Exploring the Social Benefits that Whitewater Paddlers Derive from an Urban

Whitewater Park

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This thesis titled

Exploring the Social Benefits that Whitewater Paddlers Derive from an Urban

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Abstract

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The purpose of this study was to investigate the social benefits whitewater paddlers are provided through the use of urban whitewater parks. Urban whitewater parks represent a niche trend within waterfront redevelopment, that allows people access to recreational opportunities that were either previously perceived as uninviting or physically not there. Cities across America are investing great sums of time and money in urban whitewater parks, with the expectation that urban whitewater parks will create social-cultural benefits for the city. This researcher determined this to be unverified based on an overall lack of study surrounding urban whitewater park social benefits. To fill this void found in the literature, this study explored the attainment of social benefits for whitewater paddlers using whitewater parks. Social benefits were viewed through the lens of social capital theory, and uncovered using means-end methodology in structured interviews. Salida Whitewater Park in Salida, Colorado was used as the study site, and interviews were conducted with whitewater paddlers (n=25) at this location. Results were structured and presented using a hierarchical value map with accompanying narrative descriptions from research participants. Full detail of this study's results are contained in Chapter 4, with associated discussion, limitations, and future research recommendations in Chapter 5.

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Chapter 1: Introduction

Background of the Study

The construction of artificial adventure recreation facilities in cities and urban communities is a trend that is transforming how outdoor enthusiasts recreate (Moorman, Schlatter, & Hurd, 2007; Podolak, 2012). Urban communities are re-engineering their physical environments, land and water, to increase opportunities for participation in outdoor recreational activities (Shafer, Scott, Baker, and Winemller, 2013). Whitewater, as a form of adventure recreation, fits into this urban trend (Mooreman et al., 2007; Podolak, 2012). By augmenting sections of river, engineers can create rapids as a venue for whitewater recreation. These engineered sections of whitewater can be referred to as play parks, river parks, boater parks, artificial whitewater, kayak courses, engineered river parks, or boating chutes. They are most commonly called whitewater parks (American Whitewater, 2007; Barnes, Forrester, & Leone, 2013; Crow, 2010; Podolak, 2012). The nature of urban whitewater parks allows people access to recreational opportunities that were either previously perceived as uninviting or physically not there. Urban whitewater parks attract rafters, stand-up-paddle boarders, kayakers, canoeists, body-boarders, surfers, swimmers, waders, fisherpeople, spectators, wildlife watchers, photographers, tourists, yogis, picnickers, and other recreation enthusiasts. Rivers are the life-blood of many cities and people in cities are naturally attracted to water, especially if it is easily accessible (Barnes et al., 2013; Podolak, 2012; Polat & Akay, 2015; Shafer et al., 2013; Whyte, 1980).

Whitewater parks can be constructed in wilderness, rural, or urban settings; there is, however, there is a greater need for resources such as these in urban settings. Seto, Sanchez-Rodriguez, and Fragkias (2010) define urban areas as, "a geographical area containing high population and large-scale infrastructure density; encompasses concepts of town, city, metropolitan area" (p. 168). In 2008, the number of people living in urban areas surpassed the number of people living in rural areas globally. According to the National Park Service, as stated in their 2016 urban agenda, eighty percent of the population in the United States is living in urban areas (National Park Service, 2016). Yet, with few exceptions in North American, urban areas are growing not in density but in physical size, expanding outward. While the size of the cities grows, the extent of our meaningful face-to-face interaction decreases (Graham & Glover, 2014; Quinn, 1955). Seto et al. (2010) state, "These patterns of sprawled development have been associated with increasing social segregation and reduced community participation, less social involvement, and a disruption of community" (p. 178). Furthermore, people living in urban areas need ways to reconnect with nature and each other to recover from mental and physical fatigue (Spartz & Shaw, 2011). Some cities, in regions like the mid-west, are far away from oceans, cascading rivers, and mountains, creating a long commute for those who wish to access outdoor recreational opportunities (Mooreman et al., 2007). It has been suggested that the redevelopment of urban space, such as in the case of urban whitewater parks, the needs of today's cities and the people who live there can be met by providing access to recreation and opportunities for developing and strengthening social networks (Baur & Tynon, 2010).

Urban waterfront redevelopment projects that choose to incorporate whitewater design, creating features such as waves and hydraulics attract whitewater paddlers, and an array of passive and active users, both on and in the water, as well as along the shore (Barnes et al., 2013; Podolak, 2012; Polat & Akay, 2015; Shafer et al., 2013; Whyte, 1980). While studying whitewater park attendees' distribution patterns on shore and in the water, Podolak (2012) found that, "the whitewater waves attract paddlers...who in turn appear to attract riverbank spectators" (p. 134). As illustrated by Podolak (2012), attracting and maintaining the attendance of whitewater paddlers is a key consideration in the design of urban whitewater parks due to their ability to attract onshore park users. Urban park managers have suggested that for each whitewater paddler in the water, four or more people will be seen spectating on the shore (E. Dahlstrom, Personal Communication, 09/25/2015; M. Healy, Personal Communication, 09/25/2015; R. Wicks, Personal Communication, 09/25/2015). While the experience for those on the shore may differ from those on the water, attracting them as spectators is a step that can lead them to engage in a variety of other park activities (Podolak, 2012). Therefore, while urban waterfront restoration projects can be completed without the incorporation of whitewater parks, the multiuser attraction potential created by providing whitewater features for paddlers to play on is an important consideration in modern urban park design and waterfront redevelopment projects (Podolak, 2012; Watkins and Bowers, 2014).

In 2007, American Whitewater, a paddling conservation group and premier authority for whitewater advocacy, released a statement regarding the now popular construction of whitewater parks. American Whitewater (2007) stated, "We feel that any modification to an impaired river channel should be made with the utmost caution, care, and commitment" (p. 1). This statement went on to hail designs that are paired with larger environmental efforts such as urban regeneration, river restoration, environmental restoration projects, multifunctional riverscapes, and waterfront redevelopment (Barnes et al., 2013). Such projects provide recreational opportunities while also achieving environmental tasks like river bank restoration, dam removal or partial removal, minimum water allocations from upstream dams, creation of fish habitat, increased soil permeability, a healthier riparian zone, and a more natural aesthetic quality (American Whitewater, 2007; Crow, 2010; Podolak, 2012).

When "selling" the idea of a whitewater park, many communities and contractors will advocate the potential economic benefit of a whitewater park. Urban whitewater parks have the ability to attract a large number of users in the form of local residents, visitors, and tourists. Spending from these whitewater park users can create a million to a multi-million dollar local economic impact each year for a given city (Watkins and Bowers, 2014). In addition to the steady flow of cash associated with whitewater parks, larger events and competitions hosted at the park give the possibility of larger economic stimuli (Podolak, 2012; Watkins and Bowers, 2014).

Simply building an urban whitewater park does not guarantee the attraction of individuals and the community (Baur & Tynon, 2010). A key factor in urban park user participation is that the site is perceived as accessible. An accessible park is likely to have a higher level of use and social bonding among park visitors (Seaman, Jones, &

Ellaway, 2010; Tsaur et al., 2014). Accessibility, as perceived by urban whitewater park users, can be increased through inclusion in the planning process, physical modifications such as concrete ramps leading into the water, connecting the park to an existing park system, and understanding how people will use the provided recreation space (Chan and Lee, 2008; Getzner, 2015; Nkansa & Chapman, 2006). Although planning often starts with whitewater paddlers as the focal point, the final plan for construction should represent the needs of a variety of community stakeholders (American Whitewater, 2007; Baur & Tynon, 2010; Jurkovic, 2014; Podolak, 2012). In the end, urban whitewater parks represent a contrasting experience for the user when compared to the traditional wilderness river setting (Schuett, 1995; Sanford, 2007).

Beyond the urban setting and their recreational nature, urban whitewater parks differ greatly in character and context based on a wide variety of variables in their planning, construction, and management. As of 2012, there were fifty-two whitewater parks in the United States ranging in cost from tens of thousands to tens of millions of dollars (Watkins and Bowers, 2014). Some of the variables affecting urban whitewater parks include physical location, region, annual water flow, water quality, climate, ecology, geography, local community cohesion, construction design type, distance from people, funding, reasons and motivations for construction, stakeholders, politics, existing park and recreation systems, and public image (American Whitewater, 2007; Podolak, 2012). With a variety of variables affecting each project, urban whitewater parks are inevitably diverse and inconsistent with the benefits they create. This is a problem, as the success of an urban whitewater park hinges on a specific set of defined benefits. In order to fully understand the aim of this research one must understand the potential benefits created by a successful urban whitewater park. One way to understand the success of urban whitewater parks is through the triple-bottom-line (Kang & Lansey, 2012; Rogers & Ryan, 2001; Wise, 2016). The triple-bottom-line is an ethics based accounting tool that incorporates a balance of economic, environmental and social-cultural benefits. An urban whitewater park will be considered successful when a maximum number of economic, environmental and social-cultural benefits are considered and accounted for in the park design (Atkinson, 2008; Kang & Lansey, 2012; Rogers & Ryan, 2001; Scerri & James, 2010; Wise, 2016). The more benefits an urban whitewater project can account for in the park design, the more likely it is to receive funding and be constructed (American Whitewater, 2007; Getzner, 2015; Podolak, 2012)

In an urban setting, economic benefits are often most apparent, as they are traditionally the most valued and are less sensitive to project type. Economic benefit is traditionally measured in dollar amounts and accounts for finances directly and indirectly linked to the project at hand. To maximize economic benefits, urban whitewater parks should be in close proximity to downtown businesses. They should be accessible to locals, visitors, and tourists. They should host competitions and events. They should also be near outdoor retailers and outfitters. Social-cultural and environmental benefits, historically less valued in cities, appear only after intentional planning and are more sensitive to project type (Barnes et al., 2013; Scerri & James, 2010). Environmental benefit often refers to non-human or ecological well-being and is traditionally measured by quantitative means. To maximize environmental benefits, urban whitewater parks should be multi-functional spaces constructed in an existing channel and support efforts to return the river to a more natural state. Social-cultural benefits are largely subjective in nature and in some cases unobservable (Atkinson, 2008; Scerri & James, 2010; Tsaur et al., 2014). To maximize social-cultural benefits, an urban whitewater park should be easily accessible, involve the community in planning and management, and be designed with the community's needs in mind.

Inclusion of economic, environmental, and social-cultural benefits is ideal scenario for a successful urban whitewater park. Yet, in reality, a "win-win-win" with respect to these three different types of benefits is difficult to achieve. Often, one benefit must be compromised for the sake of another (Podolak, 2012). Furthermore, the intended function and presumed benefits of an urban whitewater park may differ from the actual function and actual benefits. These unfortunate realities raise questions which presently do not have answers.

Significance of Study

Cities across America are investing great sums of time and money in the construction, maintenance, and management of urban whitewater parks. The expectation is that urban whitewater parks will create economic, environmental, and social-cultural benefits for the communities in which they are built. As it stands, not all of these benefits are verified. There is currently a lack of research on urban whitewater parks, the benefits their users derive, and the benefits their physical presence produces. Due to this lack of research, there is a gap in knowledge. This study is intended to contribute to the literature by examining the social benefits that whitewater paddlers derive from urban whitewater

parks. Social benefits are traditionally difficult to quantify and in some cases especially challenging to obtain (Urban environmental indicators, 1978). When considering the loss of community in American cities, we need to know if urban whitewater parks' current design and management creates a space for positive community social interactions (Graham & Glover, 2014).

In her research on multi-functional riverscapes, which included the study of six urban whitewater parks, Podolak (2012) expressed, "Many of the project objectives were socially focused; however, assessing social change was challenging because there was a lack of available data" (p. 82). When asked, spokespersons for three urban whitewater parks in three geographical areas across the United States stated that visual inventory and head counts were the only existing measures of user social experience used at their sites (E. Dalhstrom, personal communication, September 25, 2015; M. Healy, personal communication, September 25, 2015; R. Wicks, personal communication, September 25, 2015). Little can be learned about the actual social benefits whitewater paddlers obtain by attending an urban whitewater park using existing social measures such as head counts, attendance rate, level of attractivity, site observations, or use of space (Bernhardt et al., 2007; Podolak, 2012; Urban environmental indicators, 1978). It is impossible to know how people perceive and experience urban whitewater parks unless they are asked, visual studies are not enough (Jurkovic, 2014).

