SENSE OF PLACE AND THE REDESIGNATION OF THE

GATEWAY ARCH NATIONAL PARK

A Thesis Presented to

The Faculty of the Graduate School

At the University of Missouri – Columbia

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Geography

By

SETH T. KANNARR

Dr. Michael A. Urban – Thesis Supervisor

April 2022
Approval

The undersigned, appointed by the Dean of the Graduate School, have examined the
Thesis entitled

SENSE OF PLACE AND THE REDESIGNATION OF THE

GATEWAY ARCH NATIONAL PARK

presented by Seth T. Kannarr,

a candidate for the degree of Master of Arts in Geography

and hereby certify that, in their opinion, it is worthy of acceptance.

________________________________________
Professor Michael A. Urban – Geography

________________________________________
Professor Soren Larsen – Geography

________________________________________
Professor Karen Piper – English
Dedication

I dedicate this thesis to my grandfather John Kannarr in Glendale, AZ for his above and beyond efforts in exposing me to the wonders of the natural world and inspiring me to work hard to earn success in my education. From a young age, he taught me an appreciation for learning, critical thinking, and taking care of what is most important in life. His generosity and support have set a high example for which I hope to emulate throughout my life as I grow in age and wisdom. I want to thank him for all our travels together, all our Denny’s stops, and for all the advice, stories, and quips we have shared. He is an inspiration and I love him dearly. Thank you, Grandpa!
Acknowledgements

I would like to thank the faculty of the Department of Geography for providing me with the opportunity to come to Mizzou on a Teaching Assistantship for GEOG 1100/1200 and for sharing their knowledge, expertise, experience, and wisdom over the last two years. Your tutelage and support have been instrumental to my development as an aspiring academic, so thank you for all your efforts and time!

I want to extend thanks to Dr. Larsen and Dr. Piper for their time and effort with serving on my thesis committee, as well as a special thanks to my adviser Dr. Urban for taking me on as an advisee last Spring as I pivoted geographic specialties and thesis topics. You were very helpful in identifying my strengths and weaknesses as a researcher and guiding me through this process. Thank you for your sound metaphor play and setting the example for what a well-rounded, disciplined geographer looks like!

Another set of thanks goes to my fellow graduate students in the “fish pen”! Between the funny memories and moments of collective terror, I am glad to have met you all! A special shout out to Sarah for being my writing buddy and TA partner, we did it!

Thank you to my family, friends, and mentors for all their support and encouragement over the last couple of years. Sometimes it “takes a village” to prepare a child for the realities of the adult world, and I know I would not be successful here today without you all. Finally, a special thanks to my girlfriend Elizabeth for her wholehearted love, support, and distraction from this COVID-19 pandemic, to which I can thank for providing an unprecedented and unforgettable “new normal” experience.
### Table of Contents

I. **Title Page**  
   Page I  

II. **Approval**  
   Page II  

III. **Dedication**  
   Page III  

IV. **Acknowledgements**  
   Page IV  

V. **Table of Contents**  
   Page V – VI  

VI. **List of Figures**  
   Page VII – VIII  

VII. **Abstract**  
   Page IX  

VIII. **Chapter 1: Introduction**  
   **Page 1 – 11**  
   
   a. **Criteria for a ‘National Park’**  
      Page 2 – 6  
   
   b. **Historical Context of the ‘National Park’ Designation**  
      Page 6 – 8  
   
   c. **Historical Context of the Gateway Arch in St. Louis**  
      Page 8 – 11  

IX. **Chapter 2: Literature Review**  
   **Page 12 – 22**  
   
   a. **Place in Geography**  
      Page 12 – 14  
   
   b. **Place and Place Naming**  
      Page 14 – 18  
   
   c. **Renaming Protected Areas**  
      Page 18 – 22  

X. **Chapter 3: Methodology**  
   **Page 23 – 37**  
   
   a. **Survey Creation and Distribution**  
      Page 26 – 30  
   
   b. **Yelp Review Collection**  
      Page 30 – 31  
   
   c. **Data Coding Process**  
      Page 31 – 34  
   
   d. **Coding Analysis with NVivo Software**  
      Page 34 – 36  
   
   e. **Z-Score Statistics Tests**  
      Page 36
f. Map Creation

XI. Chapter 4: Results

a. Maps

b. Word Clouds

c. Survey Respondent Demographics

d. NVivo Coding Results

e. Z-Score Test Results

f. Combined Thematic Code Total Diagrams

XII. Chapter 5: Discussion & Conclusion

a. What Makes a ‘National Park’

b. Status of the Gateway Arch

c. Limitations

d. Future Research

XIII. References

XIV. Vita
## List of Figures

I. **Figure 1** – Map of All National Park Service Units  
   Page 4

II. **Figure 2** – Photo of the JNEM Sign  
    Page 9

III. **Figure 3** – Photo of the Gateway Arch National Park  
    Page 10

IV. **Figure 4** – Photo of the GANP Sign  
    Page 11

V. **Figure 5** – Theoretical Framework Diagram  
    Page 25

VI. **Figure 6** – Image of Qualtrics Survey Preview  
    Page 27

VII. **Figure 7** – Table of Qualtrics Survey Questions  
    Page 29

VIII. **Figure 8** – Table of Codes and Themes  
    Page 33

IX. **Figure 9** – Map of Thiessen Polygons and National Parks  
    Page 39

X. **Figure 10** – Map of Qualtrics Survey Respondents  
    Page 39

XI. **Figure 11** – Word Cloud for Yelp Reviews of GANP  
    Page 41

XII. **Figure 12** – Word Cloud for Yelp Reviews of YNP  
    Page 42

XIII. **Figure 13** – Word Cloud for Survey Q1  
    Page 43

XIV. **Figure 14** – Word Cloud for Survey Q3  
    Page 44

XV. **Figure 15** – Word Cloud for Survey Q7  
    Page 45

XVI. **Figure 16** – Word Cloud for Survey Q9  
    Page 46

XVII. **Figure 17** – Survey Demographics by Age  
    Page 47

XVIII. **Figure 18** – Survey Demographics by Gender  
    Page 48

XIX. **Figure 19** – Survey Demographics by Ethnicity  
    Page 48

XX. **Figure 20** – NVivo Coding Analysis Results for Yelp Reviews  
    Page 50

XXI. **Figure 21** – NVivo Coding Analysis Results for Survey Qs  
    Page 51
XXII. Figure 22 – Z-Score Test Results for Yelp Reviews  Page 52
XXIII. Figure 23 – Z-Score Test Results for Q1 & Q3  Page 53
XXIV. Figure 24 – Z-Score Test Results for Q1 & Q7  Page 54
XXV. Figure 25 – Z-Score Test Results for Q1 & Q9  Page 55
XXVI. Figure 26 – Z-Score Test Results for Q3 & Q7  Page 56
XXVII. Figure 27 – Z-Score Test Results for Q3 & Q9  Page 57
XXVIII. Figure 28 – Z-Score Test Results for Q7 & Q9  Page 58
XXIX. Figure 29 – Summary Chart of Survey Z-Score Tests  Page 59
XXX. Figure 30 – Thematic Code Totals for Values/Characteristics  Page 60
XXXI. Figure 31 – Thematic Code Totals for Yellowstone NP  Page 61
XXXII. Figure 32 – Thematic Code Totals for Gateway Arch NP  Page 62
Abstract

The redesignation of the Jefferson National Expansion Memorial to the Gateway Arch National Park in 2018 by the Trump administration spurred debate about the distinct naming designations utilized by the National Park Service (NPS) in the United States. Place naming is a significant factor in shaping the 'sense of place' that people experience with these protected areas. In this study, I seek to better understand how 'sense of place' with the Gateway Arch has been affected by the contentious redesignation to a 'National Park'. To assess 'sense of place', I gathered data on values and characteristics people associate with 'National Parks' and the Gateway Arch. Primary data was collected from an online Qualtrics survey of adult U.S. residents in the “National Park Service (Fan Page)” group on the social network Facebook and secondary data pulled from published Yelp reviews. Together, these qualitative data were used for a two-part coding analysis with NVivo software that provided statistics for three main themes: environmental characteristics, intrinsic values, and visitor experience. Results showed that people associate environmental characteristics the most with 'National Parks' at large, while the Gateway Arch is most associated with intrinsic values. These results, in addition to the historical background of the NPS system and the Gateway Arch, is crucial in understanding the critical disconnect between how ‘National Parks’ are broadly perceived and the current designation of Gateway Arch National Park.
Chapter 1: Introduction

It can be simply put that ‘National Parks’ are the best idea we ever had (Stegner 1983). They serve as a mecca of outdoor recreation and appreciation, and effuse a reputation of beauty, heritage, and wildlife around the world (Harmon and Putney 2003). Millions of people visit these splendid places every year, and the U.S. ‘National Parks’ are especially well-known amongst the American public. As a geographic concept, ‘National Parks’ serve as centripetal forces that evoke feelings of national pride and bring people together with a sense of unity and shared heritage (Ross-Bryant 2012). These are valuable and cherished places that provide an aura of mythos about their history, purpose, and opportunities for all people to partake.

The National Park Service (NPS) in the United States currently manages a total of 423 units, known generally as “parks” (NPS 2022). Within these 423 NPS units are 19 official and distinct naming designations, ranging from ‘National Park’ and ‘National Monument’ to ‘National Seashore’ and ‘National Battlefield’. Although naming designations are theoretically set by NPS guidelines based on the general characteristics of each kind of protected site, the specific designation of a unit may at times be shaped by congressional action instead and can yield contentious results (Condé Nast Traveler 2022).

Recent attention concerning the redesignation of the Jefferson National Expansion Memorial (JNEM) to Gateway Arch National Park (GANP) in February of 2018 highlights debates about these designation categories (Luong 2018). One side of the argument feels that the designation of ‘National Park’ is unbefitting of the Gateway Arch.
due to the lack of “nature” and its urban setting in downtown St. Louis, Missouri. The other side finds the NPS naming designations to be insignificant and celebrates the redesignation as a boost of attention and tourism to the site. This speaks to the idea of ‘sense of place’: what feelings and perceptions that people have regarding a particular location or space (Relph 1976). Individuals hold their own perceptions of what values and characteristics ‘National Parks’ are associated with, and these may or may not match up with the actual characteristics of these places. In this study, I seek to answer the following central research question: how has the redesignation of the Gateway Arch National Park affected its sense of place?

It is worth acknowledging that this study comes from a “settler” perspective on ‘National Parks’, as the views and opinions of the common Americans shared here may not be fully representative of all people. Indigenous peoples in particular have a complicated history with U.S. lands, as there is also a movement to remove public access from ‘National Parks’ and return the land to native tribes (Treuer 2021). These important spaces may mean different things to different communities, and the arguments presented here are not the zenith of thought on this topic. I seek to enlighten understanding on sense of place, protected areas, and place renaming for all people, and intend to do so respectfully for all people.

