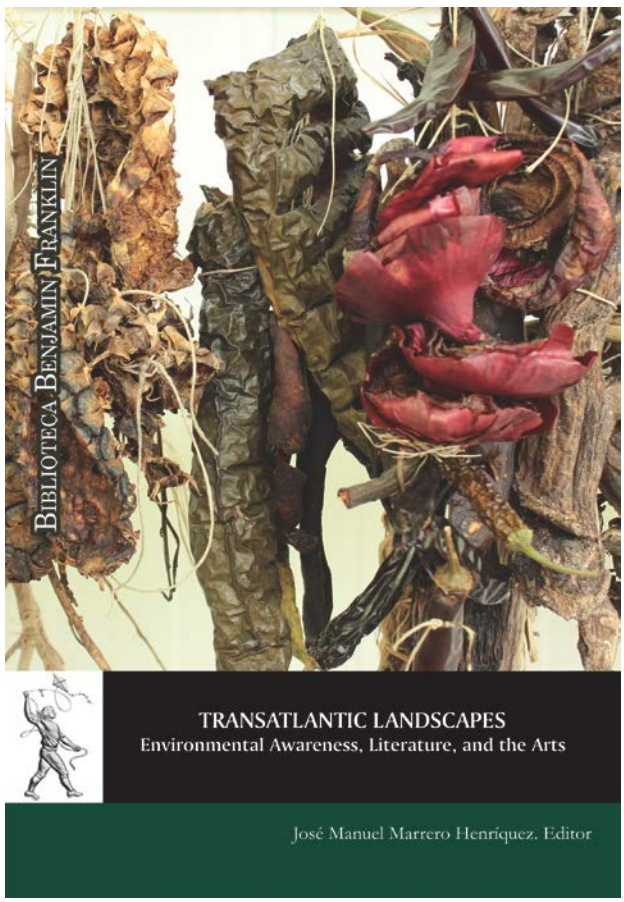

Figure 6: Book cover *Transatlantic Landscapes.* Fernando Casás *Plantas 01* (detail) work-in-progress since 1962. Dried plants, fruits, roots, and string.

Introduction

[p.95]* Being part of a community (socially, culturally, and politically) implies having some common concepts, frameworks and vocabulary that give coherence to the group, forming their identity. This identity might be imaginary, as Benedict Anderson claims, but as he well argues it is also strong enough to convey the necessary sense of unity and coherence. Most of those terms, of that vocabulary, are assumed by the members of the community and tend to be naturalized, forgetting that they are social constructions decided upon by the community itself. The consequences of naturalizing some concepts derive in and from the way in which said group perceives the world, and therefore also affects the way in which the group is going to interact with it.

"Progress" and "development" are two central terms nowadays shaping, among other aspects, the (environmental) future of the world and its natural resources. The first question to be asked is: what do progress and development mean?

According to the Oxford English Dictionary online some of the meanings for progress are[1]:

> I. The course or process of a series of actions, events, etc., through time; advancement through such a course.
>
> 1. Progression or advancement through a process, a sequence of events, a period of time, etc.; movement towards an outcome or conclusion. […]
>
> 2. *spec.* Advancement to a further or higher stage, or to further or higher stages successively; *growth; development, usually to a better state or condition; improvement; an instance of this*.[2] Freq. ***to make progress***.
>
> In later use applied esp. to manifestations of social and economic change or reform.

In relation to the second term, to develop,[3] some of the definitions, relevant in the context of this paper, are: [4]

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* The page numbers of the original edition are included in in-text square brackets to indicate the start of any new page in the original edition. The punctuation has been slightly revised in this edition.

[1] Since the interest of this paper will focus on social and environmental matters, only the definitions related to the topic will be provided for both terms, to avoid too long a quotation.

[2] My italics.

> [p.96] 3.f. To *realize the potentialities* of (a site, estate, property, or the like) by *laying it out*, *building*, *mining*, etc.; to convert (*a tract of land*) to a new purpose or to make it suitable for residential, industrial, business, etc., purposes.[5]
> 5.a. To bring forth from a latent or elementary condition (a physical agent or condition of matter); to make manifest what already existed under some other form or condition.

After reading these definitions, one could conclude that: land (which in most contexts can be identified with nature) in its "elementary condition" is "underdeveloped." Moreover, as the word development is used to define progress, one can also imply that: "developing the land" is a way "to make progress."

These definitions and what they imply are part of the Western mentality that is taking over the world, and are deeply ingrained in the cultural, social, economic, and political realms. The concept of development as a means to "relieve the suffering" of those in "underdeveloped countries," mainly caused by poverty, was established after U.S. President Truman included it as the fourth point of his "program for peace and freedom" in his Inaugural Address, in 1949 (Truman). This aspiration, later embraced by other Western countries, is long thought to have failed. Professor Gilbert Rist, who offered a detailed historical analysis of the concept of development, claims in the introduction that "development has gradually been drained of content, so that it is now a mere residue used to justify the process of globalization" (Rist, 6).

In this context it is necessary to mention that the term development has been used, after the Brundtland Report was issued in 1987, as part of the compound "sustainable development." According to the contemporary definition of the term provided by the World Bank, an institution actively engaged in sustainable development projects:

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[3] I chose to define the verb to develop instead of the noun development because I found the wording used to define it more significant, although both the verb and the nound convey the same meanings.
[4] The first two definitions being out of use/archaic.
[5] My italics.

> Sustainable development recognizes that growth[6] must be both inclusive and environmentally sound to reduce poverty and build shared prosperity for today's population and to continue to meet the needs of future generations. It must be efficient with resources and carefully planned to deliver immediate and long-term benefits for people, planet, and prosperity. […]The three pillars of sustainable development [are] economic growth, environmental stewardship, and social inclusion. (*Sustainable development*)

Both the concept and practice of sustainable development have been subject to criticism in various fields. The degrowth literature (from the Club of Rome to Serge Latouche), is well-known for questioning the equation "development = progress." Another critical example can be found in Marxist analysis, which presents the (hidden) agenda of the development policies as another name for capitalist globalization. Nevertheless in the case of this paper I will refer to the simple form development, the main reason being [p.97] that the examples under analysis (about developmental projects in the US Southwest) have no sustainable character whatsoever.

Overview

By combining concepts from ecocriticism, environmental history and human ecology I will analyse the (social and environmental) problems posed by the concepts of progress and development in the U.S. Southwest. In the theoretical section I will refer to Vandana Shiva's concept of maldevelopment, Alf Hornborg's ideas about unequal exchange and asymmetric flows of energy, the dichotomy of poverty as subsistence versus misery as deprivation, Rob Nixon's reflections on structural and slow ways of violence, and Arundhati Roy's and Devon Peña's critique of technospeak. In the second part of the article I will focus on the Southwest of the United States and a cultural group, the Chicanos, and how the Western concepts of progress and development (fail to) work in said region and for that cultural group. Finally, I will address the topic of the idealization of the native peoples as "ecological Indians" (Shepard Krech III), in contrast to the concepts under analysis.

[6] It is worth noting that economic growth is tightly linked not only to ideas of development, but also of sustainable development.

Theoretical Concepts

The terms of progress and development and their definitions have been/are questioned in many ways. One academic who has been active in criticizing them is Vandana Shiva, who, as if answering the aforementioned conclusions, claims in her work *Staying Alive*:

> it is assumed that production takes place only when mediated by technologies for commodity production, even when such technologies destroy life. A stable and clean river is not a productive resource in this view: it needs to be developed, it needs to be 'developed' in dams in order to be so (Shiva 2002, 4).

In answer to this, Shiva coined the term "maldevelopment:" "Development, thus, is equivalent for maldevelopment, a development bereft of the feminine, the conservation, the ecological principle. […] [T]he paradigm of maldevelopment […] sees all work that does not produce profits and capital as non or unproductive work". (4)

Shiva, in her critique of this Western-based idea of development addresses the topic of technology as going hand in hand with the terms under analysis. In the OED definition of to develop, the technological implications are also present when the definition refers to building and mining as two ways of obtaining development. These two activities are largely dependent on tools and technology, and also quite damaging for the environment. As Shiva concludes, development is often ironically dependent of the side-destruction it tends to create.

[p.98] In a paper about energy, distribution, value, and power, human ecologist Alf Hornborg also argues, that "production is destruction. […] Finished products must be priced higher than the inputs […] but inexorably represent less available energy" (52). His is a comparative study of energy and economic flows, where he explains how resources are turned into energy, which is used to produce goods through technology, and all that is translated in a virtual (but still very real and powerful) economic value.

Hornborg questions the ideas of power and progress, while analysing the role of technology in societies and in economy. He writes about unequal exchanges (when either labour or energy value are being underpaid) and asymmetric flows of energy (resulting from the fact that the resources are taken mostly from poorer countries and communities),

while most of the energy, the technology, and the goods that result from it go to the rich ones. He claims that industry and technology are identified with progress, and said progress is mainly achieved by appropriating said resources "from an increasingly impoverished periphery" (49).

The point here is, rather than a critique of technology per se, a critique of an excessive reliance on it, combined with power imbalances and a disregard of the negative (ecological and social) consequences that might derive from its production and/or use. There is also a critique of the Western value system, where resources (and nature in general) are regarded as valuable as long as some monetary profit can be made out of them, which implies "developing" them by using technological means.

This tension between natural resources and processed goods, in turn, relates to the dichotomy of "poverty as subsistence" and "misery as deprivation":

> Culturally perceived poverty need not be real material poverty: subsistence economies which satisfy basic needs through self-provisioning are not poor in the sense of being deprived. Yet the *ideology of development*[7] declares them so because they do not participate overwhelmingly in the market economy and do not consume commodities produced for and distributed through the market *even though they might be satisfying those needs through self-provisioning mechanisms*.[8] (Shiva,10)

The fact that the "ideology of development" (as Shiva puts it) and its connection to the capitalist/consumerist economic model does not leave any space for subsistence economies implies much more than the mere adaptation of said communities into the new economic system. As argued by numerous critics (such as those quoted in this text), and as claimed in the literary works of numerous authors from minority groups (such as the Chicanos), those communities are often dragged into the new economic system, often lacking the necessary skills (such as lack of education and communication problems, often enhanced by race and class issues) to join it in equal terms. As a consequence, when deprived of their means for subsistence and integrated into an [p.99] unjust system they might end up suffering from said misery as deprivation. Moreover, as Hornborg points out, in the current system there has to be two

[7] My italics.
[8] Italics in original.

different groups: those who are deprived of the natural resources (i.e., their means of subsistence) and/or provide the underpaid labour; and those who enjoy those resources, often translated into commodities through the use of technology.

These forms of progress and (mal)development, as they relate to the theories of asymmetric distribution and unequal exchanges, often derive in special kinds of violence for those who fail to integrate into the system. In his book *Slow Violence* Rob Nixon refers to Johan Galtung and the term "structural violence" only to go a step further and coin the term "slow violence." In both of these concepts dealing with violence the agency is hidden or difficult to track. Galtung's term highlights how some kinds of violence stem from established social, cultural, political or economic structures (e.g., racism).

> the structural violence embodied by a neoliberal order of austerity measures, structural adjustment, rampant deregulation, corporate megamergers, and a widening gulf between rich and poor is a form of covert violence in its own right that is often a catalyst for more recognizably overt violence. (Nixon 10-11)

Nixon's term, on the other hand, adds a new dimension with the use of the adjective slow. This kind of violence, characteristic in scenarios of environmental degradation, takes quite some time to manifest and is therefore difficult to measure, to stop in time and often to attribute to those responsible. Climate change is an example of said type of violence: it is produced by the human race, but it is difficult to trace, to measure and to attribute to a concrete culprit, and therefore is really difficult to stop. Both types of violence are quite dangerous, as they integrate into and often derive from the prevailing systems.

Finally, there is another related aspect worth mentioning in this theoretical section: progress and development are terms often used in the so-called technospeak. Technospeak is the name often attributed to the kind of specialized, detailed language often used in science and technology, which sets whatever knowledge as inaccessible for the layperson.

Another aspect often attributed to this kind of language is its tendency to be impersonal, naming neither the agents nor those affected by their actions. Nixon, when referring to Arundhati Roy's work says:

"this was her primary contribution to the NBA[9] and to the international environmental justice movement: to expose the insidious, traumatic violence inflicted on the most vulnerable, human and non-human, by the affectless language of technospeak" (169).

[p.100] Chicano critic Devon Peña gives a good account of experiencing the power of technospeak in the legal arena. When talking about a trial at the water court in Colorado, Peña relates how the judge warned that he did not want it "to get emotional. This was a purely legal and scientific matter" (252). Later on in his account he adds:

> The trial was an obscene, one-sided, five-day exhibition by expert hydrologists, geologists, engineers, and lawyers who stalked well-worn legal and scientific terrain.
> […] They cited all the correct sources and outlined all the appropriate water law case histories. *The piles of charts, maps, surveys, and experts depositions were all neatly in place* (and *so terribly inaccessible*). The absurdity of the arguments […] was obvious to us, but they really seemed to believe that cyanide leaching and strip-mining are environmentally sound. Scientists can be perpetrators and victims of their own scientific delusions. They worship at the altar of *technological fixes*. (252)[10]

Once again, technology, development and progress seem to go hand in hand, as Peña's last sentence points out. Peña's feeling of impotence is clear throughout the text, and his unease increases when confronting the combination of technospeak and the legal system. "I often think of laws as dead letters. But this was more the case of the law using language, stripped of its ethical core, to legitimize the destruction of life and make death acceptable" (Peña 256).

The use of technospeak also contributes to generate structural and slow violence, by making information inaccessible to those affected and by masquerading the long-term effects most developmental actions might have on the poor and the vulnerable.

Progress and Development under Analysis

My field of research being Chicano literature and the US Southwest, I will then proceed to analyze the concepts of progress and development in relation to several Chicano literary works. Although first

[9] Narmada Bachao Andolan.
[10] My italics.

I would like to present both the area and the cultural group, and the ways in which the concepts of progress and development are problematic in this context.

The U.S. Southwest

The Southwest of the United States is a complex region for different reasons. On the one hand it is not that simple to locate it on a map. Secondly, its geographical characteristics have granted it quite a bad fame, especially since the arrival of the Anglo-Europeans. Moreover, it has a history of continuous colonizations up until 1848. Finally, the US cultural imagination has blended the picture of the Wild West with that of the southwestern territories, giving them a popular, highly identifiable and immensely idealized identity, hard to overcome.

[p.101] As geographer D. W. Meinig put it: "The Southwest is a distinctive place to the American mind but a somewhat blurred place on American maps, which is to say that everyone knows that there is a Southwest but there is little agreement as to just where it is" (Meinig as quoted in Lynch 2005, 38). The Southwest can be mapped in different ways: from a bioregional perspective, as Tom Lynch does in his work *Xerophilia*, highlighting the desert regions and the mountainous areas; from a political one, talking about the states that constitute it; or from a historical one, looking back at the Mexican-American war and the treaty of Guadalupe-Hidalgo. Nevertheless, these maps, if superimposed on top of each other do not provide a heterogeneous area,[*] on the contrary they show how some state boundaries do not fully match the old Mexican territories and/or the bioregions that supposedly constitute the area (e.g., only a part of Colorado happened to belong to Mexico before 1848, the same part that belongs in the bioregion presented by Lynch; on the contrary, all of present day California used to be Mexican territory, while only the Southern area of the state could be classified as part of the Southwestern bioregion).

This area contains most of the deserts of the American continent: part of the Chihuahuan Desert (the biggest desert in North America), the Mojave Desert, The Sonoran Desert and The Great Basin Desert (this last

[*] Note April 2017: the appropriate term should be "homogeneous."

one, the biggest in the United States, being a cold desert). The combination of all these bioregions turns the Southwest into a quite arid, dry area.

Despite this general aridity, geographer Yi-fu Tuan already pointed out that the impression the different colonizers had of the place differed quite some. While the Spaniards, coming from central Mexico, thought that the place was not as dry, noting the presence of streams and even green pastures, the Anglo-Europeans, who came from the green Eastern part of New England found it barren and stark (67). It is also to be noted that since the time of the European colonizations of the continent the Southwestern landscape has been greatly affected by overgrazing and deforestation, which have contributed to its aridity.

The different ways in which the place has been perceived by the different cultural groups that have inhabited it have had a great impact in the environmental (mal)development of the place. Tuan makes an interesting reference in his work, when talking about Herbert Gans and his study of Boston's West End. Gans concluded: "the outsider's view, even when it was sympathetic and generous, depicted a world alien to the native resident" (as quoted in Tuan, 65). In a similar way, it is possible to see how the perceptions of all colonizers, even when it was a positive one, still differed from the one the local inhabitants had of the place. In the case of the Anglo-Americans, and their negative perception, the gap between the locals and the new inhabitants has resulted in a cultural and environmental clash still unreconciled.

[p.102] Going back in time it is possible to see how late nineteenth-century Anglo-American authors, such as Willa Cather, were shocked by the US landscapes and diverse ecosystems, of which the Southwest seemed to be the most disconcerting of all. Certainly, the Southwest appeared as the most alienated of all the American territories Cather presented in her works. Furthermore, "[J.B.] Jackson notes that nineteenth-century Anglo-American explorers "believed the desert began somewhere in Kansas. To them, any region without trees and not adapted to traditional eastern methods of farming was desert"" (as quoted in Peña & Martínez, 175).

Assuming that the particular ecosystems, or even bioregions, that constitute the Southwest have been and are considered (by the Anglo-

Americans) to be extremely arid and therefore "naturally" unsuitable for the Eastern living practices, it is logical to anticipate that the way to "make the best out of" these ecosystems and to "develop" them to adapt them to the Anglo-American way of life and its corresponding idea of progress, differed from the idea the local inhabitants, presumably already adapted to the place, might have.

A good example of this is the different water laws that have been applied in the area. Traditionally, in the Southwest the water was distributed equally to all parties through acequias, or earth irrigation diches.

> The customary law of the acequia derives from Roman, Spanish, and Arabic sources. Five basic principles underlie acequia customary law: (1) the communitarian value of water, (2) the non-transferability of water, (3) the right of thirst, (4) shared scarcity, and (5) cooperative labor and mutual aid. (Peña 2005, 82)

With the arrival of the Anglo-Americans though, the doctrine of prior appropriation was installed, according to which the firsts to get access to water had a right over it (Peña 1998: 250). The system originated at the time of the Treaty of Guadapule Hidalgo, also the time of the gold rush in California, and attended mostly to economic interests. Said change, related to something as relevant as water access and distribution in a desert region, had important economic and environmental consequences, which in turn affected social and power relations all over the Southwest. Those who got access to the water in the area got the power, and due to the new legal system, the new language and the new social rules imposed by the newcomers, mostly the Anglos got hold of it.

Chicanos

Chicanos are some of the oldest inhabitants of the Southwest, former Mexicans who nowadays combine Native American, Spanish, and Anglo-American blood in their veins. After the Mexican-American war these Mexican inhabitants became [p.103] United States citizens, pejoratively called Chicanos, and were relegated in their own land to be the lowest social class. They possessed land grants and water rights acquired from the Spanish king and ratified both by the Mexican, as well

as by the United States government. These land grants were soon revoked by the United States, (not always legally/very ethically, but very effectively) by different means and for different reasons. Several commissions and committees were created in the nineteenth century to revise (Chicanos') land claims such as the Public Land Commission in California, in 1850, or the United States Court of Private Land Claims in 1891. A combination of unclear/undefined boundaries, lost documents, population lack of awareness, and economic interests resulted in speculation and fraud and numerous Chicanos lost their land claims (Beck and Haase, 1969; 1989). This contradicted what was stipulated in the Treaty of Guadalupe Hidalgo after the war and forced most Chicanos to either abandon their work in the fields or work as laborers for Anglo masters.

As a minority group with a long agricultural tradition, they have been especially exposed to the environmental degradation of the region. Chicano literature, as well as what is known as *literatura chicanesca*,[11] has often been used as a tool to voice the social, cultural, and environmental abuses. Some well-known examples are works such as Tomás Rivera … *y no se lo tragó la tierra* (1971), and what is known as The New Mexico Trilogy (1974-1981), by the Anglo-American writer John Nichols. Other earlier Chicano literary works relevant in the general Chicano social struggle, with references to Chicanos' right to the land, are Rodolfo Corky Gonzales poem *Yo Soy Joaquin*, from 1967, and Alurista's *Plan Espiritual de Aztlán*, first delivered in 1969 at the first Chicano Youth Liberation Conference.

Selected literary works and authors

It is in this geographical and cultural context that the works of Frank Waters, John Nichols and Rudolfo Anaya were composed.[12] In *People of the Valley* (1941, by Waters), *The Milagro Beanfield War* and *The Magic Journey* (1974 & 1978, by Nichols), and in *Alburquerque* (1992, by Anaya), one of the central topics is the clash between the

[11] According to Francisco Lomelí and Donaldo Urioste's classification (*Chicano Perspectives in Literature*, 1976), being the works by non-Chicanos writing about Chicano issues from the Chicano perspective.

[12] Both Waters and Nichols' works were listed by Francisco Lomelí and Donaldo Urioste as *literatura chicanesca*.