A review of available and pertinent literature uncovered only one study that sought to investigate the social world of urban whitewater parks. An exploratory study conducted by Whiting, Pawelko, Green, & Larson (2011) uncovered several socially themed paddler benefits, including mentorship, motivation, and comradery. While Whiting et al. (2011) helped lay a foundation for future research, the study's loose theoretical framework surrounding the concept of social benefits, narrow sample, and lack of structured data analysis, call this author to strengthen and expand upon multiple aspects of this previous study. More research is needed in order to define the social contribution urban whitewater parks make in cities (Baur & Tynon, 2010; Podolak, 2012; Urban environmental indicators, 1978; Whiting et al., 2011). Without understanding the social benefits whitewater paddlers derive from using urban whitewater park we cannot accurately consider and account for all aspects of the triple-bottom-line. Consequently, one cannot properly account for the success of an urban whitewater park.

Baur and Tynon (2010) suggest that in order to more fully account for the positive social impact urban whitewater parks have on users, researchers should include social capital theory in their work (p. 197). Based in sociology, but studied and applied a variety of ways within the field of sociology, there are multiple approaches to understanding social capital theory. Lin (1999) captures the essence of social capital theory, defining it as, "investment in social relations by individuals through which they gain access to embedded resources to enhance expected returns of instrumental or expressive actions" (p. 39). Going beyond the basic formation and maintenance of relationships, social capital theory is premised on the notion that intentional investment in relationships, such as the social bond urban whitewater park users form with each other, will result in social capital. Social capital is the consequence; investment in relationships is the cause. Social capital can take the form of obligation, trust, peer pressure, job

referrals, sense of community, norms of reciprocity, fulfillment, social sanctions, belonging, information sharing, and mentorship (Glover & Hemingway, 2005; Graham & Glover, 2014). Social capital theory has been applied in a number of recreation and leisure studies. Settings for these studies have included dog parks (Graham & Glover, 2014), all-terrain-vehicle clubs (Mann & Leahy, 2010), public gardens (McIlvaine-Newsad & Porter, 2013), and skateboard parks (Weller, 2006). Applying social capital theory to a study on urban whitewater park users' social benefits would add depth and greatly benefit the researcher (Baur & Tynon, 2010; DeGraaf & Jordan, 2003; Graham & Glover, 2014; Mann & Leahy, 2010).

Purpose of Study

The purpose of this study is to examine the social benefits whitewater paddlers achieve through urban whitewater park use. Social benefits will be understood through the use of social capital theory. Increased understanding of urban whitewater park paddlers' social benefits presents a potential means through which current and future whitewater parks can better plan, manage, and program their success.

Chapter 2: Review of the Literature

Introduction

The purpose of Chapter 2 is to provide a discussion of key concepts related to social benefits whitewater paddlers derive from using urban whitewater parks. This chapter addresses the following points: urban waterfront redevelopment, whitewater park design, social capital theory, and means-end theory.

Urban Waterfront Redevelopment

The term waterfront indicates any property adjacent to water, such as canals, streams, ponds, creeks, rivers, lakes, and oceans. Properties such as ports, dams, bridges, locks, and harbors, are also considered aspects of waterfront (Ali & Nawawi, 2009; Berhardt & Palmer, 2007; Gordon, 1996; 1997). People's desire for and reliance on water has created contradiction and conflict in urban waterfront management, as well as adjacent lands, throughout history (Gordon, 1996; 1997). This is especially evident in urban areas with evolving and fluctuating economic, ecological, and social-cultural functions and values relative to the time period. These changes have allowed for and contributed to the development and redevelopment of urban waterfronts. Urban waterfront redevelopment is one of the more prominent forms of urban renewal, which is the more broadly encompassing concept. While urban renewal is the process of reengineering and repurposing urban spaces in order to increase modern function and/or value, urban waterfront redevelopment focuses on yielding the same outcomes in and around waterways (Ali & Nawawi, 2009; Berhardt & Palmer, 2007; Gordon, 1997; Loures, 2015).

In modern developed countries, urban spaces have historically been valued for economic function over ecological or social cultural importance. This was evident during the industrial revolution as urban waterfronts served as centers for commerce with industrial facilities abutted against or near the water (Banyas, 2004; Podolak, 2012). As a result of the commercial and industrial developments in this era, urban waterfronts were most commonly, and correctly, associated with such negative attributes as noise, health risks, pollution, and visual displeasure (Del Saz-Salazar & Garcia-Menendez, 2003). Gradually, many of these areas become derelict, obsolete, or unused, due to more stringent environmental regulations, public outcry, technological changes, or plateaus in economic growth (Banyas, 2004; Lehrer & Laidley, 2008).

Although many modern developed countries were left with abandoned or underused urban waterfronts following the industrial revolution, these spaces still held inherent value that would be rediscovered and redeveloped at increasing rates and scales in the decades to come. With a finite amount of space in urban areas, pressure was put on city planners to redevelop existing waterfront space and infrastructure (Ali & Nawawi, 2009). By the end of World War II large scale urban renewal projects were taking place in developed countries across the globe. By the late 1960s and early 1970s many urban renewal projects were primarily focused on urban waterfront redevelopment (Gordon, 1997). Baltimore's Inner Harbor is a well-known early urban waterfront redevelopment initiative which began in the late 1960's and spanned into the mid-1980's. Levine (1987) states that this project included turning, "Baltimore's decaying downtown waterfront into 240 acres of shoreline promenades, marinas, offices, retailing establishments, residences,

and entertainment facilities" (p. 106). From an economic perspective projects like that in Baltimore indicate a shift from industry to tourist attraction. Gordon (1997) cites large urban waterfront development projects ranging from 5500-acres to 92-acres occurring during the 1970s. Early urban waterfront redevelopment projects were designed with image in mind, but lacked accountable action plans that incorporated ecological as well as economic and social-cultural functions. However, as more sites were completed, planners were able to learn from previous projects and incorporate more intentional ecological action plans, while still expanding the social-cultural scope of projects. An exemplary indicator of the current direction urban waterfront redevelopment is taking is Waterfront Toronto. The urban waterfront redevelopment task force was created in 2001 and is actively redeveloping 2000 acres of lake and river waterfront. According to Landers (2007), "project goals set by Waterfront Toronto include the creation of a riverfront park system, wildlife habitat, adequate flood protection, residential and commercial development, a more cohesive transportation network, and bridges to link the site to surrounding areas." The redevelopment and dedication of urban waterfront spaces to serve ecological, socio-cultural, and economic functions, rather than purely industrial represents a societal shift in how urban space was valued (Bernhardt and Palmer, 2007; Da and Xu, 2016).

From an ecological standpoint, urban waterfront redevelopment projects are concerned with ensuring healthy riparian zones, which has benefits for agriculture, animal habitat, and water transportation. Some projects have ordered daylighting of streams, dam removals, or removal of concrete. Daylighting takes water previously

diverted into underground culverts and returns them to their previous above-ground state. Concrete removal achieves more permeable river beds and shore lines that can more apply handle variation in water level (Berhardt & Palmer, 2007; Da & Xu, 20016; Gordon, 1996; Podolak, 2012; Schanze, Olfert, Toubier, Gersdorf, & Schwager, 2004). From a social-cultural point of view, urban waterfront redevelopment offers people living in urban spaces an opportunity for attention restoration and release of energy (Baur & Tynon, 2010; Felsten, 2009). Projects that incorporate pathways, water access, and greenspace are especially effective in this regard. From an economic perspective, urban waterfront redevelopment is an avenue for tourism and increased visitation to places that were previously only financially viable through industrial use. Holistically, Gordon (1996) states that the most functional and valued urban waterfront development projects do four things well: 1) think small by planning in increments, 2) learn from existing projects, 3) integrate what already exists, and 4) design streets, not buildings in order to promote surrounding activity. According to Jurkovic (2014), the use of urban space has the greatest impact on quality of life within cities. Life in this context holds economic, ecological, and social cultural meaning. Considering the variety of functions and values at play surrounding the use of urban waterways, and the subsequent impact on quality of life, urban renewal, and more specifically urban waterfront restoration, can be seen as a solution.

Whitewater Park Design

Whitewater parks represent a small but valuable niche under the umbrella of urban waterfront redevelopment, which falls under the larger umbrella of urban renewal. In order for a whitewater park to be considered part of urban waterfront redevelopment, intentional planning must take place. When whitewater parks are considered in the larger urban waterfront restoration context, there has been historically a primary focus being on recreation, with ecological function as an afterthought in many designs (Podolak, 2012). However, a growing number of modern whitewater parks that have adopted designs that directly foster both ecological and social-cultural benefits (American Whitewater, 2007; Schanze, Olfert, Toubier, Gersdorf, & Schwager, 2004; Podolak, 2012; Whiting, Pawelko, Green, & Larson, 2011).

Whitewater park design has varied widely since the earliest parks were developed, yet all have maintained the common thread of being a venue for whitewater recreation. It should be noted that whitewater paddling as a form of recreation is a relatively new pastime, with whitewater parks newer still. This is evidenced by the fact that the vast majority of all whitewater parks ever built are still in use today. While maintenance and upkeep are required, the lifespan of some parks has already exceeded 40 years (Podolak, 2012). Whitewater parks can be divided into two basic categories: in-channel and off-channel designs (American Whitewater, 2007; Poff, Larson, Spencer, & Shimoda, 2006). In-channel refers to whitewater parks that exist due to engineering that took place in an existing river bed. Off-channel refers to engineering that took place outside of an existing river bed (American Whitewater, 2007; Podolak 2012; Poff et al., 2006). Understanding the design variation that exists between in-channel and off-channel whitewater parks, as well as examples of completed projects, and the benefits associated

with each design, will allow for better understanding of how whitewater parks fit into the broader urban waterfront redevelopment movement.

Early in-channel whitewater park designs were borne out of whitewater canoe and kayak competition. In order to increase the difficulty of competition, paddlers would make out-of-water and in-water modifications to the existing river channel. Out-of-water modifications included gates, which were intended to mimic slalom ski gates used in downhill ski competitions. These whitewater gates were poles suspended from wires which ran across the river. In competitions, paddlers navigated between or around the gates without touching them as they progressed downstream. In-water modifications began with the repositioning or introduction of boulders and rocks into a river channel. Without having to introduce a greater volume of water to the channel, boulders can be used to constrict the water, increasing the speed of the current, while creating downstream ripples and waves (Podolak, 2012). More recently, some in-channel whitewater parks have taken advantage of existing manmade river features such as dams or flood walls when designing and engineering the parks. The partial or full removal of these structures can be used to create rapids while also returning the river to a more natural state (Evans, 2015; Landers, 2012; Podolak, 2012). Columbus Whitewater Park constructed in Columbus, Georgia in 2012 is an example of an in-channel whitewater park currently in use. The Columbus Whitewater Park's design involved the partial removal of two dams, modifications to the river bed, and riparian zone restoration efforts. In addition to creating recreation opportunities this project helped revitalize the riverfront and downtown area (Landers, 2012). The actual flow of water for in-channel whitewater

parks primarily comes from natural run-off, but recent technological advances and directives for additional water releases from reservoirs and dams has made many inchannel whitewater parks more dependably runnable. Especially in arid western regions of the United States, resource managers and park engineers have come up with ways to ensure that appropriate water flows for recreational use are maintained during the summer, and in some cases year round. Technological advances in design have allowed for whitewater parks to accommodate a wider range of water flow while still being recreationally accessible. In Colorado, towns with an in-channel whitewater park can apply for recreational in-channel diversion water rights, a legal action which, if granted by the Colorado Water Conservation Board, legally guarantees water flow of a particular size and magnitude for arranged dates (Crow, 2010).

