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HUMAN EXPERIENCE OF FOUNTAIN SPACES IN DENVER AND ALBUQUERQUE

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BY

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B.A., GEOGRAPHY, UNIVERSITY OF COLORADO DENVER, 2015

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ABSTRACT

Concerns about water have been at the forefront of public conversation over the last few years, in no small part driven by situations like the drought in California. The drought prompted cities like Los Angeles to turn off public fountains, even though fountains have a very low resource impact. This interaction is more about what a fountain represents; particularly in dry regions, fountains have been used to display power, affluence, and social importance. It has been researched and is now taken for granted that public fountains are a public good, improving microclimates, reducing stress, and adding to the overall quality of a landscape. However, there has been little research done on understanding the experience of people who utilize fountain spaces, or how this is impacted by their social understanding of what those fountains represent. My research explores this relationship in order to better understand the role and value of fountains in modern society. My findings indicate three primary values are attached to fountains: a proxy for nature, an aesthetic landscape feature, or a site of relaxation. Fountains may evoke different values in green space versus urban contexts, and future work is needed at a broader range of locations.

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Introduction

Concerns about water have been at the forefront of public conversation over the last few years, in no small part driven by situations like the drought in California. While walking around Los Angeles last summer, I noticed an interesting sculpture in front of a city building. As I drew closer, I realized it was a fountain, but the water was off. In the basin, a plastic sign-card had been posted that said, "In solidarity with those affected by the drought, the City of Los Angeles has turned off all public fountains." This is, of course, an empty gesture, as public fountains are one of the most efficient uses of landscaping water in terms of cost-benefit, evaporation, and potential for waste. But that was not the point. This past spring, while exploring Salt Lake City, I noticed that each of the many fountains had a small, permanent sign-card that said, "This fountain uses recycled water." What is it about fountains that inspires such a need to mediate their existence? These cities were acknowledging that fountains say something, they represent something to people, and in some contexts, their meaning may be more or less appropriate.

This interaction is more about what a fountain represents, and particularly in dry regions, fountains have been used to display power, affluence, and social importance (Bray 2013, Niell 2013). It has been researched and is now taken for granted that public fountains are a public good, improving microclimates, reducing stress, and adding to the overall quality a landscape (Zekri et al. 2011; Faggi et al. 2013; Gómez et al. 2013; Larson and Perrings 2013; Gage and Cooper 2015; Halper et al. 2015).. However, there has been little research done on understanding how the experience of people who utilize

fountain spaces is impacted by their social understanding of what those fountains represent. My research attempts to explore this relationship to better understand the role and value of fountains in modern society. My research involved interviewing forty participants across two fountain sites in September and October, one site in Denver, and one in Albuquerque, and subsequently analyzing their responses in order to better understand the role of decorative fountains in modern society. By directly engaging via interview with people in fountain spaces in Denver and Albuquerque, I hope to deepen the understanding of how people conceptualize public fountains in semi-arid cities, as well as how those conceptualizations differ from actual practice. Beginning this research, my hypothesis is that I will receive a wide range of results that will illustrate a significant positive valuation of fountains, while also indicating it is not a subject that most people have previously considered in these terms. I anticipate that most people who utilize fountain spaces will have separated their enjoyment of that space from any awareness or critical engagement with it.

Background

Denver

Environment and Climate

Denver is a semi-arid steppe climate city in the American intermountain west. The city is located east of the foothills of the Rocky Mountains, though the urban corridor from Fort Collins in the north to Colorado Springs in the south is standardly referred to as the "Front Range." Denver sits in the rain shadow of the Rocky Mountains, and receives fifteen inches of rainfall and fifty-five inches of snowfall annually. Other than occasional heavy or unseasonal snowfall, Denver rarely experiences any extreme weather events (Denver n.d.). Though Denver residents frequently claim the city has 300 sunny days a year, there are actually fewer than 200 days that are not at least partly cloudy (Bunch 2012).

Typically spring begins in late February or early March, though the city may get scattered snowfall through May. Summer is in full swing by June, and typically lingers into September, with a short fall that is typically punctuated by a first snowfall around Halloween. Winter weather is highly variable, with seventy degree days plunging to below freezing by nightfall, and heavy snowfall that will often melt off within twenty-four hours.

History and Settlement

Denver is somewhat fancifully referred to as the Queen City, a title it shares with many other cities around the United States. It received this appellation largely because of

the paucity of other large cities around it. It is at least 400 miles to Kansas City or Omaha, and later-developing cities like Albuquerque are equally far. This expanse of land was deemed to have insufficient potential for settlement, and was largely overlooked during the western migration. It was not until 1858, when a small quantity of gold was found in the area now known as Cherry Creek, that the first roots of early Denver were established (Dorsett 1977).

The Cherry Creek claim ultimately proved to be a bust, but developed into a settlement that served as a trade base for prospectors trying their luck in the Rocky Mountains. There were two halves of the city at first, banking Cherry Creek. The western settlement was called Auraria, after the latin *aureus*, for gold. The eastern settlement, Denver City, was named for the then-Governor of the Kansas territory, James Denver, having been established by some of his men. The settlements merged in 1860, under the single name Denver. In its first thirty years of existence, the city of Denver grew to a population of over 100,000 (Dorsett 1977). Today, the city has a population of 650,000, with a metropolitan population of roughly 4 million (Metro 2017).

Water Management Issues

Denver's water comes from a number of rivers and streams primarily fed by mountain snowmelt. Major contributing watersheds are the South Platte River, Blue River, Williams Fork River, and Fraser River, though Denver also uses water from the South Boulder Creek, Ralston Creek, and Bear Creek watersheds. There are reservoirs throughout the system, but Dillon Reservoir is by far the largest, holding roughly 40 percent of Denver's water. Because Denver's water is primarily based on streamflow and

snowmelt, drought conditions can have significant impact on the water supply (Denver Water 2017c).

At the start of the 2002 drought, the worst single year drought on record in Colorado history, average per person daily water use in Denver was 211 gallons. Since 2002, the city has undertaken a variety of programs to encourage conservation and responsible water use. In 2006 the city committed to lowering daily per person water use to 165 gallons by 2016. Thanks in part to substantial education and outreach efforts, daily water use dropped to eighty-two gallons by 2014 (Denver Water 2017b). Denver implemented water restrictions, offered rebates for upgrading to more water efficient appliances and sprinklers, and debuted an expansive education campaign titled Use Only What You Need (Denver Water 2017a).

Despite the improvement in daily per person water use, Denver, and Colorado in general, are still very thirsty and face serious concerns about water in the future. In 2012, the Bureau of Reclamation considered proposals including a 600-mile pipeline running from the Missouri River to Denver. Water could be distributed at points along the pipeline, with the majority of the 600,000 acre-feet of water going to reservoirs in Denver. This highly speculative suggestion would cost, at early estimates, billions of dollars, and would undoubtedly draw significant resistance from a whole spectrum of stakeholders. The fact that the pipeline was even suggested, however, shows the severity of the situation in Colorado (Barringer 2012).

Urban Form and Public Space

The City and County of Denver is almost square, with opportunistic tendrils to the southwest and southeast, and a long narrow corridor jutting off the northeast corner to the sprawling property of the Denver International Airport,

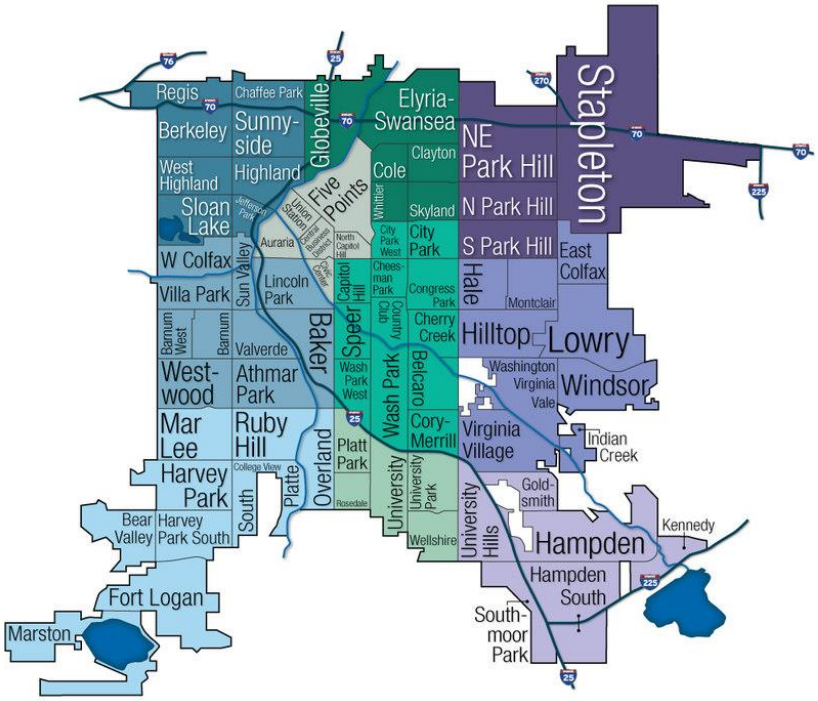

Figure 1A - Neighborhood Map of Denver, (Real Estate Webmasters 2017)

roughly thirty miles from the city. Though the city is on an efficient grid with the zero coordinates of Broadway and Ellsworth, the downtown area including Union Station, the Central Business District, and Civic Center/Capitol Hill is canted at an angle following Speer Boulevard through the city.

Denver has a number of large parks, each with a unique neighborhood composition. The three largest are Washington Park in the south of the city, east of Interstate 25 near the University of Denver Campus, Cheesman Park to the immediate east of Capitol Hill, and City Park. By far the largest of the three, City Park is almost directly east of the Central Business District, and marks an east/west break between the downtown core and residential properties moving east to Stapleton and Aurora. It shares a northern border with the Denver Zoo and the Museum of Nature and Science.

Figure 2A - Major City Parks in Denver, (Scott 2005)

85 percent of the city can be accessed within five miles of City Park, which was loosely modeled on Central Park when it was built in 1882.

Fountains in Denver

Denver has a few public fountains, the most notable of which is the Prismatic Fountain in City Park. There are also Seal Fountain in Civic Center Plaza, a splash pad at the newly renovated Union Station, and the Lawrence Halprin Fountains in Skyline Park. There are small fountains located other places around the city, but these are the most prominent. Of the four listed, only the Prismatic Fountain and the splash pad run regularly. Seal Fountain and the Lawrence Halprin Fountains are rarely if ever functioning even during big events in Civic Center Plaza. The Lawrence Halprin Fountains have been adopted by local parkour practitioners, who utilize their unusual geometric structure to practice their craft. By contrast, the Prismatic Fountain and splash pad are only turned off during cooler months, typically mid-October, to protect the pipes.

The Prismatic Fountain in Denver is the only fountain of its kind in the world. It was designed for the 1908 Democratic National Convention by a man named Frederic

Darlington. Darlington innovated a number of fountain features, including the first color-changing fountain remote control, and used compressed air to work the fountain system. The fountain deteriorated over the next seventy years until it became practically inoperable (Kerecman 2017b).

Following years of pressure from the community, renovations on the fountain began in 2006 and finished in 2008 in advance of the 2008 Democratic National Convention. Denver is the only city to ever attempt a historic renovation of a Darlington fountain, and the whole fountain vault was reconstructed according to the original blueprints. While the grouping of jets and lights was restructured to accommodate modern technology, the design team remained as faithful to the original Darlington structure and function as possible (Kerecman 2017b).

The Prismatic Fountain recirculates water from Ferril Lake, which is itself a stormwater outlet for City Ditch. Between 600 and 4,000 gallons of water pass through the fountain a minute, depending on which jets are active. While the water show runs in five to ten minute cycles throughout the day, the fountain is not lit until dusk. There was discussion of having musical shows in the style of the fountains at the Bellagio Hotel and Casino in Las Vegas, but funding and infrastructural considerations tabled that idea. The Prismatic Fountain runs for twenty-two and a half hours a day, with only a one and a half hour break to ventilate the vault (Kerecman 2017a).

Albuquerque

Environment and Climate

Albuquerque is a semi-arid steppe climate city in the American southwest. The city is located in the Rio Grande Rift, a north-south rift zone that extends from southern Colorado to northern Mexico. Albuquerque receives nine inches of rain and ten inches of snowfall annually (US 2017). Albuquerque has experienced rare haboobs, dust storms, and historically flooding was a significant problem for the city. Flood control efforts have mitigated the most severe impacts, but parts of the city are still impacted by periodic flash flooding.

Spring in Albuquerque can begin as early as February, though snowfall events may occur, they are unlikely by mid-March. Strong winds herald the beginning of spring, and last into the transition to summer in early June. Summer is punctuated by afternoon thunderstorms that unleash significant rainfall over very short periods, and are most responsible for flood events in the city. Sweater weather typically begins in early to mid-November, as summer can linger into October. Winter, such as it is, runs from late November or early December into late February. Albuquerque rarely suffers severe cold, and there are few snowfall events through the winter months.

History and Settlement

Albuquerque is also known as the Duke City, for the Duke of Alburquerque, Spain, Don Francisco Fernández de la Cueva y Enriquez de Cabrera. The Spanish region of Alburquerque, spelled with an additional “r,” is so named for the white cork trees

(*albus quercus*) common in that part of Spain. Duke Don Francisco is responsible for the establishment of the Albuquerque settlement in 1706, and the honorific nickname has become part of Albuquerque's identity (Dolk 2009). Albuquerque was a Spanish city for the next 115 years, until Mexico won its independence from Spain in 1821. Because the city was so far removed from the central government of Mexico, the change in administration had little impact on the day-to-day life of Albuquerque residents. In 1846, the United States raised an American flag in the city plaza, and effectively took control with relatively little fanfare. In 1848, the part of the New Mexico territory that included Albuquerque was purchased by the United States in the Treaty of Guadalupe Hidalgo, which ended the Mexican-American War (Oppenheimer 1969).

Because of significant flooding in 1874 that left the city stranded as an island, when the railroad came through town six years later, it was laid approximately two miles to the east of the old town plaza. The railroad was established in 1880, but Albuquerque continued to grow slowly, with a population of only 3,785 in 1891. New Mexico became a state in 1912, and Albuquerque's population continued to creep upward, reaching 35,000 in 1940 (Oppenheimer 1969). 1946 was a turning point for Albuquerque, as the Atomic Energy Commission (AEC) partnered with Sandia Base to continue the Los Alamos Labs' Z-Division work on the Manhattan Project and atomic technology. By 1950, the population was over 97,000, and by 1960, that number ballooned to 207,000. Today, Albuquerque has a population of 550,000, with a metropolitan population of just under a million (Albuquerque 2017)

Water Management Issues

Until 2008, all of Albuquerque's water came from the Albuquerque Basin aquifer, a groundwater source historically believed to be and treated as limitless. A USGS study in 1993 found that the water level in the aquifer had dropped 160 feet since 1960, and that Albuquerque was taking out twice as much water as was being replenished by annual precipitation (Ashmore et. al 2001). Around that time, city residents were using 255 gallons of water per person per day; today, that number has dropped to 135 gallons (Quigley 2015). In 2000, drought conditions in the southwest forced the city to seriously reconsider its water habits, and Albuquerque made a proposal to be at least partially reliant on surface water by 2005 (Ashmore et. al 2001).