**Criteria for a ‘National Park’**

The formal criteria utilized by the National Park Service (NPS) and Congress to designate a U.S. ‘National Park’ are very qualitative and leave a lot of room for interpretation and subjectivity. The NPS criteria used are distinct from other authorities that shed light on what qualifies a national park, in any nation. This begs the question of
how to define a ‘National Park’. The International Union for the Conservation of Nature (IUCN) is the leading international governing organization for protected areas, nature conservation, and sustainability of nature resources, and has a membership of over 1,400 governmental and non-governmental organizations (IUCN 2016). The IUCN identifies a national park as:

"Large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities."

This definition stresses the idea of a national park being "natural", and the idea of ecosystem characteristics and biodiversity as part of a national park. It also notes the scientific opportunities and recreational activities that take place at national parks. Additionally, the IUCN clearly distinguishes national parks as distinct from other 'Protected Area Categories'. A 'National Park' is Category 2, with 'Strict Nature Reserves and Wilderness Areas' as Category 1, and 'National Monuments or Features' as Category 3. The IUCN website details the differences between these categories, identifies distinguishing features, ongoing issues, and more.
The U.S. National Park Service (NPS) has an array of 423 units that are protected under the Department of the Interior. However, only 63 of these units are designated as 'National Parks'. The NPS details the various naming designations, in which it divides all 19 designations between 'Natural Values' and 'Importance in History' (National Park Service 2016). The designation 'National Park' is nested within the 'Natural Values' category and is described with this language: "Generally, a national park contains a variety of resources and encompasses large land or water areas to help provide adequate protection of the resources." In contrast, a 'National Monument' is described as: "A national monument is intended to preserve at least one nationally significant resource. It is usually smaller than a national park and lacks a diversity of attractions." Definitions are provided for other designations as well, ranging from 'Wild and Scenic River' to 'National
Historical Park’ and 'National Memorial'. These definitions are all vague and subjective, serving as less detailed and clear than the IUCN's definitions and descriptions.

The 'National Park' description provided by the NPS alludes to having a large total area as an important factor, as well as protection and diversity of resources. However, these definitions do not mention the political mechanisms behind their designation. 'National Parks' must be protected and set aside via an act of Congress, while 'National Monuments' are established by executive order via the Antiquities Act of 1906. It is common for a U.S. President to establish a 'National Monument' to protect a location faster than Congress could, and often later 'National Monuments' are then redesignated as 'National Parks' via an act of Congress after a few decades. The two most recent examples of this include 'White Sands National Monument' in New Mexico (Heinrich 2019) and 'Pinnacles National Monument' in California (Farr 2013), redesignated as 'National Parks' in 2019 and 2013 respectively.

The criteria for entry by a protected area into the NPS system is distinct from the criteria for determining the type of naming designation a protected land is given (Vincent 2013). This criteria set is helpful for when deciding whether a protected area is better protected by the resources of the local government, state government, or the federal government. Here are the criteria provided by the NPS for entry into the NPS system (to join the 423 protected units):

"To be eligible for favorable consideration as a unit of the National Park System, an area must meet the following criteria:

1) Possess nationally significant natural, cultural, or recreational resources;
2) Be a suitable and feasible addition to the National Park System;"
3) Require direct NPS management instead of protection by some other
government agency or by the private sector.

If a unit under study meets these criteria, it can be added to the National Park
System by an act of Congress.”

Debates over the designations within the ‘National Park System’ are not focused on
whether a place is intrinsically worthy of being protected under the jurisdiction of the
National Park Service, but rather which specific naming designation each NPS unit is
assigned and marketed under.

**Historical Context of the ‘National Park’ Designation**

The naming designation ‘National Park’ historically precedes even the
establishment of the National Park Service under the Organic Act signed into law by
President Woodrow Wilson in 1916 (Dilsaver 1994). Yellowstone was established as the
world’s first national park in 1872 by Congress under the Yellowstone Act. At the time,
the act of setting aside a large tract of public land to be used for conservation and
recreation was unprecedented. “For the benefit and enjoyment of the people” is an aptly
used tagline in relation to Yellowstone, a place so special and grandiose that it should be
protected forever, under the argument of conservationists like Ferdinand Hayden (Merrill
2003).

The establishment of Yellowstone National Park, to be managed by the Secretary
of the Interior, eventually led to many other large significant land areas to be protected by
U.S. Congress and designated as ‘National Parks’, such as Sequoia, Yosemite, Mount
Rainier, and Crater Lake. Conversely, the Antiquities Act of 1906 offered a secondary
pathway to land area protection by way of executive order to create ‘National
Monuments’. Under this act, the President of the United States is granted the authority to set aside public land to be protected as a ‘National Monument’ via executive order bypassing the lengthy Congressional process for creating a ‘National Park’ (Quick History of the National Park Service (U.S. National Park Service) n.d.). This was done in response to vandalism of historically and culturally significant Indigenous sites in the United States and has been reserved for land areas much smaller in size and diversity of resources than a ‘National Park’ would generally entail. Examples include Devils Tower in Wyoming, El Morro in New Mexico, and Montezuma Castle in Arizona, all established as ‘National Monuments’ under the authority of the Antiquities Act in 1906 by President Theodore Roosevelt.

Over the years, the number of ‘National Parks’ and ‘National Monuments’ continued to grow as more areas of land were found worthy of being set aside for protection under the federal government. The Organic Act of 1916 also established the National Park Service which enabled centralized management of this growing system within the Department of the Interior. In 1933, an Executive Order transferred over 50 military parks, cemeteries, battlefield sites, monuments, and memorials from the War Department and Forest Service to be managed by the National Park Service within the Department of the Interior (Dilsaver 1994). This was significant as it greatly expanded the diversity of protected land areas under the Department of Interior and increased the number of unit designations from just ‘National Parks’ and ‘National Monuments’, to having ‘National Military Parks’, ‘National Battlefields’, and ‘National Memorials’. However, it was not until the General Authorities Act of 1970 that the National Park Service would begin to realize its full potential, better organize itself, and create naming
designations such as ‘National Seashore’, ‘National Recreation Area’, ‘National Scenic River’, and more to better differentiate the diverse and varied protected areas within it (Dilsaver 1994). Since then, the National Park Service has continued to grow and diversify, and today manages units under 19 distinct naming designations. The complex history of the U.S. National Park system helps to better explain the origin of the ‘National Park’ designation; and distinguish it from all other naming designations.

**Historical Context of the Gateway Arch in St. Louis**

The story of the Gateway Arch begins in 1933 when Luther Ely Smith worked with fellow St. Louis city leaders to create a non-profit group entitled the “Jefferson National Expansion Memorial Association (JNEMA)”. The goal of this association was to create a public and permanent memorial to commemorate westward expansion of the United States, especially the influence of President Thomas Jefferson and the journey of famous explorers Meriwether Lewis and William Clark. The building of a large memorial was also aimed at helping to revive the declining St. Louis riverfront and stimulate the local economy. Discussions about potential funding by the federal government by JNEMA led to an agreement that the future memorial would be managed by the National Park Service.

National economic considerations and dwindling budgets meant that it was not until 1945 that an architectural competition was published to gather potential designs for this public memorial. Eero Saarinen won the competition with his iconic tall arch design. Construction of this massive monument began in 1959 and was not finished until its final dedication in 1967. It took $13 million to construct the JNEMA, with the $11 million for the arch itself being funded 75% by the federal government and 25% by the City of Saint...
Louis (Blahut 2015). The remaining $2 million for the transportation system inside the arch to bring visitors to the top was funded by the Bi-State Development Agency.

![Image of JNEM Sign](Figure 2) Photo of the JNEM Sign (CTS2003 2013)

The Jefferson National Expansion Memorial was originally considered an eyesore by residents in St. Louis, but quickly became intertwined with the identity of St. Louis and a famous landmark around the United States (Brown 1984). Despite its rise to prominence, the memorial grounds and infrastructure began to show its age after over four decades in service. In 2010, the Gateway Arch Park Foundation (GAPF) began a capital campaign to revitalize the grounds of the Gateway Arch. This campaign put forward a proposal to connect the Old Capitol building with the Arch via a greenway as was envisioned in Saarinen’s original design and planned to update the Visitor Center and museum underground. This 380-million-dollar renovation concluded in 2018, but not before this campaign by the GAPF pushed for a name change of the site.
The ‘Jefferson National Expansion Memorial’ name had been long considered unwieldy by visitors and residents alike, and most people refer to the site by its central feature, the Gateway Arch. The GAPF campaign sought a name change to replace ‘Jefferson Expansion’ to ‘Gateway Arch’, and to redesignate it from a ‘National Memorial’ to a ‘National Park’. This would highlight and emphasize the work put into the surrounding grounds and refreshed park aesthetic and would better reflect how residents already refer to the structure. It was also suggested that the site’s redesignation as a ‘National Park’ would help attract more tourism and national recognition, as is the case with the recent redesignations of ‘Pinnacles National Park’ in 2009 and ‘Indiana Dunes National Park’ in 2019.

During a congressional hearing for the ‘Gateway Arch National Park Designation Act’, the deputy director of the National Park Service gave a dissenting statement on the matter, noting that the Gateway Arch does not fulfill the NPS’s criteria for the ‘National
Park’ designation and would be better suited as a ‘National Monument’ or ‘National Memorial’. Despite this protest, the act proceeded and was signed into law by President Donald Trump on February 22nd, 2018 (Clay 2018). All advertising, marketing, signage, and information has since been updated to reflect the new official name: “Gateway Arch National Park”.

Many visitors and outdoor enthusiasts on online forums and social media have questioned this name change, associating the ‘National Park’ designation with places like Yellowstone and Yosemite. The debate may be strongest within the ‘National Park Service Fan Page’ community on Facebook, where concerns over the new identity of the Gateway Arch and the relative significance of naming designations within the National Park Service have been raised. This work seeks to explore this debate and describe what values and characteristics are most often associated with making a ‘National Park’ a ‘National Park’, or in other words, what sense of place is expected for people at ‘National Parks’.

*Figure 4) Photo of the GANP Sign* (Bryant 2018)
Chapter 2: Literature Review

Place in Geography

The term ‘place’ carries a particular conceptual meaning to geographers. One could define place as a particular point in space, or a specific location. However, to geographers, place is what gives meaning to space (Tuan 1979). Place is descriptive of the importance of the area in focus and offers unique qualities of this area in comparison to other areas. These are often represented in ‘human’ and ‘physical’ characteristics of an area or location (Cresswell 2014). The physical setting and environment of an area may also play a critical role in shaping social behaviors and routines at a place (Agnew 1987).

Places have names, and these names help to portray the identity and utility of an area. As one can reminisce about memories of their past, all it may take is one word or name to conjure all the feelings, senses, and experiences one had at a particular location. They can describe this place from their perspective, which may differ in experience entirely from another person regarding the same place (Mazey and Lee 1983). Place is a powerful concept, in which it gives meaning and value to the space in which all time and history has taken place.