Anglo-American understanding of progress and development, on the one hand, and the Chicano and Native American perception on the other.

The reason to choose these novels is that all of them take place in nearly the same geographical area, Waters' deals with a rural area in the Sangre De Cristo Mountains; Nichols' deal with small, forgotten towns in the Upper Rio Grande Bioregion, (both authors referring to the area of northern New Mexico and southern Colorado),[13] while Anaya's focuses in the urban environment of the city of "Burque" and the surrounding farming areas.

[p.104] Apart from the setting, the novels also share environmental justice awareness mainly exemplified in a concern for water use and water rights: Waters' novel deals with the building of a dam in a hidden valley, Nichols' *The Milagro Beanfield War* criticises the loss of water rights on the part of the local inhabitants of little Milagro village, and later, in *The Magic Journey*, he explains this process in more detail in relation to a close-by town: Chamisaville (a town that resembles existing places such as Taos, New Mexico); and Anaya fictionalises a crazy scheme to turn dry Albuquerque into a "desert Venice."

Concerning the authors, by analysing not only Chicano authors, but also non-Chicanos familiar with the place, the peoples and the history, it is possible to get a better, wider, picture of the situation.

Literary analysis

Firstly it is necessary to point out that, although these are fictional literary works, they refer to real events that have taken place in the area. All authors refer to historical facts such as the loss of land grants and water rights, and refer to existing and identifiable geographical areas. Therefore, it is not a coincidence that many of these works talk repeatedly about issues such as the building of dams. Only in the state of New Mexico there are numerous human-made/artificial reservoirs, at

[13] "All three novels [*The Milagro Beanfield War*, *The Magic Journey*, and *The Nirvana Blues*] are set in mythical Chamisa County, where the folks, the situations, and the landscapes resemble parts of Northern New Mexico and southern Colorado. Should they survive, I suppose future interested persons might refer to these books as "his New Mexico Trilogy," even though the name of New Mexico never appears in any of the texts." (Nichols, Introductory note to *The Nirvana Blues*).

least eight of which were built before 1969 (when Waters' novel *People of the Valley* was published); other three were constructed/completed in the 1970s. What these authors do, all of them either native to the Southwest or long-term inhabitants, is to use fiction to narrate the Southwest's "progress" in the last few decades, and the consequences said progress had on the local communities and the southwestern environment.

Starting with the concept of maldevelopment, it can be argued that all the novels are highly critical of the developmental ways implemented in the area, and their cultural and environmental consequences. In Nichols' novel the dam is regarded as something positive at first, as the inhabitants of the valley had suffered the destructive effects of floods before. Nevertheless, because of the construction of the dam they are eventually dispossessed of the land, and their collective identity, symbolized by the valley, is figuratively and literally destroyed. In Nichol's *The Milagro Beanfield War*, the locals[14] have already been dispossessed of their water rights and most of their land by the beginning of the novel. Therefore, their only way to influence the building of a dam and a recreation area, planned by a conservancy district alien to them, is by sabotage and rebellious acts. The alternative would imply an increase in the taxes and the privatization of the few remaining commons, and therefore the disintegration of the fragile community that has managed to survive in its ancestors land against all odds. Complementary, in *The Magic Journey* Nichol's tells the story of a boomtown [p.105] that springs from a fortuitous blast that uncovers large pools of hot springs. This discovery of natural wealth starts a plot of economic and political tensions that ends up alienating the locals from the newly discovered wealth, dispossessing them from their land, and transforming the city through uncontrolled urban sprawling (resulting from said dispossession). Finally, Anaya presents a politician aspiring to become the new major of the city of Albuquerque with a scheme to get all the

[14] Along the analysis I will use the terms "natives" and "locals" alternatively. By these terms I mean both Chicanos and Native Americans, referring to those peoples whose forefathers inhabited the area for centuries. Although the Chicanos and the different Native American tribes that inhabit the area are different cultural groups with different rights over land and water, eventually they all suffer in a similar way from these developmental projects.

remaining water rights from small farmers (mostly Native Americans and Chicanos). His plan is to divert all the water into the city, turning it into an Oasis in the middle of the desert, mostly as a tourist attraction. This in turn would imply the disappearance of the remaining local farming communities, and also of the micro-bioregions that are formed thanks to the acequia system and the local farming, in such an arid landscape.

All these works do not criticize the idea of development per se, but rather the consequences it often has in small communities, who are deprived of the natural resources they depend on in the developmental process, resources that end up benefiting distant communities and the tourist sector at their expense. These narratives would therefore serve as a good example of Hornborg's asymmetric flows of energy. Moreover, they draw attention to the resulting destruction that Shiva points out in her theory, which is a side effect of development, and that is often ignored by those who profit from the end result of the appropriated resources.

This maldevelopment, in turn, translates in the locals' inability to integrate into the new social and economic system. The "American" way of living, namely a cash economy, does not integrate the local/native inhabitants (accustomed to a subsistence economy), it rather ostracises them. What is more, in all these works this is not presented as accidental or fortuitous, but rather as a deliberate plan on the part of those in power. Nichol's writes in *The Magic Journey*:

> "Hence, if we can continue to break down the system of subsistence interdependence that has held this valley and these people together for over four hundred years, then we are well on our way to controlling the land and economic situation completely, and can pretty much dictate the type of middle-class, retirement, and tourist-oriented profit-making (at least for us) community we are aiming for." (49-50).

This incompatibility in turn generates unequal exchanges between the involved parties, since both the energy value (represented by the resources taken) and the locals labour are underpaid, driving them from being on a situation of poverty as subsistence to one of misery as deprivation. In all four novels the local inhabitants end up impoverished after the developmental projects, losing their rights to land and water (and the access to any other local resources such as woods or minerals),

and eventually having to sell their properties due to a general increase in the taxes.

[p.106] The cultural consequences of such a change are devastating for the communities, as Anaya tries to convey:

> "There's no water," Ben said, "but Dominic's not listening."
> "He seems to think the Indian pueblos will sell."
> Ben shrugged. "If they do, the way of life they hold sacred will be sacrificed. Once they can't irrigate the fields of maíz, they'll die. Then they'll have to come into Dominic's city to *work for minimum wages*, make hotels beds, and hold Indian dances in the casinos for the tourists. *The minute you become a tourist commodity, you die*." (*Alburquerque* 123)[15]

This forced change in the system is an example of structural violence, as the system is imposed on the native inhabitants, who are forced to participate in it, and can only do it in unequal terms. On the other hand, the consequences of this structural violence translate into examples of slow violence, when the disintegration of both the communities and the environment is gradual, as in the case of the slow but steady process that meant the loss of water rights for the characters of *The Milagro Beanfield War*: "In the end half his gardens and half his fields shrivelled in a drought, […] This situation had caused a deep, long-smoldering, and fairly universal resentment, but nobody […] had ever been able to figure out how to bring water back to that deserted west side land" (28).

Finally, all these abuses are conveyed through technospeak. Technospeak is the way the Anglo-Europeans have of communicating, while at the same time alienating, the locals about (and from) the new developmental projects. The first barrier is usually the language, as most of these communities are Spanish speaking, while the de facto language in the states is English. Moreover, Waters and Nichols both present rural communities with low literacy levels. Finally, the technical character of this kind of language is usually the biggest barrier when the communication occurs between experts and laypersons.

In most cases the use of technospeak is intentional, since legally the information is conveyed to the stakeholders, although factually those behind the projects are perfectly aware that the affected community is

[15] My italics.

not able to understand said ways of communication. In *The Milagro Beanfield War*, the Anglo lawyer Charley Bloom tried to overcome this barrier: "He tried to make them understand technically what they all knew instinctively, that they were going to be taxed heavily for water which would be used mostly by a very few people" (207-8). As this quote points out, the miscommunication is often not due to the affected community's ignorance, as they themselves are often experts in the place and its characteristics. It is the technicalities, and the way in which they are conveyed, what creates a barrier that results in said miscommunication.

[p.107] In relation to the inaccessibility of technospeak, as it has been already mentioned, Devon Peña refers to the American legal system and how it ostracizes the locals, especially when they have a different cultural background. A critique of the American legal system is also present in these works. In Waters' novel the ballot (to decide whether the dam will be built or not) is totally fraudulent, with the politicians bribing the population and marking their votes, even using the names of deceased people as voters (124-5). In Anaya's book the candidate Frank Dominic uses all kind of (il)legal tricks to get the water rights, shielded by his powerful political position. In *The Magic Journey* the "Anglo-Axis" states, "as we control the legal system; the laws will always back up our point of view" (51). Although these examples of corruption are fictitious, it is possible to claim that most of the time the American legal system did not accommodate the natives' ways. A historical example of this is the system used to revise the Hispanic land grants, which has been widely criticised since its morality was quite doubtful, as there were many impediments for the natives in the process (Beck and Haase, 1969; 1989).

Avoiding "ecological Indians"

All three writers, in these works, denounce the social and ecological injustices suffered by Chicanos in this region. Anaya, in his story-telling way, is the most romantic of them all, but Waters and especially Nichols try to dismantle the romantic idealization of the relation between the locals and the environment they live in, in order to present a more realistic critique. Both Waters and Nichols present the

reader with down-to-earth anti-heroes who start revolutions without intending it. Maria del Valle, in Waters' *People of the Valley*, is a complex character that although wise and enduring (like the valley itself) is also eccentric and antisocial, and finally unable to stop the destruction brought by the "Máquina of progress" (178). In *The Milagro Beanfield War* both Snuffy Ledoux and Joe Mondragon, two poor, illiterate, mind-your-own-business kind of people are responsible for the social revolts in Milagro's history, resulting from the most unconceivable situations: carving bear figures in pieces of wood, and irrigating a small and abandoned family bean field.

Nichols' characters are definitely complex and imperfect, and their attitude towards nature is ambivalent. Snuffy considered himself: "a mountain boy, like most other kids from Milagro" (508). After many years in exile (exile caused by the revolution he accidentally started), he comes back to Milagro, and one day, while staring at those mountains, he notes that they "were not etched as sharply as [he] remembered" (508). According to the book:

> "Most of the crap in the air, experts said, came from new coal-fired power plants a hundred and fifty miles west of Milagro. Someday […] the deserted mesaland and the small green villages like Milagro would lie under polluting clouds as thick as those now found in Los Angeles and New York City" (508)

[p.108] However, "Snuffy didn't know pollution from a duckbilled platypus" (508), and, while contemplating an astounding view: "Eight hundred feet below run the green river that extended all the way from the Colorado mountains to the Gulf of Mexico. Snuffy hurled a beer can into space." (510). Snuffy, a local hero who rebelled against the established system, is obviously not an ecologist fighting environmental degradation, but rather an individual fighting for personal and communal survival. Nichols presents all these contradictions that dismantle the romantic idea of the locals as "ecological Indians," as coined by Shepard Krech III.[16]

On the other hand, Nichols also presents the reader with a critique of white middle-class environmentalism, which adds to the

[16] The characters in these works are mainly –but not necessarily– Hispanic, but still due to their subsistence way of life they can be idealized as close-to-the-earth-people.

demystification of the locals' relation to the environment. When self-righteous agent Kyril Montana leads a posse in the mountains in search of Joe Mondragón he notices all the refuse left behind by the locals after the lunch break, and collects as much garbage as he can before parting (540). Nevertheless, along the book the reader learns that agent Montana, (who works for the politicians that are trying to destroy Joe for irrigating his family's small bean field after having lost his water rights), lives in a nice house, with a beautiful green lawn and a swimming pool he enjoys whenever he can.[17]

The environmental denunciation presented by these authors certainly reflects the existing tensions in the Southwest. Devon Peña's and Tom Lynch's critical work provide an insight in the controversy about who is responsible for the destruction of the Southwestern ecosystem. Although Chicanos are nowadays often romanticized as close-to-the-earth-people, during the 19th and 20th century the locals were frequently accused of not dealing responsibly with the environment, as in William deBuys 1985 book *Enchantment and Exploitation: The Life and Hard Times of a New Mexico Mountain Range*. Peña and Lynch recognize that not all native societies were necessarily respectful with the environment, and that bigger population concentration might indeed have resulted in environmental degradation (Peña, 147, 173). Nevertheless, they also highlight examples of positive environmental stewardship such as the acequia system, being a healthy and communally-fair irrigation technique that creates wet and rich ecosystems in the dry Southwestern landscape. In contrast, these critics stress the damage derived from the American capitalist system: mainly personified in the railway and the big stockbreeding companies, that took over the territory in the beginning of the American colonization of the Southwest (examples that have developed over time into numerous other ways of environmental exploitation that they also mention and analyze).

Peña and Lynch, same as Anaya, Waters and Nichols, take two important steps in their works: on the one hand they denounce the means by which land and water were taken away from the local inhabitants; on the other hand, these critics dismantle [p.109] and rationalize the arguments that accused native inhabitants of destroying the land.

[17] For more on the topic of green lawns and derived pollution see Robbins and Sharp.

Furthermore, in their works they aim to prove that the measures that were taken in the name of (the Anglo-American ideas of) progress and development were, and still are, way more damaging to the place than the traditional ways of the locals, fitting better into Shiva's concept of maldevelopment, than in the standardized term of development. Alternatively, Peña (and Rubén O. Martínez) ask for "ecological democracy", which according to them would be acquired through the combination of science and the communities' local knowledge of the land, and the local environment.

Conclusions

The novels here analysed give a historical perspective of the evolution of the Southwest with the arrival of the Anglo-Europeans, their economic system, and their idea of progress and development. They are the background of an ongoing struggle, as many native communities still fight for survival and conservation groups are formed to defend the small farmers and the acequia system.

The writers and critics here mentioned do not ask for a return to the past. They all claim the validity of most local/traditional ways at the same time that they fight for the right of local inhabitants to maintain their way of living and therefore their culture, versus the imposition of the Anglo-American idea of progress.

In the U.S. Southwest water reclamation system (same as in most of the thinking behind the concept of development itself), progress, growth, and development have been understood as correlated concepts. Nevertheless, a system that condemns a portion of the population to ostracism and poverty while producing great environmental harm should not be considered progress.

Something that cannot be denied is the fact that nowadays the Southwest of the United States is in a very delicate environmental moment. Accusing the locals of overgrazing and misusing water, and consequently taking their land and water from them has certainly not stopped the degradation of the Southwestern ecosystem. On the other hand, the American cash economy and way of living, the result of (mal)developing the land in the name of progress, have only increased its degradation accelerating water shortages and the exhaustion of the

resources, plus the (near) destruction of numerous native communities. Finding a middle ground and integrating all the stakeholders, as Peña and Martínez claim, would be the most reasonable way to make progress.

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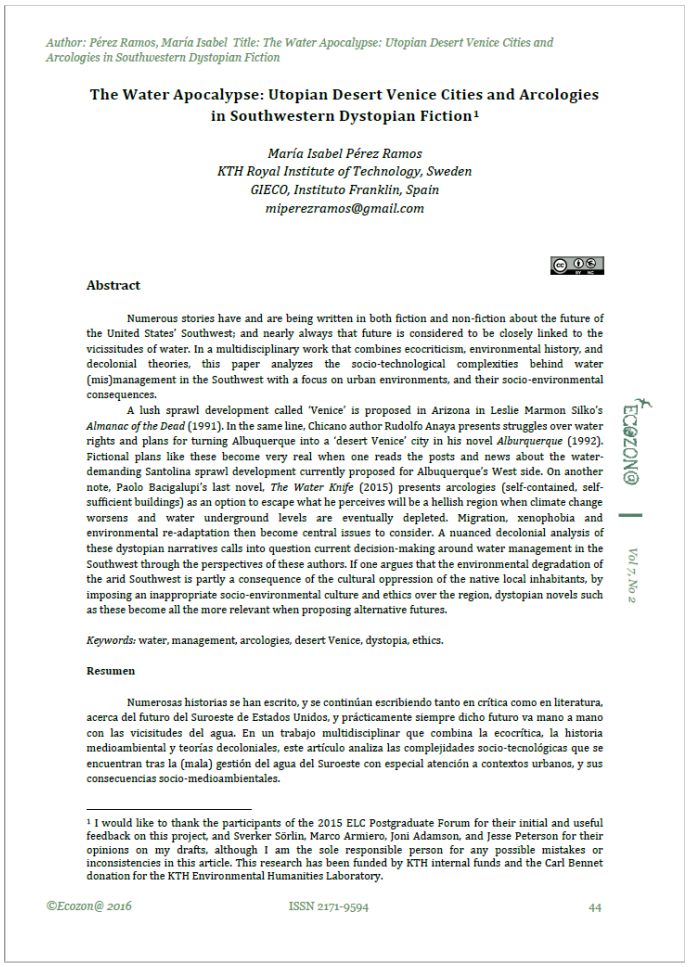
PAPER II

The Water Apocalypse:
Utopian Desert Venice Cities and Arcologies in Southwestern Dystopian Fiction

María Isabel Pérez Ramos



The Water Apocalypse: Utopian Desert Venice Cities and Arcologies in Southwestern Dystopian Fiction[1]

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Abstract

Numerous stories have and are being written in both fiction and non-fiction about the future of the United States' Southwest; and nearly always that future is considered to be closely linked to the vicissitudes of water. In a multidisciplinary work that combines ecocriticism, environmental history, and decolonial theories, this paper analyzes the socio-technological complexities behind water (mis)management in the Southwest with a focus on urban environments, and their socio-environmental consequences.

A lush sprawl development called 'Venice' is proposed in Arizona in Leslie Marmon Silko's *Almanac of the Dead* (1991). In the same line, Chicano author Rudolfo Anaya presents struggles over water rights and plans for turning Albuquerque into a 'desert Venice' city in his novel *Alburquerque* (1992). Fictional plans like these become very real when one reads the posts and news about the water-demanding Santolina sprawl development currently proposed for Albuquerque's West side. On another note, Paolo Bacigalupi's last novel, *The Water Knife* (2015) presents arcologies (self-contained, self-sufficient buildings) as an option to escape what he perceives will be a hellish region when climate change worsens and water underground levels are eventually depleted. Migration, xenophobia and environmental re-adaptation then become central issues to consider. A nuanced decolonial analysis of these dystopian narratives calls into question current decision-making around water management in the Southwest through the perspectives of these authors. If one argues that the environmental degradation of the arid Southwest is partly a consequence of the cultural oppression of the native local inhabitants, by imposing an inappropriate socio-environmental culture and ethics over the region, dystopian novels such as these become all the more relevant when proposing alternative futures.

Keywords: water, management, arcologies, desert Venice, dystopia, ethics.

Resumen

Numerosas historias se han escrito, y se continúan escribiendo tanto en crítica como en literatura, acerca del futuro del Suroeste de Estados Unidos, y prácticamente siempre dicho futuro va mano a mano con las vicisitudes del agua. En un trabajo multidisciplinar que combina la ecocrítica, la historia medioambiental y teorías decoloniales, este artículo analiza las complejidades socio-tecnológicas que se encuentran tras la (mala) gestión del agua del Suroeste con especial atención a contextos urbanos, y sus consecuencias socio-medioambientales.

[1] I would like to thank the participants of the 2015 ELC Postgraduate Forum for their initial and useful feedback on this project, and Sverker Sörlin, Marco Armiero, Joni Adamson, and Jesse Peterson for their opinions on my drafts, although I am the sole responsible person for any possible mistakes or inconsistencies in this article. This research has been funded by KTH internal funds and the Carl Bennet donation for the KTH Environmental Humanities Laboratory.

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Figure 7: *Ecozon@* edition of "The Water Apocalypse"

Abstract

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[*] The page numbers of the original edition are included in in-text square brackets to indicate the start of any new page in the original edition.

Resumen

Numerosas historias se han escrito, y se continúan escribiendo tanto en crítica como en literatura, acerca del futuro del Suroeste de Estados Unidos, y prácticamente siempre dicho futuro va mano a mano con las vicisitudes del agua. En un trabajo multidisciplinar que combina la ecocrítica, la historia medioambiental y teorías decoloniales, este artículo analiza las complejidades socio-tecnológicas que se encuentran tras la (mala) gestión del agua del Suroeste con especial atención a contextos urbanos, y sus consecuencias socio-medioambientales.

[p.45] Leslie Marmon Silko, en su obra *The Almanac of the Dead* (1991), presenta los planes para construir en Arizona una lujosa urbanización llena de fuentes y lagunas llamada 'Venecia'. De forma similar la novela *Alburquerque* (1992), escrita por el célebre escritor chicano Rudolfo Anaya, presenta los esfuerzos de un candidato a la alcaldía por conseguir los derechos sobre el agua de la zona y sus planes para convertir la ciudad en una 'Venecia del desierto'. Dichos planes provenientes de la ficción resultan particularmente creíbles cuando una lee las noticias sobre la urbanización Santolina, propuesta al oeste de la ciudad de Albuquerque. Por otra parte, la novela *The Water Knife* (2015), de Paolo Bacigalupi, presenta arcologías (edificios autosuficientes) como una posible opción para escapar de lo que prevé será una región infernal, una vez se agoten los acuíferos naturales y empeoren las inclemencias derivadas del cambio climático. La emigración, la xenofobia y la readaptación medioambiental se convertirán entonces en temas clave. Al analizar estas narrativas de ficción a través de una lente decolonial se cuestiona la actual gestión del agua en el Suroeste. Estas novelas distópicas resultan centrales a la hora de proponer futuros alternativos si se argumenta que la degradación medioambiental del Suroeste se debe en gran medida a la opresión cultural sufrida por los habitantes locales y nativos, al imponerles una cultural y una ética socio-medioambiental inadecuada.