Albuquerque moved forward with an elaborate project, the San Juan-Chama Project, which became operational in 2008. Essentially a diversion system, the San Juan-Chama Project takes water from southwestern Colorado and pipes it under the continental divide into the Chama River, which feeds into the Rio Grande River. Though Albuquerque takes its water directly from the Rio Grande, it is allowed no more than what is brought in through the San Juan-Chama diversion. In a 2016 conversation, Katherine Yuhas, head of the Albuquerque Water Utility Authority Water Resources Program, said that the San Juan-Chama project now provides 66 percent of Albuquerque's total water use.

As part of an effort to continue reducing the total water consumption of the city, Albuquerque has utilized a variety of programs to educate and reach out to the public. These include rebates for xeriscaping yards or improving appliances that use water, offering classes on more responsible water use, and heavily advertising the somewhat

clumsy 1-2-3-2-1 watering program, which serves as a reminder to Albuquerque residents how many days a week they should water in a given month between March and November (ABCWUA 2010).

Urban Form and Public Space

Albuquerque's irregular shape reflects its history of sporadic and opportunistic growth. The southern foot and western extension of the city press against the limitations of development. To the east are the Sandia Mountains, to the west is Petroglyph National Monument, which already experiences the encroachment of suburbia. To the north, south, and west, Albuquerque is bordered by Pueblo Indian lands. The chunks of land Albuquerque has claimed for itself are the tentative fingerhold the city seeks to maintain on spatial expansion.

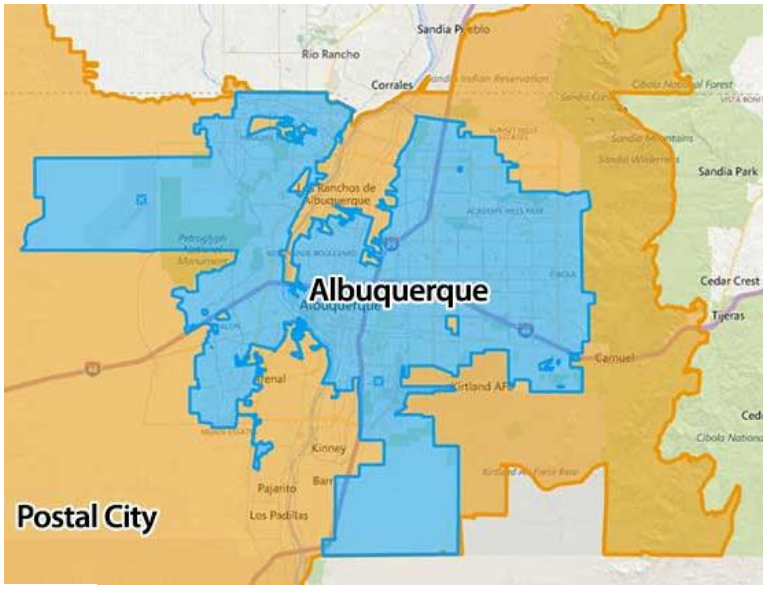

Figure 3A - City Boundary of Albuquerque in blue, (Slipstream 2017)

Within its irregular formation, Albuquerque is quartered by the neat intersection of Interstate 40, which runs east-west through the city, and Interstate 25, which runs north-south. Everything in the city is oriented north or south and east or west of that intersection. The Old Town plaza is in the southwest quadrant, less than a mile from the Rio Grande. Though the proximity to the river had its benefits for early residents,

unmanaged flooding caused the railroad to be placed two miles farther east. The pull away from Old Town led to the development of what was for a while referred to as New Town, now simply the downtown area.

Albuquerque has a few large public spaces, most notably the long narrow park system, called the bosque, which borders the Rio Grande through the city. There is also access to the Sandia Mountains, with park space and hiking trails. Albuquerque has a number of small public parks throughout the city, but the only substantial public green space that is utilized for large gatherings or concerts is the flat open field of Balloon Fiesta Park. Because of this, the Duck Pond area at the University of New Mexico is of special importance to the student body. The University of New Mexico is located in the southeast quadrant, roughly two and a half miles east of downtown. The combination of the main and north campus span from Central (old route 66) north almost to Interstate 40, and serves as a spatial buffer between Interstate 25 and the residential neighborhoods east of the campus.

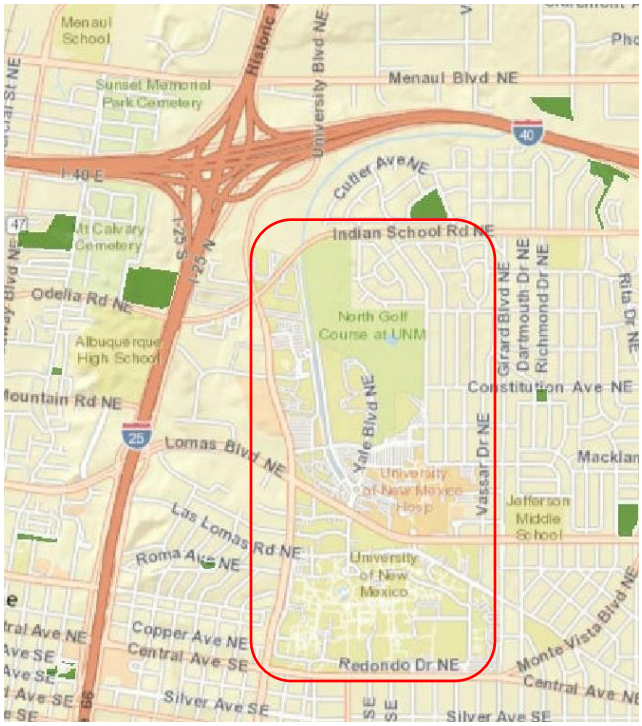

Figure 4A - University of New Mexico and the I-25/I-40 interchange, (City of Albuquerque 2017)

Fountains in Albuquerque

Albuquerque has a number of public fountains, though it is difficult to get a specific accounting of how many are in the city. The Geometric Fountain in Civic Plaza is actually maintained by the convention center, the subterranean fountain in the mall downtown is operated by a different entity than the above-ground fountain on the same property. There is a fountain at the train station, and there are other fountains throughout Albuquerque. According to a correspondence with the Albuquerque Parks Department, however, the city is only responsible for the maintenance of one fountain. Including the Duck Pond Fountain, there are four fountains on the UNM campus alone.

The Duck Pond was designed in 1962 as part of a renovation intended to improve walkability and aesthetics on campus. The university hired the firm Eckbo, Dean, Austin, and Williams, headed by modernist landscape architect Garrett Eckbo, to design and implement the project. The actual construction began in 1974 and was completed by 1976. The Duck Pond is a three-lobed design, with a water feature in each lobe. There is a bubble fountain in the southeast lobe, a waterfall in the west lobe, and a water jet fountain in the northeast lobe, examined for the purpose of this project as the Duck Pond Fountain. The Duck Pond Fountain recirculates water from the pond, which is supplied by the campus well (Trout 2015).

Comparison

Denver and Albuquerque are semi-arid steppe-climate cities in the American West, with Denver in the subregion of the intermountain west and Albuquerque in the southwest. Denver's metropolitan population is 4 million and Albuquerque's is 900,000

(Metro 2017, Albuquerque 2017). Despite this disparity in size, they are both the most populous cities in their states. There is also similarity in demographics, provided here for context. Denver has a Hispanic population of 31 percent, Albuquerque has 46 percent. Denver is 50 percent non-Hispanic White, Albuquerque is 42 percent. Denver has a higher percentage of African Americans, Albuquerque has a higher percentage of Native Americans. It worth noting that Denver has turned into a hub of technology and innovation, while the primary employer in Albuquerque is the federal government. Both cities have high rates of crime compared to the national average, but Denver's crime rate is comparable to other cities of its size, while Albuquerque's is significantly above average (NeighborhoodScout 2017a, 2017b)

Denver's average annual rainfall is fifteen inches, Albuquerque's is nine. More significantly, Denver receives fifty-five inches of snowfall annually compared to Albuquerque's ten (US 2017, Denver n.d.). Despite their similarities in terms of climate, which is the most significant linking component for this comparison, Albuquerque is perceived both by residents and outsiders as being a desert, while only one respondent in Denver correctly identified the city as a high plains desert. Fountains proliferate in both cities and, whether on or off, impact the public spaces where they are found. Dense water use like public fountains is a more efficient use of water than dispersed methods such as watering a lawn or landscaping, but fountains in drought-impacted and semi-arid areas can be perceived negatively as irresponsible or inefficient.

The fountains I selected in Denver and Albuquerque share a number of characteristics. Both the Prismatic Fountain in Denver's City Park and Albuquerque's Duck Pond Fountain on the UNM Campus are situated within a larger, public, green

space. Both are part of larger bodies of water, for which they serve a circulatory function. The majority of Duck Pond users through the week are campus students, but community members also use the space to walk dogs, come with children to feed the ducks, take wedding or prom photos, and many other uses are represented. City Park has a wedding venue, but it is also bordered on two sides by residential property, and is situated adjacent to the Denver Zoo and the Denver Museum of Nature and Science. Because of this, City Park has a range of users from local residents to tourists primarily there for one of the adjacent sites.

Literature Review

This project draws from scholarship that has already illuminated various aspects of the human-water-environment relationship. While I situate my inquiry securely within the narrative of cultural landscape writing, other scholarly domains help provide a full picture of the current work relating to this project,. This section explores the scholarly discussions found in cultural landscape writing and three related traditional academic literatures, as well as a literature derived from public academic writing. The geographic literature on cultural landscapes serves as the foundation for the entire project, and is the literature this project is concerned with informing.

The literature on hydro-landscapes of power and affluence is concerned with the use of water as a tool of power or for the display of affluence, with content taken primarily from geography and political ecology. The literature on fountains and socionature power dynamics is similarly interested in water and power, but it stems from theories in architecture, archaeology, and geography. This literature includes current work on bridging the gap between cultural and physical geography by calling for a new critical physical geography.

While these two literatures are primarily interested in the sociopolitical ways water has been used, another relevant literature – on valuation and perceptions of water in dry regions – is preeminently concerned with how this water is considered and economically valuated. In my discussion below, I narrow the focus to arid and semi-arid regions. These literatures provide a valuable perspective on the way scholars have been engaging with water as part of the cultural landscape.

The final literature, on water in public academic writing, is a foray into texts primarily intended for public audiences. These texts are written about the human-water relationship by academics trying to make the conversation more accessible to a public audience, and tend to include a blend of history, narrative, and environmental discussion. This section provides important balance to the literature as a whole by engaging with a less formal aspect of the human-water conversation.

Cultural Landscape

The literature on cultural landscapes is diverse and deep, even as a subset of the broader literature on landscape more generally. Cultural landscape writing has throughout its history primarily been the domain of geographers, with significant contributions from researchers in landscape architecture (Muir 1998). Geographic writing in cultural landscape theory developed from the late 1970s through the 1980s with Cosgrove and Jackson (1987), Entrikin (1976 and 1985), Tuan (1976), and Zube (1984) most prominently.

Cosgrove and Jackson (1987) presented the contributions of geography in understanding the landscape as text and suggested ways for the discipline to move forward, including an expanded integration of ethnographic methodology. Entrikin (1976 and 1985) provides an overview of humanistic geography and an exploration of its relationship with existential space, focused on the way a place is actually experienced versus how it is formally conceptualized. Tuan (1976) fundamentally argues that humanistic geography has a useful function in building on the traditional functions of

scientific inquiry, and Zube (1984), writing from a landscape architecture perspective, argues for a theorization of his discipline and an increased attention to qualitative concerns and more varied geographic scales.

Historically, work on cultural landscapes has understood landscape itself as a constitutive term relying on culture to provide meaning to the visual elements of a place. There are some current trends in this literature that seek a return from, or reinvisionment of, this perspective by moving away from such heavy reliance on culture to explain landscape forms (Rose 2006). However, the majority of the writing in cultural landscape theory has been interested in the understanding of landscape studies and the framing of the conversation about the topic (Entrikin 1997; Mitchell 2005). Some of this discussion is focused on older dialogues such as the split between idiographic and causal research in geographic studies (Entrikin 1985). This is representative of the way the writing on cultural landscape focuses more consistently on the way cultural landscape is understood versus what it seeks to understand.

Along these lines, there is a significant portion of the cultural landscape literature that is specifically engaged with how the landscape is read or interpreted (Lewis 1979; Zube 1984; Kaltenborn and Bjerke 2002; Tveit et al. 2006; Allen 2011). Most notably, actor-network theory, which explores material-semiotic relationships as a way to understand how meaning develops from those interactions, has been used as one way to understand landscape. This is a logical application given the movements towards the non-representational, which focuses on the action rather than the outcome, and more-than-human, which attempts to restructure and undermine the human/nature binary, trends in landscape literature (Panelli 2010; Allen 2011). There are also a number of scholars that

have done significant work on breaking down visual indicators of landscape to determine the specific elements contributing to aesthetic impressions of landscape (Zube 1984; Lothian 1999; Tveit et al. 2006).

Overarchingly, the cultural landscape literature has seen a call for geographers to be self-reflective as they consider their landscapes, and it has been suggested that the tendencies of humanistic geography lend themselves to this style of criticism (Entrikin 1976). Understanding researcher positionality, the relationship of the research to their object(s) of study, can be a key element of meaningful research in this area. This is part of why much of the recent scholarship has taken more radical and political approaches to cultural landscape studies, such as Rose's 2006 piece arguing for a rejection of the idea of culture in favor of a fluctuating performance of coherence, and Benediktsson (2007) who argues that geography must take aesthetic concerns seriously to establish a responsible landscape politics. There is a consistent undercurrent of questioning positionality within the discipline of geography and within the study of landscape itself (Benediktsson 2007; Cresswell 2010)

This literature is part of one of the richest areas of inquiry in the field of geography, but even now, there are concepts that have not yet been explored. New themes and methods continue to be identified, including non-representational and more-than-human research. My research is situated squarely within the legacy of cultural landscape literature, with strong influences from Cosgrove (2006), who explored ambiguity in modern landscapes, Creswell (2010), who argues that cultural geography takes too many things for granted and has given up examination of the social in favor of the cultural, and Mitchell (2005), who writes about the ways power is displayed across a

landscape. My work with cultural landscapes of water features builds on these works, particularly drawing on the work done by Allen (2011), Lothian (1999), and Benediktsson (2007) to consider the agency and influence of the landscape by taking fountains as unique components of a landscape and exploring the human experience of specific fountain sites.