This sense of importance of a particular place can translate into ‘place meaning’, known as ‘sense of place’ in geography literature (Tuan 1977). Sense of place has been used as a tool to assist in engaging communities to take action on issues, and studies have found that the greater an individual’s sense of place, the greater their commitment is to the place, and the greater their involvement (Axford and Hockings 2005). Positive place meaning for people also contributes to increased place-benefitting behavior (Stedman
Additionally, examples of community activism and creative practices help to increase positive place meaning in urban areas, suggesting a positive correlation between community involvement and sense of place (Buser et al. 2013). This sense of place tends to be temporary, as place meaning is not always automatically accessible in memory as assumed, therefore more recent visitation or residency of a place draws stronger feelings of sense of place (Bugden and Stedman 2019).

Sense of place correlates with place attachment, suggesting that emotional links between humans and places are common (Hernández, Hidalgo, and Ruiz 2020). This has been well studied in the field of environmental psychology for decades and is becoming increasingly relevant to human geographers looking at relationships between people and places (Lewicka 2011). Place attachment shows up in cultural expressions of art, music, customs, and local traditions (Smith, Siderelis, and Moore 2010). Similar to the relationship between community involvement and sense of place, place attachment to one's neighborhood seems prerequisite for participation in neighborhood events (Zhu 2020). Place attachment is also significant in influencing pro-environmental behavior in outdoor places such as “National Parks” (Ramkissoon, Weiler, and Smith 2012).

Akin to sense of place and place attachment, place identity is critical for understanding the behavior of people from different places (Relph 1976). When a collective group of people have shared beliefs about their place that match the ideological beliefs of the people in power, place identity arises (Harner 2001). This place identity can be politicized by a local group to resist outsiders when they feel their way of life will be negatively affected (Larsen 2004). Place identity can also be signified via semiotics with
individual symbols, signs, logos, or logos that correspond to local qualities or attributes of what makes that place unique (Peterson 1988).

Place framing is an additional concept that involves people conceptualizing place to accomplish their aims. Just as sense of place, place attachment, and place identity can all be utilized in motivating people to take action, place framing can enable citizens to make collective action structures to be organized for activism efforts (Martin 2003). Conversely, place framing has been used by tourism marketing to paint towns and areas as fulfilling a particular image, such as that of the idyllic countryside (Mair and Duffy 2021). Place framing may be a subjective yet powerful tool that can assist with "selling” a place, or place making.

Altogether, these place-oriented concepts serve as a motivator to effective place-based collaboration and serve as the foundation of what is known as ‘place making’ (Patriquin and Halpenny 2017). Place making is all about how people shape the image and likeability of places they spend time in (Lew 2017). Place making is partly the responsibility of all people in a place - how they work together to develop places over time shapes place making, especially in the context of developing global cities (Friedmann 2010). However, efforts in re-developing older, run-down places to improve placemaking end up in conjunction with gentrification and raise questions of whether these efforts are place making, or “place-masking” (Fincher, Pardy, and Shaw 2016).

**Place and Place Naming**

Critical to place making are the words and language we use to describe our feelings and perceptions of the places in discussion. When discussing a place, one must
use a place name to specify which place they are referring to. Thus, place naming is a central function of place making and affects how we perceive places. The origin of a place name speaks to the motivations of people at the time and reflects the cultural traditions of the time in which a place is named (Stewart 1958). Place naming allows for simple reference to a place in communication yet can carry deep associations with it. This is especially apparent in western landscapes where Indigenous names are often replaced with more “English-friendly” names (Basso 1988; Tamisari 2009). Over time, people realized that some place names are problematic, and scholars began to identify the conflict that arises with names and remembrance (Kearns and Berg 2002). As a result, place names have begun to change due to political correctness, cartographic digitization and standardization, and more (Monmonier 2008).

It is clear that place names are key in the social construction of space and give meaning to place (Berg and Kearns 1996). Additionally, place naming is rich with the narrativity of a place (Ryan, Foote, and Azaryahu 2016). Attached to a place name are an array of attitudes, emotions, and stories that reveal what a place means to former and current residents of a place (Baker 2001). These place names, often referred to as toponyms, create a “spatial narrative” that affects how people interact with and interpret the history of a place (Azaryahu and Foote 2008).

Not only do place names give meaning to space and provide narrative, place names can also be intended to evoke particular images and associations within people (Alderman 2008). Thus, place naming influences image and commodification of place. Over time, land developers became more aware of the “image-generation potential” of place names and have chosen names for neighborhoods that bring up mental images of
the traditional, rural American past (Zelinsky 1989). A community name can help set a ‘heritage ambience’ and provide a strong regional or community image as a result (Aplin 2002). This practice has been applied to gaming casinos as well, as the name of a casino gives the first impression of the property’s identity (Raento and Douglass 2001). To further highlight the economic potential of a place name, place names are significant for the commodification of tourism, as shown with souvenirs like postcards, marketing strategies for tourism destinations, and fandoms associated with celebrated places (Light and Young 2015).

Place names also influence social memory. Scholars have looked at the people who have had the power to name places, and the values place names represent (Roberts 1993). Place names can have “performative aspects” where place naming is often used strategically for establishing identity boundaries (Myers 1996). Place names may be utilized for commemorative purposes, and thus can be studied as being ‘symbolic monuments’ that have a lasting legacy of influencing public memory (Grounds 2001). In a way, these place names serve as signs that point people to elements of the landscape they see as historically important (Dwyer and Alderman 2008).

Consequently, place names provide symbolic capital, as in recognition of inherent value or honor earned that a place has over others. These place names are used to distinguish and give status to the landscapes and people they represent (Alderman 2008). Place names are often a part of the built environment, and the signage that is used to mark place names are not there for just simple labelling, but to identify and showcase the place with strategic and symbolic power (Bigon and Dahamshe 2014). As a concept, symbolic capital requires a sense of exclusivity, and the process of intentionally keeping away
“outsiders” (Mitchell 1997). The increase in the symbolic capital of a place over time may elevate the status of a place, but additionally hide away the power relationships and material inequalities that are always at play (Manza and Sauder 2009). The identity a place itself has, in conjunction with its name, serves as a form of symbolic capital worth studying as well (Duncan and Duncan 2001). As an example, street names carry their own form of symbolic capital, and when renamed, ultimately cause political clashes as one group is erased from social memory and another group is recognized into perpetuity (Rose-Redwood 2008).

As noted above, place names can have political implications, and place name studies over time have shifted to focus on politics and new approaches in addressing issues with place names (Rose-Redwood, Alderman, and Azaryahu 2010). An example of this is the new “critical placemaking”, which is being utilized as a tool for reclaiming public space for public use (Toolis 2017). Recently, place-naming procedures have been called into question and have become controversial, especially as recent namings and re-namings are well-documented now with increased social media dissemination and the increasing accessibility of the internet (Azaryahu, Caiazzo, and Coates 2020). Broadly, place names commonly hold on to previous colonization of space and place, and reclaiming Indigenous names and integrating them into our place names has helped to combat this ‘social memory’ (Rose-Redwood 2016). Additionally, campus landscapes have experienced place-naming controversies, where progressives challenge antiquated names, while conservatives see these efforts as being symptoms of political correctness, and campus authorities struggle to implement effective new policies that appease either side (Brasher, Alderman, and Inwood 2017).
Oftentimes the most practical solution to place naming conflicts is to rename places. Simply put, to rename a place is all about replacing what is perceived as an inappropriate name for a more appropriate name (Azaryahu, Caiazzo, and Coates 2020). However, this often brings additional controversy, and often practical concerns over renaming places by local citizens (Crețan and Matthews 2016). When successfully done, renaming places with historically problematic names can heal communities and make a positive impact (Alderman and Reuben 2020). The most prominent and common examples of place renaming are that of public streets, which often carry the names of historical figures and regimes, and thus remove them from public memory over time after popular controversy (Azaryahu 1996; Alderman 2000; Light 2004; Rose-Redwood 2008). However, the significance of place renaming and the sense of place it alters extends to protected areas such as ‘National Parks’ as well.

**Renaming Protected Areas**

Protected areas, not limited to just ‘National Parks’, all exist as places. They are spaces with names, which gives it an identity and establishes it as a place. People visit these protected areas and come away with different experiences and perceptions of the locations they travel through. Protected areas are special places, as they are generally well-known and have an above-average level of significance and regard. It is for these reasons, fueled by either history, natural beauty, or cultural values, that these areas are protected in the first place. Most protected areas are managed with visitation and recreation in mind and can provide pride and unity for a region or nation.

Ongoing research about accessibility and visitor experience with ‘National Parks’ highlights the importance of ways in which visitors encounter these protected places.
Welcoming entrance signs and danger signs shed light on visitor perception of expected behavior and representation, suggesting that additional care be taken regarding preparing materials that visitors interact with in their experiences within ‘National Parks’ (Youngs 2020). Additionally, concerns about the low proportion of minority visitation to ‘National Parks’ brings attention to what may deter some groups from experiencing protected places such as problematic management policies, distasteful representation, or even racialized place names within protected areas (Weber and Sultana 2013). All of this highlights the critical importance of how place naming in protected areas affects sense of place for visitors and the public.

Protected areas have been the subject of many discussions and controversies regarding the given name of a place. Legal cases have been filed regarding whether place names are considered public and free to use or can be privately trademarked for profit (Brantley 2011). This includes merchandise and publications using the names of places within ‘National Parks’ such as Yellowstone National Park’ and ‘Hot Springs National Park’ (Ault 2017). There have also been times where interest groups lobby for places such as wilderness areas to continue to have no name, as some “blank spots” on the map are intentionally nameless to protect a cultural characteristic of a region (Julyan 2000). Conversely, outspoken individuals such as Walt Whitman pushed for more American place names to be of Indigenous origin, believing them to be more authentic and better sounding (Dressman 1978). Most of the attention is focused on the renaming or redesignations of these protected areas.

Throughout the twentieth century there have been numerous examples of place renaming in the United States. These can include large, protected areas with entire name
and naming designation changes or acute examples of toponymic policy decisions affecting the resulting name of place. An example of this was the resistance of the U.S. Board of Geographic Names (USBGN) to allow the diacritical mark to be used in the State of Hawaii (Herman 1999). The eventual acceptance of the diacritical mark by the USBGN in 1992 allowed for a resurgence of Hawaiian place names to be renamed authentically in the Hawaiian language, including examples such as ‘Haleakalā National Park’ and ‘Hawai‘i Volcanoes National Park’.

In his exploration of the Alaskan wilderness, Robert Marshall named 169 places in the 1930s as part of four expeditions (Cole 1992). This included what is well-known as the tallest mountain in North America, named by Marshall as Mt. McKinley. However, the native Athabascan people of Alaska have known the mountain as ‘Denali’, or “The Great One’ for generations. This led to a movement to rename the mountain, as well as the ‘National Park’ area around it managed by the NPS, to the original Indigenous name ‘Denali’. This was accomplished in 2015 by the Obama Administration as part of a campaign promise to improve relations between the Federal government and Indigenous tribes (Davis 2015).