The birth of off-channel whitewater parks resulted from efforts to enhance whitewater paddling competitions by having reliable, ideal, and predictable conditions (Podolak, 2012; Poff et al, 2006). A stark contrast from the natural and wild rivers where whitewater paddling originated, off-channel whitewater parks are partially or fully disconnected from naturally occurring rivers (Schuett, 1994; Podolak, 2012). This means that while the channel through which the water runs is human made and often lined with concrete, many of the same engineering techniques used in in-channel whitewater parks to create rapids are applied as well. In off-channel whitewater parks there is not a natural source of water, therefore flow is achieved by diverting water from rivers or lakes, or by pumping water to the site. With these characteristics of off-channel whitewater parks in mind, we can further divide the off-channel category into diversion and recirculating (Podolak, 2012; Poff et al, 2006). Constructed in 1991 and still in use, the Dickerson Whitewater Course outside of Washington D.C. is an example of an off-channel whitewater park with a diversion water source. The Dickerson whitewater course was constructed for competitive purposes and utilizes the outflow from a nearby power plant's cooling stacks with water originally diverted away from the Potomac River, which, after flowing through the whitewater park, returns to the river from which it came. An interesting side effect of this particular site is that due to the water's use in the power plant the outflow water stays above freezing year round allowing to paddlers to utilize the course in the winter when ice appears on the nearby Potomac River. An example of a recirculating off-channel whitewater park is the US National Whitewater Center in Charlotte, North Carolina, constructed in 2006 and still in use. In this case the whitewater park is a closed loop that is completely disconnected from nearby Catawba River which runs adjacent to the park. The park's bottom pool is filled with water, just like a swimming pool, from which pumps carry water to the top of the course and gravity takes over and water flows through the park. (Podolak, 2012)

When considering off-channel whitewater park design benefits, especially as they relate to urban waterfront renewal, it is shown that the benefits of off-channel whitewater park designs are largely recreational and aesthetic, while the ecological impacts can be considered non-impactful at best (American Whitewater, 2007). Furthermore, The US Whitewater Center outside of Charlotte, NC, for example, is a new development built in the Charlotte suburbs. As a fully engineered, man-made, and unnatural structure, it is not an example of urban renewal or redevelopment, whereas in-channel parks typically do.

American Whitewater (2007), the premier whitewater authority in the United States, clearly states that they do not actively participate in or support whitewater parks constructed outside of existing channels.

In contrast, in-channel whitewater parks have the ability to boast ecological benefits in addition to economic and social benefits. Positive ecological benefits from inchannel whitewater parks can include riverbank restoration, dam removal, increased river bed permeability, and water aeration , all of which help to restore and promote natural riparian life (Schanze et al., 2004; Podolak, 2012). These benefits are particularly amplified when they take place in a previously impaired section of urban river. American Whitewater (2007) does acknowledge that,

In-channel whitewater parks are highly diverse in their potential benefits and potential impacts to rivers and their enjoyment. American Whitewater is an organization focused on protecting and restoring rivers, and therefore we have a direct interest in whitewater parks that will either significantly impact a river or that will restore significant ecological or social values to an impaired river. We feel that any modifications to an impaired river channel should be made with the utmost caution, care, and commitment. It is our policy that natural un-modified river channels should not be modified for the creation of whitewater parks. Whitewater parks exist in a complex and dynamic context of river management, and we consider proposed parks in this context on a case by case basis. (p. 1)

Based on the principles of urban waterfront redevelopment, as well as the variation and benefits of whitewater parks, in-channel whitewater parks align best with the urban waterfront redevelopment movement, marking a unique niche of urban waterfront redevelopment.

Social Capital Theory

The purpose of this study is to explore the social benefits of urban whitewater parks. In Chapter 1, social benefits were framed through the lens of social capital theory. Social capital theory is rooted in sociology and aims to explain the value embedded in voluntary and purposeful social interactions (Beames & Atencio, 2008; Glover, 2006; Glover & Hemmingway, 2005; Lin, 1999). Literature shows that social capital theory has been applied to the study of social equality and inequality, solidarity, resources embedded in social networks, trust, and norms of reciprocity, within sociology and related fields (Bourdieu & Wacquant, 2013; Coleman, 1988; Glover & Hemmingway, 2005; Putnam, 1995). In order to fully understand social capital theory, and how it informs the study at hand, we must examine the theory's roots and application in existing leisure literature.

The most progressive work shaping social capital theory has come from an accomplished trio of scholars, each with his own unique interpretation and application of social capital theory. Pierre Bourdieu, James Coleman, and Robert Putnam are considered the progenitors of social capital theory (Glover & Hemingway, 2005). Bourdieu (1985; 1986), having a blended background in sociology and anthropology, was particularly interested in the role and contribution of social practices in social groups.

Viewing social capital as a mechanism for the reproduction of social class inequality, Bourdieu (1985) understood social capital as "membership in a group – which provides each of its members with the backing of collectively-owned capital, a 'credential' which entitles them to credit, in the various senses of the word" (p. 249). Using the example of golf club membership, Bourdieu saw social group involvement to be more extrinsically driven than intrinsically driven (Bourdieu, 1986; Glover & Hemmingway, 2005). Coleman's (1988; 1990) interest in social capital stemmed from his work with underprivileged and disenfranchised groups. Coleman understood social capital by drawing from both sociology and economics. His primary argument was that activating social capital could overcome socioeconomic status and allow for underprivileged individuals to escape from disadvantaged circumstances (Coleman, 1988; Glover & Hemmingway, 2005). Putman is possibly the most recognized name associated with social capital in North America, due to his popular publication, and subsequent book, Bowling Alone (1995; 2000) (Beames & Atencio, 2008; Glover & Hemmingway, 2005). Putnam (2000) understood social capital as the, "connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them" (p. 19). Largely relating social capital to voluntary involvement in community groups, Putnam observed how participation in these groups affected one's broader civic engagement and social well-being (Putnam, 1995; 2000). Within the various approaches to social capital theory by Bourdieu, Coleman, and Putnam, two distinct approaches can be observed (Grootaert, Narayan, Jones, & Woolcock, 2004). The first is a resources approach, in which social capital theory is concerned with individual and group advantages that arise

from social structure and roles (e.g., Bourdieu, Coleman). The second is a civic approach, in which social capital theory is concerned with the generalized trust and reciprocity that arises from participation in both formal and informal social structures (e.g., Putnam).

Since the mid-1990's the literature from Bourdieu, Coleman, and Putnam has given way to popular application of social capital theory in magazines, public speaking, government reports, and academic works (Glover & Hemingway, 2005; Lee, Dunlap, & Edwards, 2014; Lin, 1999). Glover and Hemingway (2005) state, "Despite this increased attention, however, social capital remains surprisingly under-examined in leisure studies given the attention its connections with leisure have garnered in other fields" (p. 388). Recreation and leisure studies that have utilized social capital theory include settings such as dog parks (Graham & Glover, 2013), all-terrain-vehicle clubs (Mann & Leahy, 2009), public gardens (McIlvaine-Newsad & Porter, 2013), summer camps (Devine & Parr, 2008), cycling (Steinbach, Green, Datta, & Edwards, 2011), and skateboard parks (Weller, 2006). Within the small, but growing pool of leisure literature that applies social capital theory, there is much variation in the articulation, incorporation, and proposed scope of the concept.

For the purpose of this study, the framework, definition, and implications of social capital theory as developed by Robert Putnam can most aptly be applied. Glover and Hemmingway (2005) state that Putnam's civic approach, rather than Bourdieu and Coleman's resources approach, toward social capital theory is far more common and familiar within the field of leisure and recreation studies. Putnam's (2000) definition of social capital theory contains three key themes: social networks, trust, and norms of reciprocity. All of which collectively contribute to the fabric of our society. Focusing on these key themes, Putnam's research led him to deduce that social capital is declining in the United States. Putnam (2000) states, "By virtually every conceivable measure, social capital has eroded steadily and sometimes dramatically over the past two generations" (p. 287). Factors that have brought on this decline include, but are not limited to, "busyness and time pressure; economic hard times; the stresses of two-career families; residential mobility; suburbanization and sprawl; television, the electronic revolution, and other technological changes" (p.187). *Bowling Alone* (1995, 2000) used the leisure activity of bowling as a metaphor but also a concrete example of declining social capital. In Putnam's 1995 article, he states:

The rise of solo bowling threatens the livelihood of bowling-lane proprietors because those who bowl as members of leagues consume three times as much beer and pizza as solo bowlers, and the money in bowling is in the beer and pizza, not the balls and shoes. The broader social significance, however, lies in the social interaction and even occasionally civic conversations over beer and pizza that solo bowlers forgo. (p. 70)

While diminished social capital for an individual holds ramifications regarding one's physical health, mental well-being, and social opportunities, the larger implications brought on by Putnam's observation is that lower social capital results in lower civic engagement and participation in democratic processes. Current political and religious divides, decreased volunteerism, and low voter turnouts, indicate this larger consequence in the present day and age. With a certain degree of irony, it may be that the democratic institutions themselves are causing some of these consequences. Putnam (2000) states that government social programs, particularly those that aim to intervene for public-welfare, often squash grassroots initiatives in communities, and ultimately further erode individual and collective social capital.

In order to overcome the current decline in civic engagement, academics and practitioners must find opportunities that allow for the revitalization of social capital both individually and collectively. According to Putnam (1994), social networks, like those found at the bowling alley, have the potential to increase social capital in three interrelated ways: 1) trust and norms of reciprocity are fostered; 2) communication and coordination among individuals improves; 3) a template for future collaboration is established. As indicated by previous research, public recreational spaces, such as urban whitewater parks, are considered settings that provide a means for creating social capital. It is particularly noteworthy that urban whitewater parks, an extension of democratic institutions, often funded by local, state, or federal government, can fulfill such a valued role in the development of social capital. By providing a space for public recreation, the government is not only enriching the lives of citizens by facilitating opportunities for the development of social capital but also contributing to larger societal success via civic engagement. This is in accordance with Putnam's (2000) framework, as he states, "What really matters from the point of view of social capital and civic engagement is not merely nominal membership, but active and involved membership" (p. 58). The social networks that exist among whitewater paddlers in urban whitewater park settings may provide a

means of increasing individual and collective social capital. Such has been the case for individuals in similar recreation and leisure studies which utilize an urban park settings (Graham & Glover, 2014; Prior & Blessi, 2012; Weller, 2006).

By focusing specifically on the works of Putnam, this study takes on the responsibility of assessing urban whitewater park's ability to account for three key themes; social networks, trust, and norms of reciprocity. Urban whitewater parks deserve attention for their potential in delivering these three themes to whitewater park paddlers. By applying social capital theory toward the study of urban whitewater parks, we can expand our understanding of the social benefits of these spaces. Furthermore, exploration of this gap in the literature allows for a better understanding of the role that whitewater parks can potentially play in restoring social capital within urban communities.

Means-end Theory

During the 1980s, there was an increase in the amount of attention practitioners and academics were giving to value-based research (Reynolds & Gutman, 1988). Starting with Rokeach's (1973) research on personal values guiding human behavior, it was postulated that there was a trend between personal values and consumer habits. Gutman (1982) built off of Rokeach's work to develop means-end theory. Means-end theory has roots in consumer studies, originating from an effort to better understand the purchasing patterns of consumers (Gutman, 1982; Mort & Rose, 2004). Reynolds and Gutman (1988) specified that means-end theory "specifically focuses on the linkages between the attribute that exists in products (the 'means'), the consequence for the consumer provided by the attribute, and the personal values (the 'ends') the consequences reinforce" (p. 11). In the study of consumer patterns, products and services are considered the means, and the consumer values are seen as the end (Frauman, Norman, & Klenosky, 1998). Means-end theory attempts to explain the relationship between these two states. Means-end theory is generally applied as a way of understanding more than the variables that affect consumer habits, instead, focusing on the linkage between product qualities and desired end states for the consumer (Goldenberg, Klenosky, McAvoy, & Holman, 2002; Gutman, 1982; Reynolds & Gutman, 1988).

Means-end theory hones in on three aspects when attempting to understand consumer decision making. These three things are attributes, consequences, and values. Attributes describe the consumer's perspective on a product, service, or experience; these could be tangible, such as temperature, or intangible, such as social interaction. Consequences as described by Gutman (1982) can be positive or negative, as long as the consequence is an outcome that can be directly or indirectly traced to an attribute. Negative consequences are called risks and could take the form of peer pressure or unwanted physical danger. Positive consequences are called benefits, and could take the form of a learned skill or comradery. Values are abstract concepts that can be related to one's end goals or desired states of being. In the context of recreation and leisure research, values could include self-fulfillment, accomplishment, belonging, or personalfreedom (Goldenberg et al., 2002).