Palabras clave: agua, gestión, arcologías, Venecia del desierto, distopía, ética.

> The apocalypse has already begun and the ongoing evidence is all around us in the die-off oceans, forests, reefs, and habitats, desertification or salinization of soil, species extinction, and bioaccumulation of carcinogenic toxins.
>
> — Andrew Ross, *Bird on Fire*

On 14th July 2015, I found myself in Northwestern Spain, during an extended heat-wave, looking at the U.S. Southern Nevada Water Authority (SNWA) webpage. News-feeds conveyed the latest news: "Low lake level pumping station helps ensure access to water" / "Preparing for Water Shortage" / "Nevada Drought Forum".[1] Leslie Marmon Silko's *Almanac of the Dead* (1991), Rudolfo Anaya's *Alburquerque* (1992) and Paolo Bacigalupis' latest novel *The Water Knife* (2015) (the one that took me to the SNWA's site), all became the more real, the more urgent, while the heat reverberated outside my own window, and the word 'drought' (¡sequía!) rang incessantly in my own ears.

The water apocalypse: water depletion in the US Southwest

The Southwest of the United States has some of the fastest growing and most populous cities in the country, with Los Angeles (and the state of California) as the second most populous in the whole nation, and Phoenix as the sixth (*U.S. Census Bureau*).[2] It is moreover a semi arid region that contains four major deserts, namely the Sonoran, Mojave and Great Basin deserts and part of the Chihuahuan desert. With [p.46] snowpack decreasing in the Rocky Mountains (Sangre de Cristo) and the Sierra Nevada considerably, the natural underground aquifers being fast depleted, and the region suffering from a long ongoing drought,[3] the prospects for water in the arid Southwest are far from optimistic (*USDA*-NRCS; White; *USGS*; "The West", *NASA*; "Groundwater Deficit", *NASA*).

[1] Southern Nevada Water Authority.
[2] Web. info for 2014.
[3] California, for instance, has been suffering from a drought since 2012 (California Drought). [Note April 2017: Drought went from 2012-2016.]

> The extent of drought in the American Southwest are reflected well in the GRACE map [illustration 1]. California, Nevada, New Mexico, Colorado, Texas, Arizona, Oklahoma, and Nebraska have been suffering from various degrees of long-term drought that has parched the land surface and prevented the replenishing of groundwater below. […]
> A new study by scientists from NASA and the University of California–Irvine (UCI) has found that more than 75 percent of the water lost since 2004 in the drought-stricken Colorado River Basin has come from underground sources.
> "We don't know exactly how much groundwater we have left, so we don't know when we're going to run out," said Stephanie Castle, a water resources specialist at UCI and the study's [GRACE Gravity Recovery and Climate Experiment] lead author. "This is a lot of water to lose. We thought that the picture could be pretty bad, but this was shocking." The Colorado River basin supplies water to about 40 million people in seven states [mostly Southwestern states] and irrigates roughly four million acres of farmland. (*NASA* "Groundwater…")

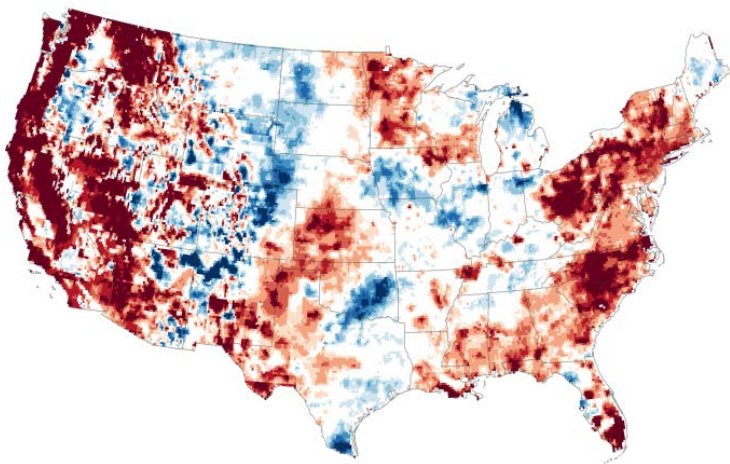

Illustration 1: Ground Water Storage (14-09-2015). NASA.
The map shows how water content in mid-September 2015 compares to the average for the same time of year between 1948 and 2012. Dark red represents areas where dry conditions have reached levels that historically occur less than 2 percent of the time (once every 50 or more years). (*NASA* "The West Dries Up")

[p.47] In this light water management becomes 'the issue' in the region (especially in the current context of climate change), and therefore in nearly any academic inquiry about it. This paper analyzes three dystopian fictional narratives written about the United States Southwest from 1991 to 2015, all of them with significant references to water (mis)management and its repercussions on urban ecologies: Leslie Marmon Silko's *Almanac of the Dead* (1991), Rudolfo Anaya's

Alburquerque (1992), and Paolo Bacigalupis' *The Water Knife* (2015). All three novels were produced at times of environmental uncertainty due to severe droughts, or acknowledged water depletion due to excessive use and climate change.[4] They all present speculative futures or ideas for the future, imagining eccentric or innovative urban plans. Silko and Anaya envision desert Venice cities, Silko through a residential area she names 'Venice', and Anaya through the 'El Dorado' plan, defined in the novel as "a desert Venice" (119). Both plans aim at resembling the city of Venice, in Italy, well-known for the canals that crisscross it. Desert Venice cities, therefore, refer to urban environments in the desert converted into surreal oases by channeling water through canals, ponds, and fountains, as enticement to prospective wealthy buyers and tourists. In Bacigalupi's story the Southwest is a desolate place swept by extreme heat as a consequence of climate change, where so-called "arcologies" (magnificent large buildings with self-contained oases) become the symbols of an eco-apartheid. Arcologies[5] were first envisioned by architect Paolo Soleri in the 60s as three dimensional cities which aimed at condensing the urban space, reducing urban sprawl and therefore land use. They are closed systems, promulgating better energy and resource use. Their compact design also intends to decrease mobility, reducing the need for roads and the use of automobiles (*Arcosanti*, web). Although Soleri's vision was utopic, envisioning a more just and sustainable society, Bacigalupi's arcologies represent a dystopic system where only the powerful and wealthy can take refuge from environmental devastation.

Almanac explores ideas of political corruption and human depravation in the context of a world suffering from an extreme moral crisis,[6] leading to what is presented as spiritual and environmental self-

[4] *Almanac* and *Alburquerque* were composed during/after the great drought of 1988 which, together with the latter effects of El Niño really affected the whole of the country, especially agriculturally (Robbins).

[5] Arcology is a compound word, formed by combining architecture and ecology ("What Is Arcology?"). The first arcology project, Arcosanti, was started by Paolo Soleri and some volunteers in central Arizona (near Phoenix) in 1970, and its construction is still ongoing.

[6] A world full of smugglers, pedophiles, policemen filming snuff movies watched in turn by majors and judges, white hegemonists creating viruses in laboratories and spreading them among communities of color, governments fostering drug addictions, and a long etcetera.

destruction. The chapter on 'Venice, Arizona' focuses on water and its relevance in arid urban ecologies and Leah Blue's ambition of building a green and lush residential area in drought stricken and increasingly depopulated Arizona. *Alburquerque*[7] further explores the base problem in the Southwest: misdistribution and mismanagement of water, which is simultaneously the cause and effect of the degradation of environmentally sound local ecologies of ethnic minority communities. Through Frank Dominic, and his 'El Dorado' plan that would turn Alburquerque into a desert Venice, Anaya delves into questions of cultural identity, [p.48] political corruption, and environmental degradation. Lastly, *The Water Knife* imagines a dystopian future distorted by power disparities where advanced technology fosters an extreme eco-apartheid in a climate-devastated Southwest. That technological 'dream' is mainly materialized in the urban arcologies.

I will first analyze the different utopian urban plans and dystopian scenarios depicted in the three novels. Secondly I will analyze the ethics surrounding the management of water in the Southwest as well as the ways these ethics are dealt with in each novel, and the message the authors aim to convey through their works. The novels suggest that solving a crisis of misdistribution and mismanagement of water is as much a human socio-ethical problem as a scientific and technological endeavor: we all need to understand the circumstances and risks and take a stance on the future. I follow the line of decolonial theory (mainly Walter Mignolo's work), which "proceeds from the prospective assumption that locus of enunciations shall be decentered from its modern/colonial configurations and limited to its regional scope" (Mignolo, *The Darker* xvi). The universalism of modern and colonial thinking, achieved by the imposition of the knowledge produced in the colonial loci on the colonized territories and peoples, which Mignolo terms the 'geopolitics of knowledge,' should therefore be debunked and substituted by multi-ethnic alliances acknowledging regional and traditional knowledges. Alternative understandings of the world (other than the hegemonic 'Western' values of commodification and constant economic growth) are therefore necessary in order to rethink our moral standpoint and learn to cooperate, if we are to survive this crisis

[7] Anaya keeps the old Spanish spelling of the city in the novel.

successfully. Applying such a decolonial approach to the United States Southwest in the search for a fair and sustainable future would imply a deep revision of the water management logic that currently prevails, as well as of the current social structures and power relations, as the novels here analyzed propose.

Silko's and Anaya's novels engage in a fictional negotiation of the issue of what has been termed the 'environmentalism of the poor' (Joan Martínez-Alier; Nixon). Bacigalupi's climate fiction, on the other hand, uses a future post-apocalyptic scenario to discuss aspects already explored by Donald Worster in books like *Rivers of Empire* (1985), and foretold by Marc Reisner in his iconic book *Cadillac Desert* (1986): mainly that the current water management in the Southwest is unsustainable and doomed to fail, ideas also discussed in a more recent work by Andrew Ross, *Bird on Fire* (2011). By fast-forwarding the predictions of Worster, Ross, and especially Reisner, Bacigalupi forces the readers to consider what kind of future they want, and what needs to be done in order to make it happen. Literary fiction can therefore prove useful in this decolonial quest as I will argue in this paper, an original ecocritical discussion on desert Venice cities, water management, and the future of urban environments in arid regions.

Desert Venice Cities: or how to get to the end of the world with style

All three selected novels look at water management in Southwestern urban environments: through the plans for a luxurious, water-filled real estate in the middle of a depopulated and water-lacking Arizona (parallel to the building of silos meant to be [p.49] launched into space with the remaining uncontaminated resources from Earth) (Silko); an Alburquerque menaced by gentrification, struggling between keeping what remains of its sustainable traditional irrigation systems or becoming a touristy 'desert Venice' that would further discriminate traditional cultures and ways of life (Anaya); and a climate-change struck Phoenix suffering from an acute lack of water and extreme social disparities fostered by the urban layout (Bacigalupi). Interestingly enough, all three imagine urban desert oases in their narratives: two (Silko and Anaya) in

the shape of desert Venices, while Bacigalupi fantasizes about closed-loop oases that conserve and reuse water, in the shape of arcologies.

Silko's *Almanac of the Dead* (1991) is set in the near future and is the most complex of the three novels. The story has an apocalyptic tone: revolutions (mostly led by indigenous peoples) are taking place all over the world. At the time of the novel one has already taken place in Africa successfully, while another one (Silko's background story) is germinating across the Americas (an alliance of indigenous peoples from Canada to Mexico, symbolically confronting through their coalition the imposed borders on the native inhabitants by the Europeans).[8] Parallel to this background story of global revolutions there are several other plots, two of which are of particular interest in the context of this paper. One is a water scheme with two relevant characters: the real estate agent Leah Blue, determined to develop a desert Venice city, and the Barefoot Hopi, a Native American connected to a group of self-defined 'ecowarriors' who blow up Glen Canyon dam. In the utopian scenario depicted by Silko, Arizona is already starting to suffer from depopulation due to lack of water while Leah (whose surname, Blue, might well refer to her fixation with the liquid element) sees this as the perfect opportunity to build a magnificent and attractive Venice, full of fountains and springs, for wealthy customers. Her plan to get the water is to drill deep wells. Leah believes in the promises of technology as a solution to aridity: "Tell me they are using up all the water and I say: Don't worry. Because science will solve the water problem of the West. New technology. They'll *have* to" (Silko 374; italics in original). In order to achieve her aim she confronts a group of environmentalists and also gets a judge to impugn a water-rights suit by some Native Americans from Nevada, setting a precedent that would ensure her right to the water (Silko 374-6). As Ruxandra Rădulescu notes, Venice, a surreal "postmodern oasis" (131), represents a further aggression to the already damaged land (and to the natives' rights), implying a "reconquest of the Southwest within the Southwest" (ibid.). Leah represents an individualistic, profit-oriented

[8] The story, moreover, prefigured the Zapatista uprising in Mexico that would emerge only 3 years later. This revolt took form in two parallel dimensions: as a direct reaction to the North American Free Trade Agreement (NAFTA), and as a protest against the Mexican government's detrimental politics towards the peasants' rights and the environmental health of the Lacandon Jungle.

attitude that completely disregards the ecological conditions and needs of the arid environment where she lives and works (replicating colonial attitudes). In contrast, characters such as the Barefoot Hopi struggle to build alliances among different groups of people (prisoners, 'eco-warriors', homeless people, etc.) to achieve a more just world, connecting human wishes of social justice with a respect for the needs of the other-than-human world.

[p.50] The other relevant plot is about Serlo, "a genuine blue blood", who funds, together with other wealthy white-hegemonists, the building of 'Alternative Earth units': "once sealed the Alternative Earth unit contained the plants, animals, and water necessary to continue independently as long as electricity was generated by the new "peanut-size" atomic reactors" (Silko 542).[9] Only the wealthiest and powerful would benefit from this plan. The aim is not just mere survival on Earth, but to ultimately launch these units into high orbits around the earth by rockets after having replenished them with "the last of the earth's uncontaminated soil, water, and oxygen" (ibid) so that "the select few would continue as they always had [...] look[ing] down on earth as they had once gazed down at Rome or Mexico City from luxury penthouses" (ibid). This second plot takes the reader away from damaged urban ecologies and into space, complicating even further the question of civil responsibility for the wellbeing of the planet and even the cosmos. Both plans—a 'wet' urban environment in the desert and a spaceship earth-like project with the remaining 'clean' resources from Earth— question the increase in (urban) eco-enclaves in the context of environmental degradation.

Overall, *Almanac* conveys a feeling of urgency through its complex environmental justice discourse and its apocalyptic tone. It is a call to arms to the readers, to take action in order to stop socio-environmental degradation and related eco-apartheids before it is too late

[9] These units are a reference to Biosphere 2 "a glass and steel enclosure built in 1987 in the Sonoran Desert just north of Tucson, Arizona, by Texas billionaire Ed Bass and cofounder John Allen" (Adamson 169). Biosphere II was used, since its inauguration in 1991 (the time of *Almanac*'s publication), as an enclosed system, in order to study and analyze earth natural cycles. The ventilation system stopped being a closed-system in 1996, but water cycles in an enclosed system are still at the core of the ongoing research projects. The University of Arizona is currently in charge of the scientific research at Biosphere 2.

and drastic measures (such as sabotaging dams) need to be taken. Silko provides examples of pro-active characters, such as the barefoot Hopi, who undergoes different actions in his struggle for justice (from writing poetry to partnering with radical environmentalists in order to free the water and the people of the United States) and points to international and inter-ethnic cooperation as the means to achieve a better future.[10] It is in the light of these coalitions that Jessica Maucione sees Silko's discourse as "purposefully anarchistic" rather than "darkly apocalyptic" (156), opening an avenue for regeneration and hope. It is, in brief, a story about a war that is being forged (Silko 532, 728), with a strong warning about environmental destruction (734) and (xenophobic) technological-fixes.

Published only a year after Silko's *Almanac*, Rudolfo Anaya's *Alburquerque* (1992) also includes a plan for a desert Venice city; none other than the El Dorado plan, this time in the context of New Mexico and the Chicano/a and Pueblo communities.[11] Urban historian Carl Abbot writes in *Imagined Frontiers* that the plots in these [*Almanac* and *Alburquerque*—and other related] novels mean to: "Unmask the processes through which Anglo Americans have asserted and established claims to the land. The attention to real [p.51] estate makes visible what was previously concealed or invisible (the "invisible hand" of the market)" (13). It should be noted, though, that the origins of foreign claims to the land are certainly to be found much earlier than the Anglo-American annexation of 1848 in the Southwestern context, they rather go back to the Spanish colonization of New Mexico in the 1500s. It is also debatable up to what point those processes had been 'invisible' before. Chicano/a literature has always criticized the doings of speculation; early examples are Maria Ruiz de Burton's *The Squatter and the Don* from 1885 and Fabiola Cabeza de Baca's *We Fed Them Cactus* from 1954. Literature about the Chicano/a experience has also been highly critical of this fact, as in Frank Waters *People of the Valley*, 1941 or John Nichol's so-called 'New Mexico Trilogy', 1974-1981. Anaya's novel should therefore be seen as a continuation in the subversive struggle carried out

[10] Not coincidentally, Silko's book was published shortly before the First National People of Color Environmental Leadership Summit took place in Washington, D.C..

[11] The term 'Chicano/a', although accepted by academia, is still a controversial term for many Mexican-Americans. In this research 'Chicano/a' refers to people of Mexican descent living (and writing) in the United States.

by Chicanos/as and Native Americans against the hegemonic system, which produces and perpetuates socio-environmental injustice.

Alburquerque's background story is the political struggle of several candidates to mayoralty, including the struggle of one of the candidates to control the water rights. Frank Dominic, who already owns most of the real state and "undeveloped" land in the city, intends to acquire all remaining water rights from the Pueblos in order to canalize the water from the *acequias* into the city, turning Alburquerque into a desert Venice where gambling would be legal and an impressive casino surrounded by canals would reign over the city. In Anaya's novels *acequias* always play an important role, representing the history and the values of the native communities. *Acequias* are earth-ditch irrigation canals, which channel the meltdown water into the fields.[12] They are communally managed by a *mayordomo* who has to ensure that everyone in the community will get their fair share of water. *Acequias* are claimed to be beneficial for the semi-arid southwestern environment, for they create small bioregions along their margins and help replenish underground water (Peña, "A Gold Mine" 264-5). Decrease in snowpack means less run-off and therefore less water for irrigation through this traditional means. The decrease in snowpack (attributed to anthropogenic climate change), combined with factors such as the loss of land grants and water rights by many local communities, unemployment and depopulation of rural areas, as well as Federal, private, and corporate encroaching of traditional lands, mean the subsequent degradation of the *acequia* watersheds and of Chicano/a and Native American communities, as Anaya portrays in his work.

In Dominic's view, however, water is being wasted in the hands of the Pueblos and Chicano/a villages, who are not farming any longer or do so on a very small scale only, producing no real benefits for the city or the State (that is, not producing any significant 'cash crop'). His plan, on the other hand, would turn the city into a tourist attraction, rebooting urban sprawl (119-122). This plot raises numerous issues well known to ethnic minorities in the Southwest, such as the loss of land grants by

[12] The acequia system was introduced by the Spaniards, who learned it from the Moors, and resembled already existing practices of some Native American communities in the Southwest.

Chicanos/as in the late nineteenth and early twentieth centuries, after the Mexican-American war, and the subsequent loss of water rights, urban segregation, and [p.52] gentrification.[13] The loss of water rights is mostly due to the Bureau of Reclamation's eagerness to dam all available water in the Southwest and channel it to cities and large agricultural endeavors, which resulted in higher taxes, as Worster (1992) and Reisner (1993) masterfully elucidate in their work. The plot therefore hints at the complexity of the water law in the region and at the political maneuverings behind such historical losses. Alburquerque is moreover depicted as a city divided by an internal border: "The Anglos lived in the Heights, the Chicanos along the valley. The line between Barelas and the Country Club was a microcosm of the city. One didn't have to go to El Paso and cross to Juarez to understand the idea of border" (Anaya 38). Furthermore, in the scenario depicted by Anaya even the barrios are being threatened: "The developers built clear up to the Sandías. Now they're buying up the downtown barrios" (13).[14] Through his plan Dominic would not only dispossess the Chicanos/as and Indian Pueblos from their remaining water rights (meaning a forced stop to any form of small scale agriculture) and displace the small businesses in the Old Town, despite Dominic's denial (Anaya 110), but he would also enlarge the eco-disparity of an already segregated city.

By recovering the old Spanish spelling in his novel, Anaya shows how history repeats itself, opening a window of opportunity at the same time: the chance to regain what was lost, a recovery of the communal values and environmental understanding that grounded the native communities. By reinserting the dropped 'r' in Alburquerque, which "symbolized the emasculation of the Mexican way of life" (Anaya 112), Anaya shows how the situation in New Mexico, and Albuquerque, has not changed much since that first symbolic act of disempowerment. Native Americans and Chicanos/as in the Southwest keep being disempowered through continuous land and water speculation.

