

The Water Apocalypse: Utopian Desert Venice Cities and Arcologies in Southwestern Dystopian Fiction¹

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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 *Albuquerque* (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.

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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 *Albuquerque* (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 cultura 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 23)

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".² Leslie Marmon Silko's *Almanac of the Dead* (1991), Rudolfo Anaya's *Albuquerque* (1992) and Paolo Bacigalupi's 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*).³ 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

² *Southern Nevada Water Authority*.

³ Web. Info for 2014.

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,⁴ the prospects for water in the arid Southwest are far from optimistic (USDA-NRCS; White; USGS; “The West”, NASA; “Groundwater Deficit”, NASA).

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...”)

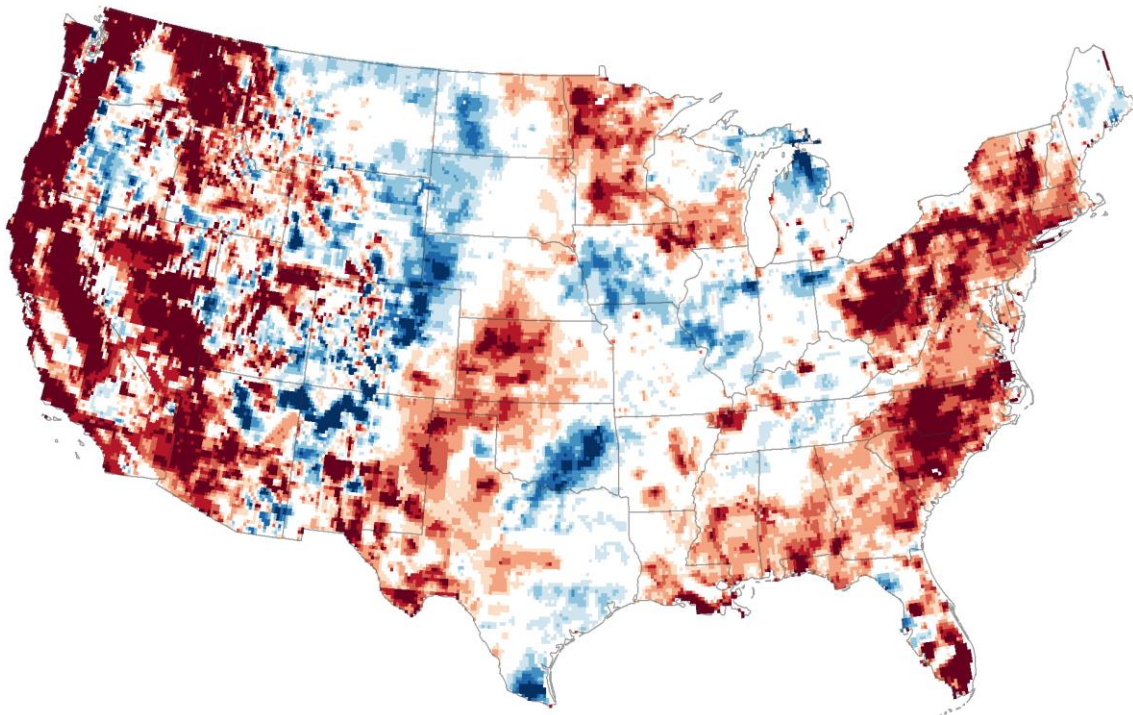


Illustration 1: Ground Water Storage (14-09-2015). NASA.

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”)

⁴ California, for instance, has been suffering from a drought since 2012 (*California Drought*).

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 *Albuquerque* (1992), and Paolo Bacigalupi’s *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.⁵ 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. Arcologies⁶ 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 deprecation in the context of a world suffering from an extreme moral crisis,⁷ leading to what is presented as spiritual and environmental self-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. *Albuquerque*⁸ 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 Albuquerque into a desert Venice, Anaya delves into questions of cultural identity,

⁵ *Almanac* and *Albuquerque* 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).

⁶ 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.

⁷ 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.

⁸ Anaya keeps the old Spanish spelling of the city in the novel.

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 D. 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 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

launched into space with the remaining uncontaminated resources from Earth) (Silko); an Albuquerque 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)⁹. 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 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.

⁹ 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.

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).¹⁰ 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 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.¹¹ 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 *Albuquerque* (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.¹² Urban historian Carl Abbot writes in *Imagined Frontiers* that the plots in these [*Almanac* and *Albuquerque*—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

¹⁰ 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.

¹¹ Not coincidentally, Silko’s book was published shortly before the First National People of Color Environmental Leadership Summit took place in Washington, D.C..

¹² 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.

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

Albuquerque’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 Albuquerque 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.¹³ 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 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

¹³ 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.

gentrification¹⁴. 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. Albuquerque 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).¹⁵ 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 Albuquerque, 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. 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 *Albuquerque* 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.¹⁶ It is known as a region where cities are built so that water is brought to them,

¹⁴ For more on the topic of urban segregation, and its connections to land and water rights losses cf. Diaz and Camarillo (1984).

¹⁵ 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.

¹⁶ "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).

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 costs¹⁷. 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*.

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 multiperspectivity¹⁸ 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

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).

¹⁷ For more on the American obsession with green lawns cf. Robbins (2012); Steinberg (2007); Robbins et al.; and Scott Jenkins.

¹⁸ Using multiple narrators in order to present different and often contradictory perspectives in a story.

enough water, and some old documents about some forgotten and obscure prior appropriation rights,¹⁹ 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.²⁰ 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 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

¹⁹ The history behind the prior appropriation system is briefly explained later in this article.

²⁰ 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*).

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, *Albuquerque* 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, conservatism, 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).²¹ 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

²¹ 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.

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 (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.²²

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)²³:

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)

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

²² 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.

²³ See also Pérez Ramos, "Progress and Development."

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.²⁴ In contrast to rural Native American and Chicano/a communities tied by traditional practices such as a communal

²⁴ 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.

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 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

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 *Albuquerque*. 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, *Albuquerque* 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).²⁵ 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 Albuquerque.

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:

He²⁶ 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

²⁵ Sara is Abrán's adoptive mother.

²⁶ The writer of the novel, Anaya's *alter ego*.

overarching strategy to cope with the global socio-environmental crisis.²⁷ 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 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.²⁸ The current crisis, which has been defined as a "crisis of the imagination" by ecocritic Lawrence Buell, needs new

²⁷ For more on the problematic around Anaya's local perspective, see Pérez Ramos, "Racism, Displacement and Pollution."

²⁸ 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.

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 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).²⁹ 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:

“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

²⁹ 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”).

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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