As previously stated, the goal of means-end theory was not to understand individual consumer preferences. It was to understand how attributes, consequences, and values are related. Treating them as a connected, rather than separate entities, allows researchers to understand attributes, consequences, and values as a part of a logical process rather than obscure concepts. Linking attributes to consequences to values connects the means to the ends in a process referred to as laddering. Going up the metaphorical ladder brings the researcher from raw products, services, or experiences, to the risks and benefits realized through consumption, to desired end states of being (Goldenberg, Klenosky, O'Leary, & Templin, 2000; Goldenberg et al., 2002).

Laddering allows for the construction of means-end chains by the researcher. In order to bring out these ladders and construct means-end chains, a specific qualitative questioning technique is used (Gutman, 1982; Reynolds & Gutman, 1988). This technique uses structured, open-ended questions during a one-on-one interview format (Frauman et al., 1998). The questioning process begins after a particular attribute is identified, by either the researcher or consumer. Starting with the identified attribute, the researcher asks why that attribute is important to the consumer. The consumers will provide either an attribute or a consequence as their response. Based on that response, the researcher will then again ask why that attribute or consequence is important. This process of asking why, getting a response, and why again will continue until the consumer mentions a value code or is unable to articulate a response. This qualitative technique of active listening and open-ended questions surround the key question, "why is that important to you?" (Klenosky, Gengler, & Mulvey, 1993, p. 365). The goal here is to draw out responses that allow for laddering to occur, with a metaphorical ascent towards progressively more abstract concepts (Goldenberg et al., 2000).

Allman, Mittelstaedt, Martin, and Goldenberg (2009) state: "In increasing numbers of studies, means-end theory has been expanded beyond the field of marketing and utilized to analyze recreation" (p. 234). Means-end theory has been applied in settings such as BASE jumping (Allman et al, 2009), Greenway Use (Frauman & Cunningham, 2001), backcountry adventure (Marsh, 2008), botanical gardens (Wassenberg, Goldenberg, & Soule, 2015), skate parks (Goldenberg & Shooter, 2009), and outdoor challenge courses (Goldenberg, Klenosky, O'Leary, & Templin, 2000). Means-end technique was used in this study in order to better understand the social benefits whitewater paddlers derive from urban whitewater park use. Means-ends theory and its associated methods provide a structured approach to qualitative research. Additionally, the means-end techniques structure allows not only for the identification of social benefits (the goal of this study) but also the identification of other types of attributes, consequences, and values and the interrelationship of these social benefits to these other types of attributes, consequences and values. Understanding this interconnectedness, as well as the social benefits themselves, will allow for a greater understanding of the variables influencing the whitewater paddlers motivations for using these recreational spaces.

Research Questions

Base on the review of present literature. Adequate support for further research on the social benefits whitewater paddlers achieve through urban whitewater park use is evidenced by a lack of existing literature. Therefore, there is a need to ask the following questions:

- 1) Do urban whitewater parks provide whitewater paddlers with social benefits?
- 2) If so, what are those benefits?
Chapter 3: Methodology

Introduction

Chapter 3 includes the following subsections: site, sample, instruments and procedures, and analysis.

Site

This study was conducted at Salida Whitewater Park in Salida, Colorado. This whitewater park has been used as the site of one previous study conducted by Podolak in 2012 which was aimed at analyzing site use and user perceptions. With a population of 5236 according to the 2010 census (US Census Bureau, 2010), Podolak (2012) described Salida as being "located at a high-elevation, in a small mountain city" (p. 130). According to the US Census Bureau: "To qualify as an urban area, the territory identified according to criteria must encompass at least 2,500 people, at least 1,500 of which reside outside institutional group quarters" (U. S. Census Bureau, 2017). Based on this definition and the population of Salida, Salida Whitewater Park is considered an urban whitewater park. The development of urban whitewater parks is a trend that has taken hold in the state of Colorado, and Salida Whitewater Park is one example.

Colorado is currently home to nineteen whitewater parks, which is more than any other state in the United States and more than any other country's total number of whitewater parks (Podolak, 2012). Salida, Colorado is located in Chaffee County in the heart of the Rocky Mountains, alongside the Upper Arkansas River, and is home to the Salida Whitewater Park. More commonly referred to as Salida Park by locals and whitewater park users, this park was first constructed in 2000 by Denver based firm Recreation Engineering and Planning. The park was funded by the Arkansas Land Trust and the City of Salida (Recreation Engineering and Planning, 2017). The park is an inchannel whitewater park design, and is 271 meters long, consisting of four engineered whitewater features. Additional aspects of the project included strategic river bank restoration, river access improvements, and a river side trail. Salida Park has established itself as a model whitewater park that many existing and future urban whitewater parks use as a benchmark. Similar to other existing urban whitewater parks, Salida Park is part of a larger park and recreation system in the City of Salida and was built adjacent to downtown. Parking spaces, spectator areas along the river, a walking path, river access ramps, tree cover, adjacent green space, downtown shopping and restaurants all run along the whitewater park's river right side. With those commonalities stated, Salida Park is also unique from other urban whitewater parks in two important ways, the Upper Arkansas River's consistent summer water flow and the area's existing tourism infrastructure.

Consistent summer water flows in Salida Park and along the Upper Arkansas River are due to a recreational in-channel diversion (RICD) water right that was granted to Chaffee County in 2006. A recreational in-channel diversion water right allows nonconsumptive water flows to be provided to sites along the river for recreational purposes, in this case for the two whitewater parks that exist in-channel on the Upper Arkansas River within Chaffee County. One whitewater park is located in the city of Buena Vista, 20 miles upstream of Salida and the county's second whitewater park. The key here is that in order to qualify for a recreational in-channel diversion the river site must be an engineered whitewater park; it cannot be a naturally occurring section of whitewater. Colorado is one of a handful of western states that allow recreational in-channel diversion water rights to be granted. The application process, legal aspects, and site qualification, can differ by state.

Chaffee County first applied for recreational in-channel diversion water rights in 2004, and approval was granted two years later. Important to note is the fact that the application process for the recreational in-channel diversion in Chaffee County was initiated, facilitated, and executed by local citizens, not government officials, attorneys, or water rights specialists. In a study of 12 Colorado whitewater parks that applied for RICD water rights, Crow (2010) found that nine of the twelve sites in the study outsourced the responsibility of obtaining the recreational in-channel diversion for their whitewater park. Salida Park as a subset of Chaffee County stands out as an example of a grassroots organized and community motivated approach to obtaining RICD water rights. The provision of the recreation in channel diversion for Chaffee County provides guaranteed water flows ranging from 200-1000 cubic feet per second from May 15-August 15 every year. The consistent water flows granted through the recreational in-channel diversion allow for ideal conditions at Salida Park when other rivers in the state and region are too low to recreationally paddle.

Urban whitewater parks are traditionally associated with local use and a high number of the parks' users traveling less than ten miles to access the park. Meanwhile, more than twenty percent of Salida Park users travel more than one-hundred miles to access the park. The study conducted by Podolak (2012), showed that Salida Park, when compared to five other urban whitewater parks was shown to have the greatest amount of whitewater paddlers present. This is in line with the whitewater tourism destination reputation that Salida and the Upper Arkansas River have. Salida is home to the oldest and boldest whitewater paddling festival in the US, the First in Boating on the Arkansas Festival (FibArk). The FibArk festival brings the paddling community and local community together with whitewater races, freestyle paddling competitions, live music, and more. FibArk spikes user numbers at Salida Park from its daily summer average of 281 people per day to 3720 people per day. These numbers reflect the even greater popularity of the Upper Arkansas River as a whole. The Upper Arkansas River supports more commercial whitewater rafting than any other river in the United States with approximately 250,000 river users per year (Podolak, 2012).

Sample

Data were collected at Salida Whitewater Park in Salida, Colorado from June 1, 2016 to August 12, 2016. To participate in the study, prospective participants had to selfidentify as a whitewater paddler and have paddled Salida Whitewater Park's engineered river features. For the purposes of this study, whitewater paddlers are defined as kayakers, canoeists, stand-up-paddle boarders, rafters, and squirt boaters who are properly equipped and outfitted for their given whitewater discipline. Participants were allowed to range from novice whitewater paddlers, class I, to expert whitewater paddlers, class V. Fisherpeople, spectators, waders, swimmers, boogie boarders, tubers, shorebased park users such as walkers, runners, and cyclists, and improperly equipped or outfitted self-identified whitewater paddlers were not included in this study. The interviewer approached participants based on the observable criteria listed above and further screened with semi-structured conversation about whitewater paddling and asking "do you consider yourself a whitewater paddler?"

A final total sample size of 25 interviewees provided the data for this study. All interviewees self-identified as whitewater paddlers and paddled at Salida Whitewater Park, the whitewater park in Salida, Colorado, during the research data collection dates that ranged from June 1st to August 1st, 2016. The final total sample was compromised of 56% (n = 14) males and 44% (n = 11) females. Interviewee ages ranged from 18 to 69 years of age, with a mean age of 35.56. It should be noted that many paddlers under the age of eighteen were present at Salida Park during the research data collection dates, but interviewing these people fell outside the scope of internal review board approval for this study. Primary water craft used by interviewees while paddling at Salida Park consisted of 56% (n = 14) kayak, 24% (n = 6) stand-up-paddle board, 16% (n = 4) raft, and 4% (n = 1) canoe. Beyond their primary watercraft, 40% (n = 10) indicated that they have also paddled at least one other whitewater watercraft while using Salida Park. When selfassessing their paddling skill level, based on the International Whitewater Rating Scale ranging from class I (novice) to class V (expert); 8% (n = 2) identified as class II, 36% (n = 9) identified as class III, 24% (n = 6) identified as class IV, 32% (n =8) identified as class V. The majority of all interviewees, 92% (n = 23), had paddled previously at Salida Park, only 8% (n = 2) were paddling Salida Park for their first time. Upon arriving at Salida Park interviewees spent an average of 2.22 hours on/in the water during a given day of paddling, times ranged from 30 minutes to 8 hours spent on/in the water. Those

interviewed who were not Salida locals spent an average of 2 hours and 34 minutes on/in the water during a given day of paddling. Those interviewed who were Salida locals spent an average of 1 hour and 50 minutes on/in the water during a given day of paddling. 72% (n = 18) of interviewees paddled with a previous acquaintance while at Salida Park, the other 28% (n = 7) of interviewees did not paddle with anyone else while at the park. Distance traveled in order to paddle at Salida Park revealed 48% (n = 12) were locals, or persons living in Salida, Colorado, while 52% (n = 13) were non-Salida residents with a mean travel time of 14 hours, and travel time ranging from 30 minutes to 31 hours.

Table 1

1	
Characteristic	Amount
Gender	
Female	44% (n = 11)
Male	56% (n = 14)
Age	
Mean	36.56
Minimum	18
Maximum	69
Paddling Discipline	
Kayak	56% (n = 14)
SUP	24% (n = 6)

Research Participant Characteristics

Table 1: continued

Raft	16% (n = 4)
Canoe	4% (n = 1)
Paddling Ability	
Ι	0% (n = 0)
II	8% (n = 2)
III	36% (n = 9)
IV	24% (n = 6)
V	32% (n = 8)
Distance Traveled to Park	
Local	48% (n = 12)
Non-Local	52% (n = 13)
Mean	5.82 Hours
Non-Local Minimum	.5 Hours
Non-Local Maximum	31 Hours
Previously Visited	
Yes	92% (n = 23)
No	8% (n = 2)

Paddled with Others

Yes	72% (n = 18)
	()

No 28% (n = 7)

Time Spent On/In Water

Mean	2.22 Hours
Minimum	.5 Hours
Maximum	8 Hours
Local Mean	1.83 Hours
Non-Local Mean	2.57 Hours

Note: All research participant characteristics were collected during in-person interviews and were self-reported by the research participant.

Instrument and Procedures

The primary researcher is an expert whitewater paddler and is competent in multiple disciples, including kayaking, rafting, and stand-up-paddle boarding. With experience paddling engineered and natural whitewater as an athlete, instructor, guide, and recreationalist, the primary researcher is a member of the paddling community and was well suited to socially navigate the whitewater park setting for the purposes of data collection. No research assistants were used in the collection of data. Prior to data collection the primary researcher participated in a detailed training with the research committee's chairman. The training included identification of anticipated concerns, discussion of anticipated concerns, and mock interviews.