Hydro-Landscapes of Power and Affluence

The literature on hydro-landscapes of power and affluence runs the gamut from purely quantitative assessments of affluence distribution to more theoretical analyses primarily concerned with representation and expanding the range of voices in conversation. For my purposes here, this literature has been truncated to primarily consider those landscapes of power and affluence which are impacted by or themselves impact water. Topics range from in-depth explorations of legal implications for water nomenclature to analysis of current geographic work on class disparity.

This literature contextualizes much of the content from the reading on cultural landscapes, addressing specific places where water is utilized to enact or represent power relationships, or to display affluence. Subsequently, there is a substantial portion of the literature that interacts with ideas of capital and infrastructure, (Shaw 1997; Page 2005; MacKillop and Boudreau 2008; Sementelli 2008), such as explorations of how the way water is discussed impacts how it is treated politically (Sementelli 2008) and the role of water infrastructural development in shaping urban form (Shaw 1997). This work highlights the importance of water in a series of political moments and contexts. Themes

of water infrastructure and politics as an exercise of power appear recurrently (Swyngedouw 1997; MacKillop and Boudreau 2008; Sementelli 2008), but this is also fundamentally a conversation about how the centers of capital skew the development of infrastructure.

The conversation among these scholars is focused more explicitly on power dynamics and the role wealth plays in the distribution of water. The wealthy elite are able to use their positions to bring water to themselves. Though they do not explicitly bar poor areas from receiving similar infrastructural developments, water follows money. This is a key note in the literature, as it is a striking example of the close relational dynamic between wealth, power, and water (Swyngedouw 1997). The class distinctions underlying this type of narrative are also explored in the fairly robust theoretical element of this literature, which seems particularly focused on political ecology and understandings of the power dynamics made manifest in the control and presentation of water (Strang 2005; Ekers and Loftus 2008; Roberts 2008; Dowling 2009; Tadaki et al. 2012; Ioris 2013). These authors are concerned with inclusion of minority voices, with direct attention to the role of feminist work as important for diversifying perspectives (Roberts 2008; Dowling 2009).

There seems to be an increasing awareness among scholars that historically under-utilized perspectives, including indigenous knowledge, may have significant value in advancing understandings of relationships of water, power, and affluence (Strang 2005; Dowling 2009; Tadaki et al. 2012). There is a comprehensive push for disciplinary synthesis, integration of marginalized voices, and continued recognition of power

dynamics inherent in relationships surrounding distribution of and access to water. (Strang 2005; Ekers and Loftus 2008; Tadaki et al. 2012)

The work in the hydro-landscapes literature also establishes a foundation for research that seeks to engage with similar questions on a more qualitative level of inquiry. Moving forward, this literature offers significant opportunities for more holistic conversations about water, power, and affluence. Though there is great variety and depth in many aspects of this scholarship, it would be bolstered by a deeper engagement with theoretical framing at all levels. Of particular importance are more mature theoretical interactions with the valuations and concerns of women, indigenous, poor, or otherwise traditionally marginalized populations. On the same note, there is a need for research that engages the opinions or lived experiences of people impacted by the various ways water is accumulated or distributed. It is important that future research does not simply reinforce or act out the power disparities already experienced by these populations, but rather highlights the human concerns of the subjects.

My project responds to this literature by building out the qualitative interests in lived experience of water, sometimes as a symbol of power or affluence. Because that mental framing does not tend to be reflective of lived experience, however, I have explored how various understandings of water are internalized or not, and how they are reflected in experience of a water landscape.

Fountains and Socionature Power Dynamics

This literature is focused almost exclusively on fountain sites both historical and modern. Though there are some theoretical engagements with the topic, the more important element here is the specialized focus on fountain sites themselves. The sites explored in this literature include archaeological locations (Bray 2013, Purdue and Berger 2015) and historic and modern water features (Sofoulis 2005; Bulut and Atabeyoğlu 2007; DeJesus 2007; Niell 2013; Juuti et al. 2015). Each are engaged through a politicized view that situates them both in place and in their historic narratives, providing a trajectory to understand their relationship with the broader literature.

One particularly important aspect of this literature is the way fountains and other aesthetic water features are used as explicit tools of power in certain situations (Bray 2013, Niell 2013). Whether in the Inca Empire (Bray 2013), where the display of water meant political power over a region, or in 1830s Havana, where the commission and design of public fountains was an exercise of political bravado (Neill 2013). This research highlights the long-standing history of water display serving a clear social role, and give fountain sites a great deal of context in terms of interpreting their history and the decisions driving their design and implementation. Despite this, there is an overall absence of work here that examines the agency of the fountain features, or the specific meanings that they embody in the present.

Additionally, this scholarship makes clear that fountains develop a multiplicity of roles outside of their basic meaning, and transform the spaces they inhabit at a fundamental level. The human-level interaction with fountain spaces is dynamic, and has the ability to transform significantly over time (Bulut and Atabeyoğlu 2007; Juuti et al.

2015). According to DeJesus (2007), fountains can be both creator and subject of their spaces, which means that fountains have an iterative relationship with anyone sharing their space. This purely theoretical view of human interaction with fountain spaces, however, does not directly engage with or query human experiences, rather focusing on the fountains themselves.

Coming from a different but important perspective, the expansive collaborative works done by Tadaki et al. (2012) and Lave et al. (2013) point to a more unified way forward to bridge the growing divide between physical and human geography within the academy. Tadaki et al. (2012) in particular notes that much of this unification is a matter of rebranding rather than fundamental reformation of physical geography practices. While I am more concerned here with qualitative issues, my work is situated within the divide that Tadaki et al. (2012) are attempting to close. My project is designed to contribute as both a marriage and an outgrowth of these works, with a more rigorous qualitative exploration than Bulut and Atabeyoğlu's (2007) discussion of the modern role of historic fountains in Erzurum, and with support from some of the background and contextual focus that DeJesus (2007) provides in her descriptive comparison of seven fountains from different eras and locations.

Valuation and Perceptions of Water in Dry Regions

The literature on valuation and perceptions of water in dry regions is the most practice oriented of the five, with a strong body of quantitative work, some qualitative research, and areas of inquiry that are both meaningful and practical. There are readings

which focus on how water is valuated- either subjectively (Head and Muir 2007; Johnson and Castleden 2011; Hayden et al. 2015) or objectively (Zekri et al. 2011; Larson and Perrings 2013; Ruddell and Dixon 2013; Halper et al. 2015), and how it is experienced or viewed (Burmil, Daniel, and Hetherington 1999; Nash and Endfield 2002; Box et al. 2008; Ode et al. 2008; Gibbs 2009 and 2014; , Henderson 2010; White et al. 2010, Faggi et al. 2013; Gómez et a. 2013; Yu et al. 2013; Gage and Cooper 2015).

Within this literature, a general consensus has formed on the enduring importance of water as a landscape feature across geographic regions, regardless of the accessibility of water or economic status of the area. This importance is illustrated in a variety of studies that examine the benefits of water features, either from a social use perspective, as in the Faggi et al. (2013) study on the preference for water features in Buenos Aires and the Gómez et al. (2013) study on the role of water in improving the microclimates of outdoor space in Valencia, or an economic perspective, such as Zekri et al.'s (2011) study of the economic benefit of an oasis in Oman, or Larson and Perrings (2013) article on housing values near parks and green space in Phoenix, which found a consistent preference for water intensive vegetation (Zekri et al. 2011; Faggi et al. 2013; Gómez et al. 2013; Larson and Perrings 2013; Gage and Cooper 2015; Halper et al. 2015).

There are also a range of studies that explore more practical uses of water, either in residential or non-explicitly aesthetic capacities. These studies highlight the shifting and multi-scalar relationships that humans have with water. Approaching the same kind of question from a range of perspectives, these authors complement each other's research with strong quantitative work that together paints a picture of residential water use that is unevenly distributed between classes, and responsive to but not dependent on local

climate. (Head and Muir 2007; Box et al. 2008; Harlan et al. 2009; Ruddell and Dixon 2013; Garrido 2014; Hayden et al. 2015)

Not every author in this literature is engaged with residential and non-aesthetic uses of water, as numerous others focus on aesthetic interactions with water (Burmil, Daniel, and Hetherington 1999; White et al. 2010; Faggi et al. 2013; Yu et al. 2013). There is a nascent theoretical foray into understanding the way landscape is experienced and interpreted, but even this aspect of the literature tends towards quantitative study. (Burmil, Daniel, and Hetherington 1999; Nash and Endfield 2002; Henderson 2010; Yu et al. 2013; Gibbs 2014) A strong focus is given to more-than-human geographies, which focus on the agency and significance of those life forms other than humans, and their movements and environments. This is a particularly interesting aspect of a literature that is predominantly driven by human interactions with landscape. Here we see yet another return to more-than-human considerations of landscape interactions, which is a trend to watch in the development of cultural landscape theorization (Gibbs 2009).

Moving forward, this literature offers a strong base from which to build studies of water valuation. Though primarily concerned with explicitly economic impacts of water and water features, there is a relentless social consideration that gestures to the underlying reason to care about these questions. There are two primary shortcomings within the literature that would benefit from further consideration and research. The first is that the literature tends to reflect very homogenized relationships with water. Though there are some researchers doing neighborhood-level analysis, there is relatively little accounting for the nuances of human interactions driven by class, gender, and other accessibility considerations. This shortcoming is driven by the fact that these are

primarily quantitative research projects. It would be reasonable to structure research questions with different target groups, areas of interest, or underlying foci in order to get at some of these marginalized groups. The second shortcoming is the general absence of qualitative methodology and direct human interaction within the literature. Both of these gaps could generate much productive research on a wide range of topics that would enliven and bolster this area of scholarship. More qualitative research would likely also naturally lead to more research dealing with issues of class, gender, and accessibility, the absence of which was noted previously.

My project addresses the gaps in this literature where there is room for more qualitative analysis of water valuation and perception. It builds on existing scholarship to undertake a targeted focus on the human experience of water features.

Water in Public Academic Writing

Along with the theoretically oriented works discussed above, a number of academics have written about the human-water relationship in more accessible texts primarily intended for public audiences. In the literature on water in public academic writing, I engage a range of authors primarily concerned with the way technical interactions with water are impacting or impacted by global supply and security. Most of the books in this literature are framed as telling the story of water, and begin with historical contextualization of variable scope before progressing into a more modern narrative that typically concludes in a call to action regarding current water concerns. Brian Fagan's *Elixir* (2012) is heavier on the first part of this framing, beginning in

Mesopotamia and moving forward through history to explore the relationship of humanity and water over time. In a similar vein, Steven Solomon's *Water: The Epic Struggle for Wealth, Power, and Civilization* (2011) begins at the start of civilization and works through various technological advances in water management, before concluding in a section on scarcity and the threat of pollution and rising concerns about water-centric international conflict.

David Sedlak's *Water 4.0* (2015) nudges forward along the historical spectrum, beginning with the impressive water-works of ancient Rome and moving through to the modern era with a consistent focus on the engineering and urban water systems necessary to provide clean and safe water. Julian Caldecott's *Water: The Causes, Costs, and Future of a Global Crisis* (2008) and Charles Fishman's *The Big Thirst* (2012) both begin by explaining the molecular construction and long history of water, running back to the beginning of life on earth. Both focus on the increasing complexity of attaining clean, drinkable water. Caldecott's work takes an expansive view of sociopolitical relationships around water, its historical uses and economic impacts. Fishman is primarily focused on the impact of current water use practices and their implications for the future of water.

Related, though less concerned with the physicality of water itself, Michael Webber's *Thirst for Power* (2011) explores the relationship of water and energy production. The book examines the way that increasing technological development and new energy fields, such as water-intensive bioalgal production, compound the scarcity issues of modern water use. *When the Rivers Run Dry*, by Fred Pearce (2007) and *Last Call at the Oasis*, edited by Karl Weber (2012) are both concerned with modern water uses and the necessity of reinvisioning these relationships. They break with the majority

of the authors in that they do not tell a chronological narrative. *Last Call at the Oasis* is a series of essays on various water issues, and *When the Rivers Run Dry* is a series of case studies Pearce uses to make his point about the critical need for reimagining water relationships in the modern era.

Donald Worster's *Rivers of Empire* (1992) and Alice Outwater's *Water: A Natural History* (1997) both have a more limited scope, both geographically and historically. They are focused on the role of water in the development of the United States, particularly during western expansion. Outwater's book has a more technological bent, focused on human engineering and the difference between remediated water and healthy water. *Rivers of Empire* examines western expansion hand in hand with ecological destruction, considers the impact of damming and rerouting rivers, explores and the relationship of water in the west.

Rounding out the literature, somewhat on his own, is Wallace Nichols' *Blue Mind* (2015). This book is a blend of neuroscience and anecdotes, both personal and collected from a range of other people, that explores what it is about water that compels us, and what the actual impact of water is on the human mind. Though Nichols approaches water from a different perspective than his company here, *Blue Mind* does legwork on understanding the minutiae of the human-water relationship that are not explicated in the other texts.

Most of these authors, writing about serious water issues for a non-scientific public, do not address fountains or aesthetic water use of any kind, in their discussion of water use (Worster 1992; Outwater 1997; Pearce 2007; Caldecott 2008; Webber 2011), some do so only in a technical capacity, with the historical context or life-sustaining

functions of fountains highlighted (Weber 2012; Sedlak 2015), but a few authors address fountains as I do here, as aesthetic features (Solomon 2011; Fagan 2012), while a handful go even further and attempt evaluation or landscape assessment of fountains (Fishman 2012; Nichols 2015).

Among the authors who do not address aesthetic water, there are still some productive components to note. Many of these authors make reference to a taken-for-granted narrative about the human attraction to water. While offering no scientific support, and rarely any anecdotal evidence, these authors feel comfortable putting forward the claim that humans are naturally drawn to water (Pearce 2007; Caldecott 2008). These taken-for granted narratives are also brought up by the authors who do address fountains in some way (Solomon 2011; Fagan 2012; Fishman 2012; Nichols 2015). Only Nichols has taken up the task of addressing the scientific underpinnings of this attraction, and his work, a mixture of neuroscience, observation, and personal experience, is a compelling support for the narratives the other authors put forward. In *Blue Mind*, Nichols finds that fountains positively affect the mind, providing a variety of health benefits including lowered levels of stress, and enable a form of cognitive blindness, in which the presence of a fountain mediates potential negative components of our environment.