[13] For more on the topic or urban segregation, and its connections to land and water rights losses cf. Diaz and Camarillo (1984).

[14] In an interview with Javier Benavídez, executive director of SWOP—the Southwest Organizing Project—the topic of the gentrification of the barrios and the city center of Albuquerque was addressed, proving that Anaya's fiction (written in the 90s) mirrors in many ways the 'contemporaneity' of the city.

Dominic's plan is the ultimate strike to the small local/traditional communities, and Anaya calls the characters, and the readers, to arms: "If you don't fight the problem, you're part of the problem" (131).

In both *Almanac* and *Alburquerque* the authors present what could be regarded as farfetched and absurd: urban plans counting on scarce water resources for frivolous use. Dominic's name for his plan, El Dorado, perfectly symbolizes this quest for a utopian treasure, the gold of the desert, water: "you can build a dream on the agua, the blood of the valley, but you can't buy the blood" (121). The Southwest is a vivid example of how a precious and scarce resource such as water has been put continuously to questionable uses.[15] It is known as a region where cities are built so that water is brought to them, [p.53] instead of building the cities by water courses (Reisner 305); in a country where a swimming pool, and specially a green lawn, seem to be a constitutional right, no matter the costs.[16] These examples are good proof of the claims made by Anaya and Silko: water is so valuable that it becomes a symbol of status. Leah Blue, the fictional developer in Almanac argues that "People wanted to have water around them in the desert. People felt more confident and carefree when they could see water spewing out around them" (374). Social and environmental concerns are therefore overlooked in the name of real estate 'development', political power and economic profit. The urban utopian Southwestern oases envisioned by characters like Leah Blue and Frank Dominic are nevertheless likely to turn into dystopian barren counterparts, and this is precisely what Bacigalupi writes about in *The Water Knife*.

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[15] "Tucson in the 1990s considered refilling the dry bed of the Santa Cruz River to revitalize downtown. Other Arizonans have successfully promoted development of the amazingly named Scottsdale Waterfront where flats, shops, and the Fiesta Bowl Museum will hug the bank of the Arizona Canal as it channels irrigation water through the Valley of the Sun. Denver has turned a stretch of the unprepossessing South Platte River into a whitewater park. An investment of $54 million has remade a seven-mile stretch of the North Canadian River into the "Oklahoma River," where rowing and canoeing events attract Olympic athletes from around the globe" (Abbot 24).
Currently, the Santolina development planned west of Albuquerque resembles the plots of these novels: "the developers do not have water rights secured for total usage estimated to top out at 4.7 billion gallons per year. Owners of senior water rights fear granting new ones to Santolina will contribute to over-allocation and depletion of stressed surface and ground supplies" (Wright).

[16] For more on the American obsession with green lawns cf. Robbins (2012); Steinberg (2007); Robbins et al.; and Scott Jenkins.

Paolo Bacigalupi's novel depicts a near-future Southwest, devastated by the interrelated factor of lack of water and climate change, where acquiring water rights is no longer a way to booster urban development in a water-deprived state, or a game in a mayoral race, but a deadly business. In the same way as Silko in *Almanac*, Bacigalupi uses multiperspectivity[17] to voice the point of view of different characters, presenting the complexity of the situation from a very human standpoint. The novel contains a character similar to Leah Blue: Catherine Case, "the Queen of the Colorado", the person in charge of the SNWA and also a successful developer whose desire for power and wealth determines the future of the urban landscapes and social distribution of Nevada. Moreover, Reisner's *Cadillac Desert* becomes a character in its own right in the story: a book full of agency, capable of influencing the readers' mindset in the present with its apt conclusions and helping (or causing trouble for) the characters in the novel. Bacigalupi's post-apocalyptic scenario does not lack a resemblance to the present; it is rather a quite convincing setting, an urban dystopian future struck by climate change, full of closed borders and refugees, and subsequent bigotry and xenophobia. In this future, Texas has already 'fallen' (that is, become virtually uninhabitable) due to lack of fresh water, and its citizens have migrated in large numbers to the contiguous states. As a consequence, the neighboring states have developed a strong social reaction against the so-called 'Merry Perrys' or Texans. Phoenix (and Arizona), seem to be next in line, with hundreds of subdivisions abandoned also due to lack of water, a polluted atmosphere carrying airborne diseases and being constantly hit by sandstorms, Red Cross relief tents close to pay-for water pumps, and the population using 'Clearsacs' to purify liquids, such as urine, in order to drink them. Nevada and California seem to be doing better, if not much, and with the borders to the north closed to all of them, the battle to control the remaining water in the region is fierce, amoral, and violent. The last resources of Phoenix are the CAP (Central Arizona Project), which proves not to carry [p.54] enough water, and some old documents about

[17] Using multiple narrators in order to present different and often contradictory perspectives in a story.

some forgotten and obscure prior appropriation rights,[18] together with the new arcologies being built by the Chinese, with the Taiyang already standing and inhabited (but only by a privileged few).

The CAP is a noticeable example of the modern canal, which has been described by Donald Worster in the following terms: "Quite simply, the modern canal, unlike a river, is not an ecosystem. It is simplified, abstracted Water, rigidly separated from the earth and firmly directed to raise food, fill pipes, and make money. […] [T]he contrived world of the irrigation canal is not a place where living things, including humans, are welcome" (Worster 5). The CAP is the lifeline of most of Arizona's water, and especially of Phoenix, and therefore figures prominently in Bacigalupi's story.[19] In the novel, it appears as the last watercourse providing Phoenix with a consistent, albeit scarce, water flow (compared to the nearly empty aquifers and the Verde and Salt Rivers, which had turned seasonal in a time of barely any rain—Bacigalupi 43). Reisner and Ross, however, describe it as a project doomed to fail due precisely to "the impact of climate change on the river flow" (Ross 42; Reisner 303, 296). Bacigalupi's arcologies, on the other hand, are a solution at a time when climate change has turned the region into a nearly uninhabitable place, affected by extreme temperatures and sand storms. Bacigalupi envisions arcologies as becoming the 'ideal' eco-enclaves of a desolated Southwest. Nevertheless, despite their low environmental impact and their potential for improving quality of life, in this narrative arcologies, like the technological advances in the other two novels, end up highlighting prevalent power structures that ultimately foster eco-apartheids. These buildings are not envisioned as contributing to diminishing urban environmental degradation; they merely are the shelters of the wealthiest and most powerful in a world gone astray, coming with clean filtered air and plenty of running water, including fountains and greenery. In an already devastated urban ecology, the rest of the population has to stay in

[18] The history behind the prior appropriation system is briefly explained later in this article.

[19] The CAP took long to happen: with plans being proposed already by 1946, it was approved by President Lyndon B. Johnson in 1968. Its construction, which began at Lake Havasu in 1973, took twenty years and was completed south of Tucson (Reisner; *Central Arizona Project*).

the few houses which still have running water, move to the relief tents, or risk their lives trying to cross the heavily militarized and closed state borders.

Certainly, all the extreme schemes from these novels highly depend on technology: from traditional drills for pumping water from a greatly depleted aquifer to more futuristic technologies for building, maintaining, and launching the Alternative Earth units; for controlling the temperature and people's mood through domes made out of a new synthetic membrane in Dominic's 'El Dorado'; or for creating self-contained buildings, like the Taiyang, in environmentally hostile locations, as in Bacigalupi's story. In all these cases these technologies only help to foster environmental degradation and socio-environmental inequities in dystopian urban scenarios, while the land ethics incarnated by some characters (mostly Native American and Chicano/a) pursue just the opposite, an all-encompassing solution for all humans, the environment, and other-than-human beings. Note, however, that no critique is addressed to technology per se in these [p.55] works but to the logic and the power structure behind it. Extreme examples of urban eco-apartheids appear in all three novels, with economic interests and climate change worsening the situation of 'eco-disparity' between the wealthy and their shelters, and the rest of the population (especially the poor and the people of color) and the remaining urban space. These novels, therefore, do not present feasible future urban plans; they warn again the risks of further degrading urban ecologies while mismanaging resources like water and building eco-apartheids.

Overall, *Almanac* and *The Water Knife*, both set in the near future, convey a feeling of urgency, the former through its complex environmental justice discourse and its apocalyptic undertone and the latter through its post-apocalyptic scenario of extreme weather conditions and desperate peoples. Silko's novel is a tribute to the Mayan almanacs and the ongoing resistance ever since they were conquered by the Europeans (Adamson 136-145), a manifesto and also a warning. In the same line, *The Water Knife* is an admonishment and a cautionary tale, with constant references to what could/should have been done when there was still time. In contrast, *Alburquerque* builds a plausible current scenario, addressing issues of community values, land and water rights,

and urban segregation. By referring to past and current events mostly related to urban development, water rights and subsequent environmental degradation, and by hypothesizing about possible (future) unsustainable and unjust schemes, all three fictional narratives are successful in raising awareness of current and pressing environmental justice issues and of different cultural values at stake. Urban environments are at the center of these authors' fictional inquiries of the future of the Southwest, exposing the history of water mismanagement and the roots of urban eco-apartheids.

Dogmas at war: denialism, conservationism, and the environmentalism of the poor

An analysis of the ethics behind the history of water management and legislation in the Southwest contextualizes the novels analyzed here further and traces the road that has led to the current state of degradation, segregation, and injustice in those urban ecologies.

One could quite safely claim that water in the Southwest is sacred. In my readings I have often come across numerous religious and spiritual references. Reisner, for instance, refers to one of his interviewees, a farmer who backed the CAP project and who claimed that "water is essential", as talking with "religious conviction" (300). Moreover, Reisner says of the CAP that it belongs to a "holy order of inevitability" (305) and claims that [future alien] archeologists … may well conclude that our temples were dams" (104).[20] Ross refers to the "gospel of growth" as a "system of belief" (quoting Dennis Meadows) and to Arizona's CAP as some politicians "Holy Grail" (42). Moreover, he emphasizes the "sanctity of private property rights" existent all over the United [p.56] States (67; 21), something supported by Theodore Steinberg's historical account of water wells in Arizona (Steinberg, chapter 3). On the opposite end of the spectrum from those in the Southwest who regard water privatization and extreme exploitation as most desirable, one finds the Sierra Club equating Grand Canyon to the Sistine Chapel in the campaign that managed to stop its damming

[20] This claim can be seen as echoing Indian first Prime Minister Nehru in his description of mega-dams as the temples of modern India, in 1954.

(Reisner 286; *Sierra Club*), and Edward Abbey (Silko's ecowarriors clearly resembling Abbey's Monkey Wrench Gang) comparing the drowned Glen Canyon to a buried Taj Mahal or Chartres Cathedral and stressing that no human agency will unfortunately be able to recover what was lost with the damming (189). Furthermore, Chicanos/as (particularly *acequia* advocates) claim that 'El agua es vida/Water is life' in a very different sense than that sponsored by the Bureau of Reclamation or the Sierra Club. This Chicano/a perspective, which is considered to be part of what has been termed the environmentalism of the poor, does not pursue economic profit or outdoors recreation and conservation, rather it seeks cultural and environmental equilibrium.[21]

When it comes to water in the Southwest different ethical systems operate depending on the cultural group. For most Chicanos/as, water management is an issue of equal sharing. Devon Peña devotes some of his work on the *acequia* system to talk about its customary law:

> The customary law of the acequia derives from Roman, Spanish, and Arabic sources. Five basic principles underlie acequia customary law: (1) the communitarian value of water, (2) the non-transferability of water, (3) the right of thirst, (4) shared scarcity, and (5) cooperative labor and mutual aid. (Peña, *Mexican Americans* 82)

With the arrival of the Anglo-Americans, and their Western-shifting frontier, the doctrine of prior appropriation was imposed. This principle implied that whoever got access to the water first had a right over it (Peña, "A Gold Mine" 250)[22]:

> According to the doctrine of appropriation, the first person who came to a string and claimed its water, or a part of it, had priority to exploit it; he acquired, in other words, a vested right to the water, made it a form of personal property. Under the doctrine, it mattered not at all how far from the river he lived or how far he diverted the water from its natural course, mattered not at all if he drained the river bone-dry. There was only one rule in that appropriation: *Qui prior est in tempore, potior est in jure* – he who is first in time is first in right. (Worster 88)

[21] This distinction aims at differentiating utilitarian and profit-based approaches versus more environmentally conscious attitudes such as the conservationist/preservationist/communitarian, without equating the latter attitudes with each other, for they certainly approach the environment and humans' relation to it in different ways.

[22] See also Pérez Ramos, "Progress and Development."

Worster regards this shift as a radical one, reflecting the Anglo European cultural change in perception about the environment: "the adoption of prior appropriation was part of a larger shift in thinking about nature, a shift towards instrumentalism in resource law and property rights" (Worster 89). It affected social and power relations all over the Southwest: those who got access to the water became powerful, and due to the new legal system, the new language and the new social rules imposed by the newcomers, mostly [p.57] the Anglos got hold of it. This change, not coincidentally, happened at the time of the gold rush in California, which originated after the discovery of gold in the beginning of 1848, precisely at the time of the end of the Mexican-American war, and attended mostly to economic interests. To complicate things further, in Arizona (where two of the three novels are based) a vast amount of water has been retrieved since the 1920s by farmers and landowners from the underground aquifers. Underground water happened not to be contemplated in the State's constitution, and it was moreover considered in a different category from 'contained' water sources:

> The 1919 code made water in definite underground channels subject to prior appropriation, but water percolating through cracks and holes in the earth escaped unnoticed.
> The result was strikingly undemocratic: in Arizona all water was not created equal. By failing to mention percolating water, [George] Smith helped create a legal fiction. Under the law there were two kinds of water: one contained by definite boundaries (a lake or stream, even an underground one), and another that dribbled freely, unrestrained through the ground. (Steinberg 92)

The prevalence of private property of underground water sources lingered in the State until 1980, when the legislation for what became the Groundwater Management Act was drafted as a condition of the federal government, before approving funding for the construction of the CAP (Water Education Foundation et. al). Silko refers to the complexities of this legislation in *Almanac*, published before the CAP was finalized in 1993, through Leah's plans to drill from deep wells. The water management situation in other Southwestern states has not been any simpler, although water is growing short in all, bringing the Chicano/a saying 'El agua es vida/Water is life' once again to mind.

The fictional works under analysis in this paper address the sacred character of water and the conflicting (un)ethical attitudes toward it differently. When dealing with the ethics around water management and

socio-environmental interactions, spirituality is a relevant aspect in Silko and Anaya's works. In *Almanac*, Silko presents the socio-environmental crises of the modern world as a result of the imposition of inappropriate environmental ethics, derived in part from the loss of spirituality and religious beliefs. Insatiable greed and craving for power have become the new dogmas of cultures such as the European or the North American ones, the novel claims, where any communal values, environmental ethics, and ideas of the common good seem to have been lost, together with any deep spiritual connection. In contrast, the characters in Silko's story recur to their ancestral deities and beliefs, whether those are Mayan gods or African deities. Silko, though, does not impose a one-size-fits-all belief system as the answer to the world's problems, but the lack of spirituality is at the core of the problem in her argument about environmental ethics. Instead of a lack of spirituality, all of the novels point to a lack of sense of community in the population.[23] In contrast to rural Native American and Chicano/a communities tied by traditional practices such as a communal [p.58] irrigation system—like the Pueblo depicted by Anaya—, the cities in these novels lack strong communal ties, particularly across people of different ethnic background. It is the lack of communal unity, together with the utilitarian and individualistic understanding of water management that eventually transforms the cities in the novels into eco-apartheids. These urban ecologies are ultimately shaped and doomed by the ethics that surround water management and urban planning.

Recurring to spirituality as the answer to the socio-environmental crisis might not be the best way to unify all humans into their quest for a socio-environmental ethical future at a time when numerous societies are fostering religious bigotry and a growing number of individuals do not hold any religious beliefs any longer. On the other hand, Silko's advocacy for communication across cultures, albeit a complex endeavor, seems to be the key to a (fairer, more ethical) future in her narrative. Her empowerment of characters belonging to ethnic minorities echoes the

[23] Understanding community as a social alliance opposed to the rampant individualism commonly fostered in capitalist cultures. Communities should therefore be understood in this context as groups of citizens who share the same cultural understandings, build alliances and coalitions among members, and work together for a better socio-environmental future.

shift proposed by Donna Haraway, from representation to articulation, according to which "all the patterns, flows, and intensities of power are most certainly changed" (91). Walter Mignolo historicizes the politics of representation in the Americas since the colonial times in his paper "The Geopolitics of Knowledge and the Colonial Difference":

> Las Casas defended the Indians, but the Indians did not participate in the discussions about their rights. The emerging capitalists benefiting from the industrial revolution were eager to end slavery that supported plantation owners and slaveholders. Black Africans and American Indians were not taken into account when knowledge and social organization were at stake. They, Africans and American Indians, were considered patient, living organisms to be told, not to be heard. (63)

Ever since colonial times ethnic minorities living in the Americas have been struggling to regain their right of articulation. Some of Silko's characters (e.g., the barefoot Hopi) belong in this struggle and present different routes of action for the future.

Peña also argues for the Chicanas/os' politics of articulation in his work:

> Their position as defenders derives not from a concept of "nature under threat," but rather from a relationship with "the forest as the integument in their own elemental struggle to survive". In other words, **their authority derives *not* from the power to represent from a distance, *nor* from an ontological natural status, but from a constitutive social relationality in which the forest is an integral partner, part of natural/social embodiment.** In their claims for authority over the fate of the forest, the resident peoples are articulating a social collective entity among humans, other organisms, and other kinds of non-human actors. ("The Gold Mine" 85; italics in original, bold added by the author)

Fictional narratives, such as Silko's, Anaya's or Bacigalupi's, contribute to this decolonial thinking, albeit in different ways. Joni Adamson's analysis of the kind of nature presented in American Indian writing matches the 'artefactual nature' of Haraway: a nature constituted by myths, folklore, culture, and the people who produce them, as much as by rock formations, mountains, springs, and caves. Chicana/o narratives also perceive nature as something co-created between humans and their surrounding environments (whether rural or urban), with common references to herbal gathering [p.59] practices, cattle grazing, agriculture and irrigation, gardening and forestry management, as well as to river and animal spirits, tortoise mountains, and whispering trees.

Faithful to his way of writing, Anaya argues for a holistic approach in *Alburquerque*. This novel, in line with his other literary works, is framed in terms of a good-versus-evil struggle: with those looking for balance (social and environmental) fighting against those looking for chaos (power and control resulting in socio-environmental destruction). *Acequias* (both in rural and urban contexts) are key elements in this search for balance. Other than Dominic's plan to acquire the water rights, *Alburquerque* is the story of a young man's search for identity after the truth about his biological mother is revealed to him. Same as his Pueblo friend Joe (José Calabasa), a Nam veteran also suffering from identity conflicts, and with the help of his new love Lucinda, Abrán will understand that an environmental equilibrium is a necessity in such a quest: "he had to find his spiritual center, something grounded in the values of Sara, something that came from the earth and the rhythms of the people, something he sensed Lucinda offered" (Anaya 147).[24] Similarly, Joe's (Jose Calabasa's) trauma from the Vietnam War prevents him from reintegrating into his Pueblo community, causing him much pain and frustration, as well as an identity crisis. The communal cleaning of the *acequia* constitutes the first step towards his healing and recovery. The same *acequia* Joe helps to clean also cleanses Joe from his fears and war nightmares (187). *Acequias* are also symbolic of a way of life that is on the verge of extinction due to the economic pressures of the United States cash economy, embodied in the novel in Frank Dominic's master plan of acquiring the Pueblos' water rights in order to channel water through the city of Alburquerque.

The Pueblos, as well as the northern Chicano/a communities who hold the remaining water rights in the novel, all suffer from the disintegration of their impoverished communities. Both Joe and Abrán represent a proactive younger and urban generation willing to learn from their elders and recover the fading values that held these communities together: by combining a law career with the knowledge from the Pueblo council, as in Joe's case, or a medical degree with the knowledge of the *curanderas*, as is the case with Abrán and Lucinda. Joe and Abrán are the epic heroes the world needs, the alter egos of the mythic characters of an epic poem:

[24] Sara is Abrán's adoptive mother.

> He[25] was writing an epic that explored the Mesoamerican mythic elements Chicanos had incorporated into their heritage. Juan and Al, two plain homeboys from the barrio, took a journey into the Aztec past, and what they found, Ben hoped, would create a new consciousness for the people, a new identity for the downtrodden. (60)

Anaya's perspective, therefore, recurs to the local sphere and knowledge as the tools to achieve (or retrieve) a socio-environmental balance. This perspective is an empowering message to young people belonging in ethnic minorities and links to their ancestral knowledge and traditions, but it can be problematic when aiming at presenting an [p.60] overarching strategy to cope with the global socio-environmental crisis.[26] Nevertheless, there is an intrinsic value in any message that asks for balance and a deeper relation with our community and our surroundings.