All interviews were conducted in person at Salida Whitewater Park using a structured interview script. This approach allowed for consistency in following means-

ends techniques with a series of set prompts built into the script, while still being flexible enough to adapt to the spontaneity of participants' answers. Interview time lengths varied, taking between ten and thirty minutes to conduct. All interviews were recorded using two digital voice recorders simultaneously for quality assurance purposes. The primary researcher conducted interviews with individuals that specifically self-identify as a member of the whitewater paddling community and had used Salida Whitewater Park. The interview script included closed-ended questions, open-ended questions, and demographic questions. After gaining verbal consent from the participant, the researcher turned on the voice recorders, again asking for consent so that it was documented, and then begin the interview. After leading with a series of paddling experience and demographic questions, research participants were asked to name the top three outcomes or take-a-ways they achieved while paddling at Salida Park. This was the start of the means-end technique questioning. Once the outcomes were listed, the primary researcher repeated the list to the participant for clarification and asked if there is anything else they would like to mention. If not, the participant was tasked to order their top three outcomes in order of least important to most important. Then, starting with the most important outcome, participants were asked why that outcome is important to them. After they gave their answer the researcher clarified their answer and would again ask why that was important to them. This process continued, creating a metaphorical ladder of thought abstraction as the researcher continued to ask "and why is that important?" Eventually the participant was either unable to answer the question or spoke without successfully articulating further thoughts. These events concluded the line of questioning. At this

point the same process of active listening and questioning was repeated with the remaining outcomes. Upon completion of the means-end technique questioning the interview was concluded. See Appendix A for the full structured interview script.

Analysis

Post data collection, a series of analyses were used on the final data set. Twentynine open-ended scripted interviews were conducted in person using convenience sampling at Salida Whitewater Park in Salida, Colorado between June 1 and August 1, 2016. Of those twenty-nine interviews, four were thrown out due to poor audio quality leaving a final total sample size of twenty-five viable interviews. Interview duration ranged from ten minutes to 30 minutes. One hundred percent of the digitally recorded audio from those twenty-five interviews was fully transcribed by the primary researcher, creating 229 pages of text. Transcribed interview text ranged from six pages (1257 words) to 14 pages (3424 words) in length. Each interview began with a series of demographic questions that included gender, age, paddling discipline, paddling skill level, distance traveled to the park, visitation frequency, number of paddling companions, and time spent paddling at the park. Self-reported interviewee responses to these demographic questions were tallied and compiled upon conclusion of data collection. After demographic questions research participants were engaged through use of meansend technique questioning. This process was described in the procedures section above. Interviews concluded after means-end technique questioning.

Transcribed interviews were then systematically coded focusing on the means-end technique questioning that took place in each interview. Coding was conducted in two stages. First, reading through each interview's text and assigning specific phrases or terms to summarize statements from the interviewees during the means end technique This process of reading and labeling continued through each interview for questioning. twenty-five interviews. Happening in conjunction with the first stage of coding, coded statements were further divided into three categories; attribute, consequence, and value, as part of the means end analysis. Because means end technique questioning relies on asking continuous follow up questions to answers already given by the interviewee, the codes are connected to each other creating a metaphorical ladder of interviewee thoughts and answers. The process of connecting an attribute code to a consequence code to a value code is referred to as laddering. At the base of the ladder are the codes categorized as attributes, further up are codes categorized as consequences, at the top are codes categorized as values. Progression up the metaphorical ladder symbolizes movement into deeper more abstract thought. Not all interviewees gave responses during the means end technique questioning that resulted in complete ladders. Some interviewees would end a series of thoughts before ever making a statement that could be coded as a value. Some interviewees would make connections between multiple consequences or values. These ladders were still included in the analysis.

The first round of coding process resulted in a total of 168 codes present in the twenty-five interviewees. Thirty codes were classified as attributes, 115 codes were classified as consequences, and 23 of these codes were classified as values. Ladders were assembled for each interview creating a total of 230 ladders. While the first round of codes preserved the nature of the interviewee's original statements, there was a great

variety of codes, some very similar, but labeled differently due to interviewee wording. Analyzing the ladders built off of these codes for reoccurring themes and patterns proved to be futile due to the great variety of open codes, therefore, a second round of coding took place in order consolidate common themes and a more readily analyzable set of data.

Throughout this coding process, the primary researcher and a second researcher continuously reviewed and discussed code assignments and ladder assemblies. Intercoder reliability was established when consensus was reached after a full review and agreement upon the coding and laddering of the first ten interviews. This process of establishing intercoder reliability took place before and after the second round of coding and laddering. Outside of this formal consensus many informal conversations and reviews took place between the two researchers.

During the second set of coding, codes were grouped with other similarly themed codes and given a new label to describe the common theme of the newly grouped codes. These new labels became the new codes for statements associated with them. This greatly consolidated the codebook and made the analysis of the ladders much more effective. In the category of attributes, 23 open codes were grouped into four axial codes. In the category of consequences, 115 open codes were grouped into 11 axial codes. And in the category of values, 30 open codes were grouped into three axial codes.

Based on the second round of codes, ladders were reassembled to maintain their previous order, but to have the codes re-labeled. Of the 230 ladders, 86% (n = 198) maintained a logical, and usable order for later analysis. Of the remaining ladders, 14%

(n = 32) became unusable due to code repeats in the ladder structure. While the transition from the first round to the second round of coding and laddering created a loss in the amount of usable data, it ultimately created a set of data that could be more clearly analyzed.

In order to identify reoccurring themes and patterns among the ladders a hierarchical value map was created, not only as a visual representation of all the ladders, but also a reference point for code frequencies and the frequency of connections between codes. The hierarchical value map reads from bottom to top with attribute codes along the bottom, consequence codes in the middle, and value codes along the top. Code names are housed in bubbles and the size of the bubble is representative of that code's frequencies. Lines between the bubbles illustrate the link, or connection of codes in the various ladders. The thicker a line appears, the more frequently the link appeared among total amount of ladders. The completed hierarchical value map allowed researchers to assess, code frequency, or how often a code appeared among the ladders; and the strength of association between codes, or how often a link appeared between two codes.

To achieve validity using means-end methodology, the literature dictates that a minimum sample size of 40 is required (Reynolds and Gutman, 1988). The present study, utilizing means-end techniques, did not accomplish the minimum required sample size. However, there is still value in using a means-end approach in this study, as it provides a structured framework through which data can be analyzed and displayed. Inclusion of the hierarchical value map allows for an otherwise complex set of qualitative data to be more readily interpreted. However, hierarchical value maps are often critiqued for not fully representing the depth and richness of a qualitative study. Speaking to this effect, Marsh (2008) stated, "A research method that captured more of the richness of the experiences might serve to enrich the content categories identified" (p.292), as he concluded his study which utilized means-end methodology in an outdoor recreation setting. Therefore, this study will also include descriptive qualitative data, in the form of statements from research participants, in order to highlight specific connections found in the hierarchical value map and draw out the richness of the data in this study. Results and presentation of the hierarchical value map and accompanying descriptive qualitative data are included in Chapter 4.

Chapter 4: Results

Introduction

Chapter 4 presents the results of this study. This chapter contains two sections, the hierarchical value map, and descriptive qualitative data presented in narrative form. The chapter concludes with a summary of results.

Hierarchical Value Map

After analysis, 19 thematic codes were identified in the data set. Of those 19 codes, four were attribute level codes, eleven were consequence level codes, and four were value level codes. The attribute codes identified why the interviewee choose to be at the urban whitewater park. The consequence codes identified benefits the whitewater park paddler derived through park use, otherwise phrased as, why the attribute was important to the interviewee. The value codes show a deeper level of meaning and identified why a given consequence (benefit) was important to the interviewee. The four attribute codes were Park Design, Park Location, Being on the Water, and Social Network. The eleven consequence codes were Development of Self-Confidence, Efficiency of Time, Fun, Health and Wellness, Learning / Development, Motivation, Multiuser Appeal, Nature Benefits, Opportunities for Teaching, Sense of Safety, and Social Support. The four value codes were Enjoyment of Life, Self-Betterment, Self-Fulfillment / Purpose, and Sense of Belonging. Each code represents a larger body of qualitative responses given by participants during means-end questioning. Codes were assigned partially based on previous studies by Allman, Mittelstaedt, Martin, and Goldenberg (2009), Goldenberg, Klenosky, McAvoy, and Holman (2002), and

Goldenberg and Shooter (2009), all of whom used means-end analysis based in an outdoor recreation context. Additional codes were derived inductively by the primary researcher and the head of the research committee.



Figure 1. Hierarchical Value Map

Using the coding and simultaneous laddering process described in Chapter 3 a total of 198 ladders were constructed. In Figure 1, the hierarchical value map illustrates the themes and patterns of all 198 ladders combined. The hierarchical value map is not only a visual representation of all the ladders, but also a reference for code frequencies. The hierarchical value map reads from bottom to top; with the attribute level codes along the bottom, shown in white bubbles; consequence level codes in the middle, shown in light grey bubbles; and value codes along the top, shown in dark grey bubbles. Each code is housed in a bubble and the size of the bubble is representative of that code's frequencies. Note that Fun (n = 45) is the largest bubble, because it has the highest frequency, or was the most commonly mentioned code. Lines between the bubbles illustrate the link, or connection of codes in the various ladders. Note that the line between Park Location and Efficiency of Time for example. The thicker a line appears, the more frequent the link appeared in the ladders. Completed, the hierarchical value map allowed researchers to assess code frequency, or how often a code repeatedly appeared; diversity of associations among codes, or the variety of links attached to a code; and the strength of association between codes, or how often a link appeared between two codes.

In order to achieve maximum clarity, while simultaneously maintaining an accurate depiction of the data, some of the weaker connections between codes were removed from the hierarchical value map. In the case of this data set inclusion of all representative lines illustrating connections between codes would have resulted in a web which only someone as familiar with the data as the primary researcher would have been

able to efficiently navigate. In the end, weak connections between codes were removed from the hierarchical value map. A cut off limit was established, and only connections with a frequency of four or more were included in the final version of the hierarchical value map. Although greater clarity was established, the hierarchical value map now makes it appear as if Nature Benefits (n=6), a consequence, Enjoyment of Life (n=11) and Self Fulfillment / Purpose (n=16), both values, are somehow disconnected from the other codes. This is of course not an accurate conclusion as all three of those codes are connected. It is merely the low frequency of the individual connection reaching each code, and the decision to establish a cutoff point that caused these codes to appear disconnected. In total 340 connections exist between the 19 codes in this study's data set. In order to create maximum visual clarity for the hierarchical value map, a cutoff point was established at four or more, resulting in the visual removal of weak connections. The final hierarchical value map includes 233 connections, or 68.5% of the total data.

The most frequently mentioned codes, or commonly mentioned codes, included: Fun (n =45), Social Support (n =37), Learning and Development of Skills (n = 37), and Efficiency of Time (n =37), all of which are consequences. The most frequently mentioned attribute was Park Design (n =21). The most frequently mentioned values included Self-Betterment (n = 17), and Self-Fulfillment / Purpose (n = 16). Other frequently mentioned codes included Health / Wellness (n = 24), and Motivation (n = 24), both of which are consequences.

The greatest strength of associations between codes, or most frequently occurring link between two codes, included those with a connection between: Park Location and Efficiency of Time (n = 15); Park Design and Learning / Development (n = 14), both of which represent associations between attribute and consequence level codes. The most significant associations between a consequence and another consequence included those between: Learning to Motivation (n = 13), and Learning to Fun (n = 13). The most significant association between a consequence and a value was Social Support leading to Sense of Belonging (n = 10). Additional significant associations included the attribute to consequence link between Social networks and Social Support (n = 11).

Into the River: Descriptive Paddler Narratives

While the hierarchical value map allows an efficient means through which to interpret an otherwise potentially cumbersome set of qualitative data, there is oftentimes a loss in the richness of the data. The inclusion of qualitative statements from research participants provides a means to enrich and add depth to the findings illustrated in the hierarchical value map. The excerpts of interviews found in this section are intended to offer narrative descriptions and expand upon the themes detailed in the sections above, while also providing valuable participant insight that may have otherwise figuratively, slipped through the cracks. In an attempt to not only illustrate the variety of qualitative data, but also the variety of research participants, interviews from both women and men of varying ages, paddling discipline, and skill levels have been selected. In total, descriptive narratives from ten interview's ladders. The narratives which appear in this section were selected because they show particularly profound and well-articulated insight, while also highlighting connections seen in the hierarchical value map. The first five interviews selected illustrate full ladders, with connections starting at the attribute level, leading to consequence(s), ending at the value level. The remaining five interviews illustrate segments of ladders, highlighting specific connections between two codes. It should be stressed that while the insights from these ten narratives give depth to the study and exemplify qualitative richness not normally displayed by a lone hierarchical value map, these are individual responses that do not fully or wholly represent the thoughts of others.