My work is ultimately a qualitative counterpoint to Nichols' project. Rather than placing electrodes on my subjects and showing them various watery landscapes, or playing the sound of rain, waves, or fountains, I have opted to ask my subjects what they think about fountains. This project interrogates the idea that people are drawn to water, and tries to provide a foundation in actual research. Though my project is necessarily

limited in scope, it serves as an initial foray into empirically understanding if and how people are drawn to water.

Synthesis

Much has been said in the preceding five literatures, and it is beneficial to revisit the key themes positioning this project before a transition into the research design section. Multiple times, the door was opened for future research with qualitative inquiry. There has been a strong focus on being cognizant of research positionality, and self-reflection in the research process. Current research does not involve direct interaction with human subjects at fountain sites, and does not qualitatively engage their experiences. The role of power in landscapes has also come up consistently. Researchers have considered how power is displayed in a landscape and the power dynamics of resource control and access to landscapes. There has been discussion of the agency of landscape, the multiple roles and functions of fountains, and the transformative power of fountains in a landscape. Particularly in the writings of public academics, taken-for-granted narratives about water have been also presented: humans have an innate draw to water, humans prefer watery landscapes, etc… and there has been some quantitative research to support these narratives.

From these literatures, there are also certain key ideas that can be formed about human-water relationships. Water, as a life-sustaining resource with economic impact in terms of infrastructure, access, and use, is a visual representation of power. For more affluent residences in water-scarce climates, water use best practices are typically followed only until such practices begin negatively impacting aesthetics, and living near

water features and green space tends to drive up housing values. Water is often associated with lower stress levels and tranquility, and in addition to being used to improve the microclimate of a park or plaza, fountains in particular are generally utilized as a soothing, relaxing component of landscape design.

The biggest gaps identified in the preceding literatures are fairly consistent. There is need for more theoretically robust engagement with water in general and fountains specifically. More research should be done by and about women, people from lower socioeconomic backgrounds and varying classes, people of diverse ethnicities, and other traditionally marginalized communities. More qualitative research is needed in all areas of this inquiry, specifically to access and integrate lived human experience and direct participant interaction into the research narrative. This last point is a significant part of the reason this project uses qualitative methodology and participant interviews to interrogate how people experience fountains.

Research Design

Question

How do people experience fountain spaces in the semi-arid cities of Denver and Albuquerque?

Hypothesis

My hypothesis was that most people who utilize fountain spaces separate their enjoyment of the spaces from critical engagement with resource concerns related to climate.

Methodology

This project is a qualitative study of interview responses obtained at two fountain sites, one each in Denver and Albuquerque. Short, structured interviews were administered to a random sample of passersby engaged in a range of activities at the fountain sites, with a total of forty participants, five at each site. The responses were examined using content analysis, and basic coding techniques were used to identify content categories within the responses. The project is concluded with a discussion that engages the content categories and puts them into conversation with the preceding literature review.

I began the IRB process to obtain approval for human subjects research (see Appendix A) in May 2016. During this time, I developed a paper survey to give to participants to complete. When I piloted the survey on five participants at my

Albuquerque site, I realized there was not much room for open-ended answers or nuance with such a static format, and people did not seem willing to take the time with the opportunities they did have. Without changing the substance of the questions, I reinvisioned the survey as a questionnaire to be administered by an interviewer – myself, and felt I got appreciably more depth from the responses. I initially intended to complete interviews at four sites, in Denver at the Union Station Plaza Fountain and the Ferril Lake Prismatic Fountain in City Park, and in Albuquerque at the Civic Plaza Geometric Fountain and at the University of New Mexico Duck Pond fountain. Time and budget considerations limited my Denver travel to one feasible site, the Prismatic Fountain and lack of participation at Civic Plaza resulted in dropping the Geometric Fountain site.

I ultimately collected the data for this project via interviews at two fountain sites, one each in Denver – the Prismatic Fountain, and Albuquerque – the Duck Pond Fountain, from September to October. I approached adult subjects at public fountains to solicit participation. Upon arriving at the sites, I took five to ten minutes to observe the people at the site and the activities taking place before approaching anyone. When there were enough people, I approached one person engaging in each observed activity. On

Figure 6A - Duck Pond Fountain UNM (photo: Susanna Diller)

Figure 5A- Prismatic Fountain, City Park (photo: Susanna Diller)

occasions when there were fewer people at the site, I would approach each individual present. I visited each of the fountain sites in Denver and Albuquerque between seven and twelve times in September and October. I visited each site in the morning, afternoon, and evening, on a mixture of weekend and week days, remaining at the site for two hours in each instance. During that two hour period, I would approach individuals at the site. I introduced myself as a graduate student at the University of New Mexico, explained my project, and asked if they would be willing to participate in a short interview. I had no inclusion/exclusion criteria for participation, other than voluntary consent to participate which I established in each case at the beginning of the interview. The sample size is twenty participants per fountain site.

I took notes on the interviews which I typed out and manually coded. I used content analysis, which is a flexible analytic method that allows for work with a smaller sample size, and is a productive way to examine meaning within responses that are not generalizable. Content analysis requires examining texts – written, spoken, visual, among others, to identify patterns, key words or phrase, and major trends (Carley 1993). Content analysis allows for some quantification of traditionally qualitative research efforts, by providing a structured framework for analysis that provides numerical results. I wanted to examine my interview results in more than a casual way, to identify the key themes underlying the human experience and value of these fountains.

While there are a number of software programs that will mechanically code data, I chose to code by hand due to the relatively small sample size. Often researchers are encouraged to identify certain anticipated content categories before beginning the process, as a way of identifying biases (Gläser and Laudel 2013). Based on my

recollection of the interviews, I noted aesthetics and relaxation as anticipated content categories. I began with my first participant and noted each ideological theme, numbering them in order of appearance. As an example, relaxation was the third theme identified in the first interview, and so all subsequent references to relaxation were marked with the number 3. Themes that appeared frequently in the responses were identified as content categories, and in the text I break them down by gender and site of respondent. The results section and subsequent analysis examine the responses within the content categories and identify trends within and across locations.

Results

Overall, participants were articulate, thoughtful, and able to give complex and nuanced answers on the fly. Responses indicated a generally positive conceptualization of fountains. When asked what they thought of the fountain, responses tended towards effusive. “It’s beautiful,” (Participant 21), “I love it,” (Participant 22), and “I think it’s great,” (Participant 3) are a representative handful. There were a few exceptions – three participants in Albuquerque expressed that the fountain could be more aesthetically appealing. They have a point: there is no sculptural artifice for the Duck Pond fountain; it is simply a pipe that extends up from the pond and shoots out water. More notably, one participant in Denver said that, “I’ve seen better” (Participant 32) and another called the fountain, “kinda ugly” as well as “useless and inaccessible” (Participant 37). Two other Denver participants answered, “I don’t know” (Participant 38) and “not really” (Participant 39) to the question of whether they liked the fountain.

Most of these respondents still had some positive comments about the fountains, either in terms of ambiance or utility as a communal public space. Even the critiques are reflective of the depth to which participants generally engaged the interviews, which was surprising and appreciated. From looking at these responses, it is clear that there is something important about fountains. They do serve a variety of public utilities, and the public seems to be generally aware of these functions. A number of taken-for-granted narratives that crop up in writing about water were supported in these responses, including the idea that people are drawn to water, that water relaxes people, and that water is a significant aesthetic benefit in a landscape.

This section is organized by theme, and differences across location have been noted. Male/female demographic data is included. For reference when viewing the tables: there were ten female and ten male participants in Albuquerque, and twelve female and eight male participants in Denver.

Environment

The majority of participants at both locations commented on the environment, noting that the fountain site is a connection to nature, talking about the health benefits of being in nature and near water. The two tables below reflect this trend. Twenty-nine of forty participants mentioned the environment – the climate of their state, the micro-climate created by the fountain, or the fountain as representative of non-human nature. The use of environment here covers any word or phrase that reflects a concern with the physical, explicitly, non-human environment. This use does not include words such as ambiance, when referring to a non-physical attribute, as these were coded into other categories.

A number of participants at the Duck Pond Fountain suggested sources when asked where the water in the fountain came from, sometimes pessimistic. Only one person was aware the water is sourced from the university's aquifer. At the Prismatic Fountain, participants did not even attempt to guess, and none of them knew the water is used as an overflow route for the city ditch and later rerouted into the Platte River. Once aware of

Table 1 - Participant Mentions of Environment

Environment - 29 Mentions		
	Denver	Albuquerque
Male	15%	50%
Female	40%	40%

their ignorance, however, the majority of participants asked follow-up questions about where the water came from following the interview.

Because these follow-up questions about where the fountains' water sources took place outside of the interviews, I did not record exact numbers of how many asked this specific question. As a one-off, the question did not strike me as worthy of note, but it quickly became a pattern for participants to ask, which is telling. Additionally, eleven participants answered the question about whether fountains are a responsible use of water by saying yes, but only if the water was "recycled," "recirculated," or a "closed system." two participants said that the fountain may be a waste, but they liked it anyway. One participant went out of her way to say she feels fountains are not a waste.

Based on these articulations of concern, it seems participants would use a post-interview question about the source of the water to alleviate feelings of environmental guilt that may have arisen during the interview. This sense of guilt seemed stronger in people who knew less about the fountain and those who were more emotionally engaged with it. Nichols (2014) discusses this type of what he refers to as "cognitive blindness," as the sense that if our environment seems okay, there is not really a problem.

Many participants brought up a relationship with the environment as mediated by the fountain. One participant noted, "It's a nice place to relax, with the ducks and the trees" (Participant 5). There is a pervasive interest in non-human or more-than-human nature in these responses, as participants in Albuquerque frequently mentioned the ducks: "I come to see the ducks, it's kinda nice, the ducks like it" (Participant 15); "I like it, it's relaxing. I like the ducks and turtles" (Participant 4); and "it's so calming. I like to watch the ducks" (Participant 6). among others.

Though the elements of the environmental relationship were articulated at both locations, the narrower content category of nature provided some of the more striking responses. Two participants in Denver articulated their perception of the human-nature relationship very eloquently when asked what role fountains serve in a city. One participant said that, "looking at nature and beauty is an important part of being human" (Participant 24), productively pointing to a relationship between humanity and nature, even as expressed in a man-made structure. The other participant said that, "water is life, and we identify with it" (Participant 28). However, it is also important to note that the participants who commented on the environment and nature were generally drawing a distinction between themselves and the space, identifying it as a place they go to and then come from, as indicated by these respondents, who refer to fountain sites as "a place citizens can go to, to enjoy the scene" (Participant 5), and state that "I come to relax, it reminds me of home" (Participant 9).

In the five specific times that participants used the word nature, respondents used nature to separate the fountain and the broader context of City Park from the city itself, and their everyday experience of the urban environment: "[the role of a fountain in a city is] Aesthetics, nature, beauty" (Participant 32); "[the fountain represents to me] maybe nature, I guess, with the ducks" (Participant 19); "relaxation, nature" (Participant 20); "part of nature" (Participant 21); "in the city, this is the closest you can get to nature, it's a plus" (Participant 21); and the quote above from Participant 24. Based on these responses, it seems that participants generally separate themselves from nature as well, as seen in the comment about the fountain being as close to nature as you can get.

Nature

While the majority of respondents commented on the environment, only a handful addressed the associated concepts in any depth. Five in particular mentioned nature explicitly. One of these respondents addressed the human relationship with water as vital for survival. Some responses indicated that water itself is representative of nature, while others identified the water as a host for nature – specifically the ducks at the duck pond. These responses are highlighted in part because they allow for an examination the ways that the word nature was used by participants.

Memory

Five respondents mentioned memory in some way, always in a positive context. Respondents were reminded of their childhood or former homes, of other places they had enjoyed traveling, of rain and being in a different climate, and of happier times in their life. This was an unanticipated category to emerge from the analysis, but is not necessarily surprising, especially in the context of a sample population that consistently provided revelatory and candid responses articulated at a high level.

Table 3 - Participant Mentions of Nature

Nature – 5 Mentions		
	Denver	Albuquerque
Male	5%	5%
Female	10%	5%

Table 2 - Participant Mentions of Memory

Memory - 5 Mentions		
	Denver	Albuquerque
Male	N/A	10%
Female	15%	N/A

Aesthetics

The vast majority of responses mentioned a positive valuation of fountains due to aesthetic considerations, typically stating that the role of fountains in a city is to serve as decoration. Words and phrases used include “pretty”, “beautiful”, and “decorative”, and thirteen participants specifically used the word “aesthetics” when describing the role or importance of fountains in a city. I anticipated there would be a number of responses dealing with aesthetics, which is a word I use in my proposal and throughout my thesis, but I was pleasantly surprised to see so many respondents use it unprompted. All but one participant in Denver mentioned the decorative role of fountains, and just over half of the Albuquerque respondents.

I would attribute much of the divide there to the fact that the Prismatic Fountain has been designed up from its basic utility of aeration. It is painted yellow, the jets of water move and change form, and at night the fountain is lit up. By contrast, the Duck Pond Fountain is a fairly basic bubble fountain with no decorative features specific to the fountain itself. In arguing for a redesigned landscape politics, Benediktsson (2007) raises the idea of an “aesthetic of the unspectacular.” This is perhaps an idea those who frequent the Duck Pond Fountain might appreciate, as it is clear that landscape appreciation is not limited to the physical attractiveness of a particular feature.

Table 4 - Participant Mentions of Aesthetics

Aesthetics - 30 Mentions		
	Denver	Albuquerque
Male	**35%**	**30%**
Female	**60%**	**25%**

Beyond the obvious, however, Dowling and Ioris (2013) might suggest that the difference in emphasis on aesthetics be attributed to class. The primary users at the Duck Pond Fountain attend the university, with a few exceptions, or are part of the local community. Typically, this is a student or young professional group. City Park is not a particularly expensive neighborhood, but in Denver that still means a well-off young professional on the low end. There were more vacationers in Denver, and a few retirees. This project did not examine class markers in the interview, but this could be an area for further exploration.

Strang (2005) would counter this argument for diversity by pointing to an idea that water will be experienced similarly by people from disparate cultural contexts because of its own inherent qualities, including aesthetics. In this study, this argument does not appear to hold fully true. While water was appreciated by all participants, the same water feature would elicit vastly different responses from the participants. In terms of aesthetics, it seems evident that fountains give a strong visual impression, and can have a significant positive impact on the surrounding area.