In Paolo Bacigalupi's dystopian fiction *The Water Knife*, the reader finds tent revivals close to the Red Cross (pay-for) water pumps in a context of eco-apocalypse and eco-apartheid, with constant references to the denialism of previous human generations who chose to either ignore or, even worse, refute Reisner's criticism and predictions in his renowned *Cadillac Desert*. Bacigalupi's is a warning, with constant references to *Cadillac Desert*, aimed at fostering socio-environmental restoration in our current time. It is a path that needs to be taken immediately, at the time of the reader's and not of the novel's characters. His references to religion therefore do not seek to inspire any deeper spirituality in the readership. The novel's message is rather the opposite: religion should not become the last hope of a desperate and segregated humanity abandoned to its fate (reminding of Reisner's prediction that "Arizonans from now until eternity will be forced to do what their Hohokam ancestors did: pray for rain" [296]). Therefore, Bacigalupi also asks for pro-activity in the present that will ensure a sustainable future for all, lest we reach a post-apocalyptic future with a crumbling faith as last resource. The tools for such path though seem to be reduced to acting according to the warnings raised in *Cadillac Desert*, while all the socio-environmental knowledge from Native Americans and Chicanas/os is unfortunately overlooked in the plot. In the end a coalition is forged

[25] The writer of the novel, Anaya's *alter ego*.

[26] For more on the problematic around Anaya's local perspective, see Pérez Ramos, "Racism, Displacement and Pollution."

among the novel's main characters—an Anglo-American Woman, a Mexican-American man and young girl, and an Afro-American man—with the aim of getting a better future for themselves, without any grand plans for solving the overall situation of chaos, injustice and climate devastation. In the quest for survival Bacigalupi therefore also presents a multi-ethnic coalition, thus implying the argument already present in the other literary works—that cross-cultural communication is key in the path to a future of inclusive, sustainable, and just urban plans. This is an argument strongly supported by critics like Adamson, and in line with the view of others like Ross:

> Success […] will not be determined primarily by large technological fixes […]. Just as decisive to the outcome is whether our social relationships, cultural beliefs, and political customs will allow for the kind of changes that are necessary. That is why the climate crisis is as much a social as a biophysical challenge, and why the solutions will have to be driven by a fuller quest for global justice […]." (Ross 16)

(Can there be such a thing as an) Eco-Future?: lessons to learn and put in practice

Climate change is difficult to portray and dramatize (Nixon; Ross, 23). On the other hand, one has to be careful not to attempt to turn a slow and complex process into a military campaign with a simplified problem and goal.[27] The current crisis, which has been defined as a "crisis of the imagination" by ecocritic Lawence Buell, needs new [p.61] narratives to help us all understand the magnitude of the problem and visualize alternatives for the future: "problems will never be solved until people begin imagining a new story, speculating about how things could be different. […] Imagination […] is the first step toward solution" (Sherman Alexie qtd. in Adamson 25). Even in the ominous narratives here analyzed some new hopeful stories are imagined such as the coalitions in Silko, the victory of two homeboys in Anaya, and the survival of some doomed Southwestern citizens in Bacigalupi.

Many warnings have been made, calling governments, corporations, and citizens alike to make better and more conscientious

[27] For more on the topic of the risks of simplification of environmental crisis, in the context of alien species in South Africa, cf. Lindström et al.

use of water (Worster and Reisner being only a couple of examples of 'early' warnings), while novels like the ones discussed here also warn against the adverse effects these disparities have specifically on urban ecologies, and yet the situation keeps getting worse. Anaya's and Silko's novels were already published over twenty years ago. Bacigalupi's, on the other hand, has come out only recently, reflecting all the added current tensions around water in the Southwest and its main cities in a futuristic setting. Fiction can inform the public in different ways that scientific data or political discourses, by creating empathy, by fantasizing about future outcomes, by engaging audiences, and by offering alternative narratives. In the same fashion, it can be considered romantic or alarmist, and therefore dismissed. Recurring to utopian scenarios that closely resemble contemporary real schemes is a useful literary technique to reflect on the problem and imagine possible outcomes: whether complex but hopeful (Silko's international healers' convention), positive and reassuring (Dominic's defeat and Joe and Abrán's newly found identity in Anaya's story), or post-apocalyptic (as in Bacigalupi's narrative).[28] Interestingly enough, the novels that speak for the relevance and the potential of returning to a sense of community in the struggle for socio-environmental justice are those written by ethnic minority writers (Silko and Anaya). This same argument is claimed by decolonial theorists (Mignolo), ecocritics (Adamson) and cultural theorists (Ross). All the works mentioned or analyzed in this paper, though, alert against a future where power disparities have been exacerbated in the form of eco-apartheids in more or less degraded urban ecologies, and the environmental crisis has worsened globally to the extreme, providing a very human narrative to current warnings:

[28] Dominic's plan resembles the Santolina sprawl development; a Venice in Arizona can be compared to the examples provided by Abbot—see note 15; the Alternative Earth Units and futuristic arcologies are fictional parallels or developments of Biosphere 2 and Arcosanti respectively. Moreover, the five year long drought that California is going through is good proof of how water and status can go hand in hand. Currently, municipal fines and the (subsequent) #droughtshaming campaign in Twitter are certainly changing things in drought-stricken California (Hickman). Still, those who are wealthy enough have been tracking water to keep their states green (Christie) (supporting the Western saying: 'water flows uphill toward money'); while others opt for more affordable solutions, painting their lawns green, in light of the fines for watering it, rather than letting it brown or adapting it to the local environment by xeriscaping it ("Painting the Lawn Green").

> "if these initiatives do not take shape as remedies for social and geographic inequality, then they are likely to end up reinforcing existing patterns of eco-apartheid. If resources tighten rapidly, a more ominous future beckons in the form of triage crisis management, where populations are explicitly selected out for protection, in eco-enclaves [which could [p.62] perfectly be called Alternative Earth units], or for abandonment, outside the walls." (Ross 17)

In the quest of critics and academics to deal with the current socio-environmental crisis and work towards a solution, works of fiction like those analyzed in this paper are crucial tools to raise and explore concerns (such as the future of urban ecologies in the Southwest) through powerful narratives.

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PAPER III

Lands of Entrapment:
Environmental Health and wellbeing in literature about the U.S. Southwest and Chicana/o Communities

María Isabel Pérez Ramos

Figure 8: Farmworkers mural Chicano Park

"El Agua es Vida. Water is Life"
— Popular saying and motto of the New Mexico Acequia Association

"Polluted soils are related to degraded souls"
— Kosek, *Understories*

Introduction

In her well-known novel *So Far From God* (1993/2005), Ana Castillo renamed the state of New Mexico, popularly known as "The Land of Enchantment," "The Land of Entrapment" (172). Her description, with sick animals (both human and not) and dying birds falling from the sky, calls to mind Rachel Carson's "A Fable for Tomorrow" (1962). Carson warned starkly about how pesticides, fungicides, and herbicides polluted water and soil and affected both plants and animals (including human beings). Every state in the United States Southwest suffers from environmental health related issues: air, land, and water pollution coming from factories, pesticides, and the like. Castillo warned about factory chemicals, hazardous workplace exposures, and uncontrolled (water) pollution, and their effects on people's health and livelihoods in New Mexico. In *El Puente/The Bridge* (2000) Ito Romo depicts a similar industrially polluted landscape in the borderlands between southern Texas and northern Mexico. Stories about bodies—mainly Chicana[1] bodies—entrapped in toxic landscapes, victims of industrial abuse and malpractice, also appear in the work of other Chicana writers such as Cherríe Moraga, Helena María Viramontes, and Lucha Corpi. These works, published in the 1990s, are based on the toxic experiences faced by Chicana/o communities due to the use of pesticides, and in most cases are told from the perspective of farm workers.

[1] The term 'Chicana/o', although accepted by academia, is still a controversial term for many Mexican-Americans. In this paper 'Chicana/o' refers to people of Mexican descent living (and writing) in the United States. I also use the term 'Mexican-Americans' in relation to Ybarra's work following her own choice in the title of her book, and 'Hispanos' in relation to the communities of the Upper Rio Grande Bioregion, for it is the most commonly used term in that region (Kosek, 291).

This industrial and agricultural toxicity has often been analyzed in literary criticism from the perspective of the physical impact it has on the body of Chicanas/os and on the environment. The first section of this paper revisits this topic from a broader perspective that also considers toxicity's impact on the mental health of individuals and communities, what could be called a 'toxic trauma.'[2] It addresses toxicity and environmental injustice—and derived illnesses, deformities, casualties, and mental disorders—first in the context of pesticide use in California's agricultural landscape, and later in the context of negligent and abusive industrial (mal)practices on the U.S./Mexico border. It builds on previous work by Joni Adamson (2002; 2010), María Herrera-Sobek (2013), and Linda Margarita Greenberg (2009) on environmental health issues in the Chicana/o community, with references to Stacy Alaimo's (2010) transcorporeality, highlighting the vital role of (clean) water in the life cycle and communities' wellbeing. In the second section of the paper I concentrate my analysis on other factors that affect Chicana/o communities' health and wellbeing, particularly the link between environmental degradation (due to practices such as overgrazing and water mismanagement) and cultural deterioration (due to unemployment, poverty, depression, and substance abuse) in the context of water management in the Upper Rio Grande Bioregion—which to my knowledge has not been addressed in the literature before. Literary works about the Chicana/o community, such as those by Frank Waters or John Nichols, and Chicana/o literature by authors like Rudolfo Anaya portray impoverished communities struggling to maintain/regain control over the natural resources for the sake of their own (cultural) health. Thus, human bodies and minds, cultural identities, and natural sites and resources in these stories are all affected due to the same political and economic practices. This becomes all the more evident if one compares these fictional narratives with the anthropological work of Jake Kosek, linking heroin addiction to resource management in Northern New Mexico.

This broad analysis of Chicana/o literature shows how Chicana/o culture, in its socio-environmental justice pursuit, strives for wellbeing,

[2] For a clinical study of toxic trauma as a disruption of somatic systems see Baker. In this paper I also add the dimension of trauma as psychological distress.

conjoining economic, environmental, and social issues (health being a key one). In Latin America this holistic perception of socio-environmental wellbeing is referred to as *Buen Vivir*, or *Sumak Kawsay* in Quechua.[3] Ecuador, one of the countries that have incorporated *Buen Vivir* guidelines in its government, promotes social equity, quality of life, and (environmental) sustainability, as well as aiming to ensure cultural diversity and intergenerational responsibility ("El Socialismo del Buen Vivir").[4] This falls in line with Robert Constanza's definition of (what) "economy" (should mean): encompassing natural capital (e.g. biodiversity), social and cultural capital (e.g. social cohesion), human capital (e.g. physical and mental health), and built capital (Constanza 77-78). Chicana scholar Priscilla Ybarra defines a similar philosophy to that of *Buen Vivir* in Chicana/o literature: "goodlife writing," which "embraces the values of simplicity, sustenance, dignity, and respect" (2016, 4). The communities from the narratives under analysis, in their struggle to attain this 'good life,' honor water as source of life and/or keystone in their cultural identity and wellbeing, relating closely to the popular motto *el agua es vida* and striving to maintain/regain access to clean water. In this sense they are in line with current activism, such as the protests against the Dakota Access Pipeline in the United States, led mostly by members of the Standing Rock Sioux reservation. This 1,172-mile long pipeline intended to transport light sweet crude oil from North Dakota to Illinois, is regarded as an environmental health threat by the Standing Rock reservation members: [5] "The Dakota Access threatens everything from farming and drinking water to entire ecosystems, wildlife and food sources surrounding the Missouri. […] We ask that everyone stands with us against this threat to our health, our culture, and our sovereignty" ("Sacred Stone Camp"). Along with this opposition there is an initiative by the Standing Rock youth: 'Rezpect Our Water,' with the motto: 'Mni Wiconi' ('water is life' in Lakota). Both initiatives,

[3] See also "Sumak Kawsay." Strategies to achieve *Buen Vivir* have been incorporated into Ecuadorian and Bolivian governments in 2008 and 2009 respectively (Mercado).

[4] For a critique of the Ecuadorian government manipulation of this philosophy see Zorrilla.

[5] For information about the proposed Dakota Access Pipeline project see *Energy Transfer*.

as with the novels under analysis, establish a direct link between environmental health, cultural identities, and wellbeing.

Toxic Trauma: Toxicity And Struggle Among Farm And *Maquila* Workers

Of Sprayings, Poisonings, Demonstrations, and Crucifixions

Issues of vulnerability, body boundaries, and mental disruption are addressed in this section, in the context of pesticide exposure. Recently the United Farm Workers (UFW) started the initiative "Protect California school kids from pesticides" alleging that:

> In 2014 the California Department of Public Health issued a report documenting the use of 144 hazardous, drift-prone pesticides used in large quantities (up to 29,000 pounds) within a quarter mile of many California schools. The report also highlighted the fact that Latino children in California are almost twice as likely as white children to attend schools near the highest use of these hazardous agricultural pesticides. ("Protect")

Tracy Perkins and Julie Sze narrow their focus of attention to the Central Valley and enumerate the problems affecting this agricultural region as being "poverty, pesticides, disputes over the allocation of irrigation water, farmworker deaths, and, most recently, a cluster of babies born with birth defects in the small town of Kettleman City" (2011). They moreover emphasize "the toxic burden residents […] bear from pesticide drift, diesel exhaust, toxic waste, drinking-water pollution, and high air pollution levels" (Perkins and Sze, 71-2). Of the many stories they collected from the Central Valley[6], that of Teresa De Anda[7] resonates particularly strongly with the narratives analyzed below. After her community and her family suffered from a pesticide drift in 1999 De Anda decided to dedicate her life to protect communities from the harmful effects of pesticide exposure and derived water pollution. De Anda is a real-life example of what Helena María Viramontes, Cherríe

[6] See also *Voices from the Valley*.

[7] Deceased in 2014. "She was an incredible advocate for low-income rural communities and communities of color threatened by exposure to unsafe drinking water and pesticides. […] In addition to serving on the Coordinating Council of AGUA, Teresa was a community organizer with Californians for Pesticide Reform and a founding member of El Comité para el Bienestar de Earlimart. She was instrumental in passing the Pesticide Drift Exposure Prevention and Response Act in 2004" ("Honoring").

Moraga and Lucha Corpi portrayed very effectively in their respective novels *Heroes and Saints* (1994/2014), *Under the Feet of Jesus* (1995/1996), and *Cactus Blood* (1995/2009), women who are well aware of the price of the toxic burden, their and their children's disrupted bodies (and minds) being living examples of the harm. When toxicity is ubiquitous it can cause a 'toxic trauma,' with harmful somatic effects, also causing psychological distress—which in these novels manifests in nightmares, feelings of extreme vulnerability, rejection of one's own body, and depression. This trauma can also be communal if large numbers of a community suffer from ailments such as cancer or birth defects that ultimately affect the integrity of the group. Furthermore, this trauma not only affects humans, but also possibly the whole natural environment. All the novels under analysis in this section present instances of toxic trauma. They moreover offer alternatives to the toxic landscapes in line with the 'goodlife' values Ybarra associates with Mexican American communities.

Cherríe Moraga's play *Heroes and Saints* was inspired by several events and narratives from 1988 surrounding the farmworkers struggles: Cesar Chávez's 36-day fast, the aggression toward activist Dolores Huerta by a policeman at a peaceful protest, the high incidence of children with cancer and birth defects in the community of McFarland in the San Joaquin Valley, and the documentary about this same place and facts, *The Wrath of Grapes* (Moraga 2014, 89). Moraga's play moreover reflects on these events from a particular vision of the 'environment,' in line with the definition of environmental justice advocates: "For immigrant and native alike, land is also the factories where we work, the water our children drink, and the housing project where we live. *For women, lesbians, and gay men, land is that physical mass called our bodies*" (Moraga 1993, 173).[8] Moraga includes a bodily dimension in her definition, conjoining peoples who have traditionally been discriminated against by mainstream, patriarchal systems, often in the same terms as the land. In *Heroes and Saints* toxic trauma intrudes in all the dimensions of this definition of land: work, home, water, and bodies.

Heroes and Saints is set in the fictitious town of McLaughlin, described as "a cancer cluster area" (110) (clearly referring to

[8] Italics added. Reference found in Ybarra, 240.

McFarland), and as a "1980s Hispanic Love Canal" (ibid.) as the subsidized housing (where most families are suffering from cancer and birth defects) has allegedly been built over a former pesticide dumping site. Moreover the tap water in town is polluted due to pesticides in the nearby fields sipping into the aquifers. The plot revolves around the 'Valle' (valley) family, and Cerezita in particular: a teenage girl whose physical presence is constituted only by a head due to a birth defect[9] caused by her mother Dolores'[10] exposure to pesticides during her pregnancy. 'Cere' is an intelligent, pro-active young woman struggling for justice, who wants to make visible the toxic exposure of her community to the pesticides used in the nearby fields, and the pollution of the community's water sources. These abuses result in individual and communal toxic trauma materialized mostly in the bodies of children dying from cancer, and incite the community to take action. Some people, such as Cerezita—who claims that "nobody's dying should be invisible" (139)—and the activist Amparo[11] agree that "if you put the children in the ground, the world forgets about them. Who's gointu see them" (94). As part of a visibilization crusade the dead children are furtively crucified like little Jesus Christ figures in the vineyards, embodying their community's suffering and helplessness. These crucifixions foster what Linda Margarita Greenberg terms "pedagogies of crucifixion," "contesting the environmental racism inherent in the agriculture industry's tolerance of cancerous condition in Chicana/o farmworking communities" (166). The toxic trauma affects other members of the community like Cere's sister Yolanda, who loses her little daughter Evalina to cancer (the tenth child to die of cancer in the community), representing the damaged, toxic body and mind: "Nobody told my body my baby is dead. […] [My breasts] feel like tombstones on my chest!" (142) "I'm afraid […]. I think my womb is poisoned" (143). Yolanda is devastated not only by the loss of her child but by the subsequent distrust of her body. Her depression is another example of

[9] A reference to a kid pictured in the *Grapes of Wrath*, who was born only with a head and torso (Moraga 2014, 89).

[10] Meaning pains/sorrows, her name is quite telling of the mental toxic trauma she goes through, due partly to her daughter's birth defect and the death of her grandchild.

[11] Meaning protection, refuge, shelter. Her character is based on Marta Salinas, a mother and activist from McFarland, and the Chicana activist Dolores Huerta (Moraga 2014, 89). Her activism also resembles that of Teresa De Anda.

toxic trauma, and example of how a constant exposure to toxicity might affect particularly women both physically and psychologically due to their key reproductive role.

The actions carried out by these women in the play make their suffering visible to those outside their community, including the readers/audience—"Only struggles can transform an ill body into a political fact" (Armiero and Fava, 79)—and so Moraga narrates several protests/processions. At one point Amparo mobilizes the community (mostly mothers), asking for clean drinking water in front of the public school. In her speech she juxtaposes wellbeing to material wealth, stressing how *el aire, el agua, y la tierra* (air, water and soil/land) are the most important elements in life, more so even than a roof if, as in their case, the roof only contains toxicity and illness. She moreover organizes another political demonstration, where some Mothers for McLaughlin voice the names and ages of their children, victims of cancer, protesting unsafe housing, (water) pollution, and pesticide use. Despite the terrible events visibilized and performed by the community—deformities, deaths, and crucifixions—Moraga's play portrays what María Herrera-Sobek terms "aesthetic activism" (2013), presenting these events in a way that manages to turn all the harshness into something lyrical and transcendental. This "aesthetic activism" makes the otherwise rough plot tolerable, fostering empathy and support, which combined with the "pedagogies of crucifixion" that turn "the passivity of death into active dialogue with the larger society it seeks to transform" (Greenberg 165), promotes an awareness of environmental health issues and toxic trauma affecting the Chicana/o community in the readers/audience.

Helena María Viramontes' novel *So Far From God* portrays a farmworker family often on the road looking for a job in the fields. The farmworker communities in the story are fragile and in constant reconfiguration: temporal as their work, seasonal as the crops. Through the various voices of the main characters—mainly the mother, Petra; her boyfriend, Perfecto; the oldest daughter, Estrella; and Estrella's friend Alejo—the reader gains access to a life of extremely hard labor, poverty, vulnerability, and toxicity. Under such circumstances, as Estrella notes, the farmworkers in the fields starkly contrast with the healthy, happy-looking, cleanly dressed female figure depicted in the logo of the Sun-

Maid Raisins company that they pick grapes for (49-50). Other than the ailments derived from harsh labor—including dehydration, sunstroke, muscular damage and pain, and blood circulation problems (e.g. varicose veins)—the workers have to endure the toxic trauma derived from the spraying of the fields. As in Moraga's story the spraying is done without warning, with dreadful consequences for the workers' health, and the water the farmworkers have access to is polluted due to the use of pesticides. Furthermore, since even pregnant women and small children have to work in the polluted fields in order to make a living for their families, the females in the story also feel anxious about their children's health, as well as about their own bodies and reproductive capabilities, fearing that they will have babies with birth defects. Viramontes goes as far as linking toxic pollution, bodies/minds, and borders: only healthy, useful migrant bodies (and minds) can stay on the U.S. side of the border, if they fall sick or damaged they are rendered useless and disposable, and sent to the other side.