A similar example that is under consideration for a place rename is Mount Rainier in Washington State. Known as ‘Tacoma’ by the local natives, the U.S. Board of Geographic Names named the mountain ‘Rainier’ in 1792 (Orth 1984). At the time, the Indigenous tribes native to the area pushed for it to be named ‘Mount Tacoma’, and there still exists a campaign to correct the past and rename the mountain and surrounding ‘National Park’ to be Mount Tacoma instead (McCoy 1986). Although not part of a ‘National Park’ like the previous two examples, ‘Squaw Peak’ in Phoenix, Arizona
started to receive backlash for having a derogatory name in the early 2000s (Kelleher 2004). The mountain is a popular hiking destination for local urban residents, and the renaming of it to ‘Piestewa Peak’ was a controversial and political topic for residents of the city of Phoenix.

Zion National Park, a popular protected area in southwestern Utah, experienced place renaming back in 1917 prior to its fame and eventual notoriety. Originally established as ‘Mukuntuweap National Monument’ in 1909, many felt that the name was difficult to pronounce for white Americans (Oswald 2009). Additionally, there was an ongoing sentiment that visitors often treat ‘National Monuments’ as lesser sites than ‘National Parks’, so there was pressure to redesignate the site as well (Rothman 1986). The local Mormon community called the site ‘Zion’, named by Mormon pioneer Isaac Behunin when he settled the canyon in 1863, and so the collective decision in 1919 was to rename and redesignate the site as ‘Zion National Park’.

As indicated by the redesignation of ‘Mukuntuweap National Monument’, there are various reasons for a protected area to be redesignated from a “lesser” designation, such as ‘National Monument’, to a ‘National Park’ (Weiler and Seidl 2004). An economic study looking at the eight ‘National Monuments’ redesignated to ‘National Parks’ from 1979 to 2000 found that the name redesignation brought in an average of 13,000 additional visitors per year (Weiler 2005). This is a significant increase, and of course brings significant revenue growth from entrance fees and visitor center or gift shop sales. Although the official unit redesignation by the NPS does not alter the level of funding an NPS unit receives, the individual site and local economy will likely benefit from the increased economic activity. Although this is not the whole story, this adds
insight to the underlying rationale of the four ‘National Park’ redesignations done during the Trump Administration, including the controversial naming designation of the ‘Jefferson National Expansion Memorial’ to the ‘Gateway Arch National Park’.
In this project we are seeking to identify to what extent ‘sense of place’ associated with the Gateway Arch has been affected by its redesignation to a ‘National Park’. An individual’s sense of a place is fundamentally based on the perceptions and associations that a person holds with a particular location. Thus, it was critical to gather data about how people perceive the general concept of a ‘National Park’, as well as perceptions of the Gateway Arch National Park (GANP) specifically. Members of the general public were chosen as subjects in this study, as well as previous visitors to the GANP to provide a more nuanced perspective shaped by experience. To gather this subjective perception data from these subjects, we decided to assess what values and characteristics people associate with ‘National Parks’. We enabled our subjects to describe their perceptions at an easier-to-understand and more accessible level by asking for values and characteristics while allowing us to draw legitimate conclusions about sense of place regarding these protected areas.

To accomplish these aims, data was collected from an online Qualtrics survey distributed via Facebook, as well as from published Yelp reviews of the Gateway Arch National Park (GANP). The Qualtrics survey provides original, primary data from people with an expressed interest in ‘National Parks’ to use for this research, while the Yelp reviews provide public, secondary data from people who had visited and experienced the ‘National Park’. This allowed us to conduct a two-part coding analysis as the principal method for this exploratory case study (Flick 2018).
These two datasets together provide a stronger insight into the perceptions that people have regarding the GANP and allow for a direct comparison of the analytic codes and their respective code counts for analysis. Utilizing the NVivo software package allowed for a straight-forward and objective cross-comparison for the coding analysis and to help verify the emergent themes and results. Ultimately, these methods enabled us to translate segmented, written text into usable themes that can more clearly demonstrate how perceived sense of place has been affected by the redesignation of the Gateway Arch.

Coding analysis can process and condense a large volume of qualitative textual data into simpler, easier to quantify individual codes and themes (Gibbs 2018). These codes are generated to reflect what the intended point and meaning of each response provides, not just highlighting words or phrases appearing the most by volume. We recognize that survey respondents and Yelp reviewers all provide nuanced and diverse perspectives from varying experience levels and familiarity with the National Park Service (NPS) system, and that analysis of these texts are subjective by nature. We chose to not pursue ethnographic interviews in part, due to the logistical challenges presented by the COVID-19 pandemic and to eliminate potential bias that may come with asking visitors about their experience at GANP while interviewing them at GANP. This bias could be manifested in visitors providing an inflated positive view of their experience and does not offer visitors the opportunity to reflect on their experience after it has ended.
Figure 5) Theoretical framework diagram for this study.

Figure 5 displays the theoretical framework utilized in this exploratory case study with a simplified flow diagram. The flow begins with the research question, which is central to the entire study. To answer the research question, we need to look at sense of place. Since sense of place is a potentially unwieldy concept for non-geographers, we will seek the perceptions held by study subjects. To offer more palpable concepts to address for study subjects, we will use values and characteristics as representative of the perceptions they have regarding these protected areas. Once data is gathered via the Qualtrics survey and Yelp reviews, I will process it and assign analytical codes to each
response that seems to come from a particular approach or belief. These codes can be totaled and separated into different thematic categories to better interpret the results. These themes then provide grounds for discussion regarding the perceptions they represent from the study subjects, which then helps to address the central research question of how sense of place has been affected by the GANP.

**Survey Creation and Distribution**

An online survey was created to assess public perceptions and associations related to sense of place with the general concept of ‘National Parks’. The target audience was adult U.S. residents actively engaged in discussions about their experiences with the National Park Service system. This broad group is more likely to have a strong grasp on the background knowledge and experience necessary to effectively answer survey questions about U.S. ‘National Parks’ and what they value about them and their experiences with these places. For example, most people outside of this group may not know about the various designations the NPS uses with the 423 units it manages, or how these various unit designations may compare from personal experience. Having this pre-existing experience and knowledge will enable survey respondents to have a foundation from which to reflect on their experiences and beliefs as they respond to questions. To find a large volume of these individuals, survey respondents were solicited from the ‘National Park Service (Fan Page)’ group of the social media platform Facebook, which had over 220,000 members following it as of March 2021 when the Qualtrics survey was launched (National Park Service (Fan Page) | Facebook 2022).
I utilized Qualtrics survey-building software to construct the survey instrument and solicit online responses. Open-ended questions were carefully designed to avoid potential survey response bias and errors. For example, a multiple-choice question such as “What do you value about ‘National Parks?’” would require a list of answer options created by me that would limit the creativity of respondent's answers. Using open-ended questions gives survey respondents the freedom and flexibility to respond with their own
thoughts, and not provide a limited set of responses for them to pick between. However, some questions such as “In which U.S. state do you currently reside?” were drop-down choice questions in which it was practical to provide respondents with the full range of answer options to potentially reduce response processing later, as it can be time consuming to edit each individual response to ensure that answers like U.S. State names are all spelled correctly, capitalized consistently, and not abbreviated inconsistently.

In seeking to collect data on the perceptions of ‘National Parks’, we wanted to gather responses regarding the values and characteristics associated with ‘National Parks’. We decided to create similar questions that ask survey respondents similar questions in a couple of different ways to help prevent survey respondents from gauging the intent of the survey questions. For example, survey questions 1, 2, and 3 are distinct questions, but all intend to provide qualitative data on the same concept – what perceptions they associate with ‘National Parks’. Although not all question alternates were ultimately utilized in this study, it was my intent to provide more questions in advance for potential analysis, as opposed to later regretting not including more questions and being limited to the kinds of responses that could be utilized for analysis in this study. See Figure 7 below for the total list of survey questions utilized, with the relevant questions focused on for this research project in bold and italics.
<table>
<thead>
<tr>
<th>Question #</th>
<th>Question Verbiage</th>
<th>Question Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Do you consent to completing this survey as a participant of minimal to no risk after reading through the MU IRB (Protocol #2054242) text above?</td>
<td>Multiple-Choice</td>
</tr>
<tr>
<td>1</td>
<td>What do you value about ‘National Parks’?</td>
<td>Open-Response</td>
</tr>
<tr>
<td>2</td>
<td>Why are ‘National Parks’ important?</td>
<td>Open-Response</td>
</tr>
<tr>
<td>3</td>
<td>What characteristics do you expect a ‘National Park’ to have?</td>
<td>Open-Response</td>
</tr>
<tr>
<td>4</td>
<td>What is your favorite ‘National Park’?</td>
<td>Drop-Down Choice</td>
</tr>
<tr>
<td>5</td>
<td>What do you value most about your favorite ‘National Park’?</td>
<td>Open-Response</td>
</tr>
<tr>
<td>6</td>
<td>What are some defining characteristics about your favorite ‘National Park’?</td>
<td>Open-Response</td>
</tr>
<tr>
<td>7</td>
<td>What characteristics or values do you associate with Yellowstone?</td>
<td>Open-Response</td>
</tr>
<tr>
<td>8</td>
<td>What characteristics or values do you associate with Mount Rushmore?</td>
<td>Open-Response</td>
</tr>
<tr>
<td>9</td>
<td>What characteristics or values do you associate with the Gateway Arch?</td>
<td>Open-Response</td>
</tr>
<tr>
<td>10</td>
<td>What characteristics or values do you associate with the Statue of Liberty?</td>
<td>Open-Response</td>
</tr>
<tr>
<td>11</td>
<td>How many of the NPS’s 63 officially designated ‘National Parks’ have you been to before?</td>
<td>Multiple-Choice</td>
</tr>
<tr>
<td>12</td>
<td>In which U.S. State do you currently reside?</td>
<td>Drop-Down Choice</td>
</tr>
<tr>
<td>13</td>
<td>What is your Zip-Code (Five Digits)?</td>
<td>Number Fill-In</td>
</tr>
<tr>
<td>14</td>
<td>What is your Age?</td>
<td>Number Fill-In</td>
</tr>
<tr>
<td>15</td>
<td>What is your Sex?</td>
<td>Multiple-Choice</td>
</tr>
<tr>
<td>16</td>
<td>What is your Ethnicity?</td>
<td>Multiple Choice</td>
</tr>
</tbody>
</table>

*Figure 7) Total List of Survey Questions with Relevant Questions in Italics and Bold*

Survey respondents were asked about four specific NPS units under different official NPS naming designations, without identifying them by designation, to create a basis of comparison of values across these different NPS units. This included the Gateway Arch National Park, identified only as the “Gateway Arch” in direct effort to not let the naming designation influence the answers of survey respondents. Of the four specific NPS unit questions, only Yellowstone was utilized to serve as a “control” for a ‘National Park’ and to complement the Yelp reviews data collected for Yellowstone National Park. In addition, survey respondents were asked to provide their U.S. State of residence and Zip Code to assist in the creation of maps to add context to the results.
The survey was designed with anonymity and privacy in mind, as no personal or identifiable information was collected from any survey respondent. IRB Approval was granted on 03/24/2021, Protocol #2054242. The survey was posted to the ‘National Park Service (Fan Page)’ group on Facebook via three separate posts, on March 25th, April 6th, and April 12th in 2021. The survey was open for three weeks, or 21 days, and 544 complete responses were recorded and used for survey coding and coding analysis. While 625 total responses were collected, 81 responses were started and not completed all the way through by respondents. This incomplete data was securely archived and not included with the complete responses data set for analysis.