Relaxation

Relaxation is the other major category that emerged from the responses. Words and phrases used include “tranquility”, “serenity”, “oasis”, “a break from the intense cityscape” (Respondent, 8), and “relief from stresses” (Respondent, 4). Though I had been

Table 5 - Participant Mentions of Relaxation

Relaxation - 28 Mentions		
	Denver	Albuquerque
Male	25%	40%
Female	25%	50%

aware of the effect the sound of water has on the human nervous system (mentioned by participants as well), I had not expected so many participants to be conscious of the impacts, perceived or otherwise, that the fountains had on their mental state.

The category of relaxation was more prevalent in Albuquerque in Denver, though it came up both places. Though there may be city-level considerations informing this difference, I would be inclined to attribute it primarily to the immediate context of the fountain. While the Prismatic Fountain in City Park is in a large public, primarily recreational space, the Duck Pond Fountain is on a college campus. Students come to the Duck Pond to get away from the stress of their school day, mentally rejuvenate themselves before or after classes, or simply get outdoors for a little bit. Because of this contextual difference, the Duck Pond is likely to be perceived as more of an "oasis" than the Prismatic Fountain.

Another consideration may be the perceived climate. Though Albuquerque and Denver are in the same climate zones, Albuquerque gets significantly less precipitation of any form than Denver, and subsequently appears much less green throughout the year. Five Albuquerque residents commented that they live in a desert, while only two Denver residents did so. An additional four Albuquerque residents commented on how dry the state is, while no participants in Denver made similar comments. This could also lead to a recognition of fountain spaces as being particularly relaxing, as they create pleasant microclimates and a soothing soundscape.

In their assessment of whether proximity to parks was considered an amenity or disamenity in Phoenix, Larson and Perrings (2013) found that proximity to small parks was likely to be a disamenity. This is largely because the negative aspects of living near

public space, noise from users, increased homeless presence, loose dogs, et cetera, would outweigh the positives. Proximity to large parks, however, was highly desirable and saw an associated increase in property value. City Park certainly fits the bill, and though Denver is not quite as dry as Phoenix, the comparison seems apt. There are a variety of amenities associated with a park so large, including access to organized events, green space to spend time outdoors, and a sonic buffer on at least one side.

Community

Community was the most surprising category I found in the responses. The idea of fountains as community spaces has precedent in the literature, particularly in historic contexts where fountains were the central feature of a public plaza. I had believed that to be less of a modern role, but these responses indicate otherwise. I am disinclined to think that the participants were simply repeating rhetoric, as many of them had some anecdotal support for their claims of fountains as community sites. Half of the respondents in Albuquerque mentioned fountains using phrases such as gathering places, safe public spaces, and places where people come together. Five participants from Denver mentioned community as well, sometimes in defense of fountains (as in, see how many people are using this space, it is clearly a public good).

Table 6 - Participant Mentions of Community

Community - 15 Mentions		
	Denver	Albuquerque
Male	**5%**	**25%**
Female	**20%**	**25%**

Contradictions

This is an odd category, but significant to this study. More so than interviews where people were critical of fountains, or negatively valued the particular fountains in question, these contradictory comments raise potential flags. The participants may have mediated certain answers to meet what they thought I expected. Though this was a very low-stakes environment, there is still a possibility that they modified their responses. Likely, participants were working through their ideas for the first time and were subsequently forming new thoughts in the moment.

Just under half the participants at each site had some form of thematic contradiction in their responses. Examples of contradictions include participants who expressed great enjoyment of the fountain then stated that they thought it was not a reasonable use of water, people who said they enjoyed the sound and sight of the fountain but said they would enjoy the site as much without it, or people who said the fountain was not a reasonable use of water but said that fountains were important features in cities.

Table 7 - Participant Mentions of Contradictions

Contradictions - 17 Mentions		
	Denver	Albuquerque
Male	**20%**	**15%**
Female	**30%**	**15%**

Discussion

Taking the results in light of writings on cultural geography, what can we say about the way people experience fountains? The question of experience is closely related to the question of value, and the results identify three main experiential values: aesthetics, environment, and relaxation, that people place on fountains. Though many participants overlapped in discussing these values, each one represents a different way of experiencing fountains.

Primarily relying on Cresswell (2004), Relph (1976), and Lothian (1999), with support from Allen's (2011) exploration of the use of actor network theory in landscape, it seems productive to briefly discuss fountains as both Latour's Things, and as unique and individual places. While fountains are human-constructed objects in the landscape, most people who visit them had no hand in their physical construction. They arrive to the fountain, bringing with them networks of pre-existing ideas and relationships that inform their immediate experience of the fountain. The experience of fountain then either fosters or repulses those networks. If the fountain is reminiscent of a location from someone's youth, for instance, it may support the pre-existing idea of what constitutes a fountain. In cases like Albuquerque's Civic Plaza Geometric Fountain, however, a fountain may not foster an experiential resonance. The object itself may seem out-of-place, a description that necessarily implies there is a correct place for a fountain.

What then are those places? Relph (1976) notes that the essence of place does not come from the location itself, or the particular object at the location, but says that places are the, "profound centres [sic] of human existence." A fountain may represent home to a participant who lives nearby (Participant 39) or remind someone of happier times

(Participant 30). These experiences have as much to do with the fountain itself as the volume of pre-existing ideas and network of interaction these participants imbue it with.

In this way, Relph's claim that, "features of the world are experienced in their meaning," speaks to the deeply individual experience people have of fountains. This is not to say that certain experiences cannot be more broadly generalizable. People who come to a fountain to relax are expanding on a pre-existing idea in the cultural narrative that says water is calming. They are also correct, as Nichols (2015) goes to great lengths to prove. The sound of water benefits the sympathetic nervous system and helps reduce stress. For people who place the greatest value on the relaxing qualities of a fountain site, that is the unique meaning of that site. The object of the fountain becomes a Thing that provides a sense of calm in the middle of a busy city, schedule, or school day. Though these fountains do not serve a life-sustaining function, they have a utility – improving the quality of life for nearby residents.

This particular utility, improved quality of life, is shared by participants who experience the fountains as an environmental value. Intensely urban areas can benefit from the insertion of fountains, notably those within green spaces, as a proxy for nature. Clearly, this understanding of nature reinforces a division between human and more-than-human nature, as people generally fail to acknowledge as natural anything but more-than-human landscapes. Despite the oversimplified binary at play, it is beneficial for humans to spend time in more-than-human nature, a fact noted by many participants at the fountain spaces. In a broader life environment that can feel unrelentingly developed, fountain spaces provided a break for many participants. Though tertiary elements, such as

the broader setting or the ducks, were a note for some participants, the water itself was a focus. “Water is life, and we identify with it” (Participant 28).

Other participants experienced the fountains as objects of aesthetic value. While it may be tempting to fall back on claims about the inherent quality of a landscape, Lothian (1999) argues strongly that objectivist approaches to evaluating landscape aesthetics are overly limiting. A reliance on objective assessments of landscape aesthetics requires a break from historical perspectives on aesthetics that have consistently determined that beauty is, in fact, in the eye of the beholder. The subjectivist approach Lothian espouses views aesthetic determinations as an individual perspective based on, “what is perceived through the memories, associations, imagination, and any symbolism it evokes.” While Relph makes the point multiple times that landscapes are necessarily more than the “aesthetic background to life,” they are of course part of the experience. Fountains serve as an element of beautification – the lip gloss on a pretty girl, as one participant suggested.

There were three prominent content categories that emerged from the study results: relaxation, aesthetics, and environment. They form a triangle of related concerns and experience that structured most of the responses. Each of these categories also finds direct correlation in the literature underpinning this project, in both theoretical and quantitative aspects.

Unanticipated Categories

Three trends emerged in the responses that I had not intended to examine: community, memory, and contradictions. Community became a major component of responses in Albuquerque particularly, with half the participants bringing it up in some capacity. It was addressed in Denver to a lesser extent, which is surprising because City Park does actually host a number of large community events, including a summer concert series. The content category of memory had fewer responses than that of community, but was clearly significant to the five participants who addressed it. Seventeen participants had some type of self-contradictory statement in their responses. In this section I discuss those respondents who talked about community first, transition to discussing memory, and conclude by addressing contradictions.

Although I had not considered community as part of the project, there is some precedent in the literature. Part of the thought process behind selecting the Duck Pond and the Prismatic fountain was that both are in public locations with a high level of traffic, so the emergence of a community narrative is logical. Certainly, any discussion of community must note the complete lack of engagement at the Civic Plaza fountain in Albuquerque, but at least at the two sites that made it into the study, community came up frequently. This is not necessarily surprising in either location. The Duck Pond, in addition to being a point of reference for the UNM student body, is used by the general public for a range of purposes including walking dogs, photoshoots for quinceañeras and weddings, and simple relaxation. Though I am unaware of any structured community events that use the Duck Pond, it is part of the community life of the UNM student body and immediately adjacent Albuquerque residents.

Talking about the Duck Pond, one participant said that the fountain is, “pleasant, lots of people seem to use it” and that it, “Bring[s] people together in a relaxing environment” (Participant 1). Other participants mentioned fountains as a site for community events, community safe spaces, and commented that people like to gather around fountains. A participant from Florida said, “People like to hang out around water, even back home, people are around the fountains. I wouldn’t say [fountains are an important feature in a city], but people always like to be around them, so there’s something they like. I wouldn’t notice if there weren’t fountains somewhere, but it’s nice when there are.” Notably, nobody gave direct personal examples of attending community-development events but there were many participants who discussed the fountains and broader green space as a something that fosters a sense of community. This may be a case where practice and perception are in conflict, or where a rhetoric about the use of space has permeated even informal discourse.

Switching gears, five participants specifically mentioned memory in their responses. These memories were framed within one or more of three categorizations: home, childhood, or happiness. In Albuquerque, one respondent said that the fountain reminded him of home. When this participant elaborated, he said it was that the fountain created a meditative space he correlated with his home. Another Albuquerque participant said that the sound of the fountain reminded him of rain, of places with more water.

The respondents in Denver who mentioned memory reflected similar types of associations. One of the participants, originally from North Carolina, noted that the fountain reminded her of a park from her childhood. The participant said that the fountain represented the pride a city has, and, “even places without water can have fountains if

they're wealthy enough" (Participant 22). Another participant said that the fountain made her think of family. This participant was one of three I spoke to who was going through a divorce, and the fountain was a place she could go to relax. This participant also said that the fountain was a very European space, and brought to mind fountains she had seen during travels in India. There was a great deal of reflection in these answers, a certain melancholy, and it was clear that the fountain was an important place, a convergence of prior places and experiences.

Interestingly, one of the other participants going through a divorce similarly conceptualized the fountain as a place to work through memories. This participant told me that she was typically at the fountain when she brought her children to the adjacent zoo or museum, and so it reminded her of happier times, and family. The third divorcing participant did not mention memory, but said that every time he spoke to his ex, he would come to the park, drink a beer, and watch the fountain. I found this small sub-group a surprise, and was interested in the way, for them in particular, the fountains had become something of a melancholy touchstone.

One of my most eloquent participants, who spoke about fountains as a public good, and expressed a deep appreciation for the fountain, also said that she would enjoy the site as much without the fountain. This was a common trend: eleven participants spoke appreciatively of the fountain either for aesthetic reasons or for the impact on the soundscape, but then indicated they would enjoy the site just as much without it.

Conversely, I had a number of participants who spoke very critically of fountains, their water use practices and environmental impacts, but when asked if the fountain in question was a reasonable use of water, or whether they liked the fountain, would say

yes. One woman in particular seemed to catch herself mid-contradiction. After speaking critically of fountains for most of the interview, I asked if the Duck Pond was a reasonable use of water. The participant responded, “yes, I guess, because I use it” (Participant 12).

This self-awareness was generally lacking, however, and I find that this probably indicates nothing so much as a lack of previous thought on the subject. While twelve participants mentioned some specific characteristic – auditory, climatic, environmental that drew them to the site, none of them expressed having given the fountain any meaningful thought before. On the contrary, one participant, after the interview, said that she had probably spent more time thinking about fountains during the interview than she had the whole rest of her life. Two other participants expressed similar sentiments after their interviews as well. At least for the participants of this study, it seems fountains had not previously been considered part of discourse on water use or urban form.

Limitations

Of course, no project is without limitations, and one of the biggest for this project is scale. While the sample of forty participants at two locations was robust, and allowed a preliminary insight into the subject, it is far from generalizable to the entire population. A greater number of sites and participants would be necessary to begin making population-wide generalizable claims. Future studies may benefit from comparison of cities in different climate zones, or of significantly different sizes.

It may also be productive to interview people who are not at a fountain site, to determine if people tend to respond differently when not in the immediate area of a fountain. One of my interview questions was, "Would you enjoy this site as much without the fountain?" but it could be hard for people to envision such a drastically reimagined landscape when they were actively experiencing the auditory and environmental impacts of the fountain. This project was primarily interested in the experience of people in fountain spaces, but a project with broader scope would likely be improved by questioning how people interpret or recall those experiences without the physical presence of a fountain as a prompt.

Another area of the project that could be re-envisioned in future projects is participant selection. For this project, I randomly approached individuals at my two fountain sites. While I worked to ensure I was getting a diverse sample population, I also wanted to be sure I was getting a sample that was representative of the actual user population. I am aware, however, that my biases as a young white female approaching strangers in a public space may have influenced who I was inclined to approach. Working with a research team comprised of people from different demographics might help alleviate this problem, as would blind forms of outreach such as mailed surveys.

Though I had no problem getting participants in Denver and at the Albuquerque Duck Pond location, people at Albuquerque's Civic Plaza Geometric Fountain were generally unwilling to participate. I visited the site twice a day for seven days, and found three participants willing to participate. There seemed to be a variety of impediments to participation. The first is that Civic Plaza is primarily a transient space unless there is an event. People would pass through the space on their way to or from work, during their

lunch hour, or as they maneuvered downtown. These people were either unwilling or unable to stop, typically due to time constraints. Of the few people who were sitting in the space, many seemed to be homeless. Every person I approached from this group declined to participate. The three participants I did ultimately gather were business-people on their lunch breaks.

This lack of participation resulted in dropping the Civic Plaza location from my project, which is actually rather significant. Since the idea of fountains as community space was brought up numerous times at the two sites I did include, the utter absence of community presence or participation at Civic Plaza is worthy of its own consideration. What characteristics of a space are more likely to foster a sense of community, or to dissuade community gatherings? This example underscores the potential value of interviewing participants about fountains outside of the immediate fountain space. Informally, I have had varied and interesting conversations with people in Albuquerque about Civic Plaza and the Geometric Fountain, most often negative assessments of the space.