Alejo's story is a clear example of the somatic disruptions caused by pesticides. Alejo is sprayed while stealing fruit from the fields with his cousin in order to make some extra money on top of his low wages—no warning had been given about the fields being sprayed that day. He then gets what the workers refer to as "daño of the fields"—diarrhea and vomiting (93). Petra, who is well aware of the unfairness of the system they are enmeshed in, tries to counter it by taking care of Alejo for as long as she can, despite her family's precarious situation. In this way, Petra personifies the goodlife values present in Viramontes' writing, supporting and sustaining Alejo in an attempt to strengthen community ties. The most transcendental point of the novel comes when Estrella, desperate to get Alejo some medical help they cannot afford, connects the materiality of human bodies, energy, and wealth: "She remembered the tar pits. Energy money, the fossilized bones of energy matter. How bones made oil and oil made gasoline. The oil was made from their bones, and it was their bones that kept the nurse's car from not halting […] the nurse owed *them* as much as they owed her." (148) Estrella's deductions expose the links between natural resources, the farmworkers hard labor, and the economic system that sustains the nurses' way of life. Nevertheless that link is not honored by

the system, and therefore Alejo becomes expendable, his health a luxury that neither he nor his friends can afford.

The toxic trauma in this narrative is also expressed metaphorically, through polluted canals that become veins in Perfecto's dreams: "he had dreamt of illness, his veins like irrigation canals clogged with dying insects" (100). Perfecto's nightmare, another symptom of a psychological toxic trauma, parallels Devon Peña's metaphor of the water system as a cardiovascular system: "when the human heart is affected because the arteries are clogged, people get sick and die. Pollution (cholesterol) damages the circulatory system and endangers the health of the overall organism" (253). This organism is not only the environment, but also the communities dependent on it. The trauma caused by the persistent toxic pollution and illness surrounding farmworker communities runs counter to the community's wellbeing and to the popular understanding that *el agua es vida*, and destabilizes the whole socio-environmental equilibrium. Perfecto's nightmare is an oneiric representation of the trans-corporeality (Alaimo) farmworkers are subject to: toxins, insects, water, and human bodies and minds are all interconnected in the deadly landscape of the fields.

Lucha Corpi´s novel *Cactus Blood* is a detective story also about the vulnerability of immigrant and native bodies. Starting with the suspicious death of Sonny Mares, a Chicano poet and activist, the Chicana protagonist Gloria Damasco—who is being trained as a private investigator— comes across the story of Carlota Navarro. Carlota, born in Mexico, migrated to the United States when she was fourteen with the hope of making a better living. Cheated by the person in charge of getting her across the border, she is sold to an Anglo-American family living in the San Joaquin Valley, for whom she works as housemaid and babysitter until the father of the family rapes her. In her escape she runs "across lettuce and onion fields, passing through vineyards where the sweet but deadly smell of pesticides hung, still fresh, in the air of a hellish dawn" (Corpi, 52), becoming another victim of toxic trauma. Part of the plot recounts the struggles of several characters against further pollution and poisoning, pursuing: "the discontinuation of pesticides, herbicides, and fungicides, all of which were responsible for cancer,

birth defects, and many other diseases among migrant farmworkers" (Corpi, 55).

Carlota is apparently poisoned by a pesticide known as "Devil's blood," a nerve gas. The scrubbing Carlota undergoes to clean herself after the rape makes her even more vulnerable to the effects of the pesticides so: "the poison had then penetrated more quickly through the broken skin" (Corpi, 86). Carlota's body is therefore raped twice, first as a victim of an abusive man, and later as a victim of her own overexposed trans-corporeality in a poisoned environment. A curandera and a shaman try to help her with every herb and remedy they know—as Petra does to Alejo in *Under*—nevertheless traditional remedies seem to be inappropriate to cure diseases produced by laboratory-designed poisons. Finally a doctor specialized in pesticide poisoning assists her and saves her life, but the poisoning causes long term physical and mental damage: from hyper-sensitive skin and brain damage to depression. Her depression spells could also be perceived as something else than somatic side-effects of her fatal toxic exposure, namely as a mental toxic trauma resulting from her awareness of her extreme vulnerability as a permanently damaged organism, lacking any formal structure in the United States to help or support her. Due to her 'illegal alien' condition Carlota only gets the support of individuals, mostly from the Chicana/o community, who strive for communal wellbeing. She is therefore another example of a damaged, disposable body, a victim of a system that allows the poisoning of living beings, forcing the most vulnerable humans to hide in order not to be thrown out of the country where they live, work, and unjustly suffer.

These three narratives present toxic biographies written by and (mostly) about women, denouncing their vulnerability as workers and/or mothers. Characters such as Cere, Amparo, Estrella, Petra, or Carlota counter the vulnerability of their exposed, fragile bodies, with courageous and generous actions that aim to uncover and stop the toxicity of their environments, and/or to help other vulnerable members of their community. Moreover, in their struggle against toxic trauma and for community and socio-environmental wellbeing, Viramontes and Corpi challenge the political borders that menace ill bodies/minds with deportation. Similar narratives are told by writers such as Ana Castillo

and Ito Romo, but in a different context: that of the industrialized border region.

Maquiladoras, Bridges And (Toxic) Flows

The border between the United States and Mexico has been the witness to different labor/economic agreements, and to the subsequent human flows those agreements have fostered. In 1965 the Maquiladora, Manufacturing, and Export Services Industry (IMMEX) was established in Mexico, and in 1994 the United States, Mexico and Canada signed the North American Free Trade Agreement (NAFTA). As a consequence *maquiladoras* (assembly plants) sprouted all around the Mexican side of the border "with the original proviso that the manufactured goods would be sent to the United States as well as the waste products. This provision has not been honored and toxic waste products have stayed in Mexico" (María Herrera-Sobek, 183—referring to "Metales y Derivados Toxic Site"). Moreover, as Joni Adamson points out:

> NAFTA's **chapter 11** gives corporations and individual investors the right to seek reimbursement for any law or regulation that impinges upon the company's future profits, while preventing nations and states from seeking protection within their own national and state court systems"[12] (2010)

This has resulted in the extreme pollution of the U.S.-Mexico border—affecting the water (mainly of the Rio Grande)[13] and land of the two nations and spreading through the air—as well as labor exploitation. Deplorable working conditions and insufficient wages, and the proliferation of polluted slums, leave *maquila* workers not being able to access decent housing in non-polluted areas with minimum infrastructures. The documentary *Maquilapolis: City of Factories* (2006) exposes the severe consequences of this situation on the health and wellbeing of communities in the particular context of the city of Tijuana.[14] Through the lens of several women, workers from the

[12] Bold in the original.
[13] The pollution of the Rio Grande when flowing through the US/Mexico border is an acknowledged problem. Said pollution derives mostly from the numerous *maquiladoras*, as well as to inadequate sewage systems on both sides of the border, and pesticide contamination from farming (see Satija; Williams; "Texas City").
[14] For more accounts on the persistent toxic trauma of the industrialized border see "Historias"; "La Tijuana"; Zaragoza.

maquilas, comes a story of labor abuse and environmental injustice that goes from the assembly plants to their precarious homes, and all the way to the USA through the border. This story is also a story of resistance and hope thanks to the initiative of women such as María Lourdes Luján Aguirre, who started conducting health surveys in her community for a binational initiative of the San Diego Environmental Health Coalition, and eventually managed to get the Mexican government to clean the toxic waste from an abandoned factory near her neighborhood. Teresa Leal,[15] who co-founded the group Comadres[16]—"a binational group of women that addresses social, environmental, labor, and toxicity issues related to the build-up on the U.S.-Mexico border of the maquilas" (Adamson 2002: 44)—is another notable example of grassroots activism. Leal initiated several environmental justice initiatives, some of them addressing the pollution of water sources such as the highly polluted Santa Cruz River (flowing from Mexico into the USA) (ibid.). Leal's ultimate goal always was to help affected communities and to restore an optimal environmental health condition to the border (Blue). The narratives and socio-environmental initiatives here analyzed criticize the resource dispossession of the Chicana/o community and/or the socio-environmental failure of NAFTA, presenting alternative goodlife values practiced by communities that struggle for socio-environmental wellbeing.

Two Chicana/o novels in particular are illustrative of these issues: *So Far From God* (1993/2005), by Ana Castillo, and *El Puente/The Bridge* (2000), by Ito Romo. Castillo's novel focuses on a family formed by the matriarch and central figure, Sofia, her four daughters, and the husband—who returns temporarily to the family after being gone for twenty years. In the background is a Hispano agropastoral community struggling to keep their lilvelihood in the face of large corporate agribusinesses. In chapter nine Sofia decides to run for mayor of Tome and, together with her *comadres*, starts a sheep-grazing and wool-weaving cooperative, also selling hormone-free meat and organic vegetables, thus producing healthy food and generating sustainable jobs

[15] Deceased in May 2016. She started her activism already as a teenager, collaborating with the United Farmworkers, raising awareness among workers about the harmful effects of pesticides, and informing them about the spraying schedules (Adamson, 46).
[16] Spanish for co-mothers.

for the community and the environment. Moreover, this inspires other members of the community to address other problems, such as drug abuse—bringing to mind Kosek's account of heroin addiction in northern New Mexico. These *comadres*, as in the real-life example of Teresa Leal, in their attempt to attain a socially, economically, and environmentally sound community representing goodlife values that counter, among other things, toxic trauma. Toxic trauma is mostly present in chapter eleven, which tells of Fe's work at a factory producing weapons for the Pentagon. Fe, in her determination to "buy her house, make car payments, have a baby, in other words, have a life like people do on T.V." (189)—that is to attain middle-class stability and supposed wellbeing—gets a job in which she has to handle highly toxic products, without being given proper instructions or being informed of the risks involved. As a result her whole body is damaged: starting with nausea and headaches, later suffering an abortion, and finishing with a cancer that eats her up from the inside (on top of a skin cancer she allegedly already had, but which only got worse from contact with the chemicals). Numerous other women in her workplace suffer from similar problems but the medical services at the factory, far from acknowledging the toxic trauma they are subject to—which is seriously damaging their reproductive capabilities, as well as their overall health—attribute their problems to "just about being a woman" (178), reminiscent of similar accounts told by the women in *Maquilapolis*. Toxic trauma not only affects Fe, her coworkers, and their families, but also the rest of society—for toxic chemicals from the factory are often disposed down the drain.[17]

As the final piece of the toxic landscape depicted by Castillo, a quite unusual Way of the Cross Procession (in line with "aesthetic activism") takes place, challenging "mainstream conservation/ preservation environmentalism" (Adamson 2010). Similar to one of the protests in Moraga, a crowd gets together to pray for "their loved ones who died due to toxic exposure" (241), with people speaking at each station "on the so many things that were killing their land and turning the people of those lands into an endangered species" (241-2). These things

[17] For more on the transcorporeal impact of toxicity in Fe and her community confer Alaimo 2010, chapter 3.

range from radioactive waste dumped down the drain and toxic exposure in factories, to uranium contamination in reservations and related birth defects, as well as pesticide poisoning. These people, some of whom clearly state at the demonstration that they are struggling against their community's extinction, strive for the wellbeing of their communities through goodlife values, criticizing the toxic traumas they are subject to.

What Castillo visibilizes through Fe's physical suffering, and later through the protest procession, Ito Romo narrates from the dividing line of a liquid toxic border. Romo's novel *El Puente/The Bridge* has a bridge as central element: a bridge that connects The United States and Mexico, as well as people with the same cultural roots—the Mexican(-Americans). Together with the bridge goes the Rio Grande running under it. Through the stories of fourteen women, a picture of life right on the border is drawn. The narrative is located in two unspecified towns, each on a different side of the border, and has as its background the surprising change in color of the Rio Grande, which turns red partly due to industrial (mal)practices that result in the extreme pollution of the river. Romo addresses the issue of the centrality of water in the survival of the environment and all living beings, drawing attention to the effects of pollution on the population's health and wellbeing. In *El Puente* the Rio Grande is often portrayed as a dump (both literally and symbolically): "[Tomasita] had to clean the old earthen vessel with a Brillo pad—[…] until all of the charred blackness was gone—rinsed away—flowing down the Rio Grande, where she emptied her washtub and the sorrow in her soul" (3). Through Tomasita the reader learns that water pollution in the novel results mostly from industrial (mal)practices, but also from lack of infrastructures in poor urban areas:

> She finished washing her dishes and emptied her washtub into the Rio Grande, far to the west of the city, where the houses were barely houses, close to the small stream that came from the huge American factory. […] The river was her backyard, her toilet, and her bath. (128)

Tomasita not only is an extremely poor woman who can only access water through the polluted river, she also lives by a nearby factory disposing industrial waste into the same water she has access to—water that flows down to the cities on both sides of the river/border. Other chapters provide further examples of how characters are exposed to

pollution, showing how people with few economic resources and living in a certain part of town (and a certain—the Mexican—side of the border) are particularly vulnerable to and affected by uncontrolled pollution. Romo's concern with water pollution and its potential disastrous effects on both people and environments calls to mind—now in an industrial context—Peña's metaphor of a clogged cardiovascular system.[18]

The reasons why the river turns red are not revealed until the last chapter. All characters speculate about this surprising event and many regard it as a miracle (63). Perla contemplates using the red water to try to cure her granddaughter's birth defect, itself linked to polluted water:

> [I]f what they say was true, then she had to get some water for her little granddaughter who was born with a spinal defect. […] One of the doctors, the one from the American side, said that it was probably because Perla's daughter had drunk water from the tap during her pregnancy instead of the water from the plastic jugs. (62-63)

Perla's granddaughter is not the only victim of somatic toxic trauma. Tomasita's husband, who had worked "as a waste disposal superintendent for six dollars a day for the new factory" (128), dies from cancer shortly after taking the job. After this terrible loss Tomasita's precarious living conditions only get worse. Suffering from depression she starts grinding mulberries and eventually throws the powder into a little stream—which in combination with its pollution turns the whole river red—: "The stream that killed him […]. She spread [the mulberry powder] all the way from the big-mouthed pipe coming out of the factory wall to where the stream emptied into the river. It mixed with the mud and sludge along the stream's edge. Slowly, slowly seeping into the river" (130). What in Castillo's story is invisible—the POPs[19] invading Fe's organism and the toxicity of the factory waste—Romo makes visible with the help of mulberry powder. In this way Tomasita, as most women in the previous narratives, rejects a role as passive victim and takes action against her adverse circumstances, exposing them to the world.

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[18] Full quote in p.8 of this paper.

[19] Persistent organic pollutants. Teresa Leal talks about POPs in an interview (see Adamson 2002, 54-55).

These stories give fictional shape through "aesthetic activism" to the real-life struggles of women such as María Lourdes Luján Aguirre and Teresa Leal, who strive daily for a safe/healthy working/living environment. In a time of free trade and sanctioned pollution Romo's undefined toxic waste coming from a *maquila* on the Mexican side of the border could be read as the lethal substances thrown down the drain by Fe on the U.S.—in a narrative written before NAFTA. Castillo denounces pollution affecting Chicanas/os in the U.S., but after NAFTA most industrial pollution relocates to the border—and to the Mexican side. In Romo NAFTA goes beyond borders, but only to benefit corporations economically and to counter goodlife values, with dreadful consequences for the health of both the environment and Mexican(-American) communities, who resist this degradation actively on both sides in fiction and in real life.

Landgrants, Water Rights, Cultural Identities, and Environmental Health

People of the Valley (1941), by Frank Waters; *The Milagro Beanfield War* (1974/1981), by John Nichols; and *Alburquerque* (1992/1994), by Rudolfo Anaya, deal with notions of loss—of rights and access to natural resources—and cultural trauma, and how this has affected Chicana/o communities' physical and mental health in New Mexico. Waters' and Nichols' narratives fictionalize Chicana/o history in and around the Sangre de Cristo Mountains. Both write about how morally dubious water schemes affect Chicanas/os wellbeing, and about the reactions of Chicanas/os to these assaults. Anaya's novel focuses on Albuquerque, with attention to the water politics of the city, and how it affects Chicana/o and Pueblo communities, especially younger generations.

What Frank Waters and John Nichols portray in their literary works about the Chicana/o community in the Upper Rio Grande Bioregion,[20] Jake Kosek skillfully addresses from an anthropological angle in *Understories: The Political Life of Forests in Northern New Mexico* (2006). Kosek links mental and physical health, cultural identity,

[20] Northern New Mexico and Southern Colorado.

and environmental management already in the preface of the book by talking about heroin addiction and raids, unemployment and poverty rates, and resource conflicts in the region. He moreover explores the origins of the current resource conflicts in the state, and refers to the history of resource dispossession that Chicanas/os in the region have gone through, and to the communities' perception of those events, what he terms the "politics of memory and longing." Kosek's work shows how communal identities are not only tied to places, but also to ways of managing and relating to nature/resources. The loss of control and access to resources deprives these communities of their means of livelihood and provokes longing and resentment, ultimately affecting the cultural identity of the community (e.g., when foresters lose ownership and even access to the surrounding forests, or agricultural communities lose their water rights). The shattering of those identities, and the inability of the community of getting over the loss (often for lack of viable and sustainable alternatives), has resulted in high rates of poverty and substance abuse.

Frank Waters narrates in *People of the Valley* how plans for building a dam disrupt an isolated mountain valley community, the so-called Blue Valley. The novel presents those plans as amoral and questionable due to the lack of proper information given to the affected community, and to the appraisal and condemnation of the land despite the people's refusal to sell it. Maria del Valle, the valley's personification, leads a resistance movement to stop the destruction of the valley, and therefore of the community. As part of her resistance "she began to fight the dam: not opposing it with any reason, but calling forth the feeling for the land it would supplant" (141) by, for instance, reviving the old custom of the San Isidro procession. Sylvia Rodríguez, in her work on traditional irrigation systems (*acequias*) in New Mexico, argues that "repeated acts of procession, like repeated acts of irrigation, identify a people and tie them to their place" (Rodríguez 81). Rodríguez explores in her work the relevance of ceremonies in the shaping of cultural identities and feelings of belonging to a place. 'Rituals', she argues, help enact protective attitudes towards the environment to ensure the people's continuity in the same cultural setting, precisely what Maria fosters in her community. In Chicana/o communities most ceremonies

are connected to water and irrigation, and to the motto *el agua es vida*. The environmental devastation and derived pollution brought forth by the dam in the novel shatters the environmental and cultural balance—currently similar claims are being made by those opposing the Dakota Access Pipeline. The dam in the novel moreover means loss of land grants—the agricultural fields that feed the community and sustain their economy—as well as higher taxes, which a subsistence economy deprived of its means of livelihood simply could not afford to pay.

Maria ultimately fails to stop the dam, and dies together with the valley, but not before finding another valley for her community to relocate to, in the hope that they would restore what they had lost (physically and culturally). Her community, albeit mostly outside the cash economy and practicing instead an austere subsistence economy, is a cohesive and meaningful cultural unit until the imposition of the dam, roads, and railway—representing the notions of Western progress and development—shatters the community and forces the removal of many neighbors. "Maria saves her people not so much by securing them land (as important as that is) as by securing them time—time to learn to live in the inevitable new age" (Adams, 940). Waters' novel, therefore, is an early literary example of the Chicana/o socio-environmental struggle: trying to preserve the community's rights over land and water, together with the customs and intertwined cultural identity associated with them, while having to learn how to adapt to new socio-economic times. His account offers a background to the "politics of memory and longing" in the region, caused by the annexation of the Southwestern territories in 1848 and the subsequent loss of land grants and water rights.

John Nichols' *The Milagro Beanfield War* presents an impoverished Chicana/o community, with high rates of unemployment and alcohol consumption, and dependent on food stamps. The western side of the town of Milagro (where the agricultural fields are located) withers by the *acequia*, for the community lost their water rights due to an Interstate Water Compact (a dubious legal water rights ratification system) and higher taxes. These water rights have been acquired in the story by the region mogul, who wants to build a recreation area by a dam planned by the Bureau of Reclamation. Milagro moreover has gone from a sheep-herding town—as in Castillo—standing by a communal forest,

to an overgrazed territory standing by a restricted (and highly controversial) National Forest—bringing to mind Kosek's work. Greatly impoverished and disconnected from its former means of livelihood, the community is disintegrating, with the younger generations emigrating in search of jobs, and the older ones depending on food stamps and drinking too much. Ruby Archuleta depicts this disintegration in a speech:

> we have become a little like land that has been overgrazed, or like land that hasn't been planted correctly or fertilized for many years, and so it has lost its richness, becoming thin and weak and played out; there are no more vitamins in the soil, and all the crops growing out of it are poorer each year (205)

Her parallelism with overgrazed land is not casual for overgrazing of the remaining (and insufficient land) is a result of the impoverishment of the community and the loss of access to natural resources. Through that parallelism she presents a depressed and weakened community which moreover suffers from high levels of alcohol consumption, partly derived from the community's frustration for lack of jobs and the socio-environmental disintegration of the town. A surprising act of defiance to this difficult situation is the central aspect of the plot in Milagro: Joe Mondragón decides to start irrigating a small family bean field with water wrongfully taken away from his family. This illegal but seemingly insignificant act of defiance uncovers the "politics of memory and longing" haunting the community, and the economic interests that some outsiders have in the region. Nichols moreover contrasts the prosecution of Joe for irrigating a bean field with the ownership of swimming pools and the irrigation of lawns in a semi-arid region. This highlights how some water uses go against the holistic understanding of *el agua es vida* that regards water as a right of all living beings dependent on it.[21]

In *Alburquerque*, Rudolfo Anaya denounces the commodification of water, which he connects with the commodification of whole communities. Quite early in the novel the well-known Tingley Beach from Albuquerque is mentioned: a popular public space, where people can go fishing, running, or for a picnic. Nevertheless that popular space is threatened by the plans of a mayoral candidate to channel all the water

[21] See Rodríguez in her explanation of priorities of water use in *acequia* communities. See also Peña.

in the area and create an exclusive aquatic park, as part of his "desert Venice city" utopia. In the story this popular space is threatened, but also the traditional ways of numerous local communities, challenged when they are pushed to sell their water rights. Among them are the Pueblo communities who, by selling them, would also sell their way of life and their economic independence, mainly in exchange for low-paid jobs (128). As with Waters and Nichols, not being able to farm and grow their own crops would affect the food security of the community, possibly affecting their diet, which might have direct consequences for the community's health.[22] Therefore the community's wellbeing and cultural values (in line with *el agua es vida* belief) are also under threat in Anaya's narrative.