**Yelp Review Collection**

It was most relevant to choose the website most well-known and utilized for place reviews as the depository from which I would pull all reviews of the ‘Gateway Arch National Park’. Using the online travel review site Yelp.com, 75 public reviews of the GANP were gathered since its redesignation as a ‘National Park’ in February of 2018. Reviews were accessed from the site on January 26th, 2022. Additionally, the last 75 Yelp reviews for ‘Yellowstone National Park’ were pulled in the same manner to be used as a direct and parallel comparison to the Gateway Arch. Yellowstone was chosen for three reasons; to serve as a control in this study as it is the original U.S. ‘National Park, to provide parallelism in matching with the survey responses from question #7, and because it was selected as the leading favorite ‘National Park’ by 18.75% of the survey respondents from question #5.

With the Yelp reviews, only the review dates and review texts were collected, with all author and location information omitted. This was done to eliminate potential
bias during analysis so that the individual writing the review did not have any influence on the interpretation of the response. Each Yelp review was assigned a number to help identify individual reviews for coding and analysis. The coding process was initiated in the same fashion as they were with the Qualtrics survey responses, utilizing the analytic codes that get at what the intent of each survey response is. These Yelp reviews and the sample batch of manual codes were uploaded into NVivo software for analysis.

**Data Coding Process**

After collecting survey responses, the next step was to process them and find common threads reflecting the ways in which individuals understand, perceive, and think about ‘National Parks’. Analytic codes can be used to succinctly describe and categorize survey responses to better understand trends and themes within the data. It was important to develop a set of analytic codes prior to uploading data into NVivo software for coding analysis, as creating this code index would allow for a consistent approach to coding between both the Qualtrics survey responses and the Yelp reviews. These codes were created inductively from the collected data in an iterative process, starting with a draft and editing to reflect nuances after doing a coding trial with the data.

Here are some examples of how a response would be manually assigned to these codes. A survey response of “Seeing new animals, hiking, and a beautiful view” is categorized into the codes of ‘Biodiversity’, ‘Recreational’, and ‘Aesthetic’. Using this approach, a different response with the same intention and meaning, such as “Unique ecosystems, going camping, and the eye-candy scenery” receives the same codes of ‘Biodiversity’, ‘Recreational’, and ‘Aesthetic’. However, another example of a response such as “The beauty is awe-inspiring, it provides me a peaceful quiet on my mountain
hikes that I cannot get anywhere else” would receive the codes of ‘Aesthetic’, ‘Emotional’, ‘Recreational’, and ‘Experience’. The respondent is identifying the beauty of the protected area, which assigns it ‘Aesthetic’. Additionally, the idea of a place being awe-inspiring and providing a peaceful quiet suggest emotional responses and would be coded as ‘Emotional’. Lastly, the mention of hikes that the respondent cannot get anywhere else portrays their visit to this protected area as a unique experience, something that is distinct as something to do, thus assigning it ‘Recreational’ and ‘Experience’.

Another element to developing this code index was that of identifying thematic categories that the individual codes could be nested together with. In looking at the range of the fourteen codes utilized, they fit well into three categories: environmental characteristics, intrinsic values, and visitor experience. Environmental characteristics cover what people expect to see in these spaces, or in another way, how they would describe these places. This could range from seeing animals (Biodiversity), to no signs of human infrastructure (Undeveloped), to noting the unique urban architecture present (Manmade). Intrinsic values comprise what may be intangible but valuable or characteristic of these places. This includes ‘Historical’ or ‘Educational’ aspects, or even how a visitor may feel from experiencing them (Emotional), or how they believe people should feel about these protected areas generally. This includes mentions of the place’s name or naming ‘Designation’, or even a mention of its value in being protected by the NPS (Protection). The visitor experience thematic category is focused on aspects of a survey respondent or Yelp reviewer’s literal experience that are just as valuable or characteristic of protected areas as that of environmental characteristics or intrinsic values. This includes describing various aspects of visitor ‘Accessibility’, to what
amenities and convenience are available for people (Infrastructure), and especially all the different activities that people want to do – whether indoors or outdoors (Recreational).

Together, these three thematic categories help to provide an outline of how to organize the conclusions to be drawn from the results of the coding analysis in NVivo software. They nest together the individual codes with overarching themes and will allow for more targeted discussion post-analysis with this coding index. See Figure 8 below for the total list of individual codes, the kinds of responses that assign each code, and the thematic categories covering them.

<table>
<thead>
<tr>
<th>Thematic Categories</th>
<th>Individual Codes</th>
<th>Kinds of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Characteristics</td>
<td>Aesthetic</td>
<td>Beautiful, Gorgeous, View, Scenic, Spectacular, etc.</td>
</tr>
<tr>
<td></td>
<td>Biodiversity</td>
<td>Wildlife, Ecosystem, Ecology, Plants, etc.</td>
</tr>
<tr>
<td></td>
<td>Geodiversity</td>
<td>Geology, Landforms, Landscape, Features, etc.</td>
</tr>
<tr>
<td></td>
<td>Manmade</td>
<td>Urban Features, Architecture, Manmade, etc.</td>
</tr>
<tr>
<td></td>
<td>Natural</td>
<td>Of/Is “Nature”, Natural, etc.</td>
</tr>
<tr>
<td></td>
<td>Undeveloped</td>
<td>Pristine, Untouched, Wild, etc.</td>
</tr>
<tr>
<td>Intrinsic Values</td>
<td>Designation</td>
<td>National Park, “Not a National Park”, etc.</td>
</tr>
<tr>
<td></td>
<td>Educational</td>
<td>Learning, Education, Exhibits, etc.</td>
</tr>
<tr>
<td></td>
<td>Emotional</td>
<td>Patriotic, Peaceful, Religious, Nostalgia, “Wow”, etc.</td>
</tr>
<tr>
<td></td>
<td>Historical</td>
<td>History, Past, Heritage, etc.</td>
</tr>
<tr>
<td></td>
<td>Protected</td>
<td>Set Aside, Managed, Publicly Owned, etc.</td>
</tr>
<tr>
<td>Visitor Experiences</td>
<td>Accessibility</td>
<td>Prices, Ease of Access, ADA compliance, etc.</td>
</tr>
<tr>
<td></td>
<td>Experience</td>
<td>Overall trip, Specific programs, Junior Ranger, etc.</td>
</tr>
<tr>
<td></td>
<td>Infrastructure</td>
<td>Museum, Signs, Bathroom, Sidewalks, Trash, etc.</td>
</tr>
<tr>
<td></td>
<td>Recreational</td>
<td>Things to Do, Hiking, Biking, Activities, etc.</td>
</tr>
</tbody>
</table>

Figure 8) Thematic Categories and Codes with Descriptions for Types of Responses
A critical component of this manual coding process includes not discriminating between positive and negative aspects of particular responses. For example, a survey response articulating the lack of COVID-19 safety procedures and supplies like face masks at the Gateway Arch would be coded as ‘Accessibility’ just the same as a survey response praising the Gateway Arch for excellent minority representation and ease of wheelchair access. The essential idea is that the survey respondent is answering the question from a mindset or approach of accessibility as a value or characteristic of a particular NPS unit or ‘National Parks’ as a concept. The collection of data around the visitor satisfaction or collective attitude regarding user experience is beyond the scope, scale, or interest of this particular study.

For each Qualtrics survey question and Yelp review, the same index of analytic codes was utilized to provide a reference of data and statistics to assess how survey responses compare between questions. The same thought process demonstrated before for code assignments was applied to each individual response or case for the following coding analysis. Once this code index was completed, the survey response and review files and analytic codes were uploaded into NVivo software for analysis.

**Coding Analysis with NVivo Software**

Individual documents with the survey responses for each of the four utilized survey questions (#1, #3, #7, #9) and the aggregated Yelp reviews for both the Gateway Arch and Yellowstone were input into the NVivo 12 software. A preliminary analysis of the surface-level impression of the overall responses was accomplished by running a ‘Word Frequency Query’ on each of the six documents that counted all words with a minimum length of four letters. Words that have a higher frequency can provide a quick
yet shallow insight into what things and ideas that respondents provide the most. ‘Stop
words’ were omitted used to eliminate commonly used words like ‘such’ and ‘many’ that
are common part of speech and grammar and not representative of substance. These
results were then used to create ‘Word Cloud’ images as visualizations of the terms most
frequently used as a ‘snapshot’ of the overall response results.

Next, I inputted the individual analytic codes within the NVivo software to be
used for assignment with each survey response and Yelp review. These codes were drawn
from the index of analytical codes created inductively beforehand with the initial survey
coding process. Each individual survey response and Yelp review, or individual ‘case’,
was carefully evaluated and assigned codes deductively based on the intent and response
of the individual. A case may receive at minimum no assigned code, or at maximum
assigned each individual code once. The intent was not to gather a frequency count for all
the instances an assigned code was invoked, but to see which codes a case response
would represent. Due to there being 544 survey responses for each of the four questions
utilized, and 75 Yelp reviews for each of the two ‘National Parks’, 2,326 total cases were
coded in NVivo for this research project.

I opted to use NVivo software for this coding analysis due to its ability to store
data in a central platform, keep track of coding totals, produce charts and figures, and for
the quicker speed at which code assignments can be done compared to by hand or within
a data processing tool such as Microsoft Excel. While the ‘Autocode’ feature in NVivo
could speed up the coding process even further, we opted to code manually to ensure that
all the assigned codes were consistently generated. The assignment of codes for each
survey response or Yelp review is subjective and can take some interpretation of the
author’s intent and message, and I felt that the vast range and diversity of words or phrases that could be used to describe a certain type of response may be broader and more subjective than the NVivo software could identify.

**Z-Score Statistics Tests**

To better identify how the coding totals in the following results compare to each other, it was practical to assess quantitative significance in comparing the difference in totals between individual questions, thematic categories, codes, or even between Qualtrics survey response and Yelp review totals. A z-score test was chosen because the sample size of this data set is over 30 and we know the population standard deviation. The z-score test allows for a simple method of producing multiple hypothesis tests of significance between two coding totals within this study. This will allow us to draw conclusions about whether a particular code being recorded more often for one comparison piece over another is significantly different, or if the total difference is similar enough to not be significant for analysis.

I used Microsoft Excel to calculate the two-tailed z-score for each individual comparison, and then an online z-score to p-value calculator to produce the corresponding p-value for each z-score created. I chose to follow the traditional significance threshold of 0.05, where a p-value under 0.05 is considered significant and a p-value of over 0.05 is not considered significant. For example, if a comparison of Question X’s ‘Code A’ total of 22 and Question Y’s ‘Code B’ total of 40 yields a z-score of –2.286 and a p-value of 0.022, we know that the difference between the two coding totals is significant. Additionally, the comparison piece that had the higher coding total was indicated by a ‘In Favor of’ column, which would be Question Y in this example.
Map Creation

I utilized ArcGIS Pro software to create maps that would help to display the results and inform the discussions of this study. The spatial data for the base map, U.S. State outlines, and U.S. ‘National Parks’ all came from the Esri online database, which allows access via the software license provided by the University of Missouri. Two maps were created – one map to display where the nearest specifically-designated ‘National Parks’ is based on a particular location, and another map to show the U.S. State of residence totals from all the Qualtrics survey respondents.