Future Research

This project used qualitative methods to explore one facet of the relationship between humans and fountains, and found that within the sample population, there is support for many taken-for-granted narratives about human-water relationships. However, there are significant opportunities for expansion of this project. A larger population, selected with more purposeful demographic considerations would offer

opportunities for exploration of class, for example, of which this project can only speculate. A comparison of fountains in radically different climate zones, either arid, such as Phoenix or Las Vegas, or humid, such as Chicago or Boston, would provide insight into whether experience of fountains is impacted by factors like climate.

Participants in this project were selected randomly at a fountain site, but interviewing participants not actively in a fountain site could provide a wider range of responses. Interview length could also be expanded to include questions about climate, personal water use, and recreation using water. Fountains of varying scales and contexts should also be included. For example, Buckingham Fountain in Chicago is likely to elicit different responses than the Bellagio Fountains in Las Vegas.

Future researchers can utilize the results of this project as justification for further exploration of human-water relationships using qualitative methodology. The work here indicates strongly that the academic narratives about water are supported by the general public, and may be internalized and understood and a deeper level than anticipated, by a wider swath of the population.

Conclusion

Throughout this project, I found that people primarily interact with fountains in one of three ways: as a proxy for nature, as an aesthetic landscape feature, or as a site of relaxation. Participants seem to conceptually separate fountains from other water uses as an artistic feature versus a utility. I also learned that fountains may be more contextually dependent than anticipated, as the Geometric Fountain, in its concrete urban setting,

generated far fewer responses than the Duck Pond and Prismatic Fountains, which were set in green space. The interviews I conducted were more productive than I could have hoped for, and I received a robust sample at both locations. The responses supported many taken-for-granted narratives about the role of fountains as sites of relaxation, community, and decorative focus. Whether they were informed by these narratives to the point of distortion is the question of another project, but one I acknowledge may have influenced these results. Respondents indicated a sensitivity to their environments in terms of climate, city-nature interface, and sound. This may be a sampling bias, as only people already in fountain spaces participated. Participants consistently placed a high value on aesthetics. There was acknowledgement of the relationship between water and community, and participant references to memory indicate that fountains can become emblematic for a range of topics. It is clear that fountains serve a variety of important roles in a modern city, particularly as residents attempt to negotiate their understandings of and relationship with their environment.

List of Appendices

Appendix A: Human Subjects Research

Human subjects research is any research that involves interaction with a living person using individually identifiable information. When conducting human subjects research, researchers must complete a research protocol explaining the methods they plan to use, how they intended to contact and interact with participants, what risks participants may be exposed to in the course of the study, how the researcher intends to mitigate those risks, whether or not participants will be compensated, and how the researcher will anonymize participant data and subsequently store the data, among other components of the research design. This research protocol is submitted to the researcher's affiliated Institutional Review Board (IRB), where it is either approved, sent back with edits, or rejected. If the protocol is sent back with edits, the researcher can make changes and then resubmit the protocol for acceptance.

Once a research protocol is accepted, it is either given an exemption or not. If the research is not exempted, the researcher is responsible for checking in with IRB at various points during the study to ensure compliance with the protocol and make any necessary adjustments. If the research receives an exemption, the research is deemed to be a minimal risk to the participants, and the researcher is instructed to proceed in accordance with their approved protocol with no further IRB oversight.

My protocol was submitted June 30th, and I received minimal suggested edits on July 21st. I addressed the edits, and was approved for exemption later on the 21st.

Appendix B: Interview Questions

1. Are you a resident of this city?
    a. If no: What is your city of residence?
2. When did you first visit this location?
3. What do you think of this fountain?
4. How frequently do you come to this location?
    a. What is your primary reason for coming to this location?
        i. If necessary, prompt: Is this a destination for you, or somewhere you pass through?
    b. Does the fountain impact your decision to visit this location?
        i. If yes: In what way?
5. Whose responsibility is it to conserve water?
    a. If necessary, prompt: city, state, individual residents, etc…
6. Do you know where the water in this fountain comes from?
    a. If yes: Where?
7. Are you aware of any water conservation efforts in your city?
    a. If yes: elaborate
8. How important is water conservation in this city?
9. Thinking generally: In terms of responsible water use, what is your opinion of public fountains?
    a. Do you think this fountain is a reasonable use of water?
10. Thinking generally: What role do public fountains serve in a city?
11. Do you think public fountains are an important feature of a city?

a. If yes: Why? If no: Why not?

12. What, if anything, does this fountain represent to you?

13. Would you enjoy this site as much without the fountain?

14. Do you like this fountain?

Appendix C: Participant Responses

Participant 1

1) Dayton
2) First Visit Day Of interview
3) Pleasant, lots of people seem to use it
4) N/A – first time
5) The University, public
6) Not recirculated, aquifer/reservoir
7) Really nice aquifer, no water conservation – infrastructure
8) Highly important and controversial
9) There shouldn't be very many of them
    a. Yes
10) Bring people together in a relaxing environment, aesthetics
11) Yes
12) Attempt to make the campus inviting
13) Not quite
14) I like the fountain

Participant 2

1) Yes
2) 6 years ago
3) Could be nicer
4) Daily

    a. Relaxing

5) Everybody
6) I do not, maybe sewage water
7) I do not
8) Pretty important, how dry the state is, not as bad as California
9) Very impractical, but if the water is recirculated that would be okay
    a. Yes, if recycled water
10) Decorative, for show
11) I would like to say so, see a large fountain, wow, this city is known for something. I'd have one if I made a city
12) Visually nothing, but the sound is relaxing
13) Yeah
14) Indifferent

Participant 3

1) Yes
2) Few Years ago
3) I think it's great, nice to take a break
4) Once a week, on average
5) Everyone's
6) No, although stuff in it is gross
7) Holistic – Acequias – food/water security
8) Very important

9) There's a way to use recirculated water, hard line between art and public good, fountains are both
    a. If I knew where the water came from, probably
10) Contribute to quality of life and character of city
11) Albuquerque, no. In a place like Kansas City, they're part of the identity.
12) Calm space in my hectic academic schedule
13) Yeah, I do, but no, the sound is important. Especially in the desert.
14) Yes

Participant 4

1) Rio Rancho
2) While back, elementary school
3) I like it, it's relaxing. I like the ducks and turtles.
4) Not very, because I'm busy.
    a. It's somewhere to relax before exams
5) The state
6) No, I don't
7) Not really, efficient toilets and things like that
8) Important, NM is dry
9) I think they're okay, wildlife lives here, and we relax, it's good for our health.
    a. Yeah
10) Decoration, aesthetics, to make the city look nicer
11) Depends on what's around. In the middle of a city it's not needed
12) A place to get away, relief from stresses

13) Probably not, some, but not as much

14) Yes

Participant 5

1) Yeah, but California before
2) September
3) It's nice. It's a nice place to relax, with the ducks and the trees
4) Nice to relax
    a. Every or every other day
5) Everybody's
6) I do not
7) No, neither (in Albuquerque or California)
8) Very important
9) Recirculated water would be okay, not sure
    a. I think so
10) A place citizens can go to, to enjoy the scene
11) I think they are
    a. They're attractions, they're nice to be around
12) It's a calming area
13) Yeah, still nice
14) I do

Participant 6

1) Rio Rancho

2) August
3) I think it's beautiful – better than NMSU
4) Every time I'm on campus, it's so calming. I like to watch the ducks
5) Everyone's
6) No
7) Commercials on the radio, nothing specific
8) Pretty important – we're in a desert
9) I think they're fine
    a. Yeah
10) Beauty – something to look at
11) No real need, but people find importance in them
12) Peace, calmness
13) Probably not
14) Yes

Participant 7

1) Yeah, France originally
2) August 2015
3) They're nice
4) Not often, only sometimes on campus
    a. It's a nice place to hang out
5) Everyone's
6) No clue, assume Rio Grande
7) No, not back home either

8) Pretty important, it's pretty dry, and water is precious here
9) Wanna say it's a waste in general, but not always
    a. Yes, cuz I hope it's a closed system
10) Place to gather around, create nice places, art pieces. No role, they're not helping anyone.
11) Yeah, I'd say so, they help make places nicer
12) They're nice to gather around
13) It would be different, I can't say
14) Yeah, I do

Participant 8

1) Yes, native
2) Life
3) Enjoyed it as a kid, still enjoy it, it's a nice part of campus
4) Not as much as I'd like, when I have breaks
    a. To study
5) I don't know, everyone, in a sense. It's hard to say. It's nice to have a place with water.
6) No
7) No, personal efforts
8) Not as much as it should be, it isn't in our education
9) It's probably not the best use, but you can't not enjoy it. Campus would be different without it
10) Community safe spaces

11) I think so, yeah
12) It's peaceful, a break, oasis, from the real and sad. It's a break from the intense cityscape.
13) No, probably not.
14) I like it

Participant 9

1) No, Stanley New Mexico, the high plains
2) While back, Native to NM
3) Really like them, they're a meditative space to relax, gets off the freeway
4) Once a week, Tuesday or Thursday
    a. I come to relax it reminds me of home, and it's easily accessible
5) New Mexico is dry, we should all advocate for it
6) No, but I know New Mexico and there's no water – it's probably what attracts me here
7) No, there's no water to conserve, I guess water for cattle
8) Water conservation is important, New Mexico is a dry state, every bit counts. A main concern is golf courses.
9) I believe fountains have a civic function, people go there to be quiet
10) ^above
11) Yes
12) Peace and quiet
13) Can't imagine the space without them
14) Yes I do – they're important at UNM

Participant 10

1) Yes, San Antonio before
2) Second time
    a. The ducks and turtle
3) First time, noticing – serenity, the sound is good
4) For the ducks, it's nothing special
5) The city, rainfall
6) No, I assume it's recycled
7) Not in this town – lawns show off
8) Think about the mountains, water is plentiful
9) Depends whether we're at peace or at war. At peace, cut back at home, serenity
10) Serenity, this one isn't pretty
11) Yes
12) Ducks bathing
13) Probably not
14) Yes, I do

Participant 11

1) No, Chapel Hill
2) Today, here for an interview
3) Nice, pretty
4) N/A
5) Government, well, everyone
6) No

7) No
8) Very important
9) They're nice, nice ambiance. Not necessarily supporting life
    a. No, seems silly in the desert
10) Nice ambiance, people gather around them
11) Mildly
12) Community space
13) Probably not, noise over aesthetics
14) Yeah

Participant 12

1) Yes
2) Several, 2013 probably
3) I don't looking at it, listening is good
4) Once very few weeks
    a. To hear water, yoga class
    b. Yes
5) Individuals, municipalities, there's a lot of grass, we need to be more responsible, especially the city and university
6) I don't – but I'm a pessimist with the university, so probably somewhere it shouldn't
7) Architecture/CRP container harvesting, no large-scale
8) Extremely, most important
9) Not a fan – it's arid, so there's evaporation

a. I enjoy it, yes, I guess, because I use it

10) I'm from Kansas City originally, they're gorgeous and peaceful. Hearing water helps our nervous system, and there's a cooling effect
11) Depends on the city, it's irresponsible for us to have more, but people gather around water
12) Respite
13) As long as there was water, even if it was still, because of the ducks
14) Yes

Participant 13

1) No, yes, campus
    a. Vermont originally
2) August
3) It's pretty and good because it keeps the water from getting stagnant
4) Once a day
    a. It's quiet and tranquil, I feed the ducks
5) Everyone's
6) No
7) Albuquerque, no, Vermont had rain gardens
8) Probably more than Vermont, it's hotter and drier here
9) They're fine if they're recirculated
    a. Yeah, I mean, not 24/7. Turn them off at night so you don't waste the electricity
10) Make it look nice, keeps – it's a natural way to keep the water filtered

11) They're not crucial

12) Just to keep the pond from getting murky

13) Yeah

14) Yeah

Participant 14

1) Yes
2) 4 Years ago
3) It's nice, relaxing with the water noise
4) Almost daily
    a. It's a place to sit outdoors
5) Everyone
6) No
7) Not really
8) Really important, we're in a desert
9) They use up water, even if it's recycled
    a. Yea, because animals live in the water and the fountain keeps it moving
10) Something nice to look at
11) Yes
    a. I don't know
12) Water, I guess. It's dry here, so it's nice to have water going
13) Probably not, it would be a lot quieter
14) Yes

Participant 15

1) Yes
2) July ‘16
3) I like it, it’s calming
4) Often, between classes
    a. I come to see the ducks, it’s kinda nice, the ducks like it
5) Good question, I’m not too sure
6) Bodies of water, not close
7) Yeah, from a while ago, lawns
8) Pretty important
9) Dunno, I’m indifferent. They’re nice, make an area better to be in
    a. Probably not
10) Eye candy
11) No
12) I don’t know, it reminds me of rain, the ducks like it
13) Make it boring without
14) Generally yeah, structurally not really

Participant 16

1) Yes. Well, no.
    a. Bosque Farms
2) Like a week ago.
3) It’s nice. You know I’ve always heard things about it, you know, for years.
4) N/a - I just came here because it’s more… cool (inaudible), you know, shade and everything.

5) I, that's honestly a tough question. Just to think about it, I, I assume you know like the city and stuff
6) Absolutely not.
7) Uh, none… no, no.
8) It should be, you know, pretty important considering that we are eventually going to run out of water.
9) Uh, like some… okay, like this one I think is… acceptable, cuz, I guess, it's got ducks. You know, the ducks and everything that live here, but like, you know, random fountains kinda out in the middle of, you know
    a. Answered above
10) Not sure
11) Not really, I mean, I know we don't get a lot of water and rain and stuff around here, but, that'd be more of a reason not to have them
12) Nice relaxing spot
13) If the pond was still here.
14) It's, it's water that's spraying.

Participant 17

1) Yes. I am.
2) probably… 2009
3) I think it's peaceful, relaxing.
4) Usually during the semester, probably once a week.

a. I like, there's a lot of shade, it's cooler when it's, when the sun is out. I like to sit and do my homework around here.

b. Probably. I like the sound of the water.

5) All of us, the human race, really.

6) Probably just the city, I would say the city, water.

7) As far as government, I know that you're supposed to abide by, um, there's certain water laws, water waste laws, watering certain times of the week, um, during certain times of day and stuff. They try to have people follow that, but it's, that's all.

8) I think it's really important being, um, we're in a drought you know, definitely very important.

9) In this city it's, it's kinda pointless. I feel like, you know, I mean, yeah, granted like a lot of people like it, there to be water, we don't have oceans or a lot of water available, but it is kind of a waste of water, in my opinion.

a. I think so, I mean, it's, it's on campus. I mean there's not many of, anything like this around other than the biopark and stuff so it's pretty cool. I guess, just the, aesthetics of it.

10) Aesthetics

11) Not so much. I mean, if you're, you know, if you're by the ocean you have lots of rain, lot of water, I feel like, but I mean they're not, I feel like, too big of a deal, you know?