Anaya's story echoes real claims and concerns, like those of Joseph Gallegos:

> Water rights are being threatened […], without water there can be no farming. Without faming there can be no community here, it's just a desert. And you can't live in a desert for too long. I always say that farming is not an occupation; it is a way of life. And that is what is at stake here, a way of life. (242)

In the novel Joe Calabasa, a Pueblo Vietnam veteran with an alcoholism problem, cleanses his troubled conscience in the *acequia* while he struggles to find his way back into his community. He is deeply concerned about his Pueblo considering selling their water rights and tries to convince the elders not to do it. Once again *Acequias* appear to be much more than a simple irrigation method, rather they are cultural arteries, as Peña claims. Preparing *acequia* ditches for the spring, when the melted snow comes down from the mountains, is one of the oldest and most important traditions in Chicana/o culture, a "ritual" (Rodríguez 7).

> Religious beliefs, moral values, and ritual practices are integral to the operation and maintenance of this system. [T]he entire acequia culture complex remains integral to their social cohesiveness, economic welfare, sense of historical continuity, and moral-spiritual understanding of who, what, and where they are." (Rodríguez 113)

[22] For more on how the loss of food sovereignty affects communal identities and health see Adamson 2011; 2012 (on Native American communities); and the work of ethnobotanist Gary Nabhan, for example 2008a; 2008b; 2013.

Anaya presents the same value system in the Pueblo and in Joe, who learns how the *acequias* tie the cultural values of his community together. It is this understanding of goodlife values, and Joe's realization of the complexity of current (water) laws, that ultimately leads Joe to study law and to combine that knowledge with that of his Pueblo council in his determination to ensure the cultural continuum and food sovereignty of his community. This is precisely what numerous *acequia* associations try to achieve.

The communities in these three narratives are disrupted, its members (especially the younger) losing their cultural roots and striving to forge an identity. Overgrazing, water depletion and mismanagement, poverty, substance abuse, and cultural disintegration are intertwined in these novels. Lauren Reichelt, who works on public health issues, claims that: ""If [the Hispano community in the Rio Arriba County] had a resource base, they would not be in the place they are in right now." […] She sees a direct connection between individual health, social illness, and the land" (Kosek, xiii). The same can be perceived in these fictional communities. These literary works, nevertheless, in their critique also present alternatives in the form of recovered traditions that bring back cultural unity, rebellions that challenge unfair systems, and examples of self-discovery and inner growth that adapt traditional knowledge to current times and needs.

Conclusions

The Southwest has become a 'land of entrapment' for numerous (Chicana/o) communities due to toxicity and resource (mis)management, with consequences for their cultural identities, and their physical and mental health. Numerous activists and organizations work to solve these socio-environmental problems all over the region and to improve Chicanas/os wellbeing. In fiction, Chicana/o communities also strive to achieve/regain wellbeing by looking for alternatives to toxicity and socio-environmental degradation. Through "goodlife writing," "aesthetic activism," and "pedagogies of crucifixion" toxic traumas are unveiled and confronted. Moreover, the "politics of memory and longing" disclose cultural scars in numerous Chicana/o communities, and all

along the belief asserting that *el agua es vida* permeates these claims and socio-environmental struggles.

These literary works expose how, in the words of Stefania Barca: "environmental degradation and social inequality have common historical roots, lying within the sphere of corporate and/or State 'development' policies premised on the production of sacrifice zones and disposable bodies" (5). These injustices sometimes go beyond borders; the border narratives in particular "illustrate why place-based environmental justice groups cannot afford to focus solely on local community issues, but must challenge transnational corporate rhetoric about the benefits of free trade and globalization" (Adamson 2010). The goodlife values present in these narratives, fostering respect for all living beings, communal support, and sustenance present alternatives to toxicity and cultural and environmental degradation based on the adaptation of traditional knowledges and values.

The narratives here analyzed are particularly relevant readings in the current political context of the U.S.A., where the newly elected president has proposed to build a wall physically dividing the country from Mexico as a means to supposedly solve extremely complex socio-economic issues, at the same time that he dismisses the undeniable environmental crisis. Readings like these expose some of the complexities behind the social, economic, and environmental entanglements in the country, as well as they show the urgency to support environmental justice claims, like the opposition to the Dakota Access Pipeline.

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PAPER IV

“Dam a River, Damn a People?”*
Subverting dams in/through subaltern narratives

María Isabel Pérez Ramos and Susanna Lidström

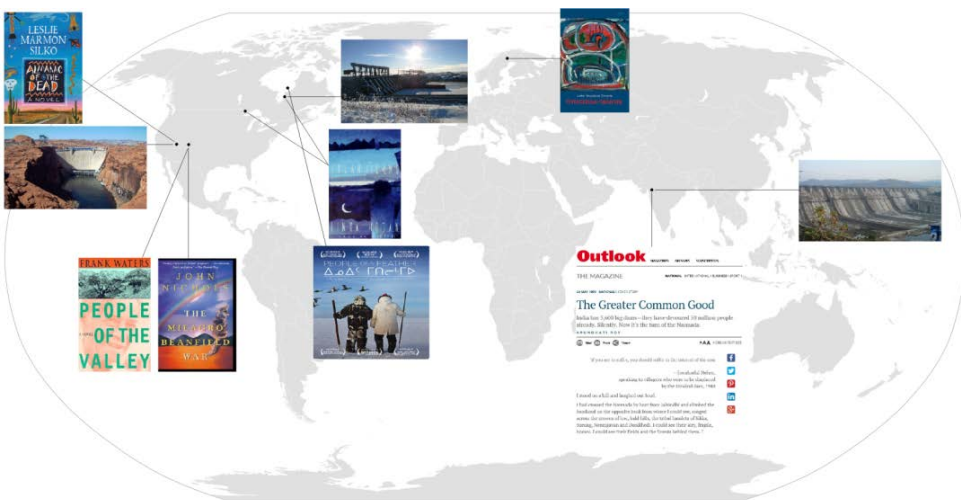

Figure 9: Contextual Map

* From the title of Robert Paine’s report *Dam A River, Damn A People? Saami (Lapp) Livelihood and the Alta/Kautokeino. Hydro-electric Project and the Norwegian Parliament* (1982).

Imagining dams

Imagine a mammoth structure of steel and concrete towering over a water course, surrounded by what used to be majestic trees, now dwarfed by the dimensions of the infrastructure giant. It is strong, solid, some call it majestic, some others monstrous. It contains water that seems quiet, calm, content, but with a strength and a will to spill over that need to be constantly controlled, measured, managed. These waters accumulate tons of sediment that lessen the artificial lake. They might even conceal the buildings and fields of a former village, previous remains of human trace, but of other scale, of other character and cultural value than the walls that now trap it and keep it submerged. The infrastructure might produce awe, pride, respect, frustration, or anger in its human viewers. Some regard it with hope, hope for affordable electricity in faraway locations, for a future without floods, or for irrigated fields; some others with resentment for the reclamation of (sacred) lands and waters, for the destruction and displacement that entailed its construction. Imagine… how do other viewers perceive it? What about the animals or the plants affected by the short and long term alterations of the bioregion caused by this structure?

Imagine, that is what writers and readers do every time they portray or encounter a dam in literature. What is the meaning entailed in (literary) dams beyond the description of their physical structures (itself biased by the writer's portrayal of it)? This paper analyzes how dams become symbolic material entities through literary tropes in subversive narratives. The narratives we analyze portray subaltern resistance against real and fictional dam projects that affect ethnic minorities and the environment in several different locations: northern New Mexico, Southern Colorado, and Arizona, in the U.S. Southwest; northern Minnesota and the Hudson Bay, in the U.S. Northeast/Canada's Southeast; the Sapmi territory in northern Sweden, and the state of Gujarat, in western India (see Figure 8). The narratives include five different novels from the twentieth and twenty-first centuries: *People of the Valley* (1941), by Frank Waters; *The Milagro Beanfield War* (1974), by John Nichols; *Almanac of the Dead* (1991), by Leslie Marmon Silko; *Solar Storms* (1995), by Linda Hogan; and *Överskrida Gränser* [Transgressing Borders, our translation] (2005), by Lars Svonni; as well

as an essay by Arundhati Roy, "The Greater Common Good" (1999); and the documentary *People of a Feather* (2011), by Joel Heath and the community of Sanikiluaq.

While most of these narratives are fictional, the dams and conflicts they portray correspond closely to infrastructures and events in the real world. Some of them were explicitly written to draw attention to specific and contemporary struggles. While each conflict has its unique characteristics, the stories have fundamental traits in common, longstanding questions of development vs. underdevelopment, light vs. darkness, water vs. drought, and arguments for progress versus accusations of abuse, oppression, corruption, and cultural and environmental degradation.

Writer Activism and Dams as Literary Tropes

> "In many parts of the world, favorable media coverage of anti-dams struggles and arguments is shaking the old belief in dams as shining icons of prosperity and modernity"
>
> —Patrick McCully, *Silenced Rivers*, xvi

As Patrick McCully claims, dams have been (and still are) icons in the popular imagination: representing prosperity and modernity, progress, power (of governments over citizens, of human beings over nature…), and the Nation (2001). McCully argues that the discourse of agencies that maintain the dam-building industry *persuades* "politicians and funders that starvation, misery and water wars await, unless lots more dams are built" (xvii). On the other end of the spectrum, writer(s)/-activists refute this popular perception by showing a side of the story that they argue has not been told, about environmental degradation and cultural disintegration.[1]

Writer activists are defined by Rob Nixon as those who are "…enraged by injustices they wish to see redressed, injustices they believe they can help expose. Silences they can help dismantle through testimonial protest, rhetorical inventiveness, and counterhistories in the

[1] For arguments supporting why dams are necessary see International…. For works that question the sustainability and social fairness of large dams in the academy, literature, and journalism see Ponsford; Grace; Nixon; McCully 2011, 1997; Leslie; Shiva; Hornig; Waldram; Paine; Abbey.

face of formidable odds" (Nixon 6). Activist writing occurs in "places where writers and social movements, often in complicated tandem, have strategized against territorial disasters that afflict embattled communities" (Nixon 5). The 'territorial disasters' in the narratives studied in this paper are all derived from the construction of large dams which affect what Rob Nixon calls "unimagined communities," and May-Britt Öhman refers to as "invisibilized peoples" in the Sámi context. These are communities and people who are actively made invisible in their own nation and who become the allegedly necessary victims of development. Linda Hogan phrases this explicitly in her work: "Nothing had changed since the Frenchman, Radisson, passed through and wrote in his journal that there was no one to stop them from taking what they wanted from this land. "We were caesars," he wrote, "with no one to answer to." We were the no one" (285). Invisibilization becomes the first strategy in a long process of slow violence, defined as "a[n incremental and accretive] violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all" (Nixon 2). The slow violence associated with dams begins the moment a dam is planned and built without consulting/properly informing those that will be most affected (who are invisibilized). It continues through its construction and subsequent community displacement/environmental impact, and all through the long term cultural and environmental effects that ensue. This paper studies narratives from the United States, Canada, Sweden, and India that use the physical structures of dams as symbols of oppression and exploitation to expose and relate processes of slow violence in activist writing.

Arundhati Roy is a clear example of a writer-activist, her activism being explicitly manifested through her own words and powerful rhetoric. In her essay "The Greater Common Good," published in *Outlook India* in 1999,[2] Roy uses a critical rhetoric to dismantle positive or detached portrayals of dams. Successfully writing to draw attention to

[2] Roy also published it in other formats such as an extended article in book format under the same title, and a chapter of her book *The Cost of Living*, all published in the same year.

the opposition against the Sardar Sarovar project on the Narmada River in western India, her name is now synonymous with dam opposition. Graham Huggan claims that Roy's "essays are deliberately designed […] as a politically motivated publicity venture that […] seeks to attract and, ideally, convert large numbers of readers both in her home country and elsewhere" (705). In an interview Roy claims that "Dry, academic analysis doesn't alter the conditions of the poor, so someone needs to raise the temperature, invoke some much-needed shame and outrage" (Anthony). She has also stated that "My style is me - even when I'm at home. It's the way I think. My style is my politics." (Ram); "I *am* hysterical. I'm screaming from the bloody rooftops. […] I *want* to wake the neighbours, that's my whole point. I want everybody to open their eyes" (ibid.).[3] In the cited interviews Roy makes a stance about her writer-activism, deeming all writing (fiction or non-fiction) as political (Ram),[4] and clearly situating herself in the public debate about large dams in India.

All the authors analyzed in this paper engage in a criticism of dams in their writing from different perspectives and in various ways. Frank Waters and John Nichols do so parting from the history of land grant and water rights dispossession of the Chicana/o community of the U.S. Southwest.[5] Chickasaw writer Linda Hogan presents a narrative that holds evident similarities with the James Bay hydroelectric project, although the novel contains an author's disclaimer stating its fictional character.[6] Joel Heath and the community of Sanikiluaq conduct an educational and outreach campaign through the Arctic Eider Society, combining traditional environmental Inuit knowledges and scientific data in order to reverse the drastic alteration of Arctic ecosystems also produced by the James Bay hydroelectric project.[7] Laguna Pueblo writer

[3] For criticism of Roy see Verghese; and Guha (2000a; 2000b). For a response see Roy (1999b); and Ram.

[4] Guha (2000b) advises Roy in his critical response to her non-fiction writings of discontinuing her political non-fiction writing and devoting to writing fiction again (thus implying an apolitical character of fiction). See Palit for a criticism of Guha.

[5] The term Chicana/o refers to the mix-bood community of the U.S. Southwest with Native American, Spanish, Mexican, and Anglo-American blood. Other terms in use are Mexican Americans, Spanish Americans, Hispanos or Hispanics.

[6] Hogan might have wanted to be cautious about possible legal responsibilities (Castor, 158).

[7] See Sea-Aes.

Leslie Marmon Silko tackles the notion of ecoterrorism and conjoins the dam opposition of radical environmentalists and Native Americans. Lastly, Lars Svonni, a member of the Sami community and a politician, explains how he uses a fictional format to make his political argument resonate with a wider audience:

> I have written so many contributions to the debate and often been refused, I have banged my head against the wall from podiums to promote Sami concerns with no one listening. ... Now more people have read the book than I could ever have achieved with my previous methods. The purpose of the book is of course to show how society is oppressing the Sami people. Using the attack on the Suorva dam is a form of "rest product," I had to use something to bring the action forward.[8]

Our analysis examines activist narratives, focusing on the specific rhetoric they use in the subversion of dams as positive symbols. It resonates with Huggan's suggestion that there is a "need for a more properly historicized, self-reflexive debate on the rhetorical function, as well as direct material effects of Western-oriented discourses of intercultural reconciliation and anti-imperialist resistance" (720). Parting from Roy's controversial and well-known anti-dam opposition in India and through an environmental justice approach, we aim to deconstruct how the selected narratives subvert dams as symbols of the Nation and Progress through tropes such as irony, allegory, and synecdoche. In these narratives, dams are depicted as destructive entities that represent the unequal distribution of power and resources within nations, as symbols of environmental degradation and cultural disintegration, as well as of violence by and against communities and the environment.

DamNation[9]

In "The Greater Common Good," Roy critiques the Sardar Sarovar project located in Gujarat, a 1,210 meter long, 163 meter high dam on the Narmada River ("Sardar Sarovar dam"). The project was estimated to displace between 40,000 to 85,000 families—depending on the source—of which most would be Adivasis[10] (Roy).[11] Roy, who

[8] Norrbottensförfattare.
[9] Title from the documentary *DamNation* (2014), directed by Rummel and Knight.
[10] Members of any of the indigenous groups of India.
[11] Current estimates go up to 350,000 people (Bosshard).

constantly addresses the reader, expresses her critique in provocative language that aims to upset and engage the reader and prompt her/him to action—the subtitle of the article, for example, claims that big dams in India have "devoured" fifty million people. Early on Roy declares that she is "no city-basher […] not an anti-development junkie, nor a proselytiser for the eternal upholding of custom and tradition." She opposes the Sardar Sarovar dam on the basis that it is an unfair and environmentally disastrous project that will not give back the benefits that have been promised, as she states had already happened in India with other similar projects at the time of her writing. She not only claims that, but wants to convince her readers of it, and she does so mostly through irony, ridiculing the government and subverting its reference to "The Greater Common Good." Roy uses her rhetoric and her arguments to dismount the positive official discourse about dams, and portrays an alternative, much more cruel and harsh reality instead, where only a few would benefit. Through synecdoche the dam acquires an agency of its own as symbol of the Nation, "the fight against the Sardar Sarovar dam" refers therefore to the struggle of the affected peoples against the government and private corporations behind the project. Moreover Roy pinpoints the historical moment when dams acquired their allegorical character that turned them into the material representation of the Nation in India: "In the fifty years since Independence, after Nehru's famous "Dams are the Temples of Modern India" speech […] Dam-building grew to be equated with Nation-building." Roy equates the Nation and the dam through their actions of slow violence and erosion of resilience, which slowly breaks the endurance of the people, and which outlasts the sensationalist attention of the media: "The struggle in the valley is tiring. […] The international camera crews and the radical reporters have moved (like the World Bank) to newer pastures. […] Everybody's sympathy is all used up. But the dam goes on."

Roy conveys her opposition to the Sardar Sarovar large dam project in an accessible manner in her article, dismounting its symbolism of the greater common good of a benevolent Nation. She produces an upsetting and emotional opinion piece on a controversial subject, engaging the readers in the debate by provoking them, and prompting them to get further informed and take a stance.

Dam as the Máquina of Progress, subverted

Roy argues that not only have big dams been equated with the (Indian) Nation, but also with the idea of Progress and the overall idea of the “Greater Common Good.” To dispute this official discourse she writes about the unaccounted people who “have been displaced by dams or sacrificed in other ways at the altars of 'National Progress'," referring to them as “refugees of an unacknowledged war,” ignored by the rest of society “[b]ecause we're told that it's being done for the sake of the Greater Common Good. That it's being done in the name of Progress, in the name of National Interest (which, of course, is paramount).” Once again, through irony (subverting the idea of the common good), and through allegory (portraying dams as negative representations of an intangible entity such as the nation, or concepts such as progress), Roy subverts the official perception of dams as positive for society. This is not a specific device created by Roy, but a common technique in subversive dam narratives.

United States writer Frank Waters published, already in 1941, the novel *People of the Valley*, about a dam project planned in the Sangre de Cristo Mountains of New Mexico that affects a self-defined Spanish-American community and a valley, which by the end of the novel are respectively displaced and transformed. Waters translates the official governmental discourse of a dam as provider of safety, water abundance, and equality into a tale of corruption, displacement, and destruction. In Waters’ narrative the dam, same as in Roy’s account, becomes synonymous with displacement and land-loss. Through allegory, the dam transcends its physical structure and becomes a representation of the abstract notion of progress: “The dam cannot be stopped […] It is not a dam alone […] it is the progress of the world which sweeps all nations, all valleys of men. No man can stop it, for it is of man himself” (Waters 164-5). It becomes the “child of progress” (180)—“So this Máquina, this monster, labored to give birth to a dam” (ibid.)—; a “conqueror” (195) in a time of neo-colonialism. Progress itself is depicted as an unstoppable machine, which represents the new values of society, putting commodities ahead of socio-environmental welfare.