The first map was included the creation of ‘Thiessen polygons’, in which each polygon displays all the land area that is closest in distance from the center point, which was ‘National Park’ locations for this map. The second map required the use of ‘Add Join’ feature to join together the survey respondent totals from each U.S. State in a Microsoft Excel sheet with the ‘Attribute Table’ embedded within the “U.S. States” layer within ArcGIS Pro. This allowed the ‘Symbology’ to be altered to display ‘Graduated Symbols’ to distinguish which U.S. State had more survey respondents by the varied size of the circle centered on each state. Traditional cartographic elements, such as a scale bar, compass rose, and legend were added to the final map layout prior to exporting the map as a JPEG image.
Chapter 4: Results

Maps

Figures 9 and 10 display the geographic distribution of Qualtrics survey respondents and to offer insight regarding their potential proximity to ‘National Parks’. In Figure 9, Thiessen polygons show comparative distance over geographic area between an array of individual points. In other words, one can point to any particular location in the U.S. and identify which ‘National Park’ is nearest to them. A survey respondent living in the Gulf Shores of Alabama may have additional barriers of access due to physical distance in trying to visit ‘National Parks’ compared to an individual residing in Salt Lake City, Utah. This map also makes it apparent that individuals in the Midwest, Southeast, and Northeast of the contiguous U.S. have considerably further travelling distances to visit ‘National Parks’ than those in the West especially. It is worth noting that these distances do not take into account the time it takes to travel via roads and highways.
Figure 9) Thiessen Polygons around ‘National Parks’ in the Contiguous U.S.

Figure 10) Graduated Symbols showing Survey Respondent totals per Contiguous U.S. State
Figure 10 shows which U.S. States had the highest totals of Qualtrics survey respondents. We collected 544 complete survey responses across each of the 50 U.S. States. Although not indicated on the map, Alaska and Hawaii each had two survey respondents. As expected, more populous states like California, Texas, Illinois, Ohio, Pennsylvania, New York, and Florida have higher totals of survey respondents. There seems to be a slight skew of higher survey respondents totals around the Great Lakes states, which may be accounted for due to the unknown demographic array in the National Park Service (Fan Page) on Facebook where the Qualtrics survey was distributed and advertised.

**Word Clouds**

The first glimpse at a set of data can often yield surface-level results that may speak widely to an overall theme or popular notion (Heimerl et al. 2014). Word clouds are a visual tool that helps provide an overview of what a qualitative set consists of. The word cloud takes the most prevalent words in the data set identified by a word frequency query and scales them so that more frequently used words are larger than lesser used words (McNaught and Lam 2010). It is worth acknowledging that these word clouds are solely supplemental and are not substantive independent of further analysis (Hearst et al. 2020). I created the following word clouds to provide a first entry into what the survey respondents and Yelp reviewers shared most frequently as a preliminary analysis.
The word cloud shown here in Figure 11 demonstrates that Yelp reviewers most frequently reference the arch itself, the park around it, and the museum that it provides for its visitors. Reviewers mention concepts such as time and history when thinking about St. Louis and the newly designated ‘National Park’ it hosts. Many write about their experience with taking a ride to the top of the arch or reference the views of the city and river that the arch provides from the top. For Yelp reviews of the Gateway Arch National Park, these concepts and portrayed word frequencies are very much within expectation.
This word cloud for Yellowstone (Figure 12) shows that Yelp reviewers most often refer to Yellowstone as a park, or its particular designation of ‘National Park’. Many write of their experiences with Old Faithful, Grand Prismatic Springs, or generally the geysers that show off the geologic diversity of the area. However, this also extends to descriptions of road traffic and long sessions of driving. Visitors also reference the wildlife they witness, especially the bison and animals in general. These are all typical sights and associations with Yellowstone National Park.
This word cloud above in Figure 13 begins our dive into the Qualtrics survey questions and the wide range of responses that were solicited by the 544 respondents that fully completed the survey from the National Park Service Fan Page on Facebook. Question 1 of this survey asked respondents “What do you value about ‘National Parks’”, and the overwhelming majority of responses included words such as beauty, natural, or nature. Beyond aesthetics, many respondents referenced the wildlife they could see, as well as the protection and preservation of these protected areas. History was also a consistent thread throughout the responses. In this case, it seems that most respondents value most what they expect to see and witness at ‘National Parks’.
This next word cloud in Figure 14 looks at the responses to Question 3, which asked: ‘What characteristics do you expect a ‘National Park’ to have?’ The word frequencies have less parity than previous words clouds, in that there are many large words centered in the word cloud. Respondents expect ‘National Parks’ to be natural, have trails, and be unique, beautiful, and educational. Additionally, the presence of nature, scenery, wildlife, visitor centers seem to be of frequent importance.
This word cloud above in Figure 15 shows us “What characteristics or values do you associate with Yellowstone?”, as prompted by Question 7. Survey respondents most frequently reference the wildlife and geysers at Yellowstone, and often mention bison and animals, as well as the various features such as Old Faithful. Of course, words such as natural, nature, beauty, beautiful, and park come up frequently just as previous word clouds showed us before.
This final word cloud above in Figure 16 displays the responses to Question 9, which asks “What characteristics or values do you associate with the Gateway Arch?”.

Survey respondents most frequently reference history and westward expansion when writing about the Gateway Arch. Many attribute it as a marvel of manmade engineering and urban architecture, in addition to it being a monument to the West. There were many references to its designation as a ‘National Park’, but these were often casted in confusion or disagreement about how it is “not a national park” to them. This seemed to be a common theme that would show up in further analysis of the survey coding data.
Survey Respondent Demographics

Questions 14, 15, and 16 of the Qualtrics survey asked respondents to provide basic demographic information, including age, gender, and ethnicity. This demographic information helps to provide additional context regarding the perspectives from which perception data on values and characteristics regarding ‘National Parks’ is being collected from. Additionally, this data helps to clarify the demographic makeup of the pool of survey respondents, which comes from the target audience of U.S. adults in the National Park Service (Fan Page) on Facebook.

![Survey Respondent Demographics by Age](image)

**Figure 17** Survey Respondent Demographics by Age

Figure 17 above shows the age group distribution of the 544 Qualtrics survey respondents who had complete survey submissions with a bar chart. The bar chart shows a well-distributed curve, with the majority of respondents being from 40 to 69 years old.
Figure 18) Survey Respondent Demographics by Gender

The pie chart displayed in Figure 18 shows the distribution of self-identified gender across all 544 survey respondents. A large majority (91.2%) of respondents were female, with only 47 men (8.6%) completing the survey compared to the 496 women. Just 1 individual identified their gender as ‘Other’ (0.002%).

Figure 19) Survey Respondent Demographics by Ethnicity
Lastly, Figure 19 demonstrates the distribution of ethnicity among the 544 survey respondents. A large majority of respondents self-identified as ‘White’ (94.4%), but each ethnicity option had at least 1 survey respondent with a complete submission. 11 respondents identified as ‘Asian’, 9 as “Hispanic / LatinX”, and 8 as “Other”. The choices of “Black / African American” and “Native / Indigenous” each had 1 respondent.

**NVivo Coding Results**

After coding all 2,326 survey responses and Yelp reviews in NVivo software, 4,922 manual assignments of the 15 individual codes were used in this project. This averages 2.12 codes assigned per survey response, with a range of 1 code assigned for a case to nearly all 15 codes assigned for a single survey response or Yelp review (Figures 17 and 18). NVivo software stored the individual counts for each code per file, and those numbers were transposed into tables displayed in Figures 17 and 18 to be used for further analysis and discussion outside of the software.
Figure 20) NVivo Coding Analysis Results for the Yelp Reviews

Figure 20 shows the counts for each code assigned and the thematic categories they fall into for both the Gateway Arch National Park (GANP) and Yellowstone National Park (YNP) Yelp reviews. This allows for an easy cross-comparison between the two areas across each code or thematic category. For example, 14.54% of Yelp reviews for GANP were coded as ‘Environmental Characteristics’ while 53.85% of the YNP Yelp reviews were coded as such. In the Yelp reviews, ‘Environmental Characteristics’ are more associated with YNP and ‘Intrinsic Values’ are more often associated with GANP, while ‘Visitor Experiences’ is only slightly higher for GANP. It is worth noting that some codes were not assigned to any responses, being represented with a count of zero. This is the case for the Qualtrics survey responses in Figure 18 as well.
Figure 21) Coding Analysis Results for the Qualtrics Survey

The same style table was compiled for the Qualtrics survey coding results shown above in Figure 21 as in Figure 20 before for the Yelp review coding results. However, this figure shows the coding and theme totals for all four utilized survey questions. Using the same example as before, 52.64% of respondents from Q1 on Values and 42.54% of respondents from Q3 on Characteristics identified the theme ‘Environmental Characteristics’ the most for values and characteristics associated with ‘National Parks’. This pairs with the same theme accounting for 73.16% of survey respondents for Q7 on YNP and 32.86% for respondents for Q9 on GANP. In result, more than twice as many survey responses were coded for ‘Environmental Characteristics’ for the YNP over GANP, with the values and characteristics percentages lying in between the two ‘National Parks’. A similar effect also is shown with the ‘Intrinsic Values’ theme as well, with the YNP and GANP roles reversed and values and characteristics in between.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>Q1 Values</th>
<th>Q3 Characteristics</th>
<th>Q7 Yellowstone</th>
<th>Q9 Gateway Arch</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Total Cases</td>
<td>544</td>
<td>100</td>
<td>544</td>
<td>100</td>
<td>544</td>
</tr>
<tr>
<td>Total Coding References</td>
<td>1,442</td>
<td>100</td>
<td>1,394</td>
<td>100</td>
<td>1,103</td>
</tr>
<tr>
<td>Envi. Characteristics</td>
<td>759</td>
<td>52.64%</td>
<td>593</td>
<td>42.54%</td>
<td>807</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>330</td>
<td>22.88%</td>
<td>200</td>
<td>14.35%</td>
<td>115</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>155</td>
<td>10.75%</td>
<td>105</td>
<td>7.53%</td>
<td>282</td>
</tr>
<tr>
<td>Geodiversity</td>
<td>103</td>
<td>7.14%</td>
<td>110</td>
<td>7.89%</td>
<td>328</td>
</tr>
<tr>
<td>Mammal</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>0.07%</td>
<td>0</td>
</tr>
<tr>
<td>Natural</td>
<td>78</td>
<td>5.41%</td>
<td>79</td>
<td>5.67%</td>
<td>34</td>
</tr>
<tr>
<td>Undeveloped</td>
<td>93</td>
<td>6.45%</td>
<td>98</td>
<td>7.03%</td>
<td>38</td>
</tr>
<tr>
<td>Intrinsic Values</td>
<td>422</td>
<td>29.26%</td>
<td>395</td>
<td>28.34%</td>
<td>161</td>
</tr>
<tr>
<td>Designation</td>
<td>22</td>
<td>1.53%</td>
<td>4</td>
<td>0.29%</td>
<td>15</td>
</tr>
<tr>
<td>Educational</td>
<td>42</td>
<td>2.91%</td>
<td>165</td>
<td>11.84%</td>
<td>13</td>
</tr>
<tr>
<td>Emotional</td>
<td>95</td>
<td>6.59%</td>
<td>51</td>
<td>3.66%</td>
<td>34</td>
</tr>
<tr>
<td>Historical</td>
<td>76</td>
<td>5.27%</td>
<td>87</td>
<td>6.24%</td>
<td>53</td>
</tr>
<tr>
<td>Protected</td>
<td>187</td>
<td>12.97%</td>
<td>88</td>
<td>6.31%</td>
<td>46</td>
</tr>
<tr>
<td>Visitor Experience</td>
<td>261</td>
<td>18.10%</td>
<td>406</td>
<td>29.12%</td>
<td>135</td>
</tr>
<tr>
<td>Accessibility</td>
<td>61</td>
<td>4.23%</td>
<td>96</td>
<td>6.89%</td>
<td>26</td>
</tr>
<tr>
<td>Experience</td>
<td>125</td>
<td>8.67%</td>
<td>73</td>
<td>5.24%</td>
<td>64</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>21</td>
<td>1.46%</td>
<td>113</td>
<td>8.11%</td>
<td>11</td>
</tr>
<tr>
<td>Recreational</td>
<td>54</td>
<td>3.74%</td>
<td>124</td>
<td>8.90%</td>
<td>34</td>
</tr>
</tbody>
</table>
Z-Score Test Results