12) I mean it doesn't, I've never really thought of that, or anything. I guess just a chill-out place, you know?

13) Probably not.

14) Yes.

Participant 18

1) Florida
2) Today, I'm visiting a friend
3) It's kind of small, but I guess it's nice
4) N/A, my friend is in a meeting so I'm hanging out here
5) Everybody's
6) No
7) Not where I live
8) Probably very important, you guys don't have a lot of water
9) I think they're nice. Maybe it depends on the city, or how the fountain works.
    a. Yeah, I hope so
10) People like to hang out around water, even back home, people are around the fountains
11) I wouldn't say so, but people always like to be around them, so there's something they like. I wouldn't notice if there weren't fountains somewhere, but it's nice when there are.
12) Um, a public place to relax
13) Probably not

14) Yeah, it's alright. It could be prettier.

Participant 19

1) Yeah, well, Las Cruces
2) When I was younger, ten years ago maybe
3) It's alright, I like it
4) Once a week or so now
    a. I mostly come here to watch the ducks
5) Everyone's
6) From the river?
7) I don't think so, not off hand
8) Pretty important, it's a desert, so we need to be careful with water
9) Well these are useful, so I guess they're okay. The one in civic plaza doesn't make a lot of sense to me.
    a. Yeah
10) Mostly they're for decoration, this one keeps the water moving, which is cool
11) Not really, I guess they help beautify some cities. Bigger cities have more fountains because they have more money, but we don't really need them here
12) Nothing, really. Maybe nature, I guess, with the ducks
13) Probably not
14) Yes

Participant 20

1) Yes

2) Last August
3) I like it, it's peaceful
4) A few times a week, less in the summer but sometimes on weekends
    a. To relax between classes, hang out with friends, it's a cooler place on campus
5) The city, and probably peoples' too
6) No
7) Lawn watering regulations
8) I think it's super important
9) I don't think they're bad most of the time, unless it's drinkable water
    a. I think so yeah
10) It's a good place to relax and hang out, it's really nice in the summer
11) I guess so, people like to be around water so that's a good thing
12) Relaxation, nature
13) No, definitely not
14) Yes, I do

Participant 21

1) Denver
2) Two years ago
3) It's beautiful
4) I've been two or three times, for recreation, the view, the fountain
5) Cities and peoples'
6) No, I don't

7) Yes, use less water – dishes, grey water
8) Getting very important
9) Don't see the correlation
    a. I think so
10) For people to relax, recreation
11) I think so
12) It's part of nature
13) It depends, I'd miss it, because I know what it's like with it
14) Yes, I do
    - In the city, this is the closest you can get to nature, it's a plus

Participant 22

1) Denver, but North Carolina originally
2) Three weeks ago
3) I love it, in terms of conservation it may be a waste, but I love it. It reminds me of a park when I was little
4) Daily
    a. Walk the dog
5) Everyone's – having an awareness, travelling abroad, you realize there's a lack of access
6) No
7) No
8) Hugely important – fires and environmental issues, it's important to conserve even abundant resources

9) I think they're fine, could be ignorant, because I don't know
10) Not fountains alone, but in a park it's an added beautiful aspect, brings me to the park, it's calming. Parks represent progress and growth, fountains go along with that
11) I wouldn't ask where are the fountains
12) Yeah
13) Brings me back to childhood. Pride, in a way, for a place it's pretty. Even places without water can have fountains if they're wealthy enough.
14) Yeah

Participant 23

1) Centennial
2) Ten years ago
3) I love fountains, I like this fountain
4) A few times a year
    a. Relax, look at the city and the view
5) All of ours
6) I assume it's reclaimed, but no
7) Yes
    a. Lawn watering regulations, recreational water on a golf course
8) Critical
9) I think if responsibly using reclaimed water, you can't have enough fountains
    a. Yes

10) I think they provide – they're in or around park space, gathering space, auditory and visual relaxation and enjoyment, reduce stress
11) Yes
12) Springs of living water
13) An added benefit, makes it come alive
14) I like the fountain

Participant 24

1) Denver, St. Paul rehab. Southern California before this, Pasadena
2) Nine months ago
3) I think it's gorgeous, manmade, but beautiful anyway. I'm a bit of an environmentalist, so that's high praise
4) Every day
    a. I walk around it and read and relax
5) Everyone's
6) Pumped in, not sure exactly
7) I really don't, I'm sure they must
8) Right in top three – with education
9) A little frivolous
    a. Considering the number of people here, and it's a mood elevator, so it's a positive
10) Aside from cosmetic, being around water has a calming effect, and with all the tensions, people are more tense, and the fountains do have a service
11) Yes

12) Escape, from the controlled environment (of the rehab center), calming – looking at beauty and nature is an important part of being human
13) Yes
14) Yes

Participant 25

1) Norway
2) Today
3) It's alright
4) N/A, came for the science museum
5) It's everyone's, but mostly the government through laws
6) No
7) Sometimes, limited watering in cities
8) Don't know, it's not the driest place
9) Nice to look at, if they're reused water it's okay
10) Relaxing, something to look at
11) Not very, but good for relaxation
12) Nothing
13) A bit, maybe
14) Yes

Participant 26

1) Denver
2) 2011

3) I guess I like the fountain, it's pretty
4) Once a month or so
    a. Running
5) Everybody
6) No
7) Yeah, I guess watering
    a. Brewery – water rights
8) Very, we live in a desert
9) I guess I don't think it changes, don't bring it in
10) Nice for people to look at
11) No, probably not
    a. I don't know
12) Nothing
13) Yeah
14) Yeah

Participant 27

1) Denver
2) 8 months ago
3) I love it
4) Twice weekly
    a. Mental sanity, I'm going through a divorce, so it helps with stress, and peak performance
5) Each individual

6) No
7) Assume they're all over it
8) Very
9) I think more responsible than private fountains
    a. Extraordinarily important, for stress and comfort –from New York originally
10) Elevate the beauty, aesthetic appeal
11) Yeah, without question
12) Very European, family, makes me feel like I'm not in the high desert
13) No
14) Yes, very European, reminds me of lakes in India

Participant 28

1) Yes
2) 1991
3) Underrepresented, beautiful – it's a spectacle at night. It's good to be there, I enjoy it. Its purpose is probably to aerate, but it's good for aesthetics.
4) Daily
    a. Walk around the lake
5) Everyone's
6) Vague idea
7) No, other than watering yard in summer, I've seen brochures to conserve
8) Uppermost importance, there's a thin line between not having enough
9) Don't use up any water

10) Aesthetics, people, without realizing the effect calming soothing water we enjoy
11) Definitely – we need those, it's life. Water is life, we identify with it
12) Aesthetics
13) No, it's not the same when it's off. It's like a pretty girl without make-up, just adds a little lip gloss.
14) Sure

Participant 29

1) Yes
2) Always
3) It's a view, something to see, it's by the museum and the zoo
4) Often
    a. Relaxation
5) Government – they make the rules
6) No, not coming to me
7) Not really, just from the news
8) 100 percent we share water
9) I think it's a plus, but safety is a concern. The pipes are old, so it's not healthy, upgrade the pipes.
    a. Don't trust it
10) Less now, because it's not the water you buy from stores, because we use it less
11) Yes, because everybody can't have clean water
12) Culture
13) No, I've been coming here a while, and no

14) Yes

Participant 30

1) Used to be, now I live in Westminster
2) 2006
3) I love it
4) Monthly
    a. Zoo, playground
    b. Yes, today
5) Everybody
6) No
7) Not this year, in Westminster the HOA has a “be aware” campaign
8) Not as important as it should be
9) Figured it’s recycled
10) Beautification, togetherness, community events, kids, community
11) Yes
12) Memories, happiness – going through a divorce, reminds of happier times
13) No
14) Yes

Participant 31

1) Yes, for the past year
    a. From Nottingham in England
2) January 2016

3) Beautiful, stunning
4) Most days
    a. It's a beautiful space, handy to get to
    b. No
5) Everyone, all of us
6) No
7) No, not that I've heard
8) Definitely in the Rockies
9) Not necessary
10) Aesthetics, nature, beauty
11) ^ above
12) Nothing
13) Yes
14) Yeah

Participant 32

1) No, Los Angeles
    a. Yesterday
2) It's pretty, I do like it
3) Pretty, I do like it
4) N/A
5) Everyone, more on those in power, like the city and state
6) No

7) Yes (Stopped watering), Jet Propulsion Laboratory emails about industrial conservation
8) Hard to say
9) I don't think they harm/hinder conservation, facilities – industries, agriculture and such are much worse
    a. I'm not offended by them
10) Add to aesthetic appeal, show, "we are a prosperous, emerging city with money"
11) No, could do without it
12) Beauty and Engineering
13) Yeah, it would still be a nice park
14) I've seen better

Participant 33

1) Cincinnati
2) First time
3) It's really pretty
4) N/A
5) The city
6) Nope
7) First all-green, no specific names
8) No
9) They're aesthetically pleasing, not a waste, good purposes
10) For the beauty
11) Yeah

12) Don’t know, it’s relaxing

13) No, it adds to the location

14) Yes

Participant 34

1) Pennsylvania
2) Thursday
3) It’s nice
4) N/a
5) It’s the city’s
6) No
7) No
8) Doesn’t seem like you’re in a drought, not like when I was in LA, and they say please shut off the fountains
9) I think it’s okay
    a. Yeah
10) Something to look at, pretty
11) Not super important
12) I don’t know
13) Yes
14) Yeah

Participant 35

1) Yes

2) First time
3) Wonderful, interesting place makes it more beautiful
4) First time
5) In need to save water, waste, be careful
6) No
7) Yes, also in California, LA
8) So important, global warming
9) I like it, it's beautiful
10) Makes place more interesting place
11) No, it's for tourist attraction
12) Nothing
13) Yes
14) Yes

Participant 36

1) Yes
2) Always, 70s
3) It's fine
4) Read, think
    a. No, been here when it's not on
5) Everyone
6) No
7) No, well, lawn watering
8) Very

9) Indifferent, water evaporates, but *shrug*
    a. Yeah, I weigh the benefits, believe so
10) Aesthetics
11) No
12) Nothing
13) Yeah, I have been here without it
14) Yeah

Participant 37

1) Yeah
2) Frequently since the 70s, 80s
3) Kinda ugly
4) Twice a summer
    a. Exercise
    b. No
5) Everybody
6) The lake
7) Lawn restrictions
8) Not very
9) Useless, inaccessible
10) As long as it recycles
11) Not really
12) Stinky fish
13) See better

14) I could go with or without it

Participant 38

1) Yes
2) 2 months ago
3) Don't understand the composition, the yellow
4) Four times
    a. Running/reading
5) Everyone, city, government
6) Nope
7) Nope
8) Important, but not pressing
9) I don't know how they work, I think they're harmless
    a. No
10) Aesthetics
11) Not important, but nice
12) The park, it goes well
13) A little less
14) Don't know…

Participant 39

1) Live in Denver
2) May 2014
3) It's a little underwhelming

4) Every day
    a. I just like the fresh air, I live very close so it's nice
    b. I wouldn't say so
5) Everybody's, but the city needs to make it easy for people, and people need to take advantage
6) No
7) Not that I know of
8) Extremely important
9) I think for their artistic purpose they add a lot to a community, but they should be multifunctional, it should have some purpose other than making it pretty with water – potable, sculptural and aesthetically pleasing even when the water is off
    a. No, I don't think it adds much to the ambiance of the park
10) Aesthetics and entertainment
11) I do
12) Well it's funny in the summer when they have the Las Vegas lights show on it, it's like coming home, I live nearby, so the bright purple lights are like a homecoming
13) Yes
14) Not really

Participant 40

1) Yes, I live right across the street
2) Three years ago

3) I think it's pretty cool, honestly, I think it's nice that we have that, it adds to the aesthetics of the area, you get a lot of joggers and bikers, so it adds a little ambiance
4) Three times a day
    a. Hang out, jog, climb trees
    b. I would say not directly, it's nice that it's there, but it's not the reason I come here
5) I think it's everybody's, you have to consciously keep in mind
6) I don't
7) No
8) I would say very important, I guess I should try a little harder
9) It's nice that we have it
10) I would say they're mostly there for entertainment
11) I would give it maybe a five, five out of ten
12) Nothing
13) I wouldn't imagine so, it's nice that it's here, especially over by the bandstand
14) Yeah, definitely like it

Works Cited

ABCWUA. 2010. *Learning to Save Water*. Albuquerque Bernallillo County Water Utility Authority. Available at http://www.abcwua.org/education/consumers.html (last accessed 4 April 2017)

Albuquerque Economic Development. N.d. *A Diverse Community*. Available at https://www.abq.org/demographics.aspx (last accessed 4 April 2017)

Allen, C. D. 2011. On Actor-Network Theory and landscape. *Area, 43*(3), 274–280.

Ashmore, S. R., J. E. Behles, R. J. Merrick, D. M. Loftin, D. I. Ashmore, J. Witherspoon. 2001. *Evaluating the Sustainability of the Albuquerque Water Supply*. Available at http://www.challenge.nm.org/archive/00-01/finalreports/013/ (last accessed 4 April 2017)

Barringer, F. 2012. *Water Piped to Denver Could Ease Stress on River*. The New York Times. Available at http://www.nytimes.com/2012/12/10/science/earth/federal-plans-for-colorado-river-include-pipeline.html (last accessed 4 April 2017)

Benediktsson, K. 2007. "Scenophobia", Geography and the Aesthetic Politics of Landscape. *Geografiska Annaler: Series B, Human Geography*, *89*(3), 203–217.

Bernard, H. R. 2000. Social Research Methods. Thousand Oaks, CA: Sage.

Box, J. B., A. Duguid, R. E. Read, R. G. Kimber, A. Knapton, J. Davis, and A. E. Bowland. 2008. Central Australian waterbodies: The importance of permanence in a Desert landscape. *Journal of Arid Environments*,*72*(8), 1395–1413.

Bray, T. 2013. Water, Ritual, and Power in the Inca Empire. *Latin American Antiquity*, *24*(2), 164–190.

Bulut, Y., and Ö. Atabeyoğlu. 2007. Fountains as urban furniture in historical urban Structure and usage culture: Erzurum city case. *Building and Environment*, *42*(6), 2432–2438.

Bunch, J. 2012. *Colorado sunshine not all it's hyped up to be.* The Denver Post: Forecast Colorado. Available at http://blogs.denverpost.com/weather/2012/01/03/colorado-sunshine-not-all-its-hyped-up-to-be/110/ (last accessed 4 April 2017)

Burmil, S., T.C. Daniel, and J. D. Hetherington. 1999. Human values and perceptions of water in arid landscapes. *Landscape and Urban Planning*,*44*(2–3), 99–109.