Built for a purpose. This research participant was a 29-year old male kayaker who described his paddling ability as class V. He spent an average of one hour on the water per paddling session, he drove three hours to get to Salida Park, paddled with other people, and had been to the park before. In all this individual's narrative illustrates the progressively meaningful connections a whitewater paddler placed first on Park Design, which they connected to Efficiency of Time, which they connected to Fun, and finally connected to Self-Fulfillment / Purpose (Figure 2).



Figure 2: Built for a Purpose

The ladder begins with the participant speaking in regards to Salida Park's second hydraulic feature, the competition wave, which he labeled as his number one park attribute.

It's excellent for a good kayaker, and it's excellent to learn on. Keeps you progressing even if you are a really good kayaker. Others, as far as holes go, there is nothing that you couldn't do anywhere else that you can't do here. You could go all over the world, find the best kayakers and bring them here, and they would all be able to do their best tricks here. (Interview 11, Page 4)

The primary researcher then asked, "Would you describe this as a world class feature?" To which the participant replied, "Yeah, yeah...that's what we call it. A world class feature." These statements were coded as Park Design, an attribute. (Interview 11, Page 4) When asked why having a world class feature to paddle on was important he stated,

I've been kayaking for a long time and started in Wisconsin, where there are not world class features, and would travel. Seventeen hours to get here, sixteen hours to get to the Ottawa, twelve hours to get to the southeast, like Tennessee, and going to Montana, and doing all that driving, I don't know, it's just not as sustainable if you want to do it a lot and be that far away from home. And this, the reason why I wanted to move to Colorado, um, you got to have a good spot, close, close to home. (Interview 11, Page 5)

This statement was coded as Efficiency of Time, a consequence. When asked why it was important to have features like this close to his home he stated, "To have fun" (Interview 11, Page 5). This statement was coded as Fun, a consequence. When asked why it was important to have fun the interviewee replied,

Um, it makes me feel good, it makes life seem worthwhile when you are doing activities that you enjoy. It give purpose to our lives so that we don't just go to work and come home and sit around and be miserable. (Interview 11, Page 5)

This statement was coded Self-Fulfillment / Purpose, a value. After this statement the interviewee was unable to further articulate his thoughts when asked why purpose was important to him. Therefore, Self-Fulfillment / Purpose became the end of this ladder.

Epicenter of the paddling community. This research participant was a 33-year old female stand-up-paddle boarder, and rafter, who described her paddling ability as class V. Spending an average of two hours on the water per paddling session, she drove two and half hours to get to Salida Park, paddled with other people, and had been to the park before. In all this narrative illustrates the progressively meaningful connection a whitewater paddler placed first on Social Network, which they connected to Social Support, and finally connected to Sense of Belonging (Figure 3).



Figure 3: Epicenter of the Paddling Community

This ladder begins with the participant describing her number three ranked attribute.

Hmm. I mean it just strikes me that this is a place where the community surrounds paddling. You know like I'm always going to have, even if I didn't plan to meet a friend here, someone to paddle with. This is the epicenter for the paddling community across Colorado and the West, or whatever. (Interview 1, Page 3)

This statement was coded as Social Network, an attribute. When asked why it was important to be able to just do down to the river, knowing you will have someone to paddle the interviewee stated, "Just belonging to a group of people, with a similar group, shared passion is fundamentally rewarding" (Interview 1, Page 6). This statement was coded as Social Support, a consequence. The interviewee expanded upon this idea by stating,

Probably goes back to feeling like part of something. I think as human nature we seek out groups and communities and families. My whitewater SUP and river

SUP/surf friend are kind of like family. You go weeks without seeing them, but you all share this love for this thing, so when you see them again it feels like a reunion every time. (Interview 1, Page 6)

This statement was coded as Sense of Belonging, a value. After this statement, the interviewee began a new train of thought creating new ladders, therefore Sense of Belonging was the end of this ladder.

A part of me. This research participant was a 65-year old male kayaker who described his paddling abilities as class III. He spends an average of two hours on the water per paddling session, drove approximately one hour to reach Salida Park, and has been to the park before. In total, this narrative illustrates an increasingly meaningful series of connections, starting with Being on the Water, leading to Fun, leading to Health and Wellness, and finally connecting to Self-Betterment (Figure 4).



Figure 4: A Part of Me

This ladder begins with the participant describing his second ranked attribute, stating, "Well, top three, let's see, well the first one is that I get to be on the water"

(Interview 2, Page 2). This statement was coded as Being on the Water, an attribute. When asked why being on the water was important, the interviewee replied, "You know the first day that I got in a kayak, I don't know, it became part of me, it was refreshing. When you're on the water you can't really worry about much. Just going with the flow" (Interview 2, Page 4). This statement was coded as Fun, a consequence. When asked why is was important to feel that way, the interviewee stated,

Oh, huh, I don't know I've always liked water sports. You know I was a chiropractor for 38 years and you can't be more different that, being on the water and being in the office. During the week dealing with people, Medicare, insurance companies...Very different. (Interview 2, Page 4)

This statement was coded as Health and Wellness, a consequence. When asked why it was important to participate in a recreation activity that provided contrast from his work life, the interviewee responded, "Ah, so I can do the other things that I do better in life...You know, husband, father" (Interview 2, Page 5). This statement was coded as Self Betterment, a value. When asked why being a better person was important, the interviewee concluded, "Well that's the meaning of life" (Interview 2, Page 5), which closed the ladder with Self-Betterment as the final code.

Why I moved here. This research participant was a 30-year old female kayaker who described her paddling ability as class IV. She is a Salida resident who spends an average of one and a half hours on the water per paddling session, and has been to the park before. In total, this ladder illustrates an increasingly meaningful series of connections, starting with Park Location, leading to Efficiency of Time, leading to Fun, and finishing with Enjoyment of Life (Figure 5).



Figure 5: Why I Moved Here

This ladder begins with the participant describing her top ranked attribute.

Um, the, ah, what is it called, the accessibility, like how easy it is to you know so close to my house, run down, there there's a boat ramp right there, it's easy to get in a play session, um. (Interview 20, Page 3)

This statement was coded as Park Location, an attribute. When asked why it was important to have the park so close by, the interviewee replied,

Cause it's really easy to go and I can go like mountain biking then run down to the play park and cool off and then still go to work. Just squeeze it in really fast... It's something that I really enjoy from other places that I've lived. If you want to go and park and play you have to drive like an hour down a dirt road in West Virginia and it's kinda like an all-day thing, I think the best thing about living in Salida is that you can do multiple sports and go to work in the same day.

(Interview 20, Page 4)

This statement was coded as Efficiency of Time, a consequence. When asked why effectively using her time was important to her, the interviewee replied, "Play is my priority in life. Like over career or anything else, so, that's why I moved out here, that's why I've moved anywhere" (Interview 20, Page 5). This statement was coded as Fun, a consequence. When asked why it was important to play, the interviewee responded,

It makes you happy, it makes me happy. I think I'm, so when I was teaching high school and I had more of a career I wasn't that happy, then since I left that behind and I get to like play outside like every day I'm happy, pretty much 97% of the time. I think that's winning. (Interview 20, Page 5)

This statement was coded as Enjoyment of Life, a Value. After this statement the research participant was unable to articulate further connections, therefore Enjoyment of Life was the end of the ladder.

Something for everyone. This research participant was a 69-year old male kayaker who described his paddling abilities as class IV. He is a Salida local who spends an average of one hour on the water per paddling session, he regularly uses the park and plays a large role in the maintenance of the park's slalom gates. This narrative illustrates one paddler's increasingly meaningful series of connections, starting with Park Design, leading to Multiuser Appeal, leading to Social Support, and finally connecting to Sense of Belonging (Figure 6).



Figure 6: Something for Everyone

This ladder begins with the research participant describing his number three ranked attribute. Describing in-channel modifications engineers and designers made to the section of river that is now Salida Park, the interviewee states,

In terms of a bigger course, in terms of the rock walls they build, pinching the river in, creating really good eddies, you know, that's what set the stage for this to be such a nice course. Anyway, they all deserve a lot of credit. (Interview 16, Page 3)

This statement was coded as Park Design, an attribute. When asked to elaborate on the importance of this park's design the interviewee responded,

The usage here covers a lot of different things, and everyone tries to get along for the most part. Fisherman, there is great fishing through here. Rafting, you know, I do all my instruction here in kayaking and canoe, this is where I do it. You know, you've got your inner-tubers and your swimmers, and. So, it's just a multiuse area and it draws a lot of people. (Interview 16, Page 3) This statement was coded as Multiuser Appeal, a consequence. When asked why multiuser appeal was important, the interviewee went on to say,

I think it's important, mainly just because it draws so many people to the river, you know, kids that are like two years old, you know. Babies to people who are really old like me. It's just a community thing really, you know. (Interview 16, Page 9)

This statement was coded as Social Support, a consequence. When asked why having a space for everyone to gather was important the interviewee responded, "It's powerful. Community activities are ah, they are hard to come by sometimes for such a multiuse and such a multi-range of age groups and users" (Interview 16, Page 10). This statement was coded as Sense of Belonging, a value. After this statement the research participant was unable to articulate further connections, therefore Sense of Belonging was the end of the ladder.

Fitting in. This research participant was a 22-year old female stand-up-paddle boarder, rafter, and kayaker who described her paddling abilities as class IV. She is a Salida local who spends an average of three hours on the water per paddling session, she regularly uses the park, and normally attends the park with friends. This narrative illustrates one paddler's connection from Learning and Development of Skills to Social Support (Figure 7).



Figure 7: Fitting In

This is just a segment of an interview, not a full ladder, where both codes are consequences. The segment begins with the research participant describing an early experience at the Salida Whitewater Park, recalling, "When I first learned how to kayak, I was out here at the boat ramp hole and I was like five [years old]" (Interview 17, Page 3). She provided further detail, saying, "I just was getting worked in the playhole, I was probably, it was one of my favorite experiences out there" (interview 17, page 3). These statements were coded as Learning and Development of Skills, a consequence. When asked why that learning experience was important to her, she stated,

I think that Salida is a town that revolves around the river. It's a, I think you'll hear from people that are out of towners and what not that they come to Salida specifically because of the Arkansas River and the play park. I think growing up here, being a part of the river, knowing how to play in the river is a huge part of living here, like, I feel like I'm going to live in Salida I need to know how to be good at that [whitewater paddling] or I'd feel left out of the culture of Salida. (Interview 17, page 6) This statement was coded as Social Support, a consequence. This is the end of the selected section of a ladder.

Walk less, paddle more. This research participant was a 58-year old female kayaker and rafter who described her paddling abilities as class III. She is a Salida local who spends an average of six hours on the water per paddling session, she regularly uses the park, and normally attends the park with friends. This narrative illustrates one paddler's connection from Health / Wellness to Self-Betterment (Figure 8).



Figure 8: Walk Less, Paddle More

This is just a segment of an interview, not a full ladder, where the first code is a consequence, and the second code is a value. This segment begins the research participant describing one of her motivations for kayaking, stating, "Well, I just love to exercise, just to be out here" (Interview 6, Page 9). This statement was coded as Health / Wellness, a consequence. When ask why just being out here was important to her, she replied, "For me there is a limitation in walking so, so, that is why I actually took up kayaking because I thought it was something that I thought I could do if my walking life

was going to be limited" (Interview 6, Page 9). This statement was coded as Self-Betterment, a value. This is the end of the selected section of ladder.

Brothers in whitewater. This research participant was a 33-year old male canoer who described his paddling abilities as class V. He drove 15 hours to get to Salida Park, has attended the park before, spends an average of two hours on the water per paddling session, and did not paddle with anyone else the day he was interviewed. This narrative illustrates one paddler's connection from Social Support to Sense of Belonging (Figure 9).



Figure 9: Brothers in Whitewater

This is just a segment of an interview, not a full ladder, where the first code is a consequence, and the second code is a value. This segment begins with the research participant describing the relationship among paddlers on the river.