After coding all 2,326 survey responses and Yelp reviews, the statistical significance of the various data results was examined. Figures 19-25 display the calculated z-scores, corresponding p-values, and whether results are significant based on the p-value benchmark of 0.05. Knowing the significance of a particular comparison of a code or theme across different sub-data sets is of value because it can clarify whether two values that seem similar or different are of significant difference or not. This allows for better analysis and discussion regarding individual comparisons. Additionally, the last column identifies to which data set is “in favor” or has the higher total counts for each code or theme. It is worth noting that although assessing statistical significance is worthwhile for this analysis, there are many scientific fields questioning whether these specific measures of statistical significance should continue to be used (Amrhein, Greenland, and McShane 2019).

<table>
<thead>
<tr>
<th>National Park</th>
<th>Gateway Arch</th>
<th>Yellowstone</th>
<th>Z-Score</th>
<th>P-Value</th>
<th>Significance (0.05)</th>
<th>In Favor Of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Type</td>
<td>#</td>
<td>#</td>
<td>Z</td>
<td>P</td>
<td>Y/N</td>
<td></td>
</tr>
<tr>
<td>Total Cases</td>
<td>75</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Coding References</td>
<td>227</td>
<td>260</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme Codes</th>
<th>Envi. Characteristics</th>
<th>Aesthetics</th>
<th>Biodiversity</th>
<th>Geodiversity</th>
<th>Manufactured</th>
<th>Natural</th>
<th>Undeveloped</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cases</td>
<td>33</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.000</td>
<td>0.145</td>
<td>0.000</td>
<td>0.000</td>
<td>0.002</td>
<td>0.005</td>
<td>0.046</td>
</tr>
<tr>
<td>Significance (0.05)</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>In Favor Of</td>
<td>YNP</td>
<td>-</td>
<td>YES</td>
<td>YNP</td>
<td>GANP</td>
<td>YNP</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme Codes</th>
<th>Intrinsic Values</th>
<th>Designation</th>
<th>Educational</th>
<th>Emotional</th>
<th>Historical</th>
<th>Protected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cases</td>
<td>90</td>
<td>16</td>
<td>31</td>
<td>14</td>
<td>29</td>
<td>0</td>
</tr>
<tr>
<td>Z-Score</td>
<td>4.590</td>
<td>1.633</td>
<td>4.584</td>
<td>-0.870</td>
<td>4.596</td>
<td>-2.099</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.000</td>
<td>0.102</td>
<td>0.000</td>
<td>0.384</td>
<td>0.000</td>
<td>0.045</td>
</tr>
<tr>
<td>Significance (0.05)</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>In Favor Of</td>
<td>GANP</td>
<td>-</td>
<td>GANP</td>
<td>-</td>
<td>GANP</td>
<td>YNP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme Codes</th>
<th>Visitor Experience</th>
<th>Accessibility</th>
<th>Experience</th>
<th>Infrastructure</th>
<th>Recreational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cases</td>
<td>104</td>
<td>22</td>
<td>36</td>
<td>13</td>
<td>33</td>
</tr>
<tr>
<td>Z-Score</td>
<td>1.613</td>
<td>-0.980</td>
<td>2.138</td>
<td>1.091</td>
<td>1.050</td>
</tr>
<tr>
<td>P-Value</td>
<td>0.107</td>
<td>0.327</td>
<td>0.033</td>
<td>0.275</td>
<td>0.294</td>
</tr>
<tr>
<td>Significance (0.05)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>In Favor Of</td>
<td>-</td>
<td>-</td>
<td>GANP</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Figure 22) Z-Score Test Results for the Yelp Reviews*
Figure 22 shows the z-score test results comparing the codes and themes between the two sets of Yelp reviews, which supplied the secondary data for this study. There was a significance difference in the coding total ‘Environmental Characteristics’ in favor of YNP and a significant difference in ‘Intrinsic Values’ in favor of GANP. However, there was not a significant difference for the ‘Visitor Experience’ between GANP and YNP. Amongst the individual codes, significant differences matched up with each overarching theme in most cases, with the exceptions of ‘Aesthetics’, ‘Designation’, ‘Emotional’, and ‘Experience’. These codes generally do not match their theme between the recorded totals are too similar based on the total sample size. For example, it is understandable that Yelp reviewers would provide responses that speak to the ‘Aesthetics’ of both the GANP and YNP.

<table>
<thead>
<tr>
<th>Question</th>
<th>Values</th>
<th>Char.</th>
<th>Z-Score</th>
<th>P-Value</th>
<th>Significance (0.05)</th>
<th>In Favor Of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Type</td>
<td>#</td>
<td>#</td>
<td>Z</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cases</td>
<td>544</td>
<td>544</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Coding References</td>
<td>1,442</td>
<td>1,394</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Theme</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Codes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Characteristics</td>
<td>759</td>
<td>593</td>
<td>4.515</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>330</td>
<td>200</td>
<td>5.647</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>155</td>
<td>105</td>
<td>3.101</td>
<td>0.002</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td>Gooddiversity</td>
<td>103</td>
<td>110</td>
<td>-0.480</td>
<td>0.631</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td>Manmade</td>
<td>0</td>
<td>1</td>
<td>-1.000</td>
<td>0.317</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td>Natural</td>
<td>78</td>
<td>79</td>
<td>-0.000</td>
<td>0.936</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td>Undeveloped</td>
<td>93</td>
<td>98</td>
<td>-0.362</td>
<td>0.717</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td><strong>Theme</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Codes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrinsic Values</td>
<td>422</td>
<td>395</td>
<td>0.945</td>
<td>0.345</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td>Designation</td>
<td>22</td>
<td>4</td>
<td>3.530</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td>Educational</td>
<td>42</td>
<td>165</td>
<td>-8.549</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td>Emotional</td>
<td>95</td>
<td>51</td>
<td>3.841</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td>Hisorical</td>
<td>76</td>
<td>87</td>
<td>-0.862</td>
<td>0.389</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td>Protected</td>
<td>187</td>
<td>88</td>
<td>5.970</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Theme</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Codes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visitor Experience</td>
<td>261</td>
<td>406</td>
<td>-5.614</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td>Accessibility</td>
<td>61</td>
<td>96</td>
<td>-2.793</td>
<td>0.005</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td>Experience</td>
<td>125</td>
<td>73</td>
<td>3.895</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>21</td>
<td>113</td>
<td>-7.948</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td>Recreational</td>
<td>54</td>
<td>124</td>
<td>-5.247</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
</tbody>
</table>

**Figure 23) Z-Score Test Results for Qualtrics Survey Questions 1 and 3**

Figure 23 shows the z-score test results for survey question 1 and 2, which asked respondents of which values and characteristics they associate with ‘National Parks’.

These two questions were developed as different versions of the same inquiry into what
perceptions people have regarding ‘National Parks’ and can serve as a collective baseline for these perceptions. Thus, it is practical to compare the coding totals between these two questions to see the differences were significant. Although the numbers do not seem all too different, there was a statistically significant difference between ‘Environmental Characteristics’ and ‘Visitor Experience’, in favor of Q1 on values and Q3 on characteristics respectively. For the ‘Intrinsic Values’ theme, there was not a significant difference in the coding totals.

<table>
<thead>
<tr>
<th>Question</th>
<th>Q1 Values</th>
<th>Q7 YNP</th>
<th>Z-Score</th>
<th>P-Value</th>
<th>Significance (0.05)</th>
<th>In Favor Of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Type</td>
<td>#</td>
<td>#</td>
<td>Z</td>
<td>P</td>
<td>Y / N</td>
<td></td>
</tr>
<tr>
<td>Total Cases</td>
<td>544</td>
<td>544</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Total Coding References</td>
<td>1,442</td>
<td>1,103</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 24)** Z-Score Test Results for Qualtrics Survey Questions 1 and 7

Figure 24 compares the survey data collected on values specifically against the survey response coding totals for YNP. Results show no significant difference between YNP and values for ‘Environmental Characteristics’, while there is a significant difference for ‘Intrinsic Values’ and ‘Visitor Experience’. It is worth noting that zero survey respondents provided responses soliciting the assignment of the ‘Manmade’ code between YNP and values associated with ‘National Parks’. Additionally, ‘Intrinsic Values’ codes were not as frequently assigned for YNP responses as were the Q1 values
responses, showing that YNP is not associated with the codes under the ‘Intrinsic Values’ umbrella.