Caldecott, J. *Water: The Causes, Costs, and Future of a Global Crisis*. Virgin Books, 2008.

Carley, K. 1993. Coding Choices for Textual Analysis: A Comparison of Content Analysis and Map Analysis. *Sociological Methodology*, *23(1993),* 75-126.

City of Albuquerque. 2017. *City Parks*. Available at https://www.cabq.gov/parksandrecreation/parks/city-parks (last accessed 4 April 2017)

Cosgrove, D. 2006. Modernity, Community and the Landscape Idea. *Journal of Material Culture*, *11*(1-2), 49–66.

Cosgrove, D., and P. Jackson. 1987. New Directions in Cultural Geography. *Area, 19*(2), 95–101.

Creswell, J. 1998. Qualitative Inquiry and Research Design: Choosing Among Five Traditions.Thousand Oaks, CA: Sage.

Cresswell, T. 2010. New cultural geography - an unfinished project? *Cultural Geographies*, *17*(2), 169–174.

DeJesus, N. 2007. Fountains as a Synthesis of Sculpture, Water, and Land. *Sculpture Review*, *56*(2), 16–23.

Denver: The Mile High City. N.d. *Weather*. Denver resources. Available at http://www.denver.org/about-denver/denver-resources/weather/ (last accessed 4 April 2017)

--- 2017a. *Ad campaign steps aside for new approach.* Available at http://www.denverwater.org/Conservation/UseOnlyWhatYouNeed/ (last accessed 4 April 2017)

Denver Water. 2017b. *Denver's Water Conservation Plan*. Available at http://www.denverwater.org/Conservation/ConservationPlan/ (last accessed 4 April 2017)

--- 2017c. *Water Supply.* Available at http://www.denverwater.org/SupplyPlanning/WaterSupply/ (last accessed 4 April 2017)

Dolk, S. 2009. *The Duke of Albuquerque and Alburquerque.* Albuquerque Innsights. Available at http://www.adobenido.com/blog/2010/albuquerque/the-duke-of-albuquerque-and-alburquerque/ (last accessed 4 April 2017)

Dowling, R. 2009. Geographies of identity: landscapes of class. *Progress in Human Geography*, *33*(6), 833–839.

Ekers, M., and A. Loftus. 2008. “The Power of Water: Developing Dialogues between Foucault and Gramsci.” *Environment and Planning D: Society and Space* 26(4): 698-718.

Entrikin, J. N. 1976. “Contemporary Humanism in Geography.” *Annals of the Association of American Geographers* 66(4): 615–32.

--- 1985. Humanism, Naturalism, and Geographical Thought. *Geographical Analysis*, *17*(3), 243–247.

--- 1997. Place and region 3. *Progress in Human Geography*, *21*(2), 263–268.

Fagan, B. M., *Elixir: A History of Water and Humankind*. Bloomsbury Press, 2012.

Faggi, A., J. Breuste, N. Madanes, C. Gropper, and P. Perelman. 2013. Water as an Appreciated feature in the landscape: a comparison of residents’ and visitors’ preferences in Buenos Aires. *Journal of Cleaner Production*, *60*, 182–187.

Fishman, C. *The Big Thirst: The Secret Life and Turbulent Future of Water*. Free Press, 2012.

Gage, E., and D. J. Cooper. 2015. The Influence of Land Cover, Vertical Structure, and Socioeconomic Factors on Outdoor Water Use in a Western US City. *Water Resources Management*, *29*(10), 3877–3890.

Garrido, S. 2014. Water Management, Spanish Irrigation Communities and Colonial Engineers. *Journal of Agrarian Change*, *14*(3), 400–418.

Gibbs, L. M. 2014. Freshwater geographies? Place, matter, practice, hope. *New*

Zealand Geographer, *70*(1), 56–60.

--- 2009. Water Places: Cultural, Social and More-Than-Human Geographies Of Nature. *Scottish Geographical Journal*, *125*(3-4), 361–369.

Gläser, J., and G. Laudel. 2013. Life With and Without Coding: Two Methods for Early-Stage Data Analysis in Qualitative Research Aiming at Causal Explanations. *Forum: Qualitative Social Research, 14(2)*, Art. 5.

Gómez, F., A. P. Cueva, M. Valcuende, and A. Matzarakis. 2013. Research on Ecological design to enhance comfort in open spaces of a city (Valencia, Spain). Utility of the physiological equivalent temperature (PET). *Ecological Engineering*, *57*, 27–39.

Halper, E. B., S. Dall'erba, R. H. Bark, C. A. Scott, and S. R. Yool. (2015). Effects of Irrigated parks on outdoor residential water use in a semi-arid city. *Landscape and Urban Planning*, *134*, 210–220.

Harlan, S. L., S.T. Yabiku, L. Larsen, and A. J. Brazel. 2009. Household Water Consumption in an Arid City: Affluence, Affordance, and Attitudes. *Society and Natural Resources*, *22*(8), 691–709.

Hayden, L., M. L. Cadenasso, D. Haver, and L. R. Oki. 2015. Residential landscape Aesthetics And water conservation best management practices: Homeowner perceptions and preferences. *Landscape and Urban Planning*, *144*, 1–9.

Head, L., and P. Muir. 2007. Changing cultures of water in eastern Australian backyard gardens. *Social and Cultural Geography*, *8*(6), 889–905.

Henderson, K. 2010. Review Essay: Water and Culture in Australia: Some Alternative

Perspectives. *Thesis Eleven*, *102*(1), 97–111.

Ioris, A. A. R. 2013. The Value of Water Values: Departing from Geography Towards An Interdisciplinary Synthesis. *Geografiska Annaler Series B: Human Geography*, *95*(4), 323–337.

Johnson, L., and H. Castleden. 2011. Greening the campus without grass: using visual methods to understand and integrate student perspectives in campus landscape development and water sustainability planning.*Area*, *43*(3), 353–361.

Juuti, P. S., Antoniou, G. P., Dragoni, W., El-Gohary, F., De Feo, G., Katko, T. S., Angelakis, A.N. 2015. Short Global History of Fountains. *Water (20734441)*, *7*(5), 2314–2348.

Kaltenborn, B. P., and Bjerke, T. 2002. Associations between environmental value orientations and landscape preferences. *Landscape and Urban Planning*, *59*(1), 1–11.

Kerecman, L. 2017a. *Electric Fountain FAQs.* Friends of the Electric Fountain. Available at http://www.denverelectricfountain.org/fountain_faqs.php (last accessed 4 April 2017)

--- 2017b. *History of the Electric Fountain*. Friends of the Electric Fountain. Available at http://www.denverelectricfountain.org/historic_timeline.php (last accessed 4 April 2017)

Larson, E. K., and Perrings, C. 2013. The value of water-related amenities in an arid city: The case of the Phoenix metropolitan area. *Landscape and Urban Planning*, *109*(1), 45–55.

Lave, R., Wilson, M. W., Barron, E. S., Biermann, C., Carey, M. A., Duval., C. S., Johnson, L., Lane, M. D., McClintock, N., Munroe, D., Pain, R., Proctor, J., Rhoads, B. L., Robertson, M. M., Rossi, J., Sayre, N. F., Simon, G., Tadaki, M., Van Dyke, C. 2013. Intervention: Critical Geography. *The Canadian Geographer/Le Géographe canadien,* xx(xx), 1-10.

Lewis, P. K. 1979. In *The Interpretation of Ordinary Landscapes: Geographical Essays*. New York: Oxford University Press.

NeighborhoodScout. 2017a. *Albuquerque*. Location Inc. Available at https://www.neighborhoodscout.com/nm/albuquerque (last accessed 4 April 2017)

--- 2017b. *Denver*. Location Inc. Available at https://www.neighborhoodscout.com/co/denver/crime (last accessed 4 April 2017)

Lothian, A. 1999. Landscape and the philosophy of aesthetics: is landscape quality inherent in the landscape or in the eye of the beholder? *Landscape and Urban Planning*, *44*(4), 177-198.

MacKillop, F., and Boudreau, J.-A. 2008. Water and power networks and urban fragmentation in Los Angeles: Rethinking assumed mechanisms. *Geoforum*, *39*(6), 1833–1842.

Metro Denver. 2017. *Population*. Available at http://www.metrodenver.org/do-business/demographics/population/ (last accessed 4 April 2017).

Mitchell, D. 2005. Landscape. In Cultural Geography: A Critical Dictionary of Key Ideas. Sibley, D., Atkinson, D., and Jackson, P. (Eds.). Cultural Geography.

London, US: I.B. Tauris.

Morse, J. M. 1994. Designing Funded Qualitative Research. In Denzin, N. K. and Lincoln, Y. S. (Eds.) *Handbook of Qualitative Research* (2nd ed. Pp. 220-35). Thousand Oaks, CA: Sage.

Muir, R. 1998. Landscape: a wasted legacy. *Area*, *30*(3), 263–271.

Nash, D. J., and Endfield, G. H. 2002. Historical flows in the dry valleys of the Kalahari identified from missionary correspondence. *South African Journal of Science*, *98*(5/6), 244.

Nichols, W. J., *Blue Mind*. Bay Back Books, 2015.

Niell, P. B. 2013. Rhetorics of Place and Empire in the Fountain Sculpture of 1830s Havana. *The Art Bulletin*, *95*(3), 440–464.

Ode, Å., Tveit, M. S., and Fry, G. 2008. Capturing Landscape Visual Character Using Indicators: Touching Base with Landscape Aesthetic Theory. *Landscape Research*, *33*(1), 89–117.

Oppenheimer, A. J. *The historical background of Albuquerque, New Mexico*. Planning Department of the City of Albuquerque, 1969.

Outwater, A. *Water: A Natural History*, Basic Books, 1997.

Page, B. 2005. Paying for water and the geography of commodities. *Transactions of the Institute of British Geographers*, *30*(3), 293–306.

Panelli, R. 2010. More-than-human social geographies: posthuman and other

possibilities. *Progress in Human Geography*, *34*(1), 79–87.

Pearce, F. *When the Rivers Run Dry: Water—The Defining Crisis of the Twenty-first Century*, Beacon Press, 2007.

Purdue, L. E., and Berger, J.-F. 2015. An integrated socio-environmental approach to the study of ancient water systems: the case of prehistoric Hohokam irrigation systems in semi-arid central Arizona, USA. *Journal of Archaeological Science*, *53*, 586–603.

Quigley, W. 2015. *Rising to challenge of New Mexico's falling water supply*. Albuquerque Journal. Available at https://www.abqjournal.com/558815/rising-to-challenge-of-new-mexicos-falling-water-supply.html (last accessed 4 April 2017)

Real Estate Webmasters. 2017. *Explore Denver Neighborhoods*. Colorado's Finest Real Estate. Available at http://www.indenverrealestate.com/communities.php (last accessed 4 April 2017)

Roberts, A. 2008. Privatizing Social Reproduction: The Primitive Accumulation of Water in an Era of Neoliberalism. *Antipode*, *40*(4), 535–560.

Rose, M. 2006. Gathering "Dreams of Presence": A Project for the Cultural Landscape. *Environment and Planning D: Society and Space*,*24*(4), 537-554.

Ruddell, D. M., and Dixon, P. G. 2013. The energy–water nexus: are there tradeoffs Between residential energy and water consumption in arid cities? *International Journal of Biometeorology*, *58*(7), 1421–1431.

Scott. 2005. *Denver City Parks Map.* Mappery. Available at

http://www.mappery.com/Denver-City-Parks-map (last accessed 4 April 2017)

Sedlak, David, *Water 4.0: The Past. Present, and Future of the World's Most Vital Resource*. Yale University Press, 2015.

Sementelli, A. J. 2008. Naming Water Understanding How Nomenclature Influences Rights and Policy Choices. *Public Works Management and Policy*, *13*(1), 4–11.

Shaw, W. 1997. The spatial concentration of affluence in the United States. *Geographical Review*, *87*(4), 546–553. Retrieved from

Slipstream. 2017. *Postal Cities*. Available at https://slipstream.homejunction.com/docs/ws/areas/postal-cities (last accessed 4 April 2017)

Sofoulis, Z. 2005. Big Water, Everyday Water: A Sociotechnical Perspective. *Continuum*, *19*(4), 445–463.

Solomon, S. *Water: The Epic Struggle for Wealth, Power, and Civilization*. Harper Perennial, 2011.

Strang, V. 2005. Common Senses Water, Sensory Experience and the Generation of Meaning. *Journal of Material Culture*, *10*(1), 92–120.

Swyngedouw, E. 1997. Power, Nature, and the City. The Conquest of Water and the Political Ecology of Urbanization in Guayaquil, Ecuador: 1880–1990. *Environment and Planning A*, *29*(2), 311–332.

Tadaki, M., Salmond, J., Le Heron, R., and Brierley, G. 2012. Nature, culture, and the work of physical geography. *Transactions of the Institute of British*

Geographers, *37*(4), 547–562.

Trout, L. 2015. *Duck Pond*. Albuquerque Modernism. Available at http://albuquerquemodernism.unm.edu/wp/duck-pond-unm/ (last accessed 4 April 2017)

Tuan, Y.-F. 1976. Humanistic Geography. *Annals of the Association of American Geographers*, *66*(2), 266–276.

Tveit, M. S., Ode, Å., and Fry, G. 2006. Key concepts in a framework for analysing visual landscape character. *Landscape Research*, *31*(3), 229–255.

US Climate Data. 2017. *Climate Albuquerque (West) – New Mexico*. Available at http://www.usclimatedata.com/climate.php?location=USNM0005 (last accessed 4 April 2017)

Weber, K. editor, *Last Call at the Oasis: The Global Water Crisis and Where We Go from Here*. PublicAffairs, 2012.

Webber, M. E., editor, *Thirst for Power: Energy, Water, and Human Survival*. Yale University Press, 2016.

White, M., Smith, A., Humphryes, K., Pahl, S., Snelling, D., and Depledge, M. 2010. Blue space: The importance of water for preference, affect, and restorativeness ratings of natural and built scenes. *Journal of Environmental Psychology*, *30*(4), 482–493.

Worster, D. *Rivers of Empire: Water, Aridity, and the Growth of the American West.* Oxford University Press, 1992.

Yu, Y., Parsons, A. J., Wainwright, J., Prell, C., and Hubacek, K. 2013. Perceptions of Desert landscape: a case study in southern New Mexico. *Area*, *45*(4), 459–468.

Zekri, S., Mbaga, M., Fouzai, A., and Al-Shaqsi, S. 2011. Recreational Value of an Oasis in Oman. *Environmental Management*, *48*(1), 81–88.

Zube, E. H. 1984. Themes in Landscape Assessment Theory. *Landscape Journal*, *3*(2),