So, definite sense of comradery on the river, you're instant friends, ah I would have no problem calling you up to grab a drink and we boated yesterday for two seconds, doesn't matter you're a boater, so ah, yeah that comradery is important.

(Interview 5, Page 7)

This comment was coded as Social Support, a consequence. When asked why comradery was import, the research participant went on to say,

I was in the military for a while and became a raft guide right after I was out of the military and ah it was, that was very seamless, that comradery. Going from every day depending on each other lives to going down the river and depending on them to do their job to make sure their clients are safe, but to make sure I'm safe as well so yeah. (Interview 5, Page 7)

This comment was coded as Sense of Belonging, a value. This is the end of the selected section of ladder.

Safety in numbers. This research participant was a 65-year old male kayaker who described his paddling abilities as class III. He spends an average of two hours on the water per paddling session, drives approximately one hour to reach Salida Park, he has been to the park before, and did not paddle with anyone else he knew the day he was interviewed. This narrative illustrates one paddler's connection from Social Support to Sense of Safety (Figure 10).



Figure 10: Safety in Numbers

This is just a segment of an interview, not a full ladder, where the first code is a consequence, and the second code is a consequence. This segment begins with the research participant describing the relationship among paddlers on the river, stating, "Everybody is kinda taking care of everybody and watching what you do" (Interview 2, Page 5). This statement was coded Social Support, a consequence. When asked why it is import that everyone is watching out for each other, the research participant stated, "Whitewater kayaking is an inherently hazardous sport and. You know just now, when I was out there, I flipped and I did roll, but when I rolled up there was two people right there watching. It's good, them watching" (Interview 2, Page 6). This statement was coded as Sense of Safety, a value. Although he did not expand on his ladder, the research participant did summarize his thoughts by stating, "Well safety is number one. You've got to be safe. And, I don't know, it's part of that community, the water sports community watching out for each other" (Interview 2, Page 6). This is the end of the selected section of the ladder.

If you build it, they will paddle it. This interview excerpt is from a 32-year old male stand-up-paddle boarder and rafter who described his paddling skills as class III. He is a local who has previously used the park, paddles with others, and spends an average of two hours on the water per paddling session. This section illustrates one paddler's connection from Park Location to Efficiency of Time (Figure 11).



Figure 11: If You Build It, They Will Paddle It

This section of a ladder begins with the research participant stating, "I just love how close it is, the accessibility for me" (Interview 19, Page 3). This statement was coded as Park Location, an attribute. When asked why park location was important, the research participant responded,

I have a little trailer that I put all my gear on strap my board to then bike down to the wave and park and use the park then ride back home. And just like I said earlier, to be that close, if I have 40 minutes to go paddle before I have to go do something I can get there quick to go paddle, then get out. (Interview 19, page 6)
This statement was coded as Efficiency of Time, a consequence. This is the end of the selected section of ladder.

Final thoughts. On occasion research participants would offer up final-thoughts at the end of the interview that were not part of any previous ladder. These comments were loosely prompted, but not guided by the primary research. Courteously asking if the interviewee had anything else that they wanted to say before the recorder was turned off would sometimes produce colorful commentary from the interviewees. Given the chance to speak freely, two research participants in particular displayed not only an interest, but also a strong understanding of the benefits whitewater parks provide the community, and individuals. These narratives were not part of the means-end analysis, and were resulting not coded, or included in the hierarchical value map.

The first excerpt is from an 18-year old female kayaker who described her skills as class V and drove 31 hours to get to Salida Park. She had attended the park previously, was paddling with others, and spent an average of eight hours on the water per paddling session. She states,

I wonder if people who are not in the paddling or whitewater community really understand how big of an attraction it [Salida Whitewater Park] is to their community. Like if you didn't have this park, would Salida really be this full of people regularly? With people coming in and out of the town. Like, I don't know, ha. And I think that is a hard thing to sell to a lot of cities. Wausau [a whitewater park in Wausau, Wisconsin] has got it figured out with their whitewater park. We got hundreds of people there and it's ton of dollars in economic impact from all that tourism people are spending money on it. Hotels, restaurants, camping, or whatever it might be and then there's so many other places that talk about getting a whitewater park or building one, but they don't because they don't really grasp this aspect of it. You know, they are not part of it, they don't get it. They don't really get why it would draw a dozen people on a Tuesday all day long to just sit in their downtown and eat and drink and play in their boat. So if they have something like that it's pretty special. It can really add to the community feel of that town and the tourism, and the people who live here it makes a big impact on, so. (Interview 7, Page 10)

Quoted second, this research participant was a 62-year old male kayaker who described his paddling skills as class V, and drove 17 hours to get to Salida Park. He had been to the park previously, was paddling with others, and spent one and a half hours on the river per paddling session. He stated,

Ah, I used to think that play parks, I loved them, but I used to think that they were a waste of money. They looked very expensive and they benefited just a few people who came and kayaked. I've gone a hundred and eighty degrees on that one, that, that, it's not just the holes at these play parks that you have, but as the season goes you have people who become serious kayakers, and tourists who are here doing other things and they just walk down and they sit for a half hour or whatever, and they may enjoy the river, but they may sit longer and watch the people doing the tricks, we're the entertainment for your town. Like you have a little mini circus here. Then as the weather warms up, you have people coming down in rafts and inner tubes and whatever, and you have a lot of them. And they may be tourist or local people looking for something to do. At a certain point in the summer it gets sandy and you have your beaches up there at the top and little kids with their pails and shovels and their moms. So, it's a big multi-purpose thing, and, so, it looks, I'm sure when you look at a picture of Salida you open the brochure, where are we going to go on vacation, and somebody gets to Salida, there has got to be a picture of this or two pictures or five pictures, that this is the image that would never in their life get in a kayak, that would never go down the river on a boogie board, but it looks like a happening spot. You've got this whole thing built up, which has got to be great for tourism, which is what Salida is about, having that. Ah, so that is one whole area that, I've talked to some people and they think that it's just for the kayakers and it isn't. It's for, it's an investment for the city. I own a business so I think in terms of, you're spending so much money what are you getting back? It's really obvious to me now that the city is getting something back. (Interview 12, Page 7)

He further states,

One of the values of a play park is for your youth and that I define as not just 8 year olds or 15 year olds, but let's say up to 30, that you have to have things for them to do. Active things and engaging things, and there is a lot of money put into organized sports teams, football teams, basketball teams, and kids that gravitate in that direction have a lot of options. But, kids who, and they couldn't even define it this way, but this is looking back at my kids while they were

growing up. There were kids who wanted to do individual things and whitewater parks, skateboard parks, ah, like, frisbee golf, those appeal to different people, so people who get addicted to this might not get addicted to meth or whatever else there is to get addicted to. So there is value in this kinda stuff, rather than just more basketball teams, more whatever. They have a chance of getting in another crowd, so there is a value there. (Interview 12, Page 8)

Chapter 5: Discussion, Limitations, and Recommendations

Introduction

Chapter 5 serves to discuss the results of this study, as well as the limitations of the present study, and recommendations for future research. The chapter concludes with a summary of results.

Discussion

The purpose of this study was to investigate the social benefits provided to whitewater paddlers through urban whitewater park use. If social benefits were found to be present, this study was to further identify what those specific benefits were. An increased understanding of urban whitewater park paddlers' social benefits would present a potential means through which current and future urban whitewater parks could better plan, manage, and program their success. Urban whitewater parks, in this study, were positioned under the broader concept of urban waterfront redevelopment, a form of urban renewal. Social capital theory was used as a framework through which social benefits could be more aptly framed and clearly understood. Means-end theory was used as a framework to link and relate benefits to other physical and mental aspects whitewater paddlers experience through use of urban whitewater parks. In consideration of this study's purpose, framework, collected data, and results, the present study holds implications for academics and practitioners, pertaining to the whitewater paddler social benefits gained through use of urban whitewater parks. In addition to discussing the implication of this study's results, this chapter will discuss limitations of the present study and recommendations for future research.

The results of this study were presented twofold. First, in a hierarchical value map, and second, in select descriptive narratives from whitewater paddlers. Inclusion of the hierarchical value map allowed for the otherwise cumbersome set of qualitative data to be easily visually navigated, showing whitewater paddler benefits (positive consequences) and their connections to various urban whitewater park attribute and paddler values. Descriptive narratives were included to bring out the study's rich qualitative data and illustrate specific connections shown in the hierarchical value map. In order to ensure an understanding of the results of this study, this section will begin with a brief revisiting of the research questions as well as pertinent results. This will lead into a more broad discussion regarding the theoretical and practical implications of the present study.

Do urban whitewater parks provide whitewater paddlers with social benefits? If so, what are those benefits?

This study found that, yes, urban whitewater parks do provide whitewater paddlers with social benefits. Specific social benefits that directly and indirectly presented themselves to whitewater paddlers included the following consequences: social support, motivation, learning and development of skills, increased efficiency of time, development of confidence, sense of safety, multiuser appeal, and fun. Of these consequences the most frequently occurring included: Fun (n =45), Social Support (n =37), Learning / Development (n = 37), and Efficiency of Time (n =37). These benefits were uncovered during one-on-one interviews with research participants where meansend questioning techniques were used. Means-end theory understands positive consequences to be benefits. Social capital theory further adds that these benefits should originate through intentional social interaction in a social network and manifest themselves as trust and various forms of reciprocity among whitewater paddlers. Each of the benefits listed meets the criteria outlined by means-end theory and social capital theory.

The findings of this study support previous means-end research (Allman, Mittelstaedt, Martin, & Goldenberg, 2009; Goldenberg & Shooter, 2009) where similar or identical positive consequences (benefits), such as fun, acquiring a new skill, camaraderie, and social opportunities, were among the most frequently occurring. It is difficult to say with absolute certainty whether the social benefits found through this study can be exclusively associated with being positive consequences. Therefore, we cannot know to what degree whitewater paddlers benefited, only that they did benefit. However, we can say with fair certainty that there was an absence of negative consequences (risks) mentioned by whitewater paddlers in this study. Several research participants did mention the danger that comes with whitewater paddling, but this was seen as an inherent risk of their sport, not an attribute, consequence, or value attached to the urban whitewater park. In many cases whitewater paddlers perceived that the whitewater park decreased the dangers of whitewater paddling, due to the design and concentration of fellow paddlers.

The methodology and theoretical framework used in this study allowed for the discovery of social benefits as well as their complex interconnected relationship to urban whitewater park attributes and whitewater paddler values. Social network was an

attribute experienced by the whitewater paddlers that is crucial in establishing the origins of the identified social benefits when viewed through a social capital theory lens. Intentional investment in the urban whitewater park's social network provides an indicator of a source of social capital for whitewater paddlers. As understood by social capital theory, this investment in the whitewater park's social network gave way to resources embedded within the group. The benefit, social support, was the only resource directly accessed according to the hierarchical value map, but this led to other resources indirectly, such as motivation, learning and development of skills, increased efficiency of time, development of confidence, sense of safety, multiuser appeal, and fun. Among these benefits, trust and norms of reciprocity manifested themselves a great number of ways, whether it be though the provision of safety, exchanging coaching points, or cheering each other on while surfing. Furthermore, it can be seen that the values, sense of belonging and self-betterment, also become resources that were indirectly accessed.

When reviewing available and pertinent literature, only one study (Whiting, Pawelko, Green, & Larson, 2011) was uncovered that had also sought to investigate the social world of urban whitewater parks. In Chapter one, it was acknowledged that the present study should aim to strengthen and expand upon multiple aspects of the study by Whiting et al. (2011). This was accomplished. While the previous study included only kayakers, this study included rafters, canoeists, stand-up-paddle boarder, and kayakers. The previous study also lacked structure analysis, whereas this study utilized means-ends methodology. Finally, while the social themes uncovered by Whiting et al. (2011) are in line with the findings of this study, this study was enhanced through use of social capital theory.

The use of means-end theory and incorporation of social capital theory in this study's examination of whitewater paddler social benefits at urban whitewater parks enhances the potential for academics and practitioners to use these results towards the planning and management of current and future urban whitewater parks. Pertinent literature (Bernhardt & Palmer, 2007; Podolak, 2012) and personal communications (E. Dalhstrom, personal communication, September 25, 2015; M. Healy, personal communication, September 25, 2015) indicated that there is currently a lack of indicators for measuring the success of urban whitewater parks. One means of understand success in this context is through the presence of social benefits. Existing measures such as head counts do not allow for understanding user perceptions of an experience and are therefore insufficient (Jurkovic, 2014). Using the findings and methodology presented in this study, academics and practitioners have a means to advocate indications of success through the presence of social benefits at other whitewater parks.