People of the Valley is a mixture of a cautionary tale about the cultural and environmental losses entailed in the new developmental

paradigm represented by the dam, and an ode to a fading lifestyle. Tom Lynch points to how this depiction of the community's values reinforces the stereotype of Chicana/os as backward and fatalistic, arguments that were used to justify the colonial western advancement of the United States (62). The novel nevertheless shows a deep criticism of a political system that takes advantage of a rural community with a livelihood dependent on a subsistence economy, low levels of education, and belonging in a different linguistic community from that of the authorities. The dam and the progress associated with it, although supposedly beneficial to the community, are imposed without giving them any chance to become a part of it (through education, and the possibility of the community to gradually adapt to new economic and market systems, if so they desired). Vinod Raina, reflecting on the negative impact of dams as imposed hegemonic systems, claims that:

> Of course any social group must have the right to change. But that must happen through a process that ensures that the concerned population is socially, economically and politically empowered to make their own decisions. It must be a process that ensures their dignity to make the encounter between tradition and modernity assimilative rather than violative. (2012)

Waters portrays a clash of cultures where, due to the predominant imbalances of power, those in charge overlook the minority community's environmental knowledge of the valley and its watershed, as well as its needs, and end up shattering a longstanding cultural and environmental relationship. Lynch concludes that "[t]o the considerable degree that *People of the Valley* portrays Anglo-style progress as inevitable, to the degree that it makes the forces of domestic colonization […] seem unstoppable, the novel renders resistance, however noble, as futile" (67). Unlike Roy's text, which is a call to arms to the readers to take a stance in an ongoing struggle, Waters' story is fictional. It speaks to the dams that were being built in New Mexico at the time of his writing,[12] and questions the philosophical implications of the developmental paradigm in a context and region where several cultures with different socio-environmental values co-exist.

[12] Seventy dams had been completed in New Mexico by 1939, while other twenty-two where completed between 1940 and 1949 (National Inventory of Dams, New Mexico).

Enlightenment through invisibilization: Dam as environmental degradation and cultural disintegration

> "Globally over fifty per cent of accessible freshwater is now behind dams. We are working against the seasons of our hydrological cycle. […] We can tell you from our perspective here, things are getting a lot noisier, and less predictable"
>
> —*People of a Feather*

Both Roy's essay and Waters' novel address ethnic communities living in rural areas with subsistence economies, suffering from the power imbalances between their societies and the nation state, which result in unequal distribution of natural resources and the communities' ultimate displacement. Roy argues that this imbalance is often presented "as a war between modern, rational, progressive forces of 'Development' versus a sort of neo-Luddite impulse - an irrational, emotional 'Anti-Development' resistance, fuelled by an arcadian, pre-industrial dream." This Manichean portrayal of an arcadian dream in turn invisibilizes the socio-environmental values and knowledge that have allowed the affected communities to carry out a sustainable inhabitation of their locales. As a rhetorical device to further convince the reader of their perspective, Roy and Waters emphasize how the alteration of the environment entailed in the construction of a dam often shatters communal identities and/or valuable environmental knowledges. Throughout *People of the Valley* Maria del Valle—the valley's alter ego—lists the numerous natural remedies the biodiversity-rich area provides. She also describes how the community comes together and rejoices in the "beautiful […] fresh black earth" (Waters 140) of the fields plowed for the San Isidro[13] festivity. Towards the end of the novel Waters contrasts these images with the socio-environmental loss the dam brings about: "The earth was bare, water was disregarded, men's faith was broken. The Máquina of progress overrode them all" (Waters 178). The epitome of this loss is represented in Maria's demise, symbolizing the disappearance of "the blue valley" as a sustainable socio-environmental unit.

[13] San Isidro is the patron saint of the farmers in the Catholic tradition.

The Milagro Beanfield War (1974) by John Nichols is also set in the U.S. Southwest[14] and tackles the impact of a dam and a conservancy district on a Chicana/o community. The town of Milagro is deeply impoverished, partly due to their loss of water rights. A cold war starts when a member of the community decides to illegally irrigate his family's bean field, threatening the conservancy scheme. In Nichol's novel the dam epitomizes the neo-colonial (political, cultural, and economic) power that has already displaced the community in their own homeland: "I know that if [the Indian Creek Dam and Conservancy District] come about they will be the end for most of us" (205). Through the voice of the lawyer Charley Bloom, the novel undermines the developmental paradigm behind the dam and questions the rhetoric used by the authorities, while putting the whole project in a historical context of dispossession:

> Bloom talked about the history of the north, about land grants and how they had been lost, strayed, or stolen, divvied up. […] He run down for them a history of other conservancy districts in the state which had effectively destroyed subsistence farmers by forcing them into cash economies where they could not compete. He did everything possible to probe and expose the hypocritical rhetoric surrounding the Indian Creek Dam—the state engineer's pronouncement, for example, that it was "the only way to save a dying culture." He tried to demonstrate how the conservancy district and the dam were just one more component of the economic and sociological machinery which for a long time had been driving local small farmers off their land and out of Chamisa County. […] And Bloom did his best to question the myth that this development would bring wealth to every inhabitant, and jobs and security for all. […] For the poor and the rural people little had changed, except that in taking service jobs for low wages they no longer had the time to work their land, and so had often wound up selling it, only to discover themselves poorer than before, with not even the security of their own land and a home on it to take the sting out of poverty as bitter as Chamisa tea. (208-9)

Nichols tries to educate the readers as Bloom does his neighbors, referring to the complex past of land and water rights loss.[15] The informative tone is supplemented with humorous irony and sarcasm throughout the narrative:

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[14] "set in mythical Chamisa County, where the folks, the situations, and the landscapes resemble parts of northern New Mexico and southern Colorado" (Nichols 1984: "Author's note").

[15] See Pérez-Ramos

> The Ladd Devine Company [responsible for the dam in the story] had started drawing up plans for the recreation development about the same time people were losing their water rights and beginning a wholesale exodus from the hapless west side. […] And now—*Que milagro!*—the Indian Creek Dam was conveniently going to restore water rights to the west side so Ladd Devine the Third could bless the few surviving small farmers of Milagro with a ritzy subdivision molded around an exotic and very green golf course. (31) [16]

Nichols validates his arguments at different levels by using a variety of voices, from the narrator, to the Anglo-American neighbor and lawyer, and different Chicana/o characters along the narrative. Nichols's account, similarly to Roy's and Waters', is a Manichean story of oppressed and displaced citizens versus a greedy and politically connected mogul, and equally corrupt politicians. Arguably, this black-and-white portrayal runs the risk of simplifying the real-life issues the novel speaks to, undermining the credibility of its contribution to the debate. On the other hand, Nichols conveys the complex history of dispossession and subsequent impoverishment of numerous Chicana/o communities in the Southwest, providing a historical background to the current corruption scheme depicted in the novel.

In the narratives discussed so far, the reader is presented with dams built for the benefit of a few at the expense of existing ecosystems, as well as the wellbeing of affected rural communities. Linda Hogan tells a similar story in *Solar Storms* (1995), where seventeen-year old Angel goes back to her maternal grandmothers, from whom she was separated as a child after being physically abused by her mother. They all travel north when they learn of the plans to build a set of dams which would affect Angel's great-great-grandmother's homeland, and all the territories south from there, including their current home place in Northern Minnesota. The project developed in Hogan's narrative holds many resemblances with the massive James Bay hydroelectric project, on which construction started in Canada in the 1970s, while strongly opposed by the Cree and Inuit.[17] Hogan uses some of the rhetorical devices already discussed, such as depicting the dam as the material representation of the Greater Common Good (281); and the outcome of Progress (285). Her overall strategy to convey the anti-dam discourse is to tell a story of recovery and loss (itself composed of other stories that

[16] Italics in original.
[17] See: "James Bay Project."

give shape to the natureculture continuum that the community inhabits [Chang], "modeling a cosmopolitical resistance in the "developing" world" [ibid]). The advancement of the dam and hydropower project, and the related cultural and environmental degradation, run parallel to the inner growth and emotional recovery of Angel, which depends on Angel's understanding of the interconnections of human beings with other animal species, and with the environment at large. Her story and the dam's become one, a bildungsroman with a homing plot, where the home is being shattered. Hogan's prose therefore weaves cultural and environmental concerns together. She draws a multispecies ethnography where biodiversity loss is interconnected with the community's loss of environmental knowledge, cultural unity, and wellbeing, all brought about by an imposed and ill fitted developmental paradigm, of which the dam is the ultimate material symbol. Hogan portrays this very visually through her descriptions of ravaged landscapes, such as the sacred and biodiversity rich Ammah's Island (265), flooded by the dam (272). In order to challenge that paradigm the dam is reverted as an iconic symbol of the enlightenment (understood not only as the material expression of Western thought and culture, but also in the most literal sense, bringing light in a most Divine way). It results instead in a kind of darkness unlike the one that exists when there is absence of natural light:

> [This] was a darkness that travelled toward us. It was a darkness of words and ideas, wants and desires. […] Part of the fast-moving darkness was the desire of those who wanted to conquer the land, the water, the rivers that kept running away from them. […] They wanted its [water's] power (Hogan 268).

Hogan, same as the previous authors, depicts the dam as the expression of neo-colonialism, based on resource exploitation and economic profit which commodify the most vital natural resources: "False gods said, "Let there be light," and there was alchemy in reverse. What was precious became base metal, defiled and dangerous elements" (Hogan, 268). She counteracts the rhetoric of the developmental paradigm with the story of Angel's origins—which allows her spirit to heal—, and the story of the dam—making visible all the misery and the suffering it brings forth. The story becomes a way to cope with something unimaginable by some people: "There were stories for everything, […] But not for this [the dams]. We needed a story for what was happening to us now, as if a story would guide us" (Hogan 302). In

Laura Virginia Castor’s words:

> the narrative power of Solar Storms lies in its ability to create a sense of empathy among characters, between the narrator and the landscape, and between the narrator and the reader. The role of empathy in Hogan's novel is not only to persuade her reader to enter her imaginative world, but, more importantly, it is a politicized strategy of influencing her reader's attitudes (159)

As Crista Grewe-Volpp points, *Solar Storms* presents a somehow problematic juxtaposition of the Ecological Indian “with a detrimental, despiritualized, exploitative white society” (269). This might be claimed to weaken the novel’s anti-dam rhetoric. Nevertheless, the story’s main character, Angel, is ultimately a product of both the Anglo-American culture and the indigenous culture of her ancestors, finding her identity in a reconciliation of both (Grewe-Volpp 283).

A more recent narrative about the impact of the James Bay project is presented in the documentary *People of a Feather* (2011), by Joel Heath and the community of Sanikiluaq. The documentary explores how changing sea ice (altered by the hydroelectric project) is affecting the ability of eider ducks in the Belcher Islands to get through the winter (00:21:58-00:22:05). Eider ducks have been dying in great numbers since the 1990s due to the changing ice patterns. This affects the Sanikiluaq community whose cultural memory and traditional environmental knowledge is greatly shaped by their interconnection with these ducks, which are an important source of food and key for their clothing. In this historical and scientific narrative biologist Joel Heath connects hydropower dams, climate change, sea ice ecosystems, and oceanic currents, as well as eider ducks and other animals depending on sea ice, and traditional Inuit environmental knowledge (00:45:15-00:48:36). In order to inform the audience at different levels the documentary combines images of the Belcher Islands and eider ducks from different views and at different times of the year, with historical recreations of the community’s past, the community’s current practices and habits, and the personal narratives of Heath and several community members, as well as with a scientific discourse (including a glossary of key terms). At one point the camera shifts from images of northern lights and the Hudson Bay at night to the lights of metropolises down south (in both Canada and the U.S.), zooming in into an illuminated downtown

New York (00:41:32-00:41:33), visualizing how the benefits of the James Bay dams do not stay local. The next scene depicts a local family watching a documentary on the hydroelectric project, which explains how the dams revert the natural cycle of the bay by "spewing 350 times the natural amount of fresh water into this closed system, [which] will be converted from a salt to a fresh water habitat with profound effects on current and ice formation [so] an entirely different food chain will develop" (00:42:34-00:43:37). The family in turn reflects on the impact this has on the fresh and salt water cycles/currents, and on their own livelihood, and so the dam becomes the physical symbol of a cultural and environmental threat.

In this multispecies narrative the spoken and visual rhetorical style weaves different elements together: water currents, eider ducks' winter patterns, and the local Inuit's communal memory and current livelihood, all of which are negatively affected by the dams. Both *Solar Storms* and *People of a Feather* thus question the dams from the perspective of a multispecies ethnography and an indigenous cosmopolitics (Adamson; De la Cadena) exposing the entanglements of humans, other-than-humans, and the environment, challenging the central position of human beings in the developmental paradigm.

Dam as violence

Dams are associated with violence in all the narratives, which describe how the forceful imposition of dams on the environment and human societies disrupt natural cycles and human cultures and livelihoods. Roy links dams to death, destruction, and suffering by claiming that "Big Dams are to a Nation's 'Development' what Nuclear Bombs are to its Military Arsenal. They're both weapons of mass destruction." She moreover describes the struggle going on in the valley as a "war" and calls for "warriors […] to enlist." In the same vein, the confrontation in Nichol's narrative is referred to as a war. Faithful to his ironic and sarcastic style he also compares the dam early on in the novel to Pacheco's pig, "The conservancy district and that dam […] will be as hard to live with as Pacheco's pig" (32). Pacheco's pig terrorizes the community by breaking their fences, wrecking their yards and eating their chickens. It is not only annoying but also destructive and

uncontrollable, like the development projects in the neighbors' understanding. Waters, Nichols, and Hogan moreover recount instances of arson and sabotage, as well as accounts of physical aggressions, menaces, and threats suffered by those opposing the dams. In *Solar Storms*, Angel's great-great-grandmother Dora-Rouge perceives the development plan as a "murder of the soul […] Murder with no consequences to the killers" (Hogan 226), which is driving the members of her native community into drug addictions and acts of suicide. The dam, in her understanding, is the last straw in a past of colonization, disempowerment, and imposed misery (ibid.). This past lingers in Angel's, her mother's, and grand-mother's bodies and psyches, singular victims of the abuse exerted over the natives (particularly women) and nature by the white settlers, and passed down through several generations, as their bodily scars manifest. Hogan goes as far as depicting the dam and those behind it as cannibals "eating land, eating people, eating tomorrow" (302), and portrays a violent and intentional resistance also on the part of nature:

> in time it would be angry land. It would try to put an end to the plans for dams and drowned rivers. An ice jam at the Riel River would break loose and rage over the ground, tearing out dams and bridges, the construction all broken by the blue, cold roaring of ice no one was able to control. Then would come a flood of unplanned proportions that would suddenly rise up as high as the steering wheels of their machines. (224)

Two narratives that center on the violence both imposed by and exerted against the dams, including acts of terror, are *Almanac of the Dead*, and *Överskrida gränser*. *Almanac of the Dead* (1991), by Leslie Marmon Silko, is a story with several plots revolving around a(n indigenous) revolution taking place across the Americas (in Alaska, the U.S. Southwest, and Mexico), that aims to retake the land and give it back to the dispossessed of the earth. Quite early in the novel a clairvoyant character mentions dams:

> Lecha thinks about high voltage that causes brain tumors. She thinks about tropical lands. Giant dams in the jungles. Hydroelectric power. Guerrillas as quiet and smooth as snakes. Break open the dams and the electric motors of the machinery, machinery that belongs to the masters, stutter to a halt. (162)

In her vision she relates dams with illness, power (electric and otherwise), resistance, and sabotage. All these elements are progressively weaved in the plot, and towards the end of the novel dams take a central

role, framed in a discourse of (eco)terrorism—of violence exerted by and against the government. A group of so-called ecoterrorists or eco-warriors, the "Green Vengeance group," shows a video to prove how six members commit suicide in order to blow up Glen Canyon dam, or as they say "to free the mighty Colorado!" (728). They moreover plan to bomb the White House and the U.S. Supreme Court, as well as "hydroelectric dams and electrical generation plants across the United States" (690) in a simultaneous attack. Dams thus become one more symbol of the Nation and its power, together with such iconic political buildings, while the current power/political system is depicted as the real terrorist:

> The eco-warriors have been accused of terrorism in the cause of saving Mother Earth. So I want to talk about terrorism first. Poisoning our water with radioactive wastes, poisoning our air with military weapons' wastes—*those* are acts of terrorism! Acts of terrorism committed by governments against their citizens all over the world. (734)

Överskrida gränser [Transgressing Borders, our translation] (2005), by Lars Svonni, is situated in northern Sweden, where the hydropower infrastructure developed by the Swedish state conflicts with the rights and traditions of the indigenous population, the Sami. In the novel, a group of Sami men blow up a system of dams, releasing the water downstream and causing immense damage. Thousands of people are killed, and several small settlements as well as the towns of Luleå and Boden (which exist in the real world) are flooded and washed away. Electricity is cut off in most of the country, and even abroad. Described as a terrorist attack, the event becomes front page news around the world.

The perpetrators acknowledge the attack as an act of terrorism and regret that innocent people will die. However they present the Swedish state as the ultimate culprit, its treatment of the Sami people described as a form of terror. After many years of failed negotiations and broken promises, the "terrorists" claim they are left with no other choice:

> someone had to tell the state that they are terrorising the Sami people. Not even a peaceful people like the Sami could stand it in the long run. He felt chosen to bring the message from the Sami people to the state. After decades of trying with demonstrations, protests and political campaigns the only thing that remained was this. He could think of nothing else, and was sure that the Sami people would forgive him and his companions the fact that innocent people would pay with their lives for the terror of the state against the

> indigenous people of this land. (23, our translation)

As in *Almanac of the Dead*, the dams that are attacked in *Överskrida Gränser* at the same time symbolize the nation state and its oppression of the indigenous people, and become a means by which violence can be exposed and its direction reversed. The dam therefore functions as a trope that concentrates different kinds of violence. While the terror attack is a "conventional" form of violence—dramatic and instant—the violence that the dam, and thus the state that built it, have carried out previously against those that lived and depended on the affected habitat, as well as against the environment itself, is a different kind of violence, by comparison slow and gradual (Nixon). Svonni carefully explains this other form of violence carried out by the dam/state, through one of his characters:

> Rebes's grandparents had in the beginning of the 1920s been forced to move from the most northern part of the country, from the Karesuando area. Just when they had made themselves a somewhat tolerable living by the Lule river, the state had told them to move further up the bank, as the water level was being adjusted. The water level of the Suorva dam had been raised four times and as many times Rebe's grandparents and parents had been forced to make themselves new houses to live in. (19, our translation)

The different forms of violence carried out by and between the nation state, minority peoples, and the environment are central to the trope of the dam in all the texts discussed in this paper. Not only do the dams in these stories simultaneously represent multiple kinds of violence, but they are also portrayed as the material symbol of previous injustices, oppression, and harm against people and the environment. The dams allow the affected communities to organize against (and even attack) something concrete in their struggle against what they perceive as an imposed and unjust developmental paradigm, thus reversing the direction of violence and terror.

Conclusions

These fiction and non-fiction narratives use the same tropes in their criticism in order to subvert the symbolism of dams as Nation, Common Good, and Progress; turning them instead into symbols of degradation, disintegration, and/or violence. The tropes are the same, even when the rhetoric and style are not. Each author engages in

different ways in her/his activism. All refer to concrete dams, some fictional and some not. Roy, Heath and the Sanikiluaq community, Silko, and Svonni all refer to existing and identifiable dams: the Sardar Sarovar, those that form the James Bay Project, Glen Canyon, and the Swedish dam system with a focus on the Suorva dam. Roy and Heath et al. subvert the dams in their narratives in order to transmit an urgent message about ongoing tangible negative consequences related to those specific physical structures. Heath et. al do so in an attempt to get the hydropower industry to work more sustainably. Roy, in her intention to halt the construction of the dams in the Narmada River project, refers to other existing dams in India, extending her criticism to (the logic and interests of) the power structures facilitating those dams. Similarly, Silko and Svonni refer to existing dams in order to convey a political message that transcends the dams, addressing the socio-environmental oppression exerted by the developmental paradigm and the political systems that sustains it. Therefore their dams, although specific and real, are the means to convey a broader message. Hogan, on the other hand, distances herself from the dams that clearly inspired her narrative through a fiction disclaimer. In this sense her work fluctuates between a criticism of the hydropower projects in James Bay and a general criticism of the developmental paradigm and its negative influence on humans and multiple other species, and their interrelations. Alternatively, Waters and Nichols write fictional stories about dam opposition in the context of the U.S. Southwest, where numerous dams have been built, in order to criticize a history of (neo-)colonialism and dispossession, using the fictional dams as symbols of oppression.

In these narratives the rhetoric therefore becomes a political tool. "[T]estimonial protest, rhetorical inventiveness, and counterhistories" (Nixon 6) are key elements in the written/visual activism of these authors, who through their subversion of dams reclaim the environmental sovereignty of ethnic minorities, a claim that transcends geographical locations. Through their rhetoric they fight the invisibilization of certain communities (all ethnic minorities), and expose the slow violence often exerted by dam projects. They stress the importance of telling a different version of the same story: what to some means progress and wellbeing to others becomes displacement,

uprooting, and/or degradation. This does not go without risk of romanticizing or simplifying the argument, although it does translate what is often a complex technical language, political discourse, or thick academic text, into accessible stories.

Although the high-time of large-dam building has supposedly passed, countries such as India, Brazil, China, or the Democratic Republic of Congo are currently building, or planning to build, massive dams. Most (if not all) of these are opposed by international associations and/or local communities due to their (expected) negative socio-environmental impacts—like the ones these narratives portray. The analyzed stories thus invite the readers/audience to reflect critically on the topic, and provide counternarratives to the discourses of governments and corporations, putting pressure on them to adapt their developmental plans in integrative ways, which could turn them instead into fair and sustainable technological advancements in these times of climate uncertainty.

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