It is important to note that while social networks remain an integral part of the experience for many paddlers, the initial attraction lies in the whitewater park design and location. This is especially relevant to those non-local paddlers who, as noted in demographic information, have traveled up to 31 hours to experience the benefits of Salida Whitewater Park. Whitewater paddlers associated good whitewater park design with characteristics such as intuitive features, friendly waves, large eddies that

accommodate multiple paddlers, overall park layout, and long pools below features that allow paddlers recovery time after dropping below a wave. Regarding the parks location, whitewater paddlers enjoyed access to other recreational resources, downtown shopping, local bar and restaurant venues, and proximal parking. Using the hierarchical value map as a guide, park design and park location have a direct link to many consequences previously mentioned as being indirectly related to the social support that comes from the use of a whitewater park. These consequences included learning and development, development of confidence, sense of safety, efficiency of time, and multiuser appeal.

Limitations of the Study

Although this study resulted in novel and interesting findings, there are limitations that bear mentioning. These limitations should not distract from the overall implications that transpire from this research; further they should not halt the ambitions of future researchers who wish to explore similar issues. However, acknowledging limitations is an important aspect of accountability and honesty in the research process.

First, Salida Whitewater Park provided a more than adequate setting for the purposes of this study, but there are limitations when considering the transference of results. Salida Whitewater Park was built on the most commercially run whitewater river in the United States. Previous to construction of the park Salida already had a reputation for whitewater, as evidenced by FibArk, America's oldest and boldest whitewater paddling festival. When you compare the reputation and geographic location of this area with other whitewater parks in the mid-west, for instance, there is a stark contrast. Paddlers using Salida Whitewater Park described it as a world class location, where as other whitewater parks, still high in quality, could be considered a locals only spot. Due to these potential site differences, the findings of this present study should not be uncritically applied at other whitewater parks without first analyzing unique aspects of each site. These unique aspects could include funding sources, geographic region, whitewater park design type, and local paddling culture.

Second, in regards to this study's sample size and use of means-end methodology, means-end theory literature dictates that a minimum sample size of 40 participants is required to achieve validity. This study was completed with a final sample size of 25. Yet, as mentioned in Chapter 3, there was still value in using a means-end approach. While acknowledging that this shortcoming did occur, inclusion of means-end methodology provided a strong framework for analyzing and interpreting the results of this study. This ultimately lent itself to a more structured approach than might have otherwise been achieved with standard qualitative analysis. Nevertheless, this study could have been enhanced by achieving a larger sample size.

Third, in relation to sample size, was the ability of the hierarchical value map to properly display the diversity and range of responses gathered during interviews guided by means-end questioning. Despite the study's small sample size, research participants had a great deal to say, a great number of ways. Even after a second round of coding that greatly consolidated the content categories, there were a number of outlier codes whose themes didn't accurately consolidate with other codes. When the final set of codes was visually displayed in the hierarchical value map it created a figurative spider web that only the primary researcher could effectively navigate. Once less frequent codes and outlier codes were removed from the data set, the hierarchical value map became more readable, but at the cost of lost data. In the future, one potential avenue to pursue in order to alleviate this issue would be to greatly increase the sample size. An increased number of responses could possibly add more depth than range to the content categories, thus eliminating outlier codes. This could result in a hierarchical value map that more fully displays the entirety of the study's data.

Fourth, previous recreation and leisure studies (Allman et al., 2009; Goldenberg & Shooter, 2009) using means-end methodology utilized a computer program, Laddermap Software (Gengler & Reynolds, 1995), for the analysis and presentation of results. The program assists the researcher in the assembly of content categories based on predetermined codes, performs code frequency counts, and fully assembles the hierarchical value map. Laddermap Software, or an equivalent program, were unavailable for this study. Therefore, coding, the assembly of content categories, laddering, and tallying frequencies, all steps in creating the hierarchical value map, as well as assembling the hierarchical value map itself, was done manually. This was a time consuming process that utilized inductive reasoning and involved continuous problem solving. Unlike studies that were able to utilize Laddermap Software, this study's manual process has a greater potential for human error. With that in mind, diligent and thoughtful processes were followed in order to achieve the highest quality outcomes possible.

Recommendations for Future Research

While this study was aimed at explaining benefits for the individual, social capital theory lends itself to application on a larger scale. As reviewed in Chapter 2, Putnam (2000) sought to explore the implications of social capital on an individual level, as this study did, and on a larger civic participatory level, which this study did not. Without formal study, this author cannot fairly state that attendance at an urban whitewater park, and participation in the social networks that occur there, leads whitewater paddlers toward greater civic involvement. This is, however, an aspect of urban whitewater parks, which intersects with social capital theory, which deserves attention in future research.

Another potential for future research was captured in the closing comments of an interview when the research participant noted the use of the park outside of whitewater boaters,

There are a lot of other uses for parks too. Like tonight there were boogie boarders out there trying to surf, there's people swimming through the hole.It's a multiuse thing and you don't have to be a kayaker to come down and enjoy it. Or even just the people that walk along the river walking, or throwing a stick to their dog or something. So there are a lot of uses for it and it has purpose for a lot of people. (Interview 11, p. 8)

Given this comment and sight observations by the primary researcher, an opportunity for future research would be to conduct an urban whitewater park study that included all inwater and on-shore users. In addition to capturing a more diverse sample and widening the implications of a social benefits study at an urban whitewater park, researchers would also have the potential to gain a better understanding of the role that whitewater paddlers themselves play in the larger whitewater park picture.

Although this study did not seek to understand the economic benefit whitewater paddlers provided to the local area, some inference can be made based on select research participants descriptive narratives. While existing studies (Hagenstad, Henderson, Raucher, & Whitcomb, 2000; Watkins and Bowers, 2014) focus more specifically and thoroughly on the economic impact of whitewater parks, several research participants in the present study indicated that visitation and spending money at shops, bars, and restaurants in downtown Salida was part of their paddling experience. Future studies examining the social benefits provided by whitewater parks can strengthen their implications by including more detailed questions regarding local spending and economic impact. Greater understanding of the connection between social and economic benefits would provide aid to academics and pragmatists alike in the management and development of current and future urban whitewater parks.

The present study stressed not only the importance of urban whitewater parks as they relate to community social functionality but also their ability to encompass aspects of urban waterfront redevelopment. Urban waterfront redevelopment, which falls within the scope of urban renewal, can be seen to lead to greater ecological, economic, and social benefits for people in urban areas. When comparing a site such as the US Whitewater Center in Charlotte, NC, an off-channel whitewater park constructed among the city's urban sprawl, with a site such as the Salida Whitewater Park, an in-channel whitewater park constructed directly downtown, a contrast in the benefits can be seen based not only on the intention behind the park's design, but also the park's location. It is pertinent that future studies, aiming to examine the benefits of urban whitewater parks, select sites that embody concepts of urban waterfront redevelopment and urban renewal such as urban in-channel whitewater parks.

Lastly, a general, but unquantified observation, is that whitewater paddlers display an above average knowledge of all things whitewater park, including their benefits. More experienced and skilled paddlers generally had an easier time articulating this knowledge. The final descriptive narratives featured in the results section were from two research participants whose comments occurred outside of the means-end questioning technique, but strongly represented this articulation of whitewater park knowledge. In each case, the research participants, gave insightful and thoughtful descriptions of the whitewater parks benefits, mentioning ecological, economic, and social-cultural aspects. An avenue for future research would be to compare whitewater paddler's knowledge of ecological, economic, and social-cultural whitewater park benefits against the knowledge of other stakeholders and park users. Implications of this research could affect how future whitewater parks approach stakeholders in the preconstruction planning process to increase the benefits derived by all.

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Appendix A: Structured Interview Script

Hello, my name is Karl Schmidt; I'm a graduate student at Ohio University. I'm currently looking for whitewater paddlers at the Salida Boating Park to interview. Do you consider yourself a whitewater paddler? Are you 18 years of age or older? All the information I collect in the interviews will be used for my master's thesis at Ohio University. These interviews normally take between 10-15 minutes. Would you be interested in being interviewed? I'd like you to take however long you need and read this consent form. [Consent document administered] Once you are done reading it feel free to ask any questions, then let me know with a verbal "yes" or "no" if you are interested in participating in this study. This is a completely voluntary study. [Consent given] Thank you. I do use digital voice recording, but you will remain anonymous in my research. Is it ok if I turn on the digital voice recorder? [Permission given]

[Recorder On]

Just to repeat what was already asked, do I have your permission to interview you? Can record your voice today? And you realize that this in entirely voluntary? [consent given] I'm going to start into the interview, but you can feel free to end the interview at any point or ask me questions about my line of inquiry should you feel it necessary.

What is your name?

How far from home did you travel to be here today?

Where are you from?

How old are you?

And, I know I've already asked you once, but do you consider yourself a whitewater paddler?

How long have you considered yourself a whitewater paddler?

Using the whitewater rating scale as an indication of your skill level, class I being

novice, class V+ being expert, what is your whitewater paddling skill level?

How would you describe the frequency of your whitewater paddling?

Did you paddle with anyone else today? Did you previously know them?

Had you used Salida Boating Park previous to today? How often do you visit this park to paddle?

What time(s) of year do you visit? Fall, Winter, Spring, Summer? (only ask if they have been here more than once)

How long do you stay when you're paddling at Salida Boating Park?

At this point I'd like you to focus on your experience(s) paddling at the Salida Boating Park and list for me your top three outcomes or take-a-ways achieved while padding at Salida Boating Park. Can you name those for me? This should be from your point of view only.

[research participant names three outcomes or take-a-ways]

Any other outcomes or take-a-ways you achieved while paddling at Salida Boating Park today come to mind?

[research participant makes any additions]

Ok, so what I heard you say was <u>(repeat outcomes or take-a-ways that research</u> participant listed). Is that accurate?

From the list I just spoke back to you I want you to pick the top three outcomes or take-a-ways and rank them from most important to least important from your point of view. One will be the most important to you, three will be the least important to you.

I heard you say ______ as three, _____ as two, and ______ as one. Is that accurate?

I'm now going to ask you more specific questions about all three of those. My line of inquiry may sound a little childish and silly, as I'll be asking the question "why?" a lot, but I want you to continue answering my questions as long as you can. Let's start with number one.

I heard you say _____ was important to you?

Why is _____ important to you?

(Clarify answer)

I heard you say ______ was important to you, is that accurate?

Why is _____ important to you?

(Clarify answer)

(Repeat cycle until research participant says "I don't know" or answers become

repetitive)

(Repeat cycle of questions with remaining key outcomes/take-a-ways)

Thank you.

[Note date, time, and participant number at end]

Appendix B:	: Institutional Rev	iew Board (IRB)	Approval Forms
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Project Number	16-E-192
Project Status	APPROVED
Committee:	Office of Research Compliance
Compliance Contact:	Shelly Rex (<u>rexs@ohio.edu)</u>
Primary Investigator:	Karl Schmidt
Project Title:	Exploring Urban Whitewater Park Social Benefits
Level of Review:	EXEMPT

The Ohio University Office of Research Compliance reviewed and approved by exempt review the above referenced research. The Office of Research Compliance was able to provide exempt approval under 45 CFR 46.101(b) because the research meets the applicability criteria and one or more categories of research eligible for exempt review, as indicated below.

IRB Approval:	05/18/2016 10:41:04 AM
Review Category:	2

Waivers: Waiver of signature

If applicable, informed consent (and HIPAA research authorization) must be obtained from subjects or their legally authorized representatives and documented prior to research involvement. In addition, FERPA, PPRA, and other authorizations must be obtained, if needed. The IRB-approved consent form and process must be used. Any changes in the research (e.g., recruitment procedures, advertisements, enrollment numbers, etc.) or informed consent process must be approved by the IRB before they are implemented (except where necessary to eliminate apparent immediate hazards to subjects).

It is the responsibility of all investigators and research staff to promptly report to the Office of Research Compliance / IRB any serious, unexpected and related adverse and potential unanticipated problems involving risks to subjects or others.

This approval is issued under the Ohio University OHRP Federalwide Assurance #00000095. Please feel free to contact the Office of Research Compliance staff contact listed above with any questions or concerns.



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