<table>
<thead>
<tr>
<th>Question</th>
<th>Q1 Values</th>
<th>Q9 GANP</th>
<th>Z-Score</th>
<th>P-Value</th>
<th>Significance (0.05)</th>
<th>In Favor Of</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Type</strong></td>
<td>#</td>
<td>#</td>
<td>Z</td>
<td>P</td>
<td>Y / N</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cases</strong></td>
<td>544</td>
<td>544</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Coding References</strong></td>
<td>1,442</td>
<td>490</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Theme</strong></td>
<td><strong>Envi. Characteristics</strong></td>
<td>759</td>
<td>163</td>
<td>19.628</td>
<td>0.000</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Codes</strong></td>
<td><strong>Aesthetics</strong></td>
<td>330</td>
<td>43</td>
<td>14.860</td>
<td>0.000</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Biodiversity</strong></td>
<td>155</td>
<td>0</td>
<td>12.450</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Geodiversity</strong></td>
<td>103</td>
<td>0</td>
<td>10.149</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Manmade</strong></td>
<td>0</td>
<td>120</td>
<td>-10.954</td>
<td>0.000</td>
<td>Yes</td>
<td>Q9</td>
</tr>
<tr>
<td><strong>Natural</strong></td>
<td>78</td>
<td>0</td>
<td>8.832</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Undeveloped</strong></td>
<td>93</td>
<td>0</td>
<td>9.644</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Intrinsic Values</strong></td>
<td>422</td>
<td>265</td>
<td>5.990</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Codes</strong></td>
<td><strong>Designation</strong></td>
<td>22</td>
<td>40</td>
<td>-2.286</td>
<td>0.022</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Educational</strong></td>
<td>42</td>
<td>12</td>
<td>4.082</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Emotional</strong></td>
<td>95</td>
<td>36</td>
<td>4.943</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Historical</strong></td>
<td>76</td>
<td>172</td>
<td>-6.096</td>
<td>0.000</td>
<td>Yes</td>
<td>Q9</td>
</tr>
<tr>
<td><strong>Protected</strong></td>
<td>187</td>
<td>3</td>
<td>13.349</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Visitor Experience</strong></td>
<td>261</td>
<td>68</td>
<td>10.640</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Codes</strong></td>
<td><strong>Accessibility</strong></td>
<td>61</td>
<td>16</td>
<td>5.128</td>
<td>0.000</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Experience</strong></td>
<td>125</td>
<td>17</td>
<td>9.063</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td>21</td>
<td>22</td>
<td>-0.152</td>
<td>0.879</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td><strong>Recreational</strong></td>
<td>54</td>
<td>13</td>
<td>5.099</td>
<td>0.000</td>
<td>Yes</td>
<td>Q1</td>
</tr>
</tbody>
</table>

Figure 25) Z-Score Test Results for Qualtrics Survey Questions 1 and 9

Figure 25 compares the Q1 values responses against the Q9 Gateway Arch survey responses. Nearly every coding total shows a significant difference between Q1 and GANP except for ‘Infrastructure’, which has very similar coding totals. Most coding totals were all significant in favor of Q1, except for ‘Manmade’, ‘Designation’, and ‘Historical’ being in favor of GANP. This makes sense noting the specific geographic context of the Gateway Arch. It is notable that there are nearly 300% more total codes assigned to Q1 survey responses than with Q9 responses, in part due to the drastically shorter and less-detailed responses given by survey respondents.
Table 1: Z-Score Test Results for Qualtrics Survey Questions 3 and 7

<table>
<thead>
<tr>
<th>Theme</th>
<th>Codes</th>
<th>Q3 Char.</th>
<th>Q7 YNP</th>
<th>Z-Score</th>
<th>P-Value</th>
<th>Significance (0.05)</th>
<th>In Favor Of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Envi. Char.</td>
<td>Aesthetics</td>
<td>593</td>
<td>807</td>
<td>-5.719</td>
<td>0.000</td>
<td>Yes</td>
<td>Q7</td>
</tr>
<tr>
<td></td>
<td>Biodiversity</td>
<td>105</td>
<td>282</td>
<td>-8.997</td>
<td>0.000</td>
<td>Yes</td>
<td>Q7</td>
</tr>
<tr>
<td></td>
<td>Geodiversity</td>
<td>110</td>
<td>328</td>
<td>-10.416</td>
<td>0.000</td>
<td>Yes</td>
<td>Q7</td>
</tr>
<tr>
<td></td>
<td>Natural</td>
<td>79</td>
<td>34</td>
<td>4.233</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td></td>
<td>Undeveloped</td>
<td>98</td>
<td>38</td>
<td>5.145</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td>Intrinsic</td>
<td>Designation</td>
<td>395</td>
<td>161</td>
<td>9.924</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td></td>
<td>Educational</td>
<td>165</td>
<td>13</td>
<td>11.393</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td></td>
<td>Emotional</td>
<td>51</td>
<td>34</td>
<td>1.844</td>
<td>0.065</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Historic</td>
<td>87</td>
<td>53</td>
<td>2.874</td>
<td>0.004</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td></td>
<td>Protected</td>
<td>86</td>
<td>46</td>
<td>3.628</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td>Visitor</td>
<td>Experience</td>
<td>406</td>
<td>135</td>
<td>11.651</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td></td>
<td>Accessibility</td>
<td>96</td>
<td>26</td>
<td>6.338</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td></td>
<td>Experience</td>
<td>73</td>
<td>64</td>
<td>0.769</td>
<td>0.442</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Infrastructure</td>
<td>113</td>
<td>11</td>
<td>9.160</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
<tr>
<td></td>
<td>Recreational</td>
<td>124</td>
<td>34</td>
<td>7.160</td>
<td>0.000</td>
<td>Yes</td>
<td>Q3</td>
</tr>
</tbody>
</table>

**Figure 26** Z-Score Test Results for Qualtrics Survey Questions 3 and 7

Figure 26 compares the Q3 survey question on characteristics associated with ‘National Parks’ against Q7 responses on YNP. Of the three main thematic categories, each comparison was statistically significant, with ‘Environmental Characteristics’ in favor of Q7 on YNP and the other two themes in favor of Q3 on characteristics. This differs from what was shown before in Figure 24, as there was not a significant difference for Q1 and Q7 for ‘Environmental Characteristics’ but there is for Q3 and Q7, even though Q1 and Q3 were designed to be complementary questions both designed to ask the same question in different ways.
<table>
<thead>
<tr>
<th>Question</th>
<th>Q3 Char.</th>
<th>Q9 GANP</th>
<th>Z-Score</th>
<th>P-Value</th>
<th>Significance (0.05)</th>
<th>In Favor Of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Type</td>
<td>#</td>
<td>#</td>
<td>Z</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cases</td>
<td>544</td>
<td>544</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Coding References</td>
<td>1,394</td>
<td>490</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Figure 27) Z-Score Test Results for Qualtrics Survey Questions 3 and 9**

Figure 27 above follows the example of previous z-score tests and shows Q3 on characteristics and Q9 on the GANP compared against each other. All three theme comparisons showed a significant difference in favor of Q3’s characteristics. This same effect is true with all individual codes except for that of ‘Emotional’, which was determined as not significant. There were also many coding totals of zero in this table, all in the ‘Environmental Characteristics’ category for the GANP.
This final z-score test table (Figure 28) for questions 7 and 9 compare YNP directly against GANP. All three thematic categories were significantly different, with ‘Environmental Characteristics’ and ‘Visitor Experience’ in favor of YNP while ‘Intrinsic Values’ was in favor of the GANP. These results differ slightly from the head-to-head comparison of the Yelp reviews for these two ‘National Parks’ in Figure 22, where the difference for the ‘Visitor Experiences’ theme was insignificant. Otherwise, in both the Yelp reviews and Qualtrics survey responses for comparing GANP with YNP, the ‘Environmental Characteristics’ and ‘Intrinsic Values’ themes were significant in favor of YNP and GANP respectively.

<table>
<thead>
<tr>
<th>Theme Codes</th>
<th>Theme</th>
<th>Data Type</th>
<th>Question 7 YNP</th>
<th>Question 9 GANP</th>
<th>Z-Score</th>
<th>P-Value</th>
<th>Significance (0.05)</th>
<th>In Favor Of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Env. Characteristics</td>
<td>Aesthetics</td>
<td>#</td>
<td>115</td>
<td>43</td>
<td>5.728</td>
<td>0.000</td>
<td>Yes</td>
<td>YNP</td>
</tr>
<tr>
<td></td>
<td>Biodiversity</td>
<td>#</td>
<td>282</td>
<td>0</td>
<td>16.793</td>
<td>0.000</td>
<td>Yes</td>
<td>YNP</td>
</tr>
<tr>
<td></td>
<td>Geodiversity</td>
<td>#</td>
<td>328</td>
<td>0</td>
<td>18.111</td>
<td>0.000</td>
<td>Yes</td>
<td>YNP</td>
</tr>
<tr>
<td></td>
<td>Marine</td>
<td>#</td>
<td>0</td>
<td>120</td>
<td>-10.954</td>
<td>0.000</td>
<td>Yes</td>
<td>GANP</td>
</tr>
<tr>
<td></td>
<td>Natural</td>
<td>#</td>
<td>34</td>
<td>0</td>
<td>5.831</td>
<td>0.000</td>
<td>Yes</td>
<td>YNP</td>
</tr>
<tr>
<td></td>
<td>Undeveloped</td>
<td>#</td>
<td>16</td>
<td>0</td>
<td>6.184</td>
<td>0.000</td>
<td>Yes</td>
<td>YNP</td>
</tr>
</tbody>
</table>

**Figure 28) Z-Score Test Results for Qualtrics Survey Questions 7 and 9**
**Summary Chart of Survey Z-Score Tests**

Figure 29 takes all significance data and “in favor of” annotations from the previous seven tables for the Qualtrics survey responses and condenses it into one figure, organized by theme for easier analysis of comparing any of the four survey questions against each other. As shown here, nearly every coding total comparison by question and theme has been calculated as being significant, with exception to Q1 and Q7 for ‘Environmental Characteristics’ and Q1 and Q3 for ‘Intrinsic Values’. Any entry marked “N/A” is a placeholder for the places in the matrix table where a single question would be compared against itself, such as Q1 and Q1, which does not provide useful information or statistics for this study.

**Combined Thematic Code Total Diagrams**

After finishing the coding analysis in NVivo software, compiling the coding and thematic category totals, and calculating the significance for each comparison, it became time to transition towards comprehensive analysis and eventual discussion of results.
Since this study includes a two-part coding analysis with both primary data from a Qualtrics survey and secondary data from Yelp reviews, it was practical to integrate the datasets together to provide an overall consensus for how the coding totals looked and provide a basis for which to draw discussion and conclusions from.

![Figure 30: Thematic Code Totals for Values and Characteristics](image)

**Figure 30** *Thematic Code Totals for Values and Characteristics*

Figure 30 contains the combined totals for each thematic category from the Qualtrics survey responses. This was created by taking the total counts for each theme from Q1 on values and Q3 on characteristics associated with ‘National Parks’. Since Q1 and Q3 were developed as analogous questions designed to solicit the collective perceptions and associations with ‘National Parks’, it was practical to add these totals together to show a baseline of what the collective perceptions and associations are. Under a combined values and characteristics data set, 47.7% of survey responses were coded as
‘Environmental Characteristics’ between Q1 and Q3. This is the majority of the coding assignments, as ‘Intrinsic Values’ comes in at 28.8% and ‘Visitor Experience’ at 23.5%.

![Thematic Code Totals for Yellowstone National Park](image)

**Figure 31) Thematic Code Totals for Yellowstone National Park**

Figure 31 combines the coding totals from Q7 of the Qualtrics survey responses and from the YNP Yelp reviews to display a combined dataset that represents Yellowstone National Park across this two-part exploratory case study. Results show that 72.1% of survey responses and Yelp reviews coded were within the ‘Environmental Characteristics’ theme, and only 15.2% of responses under ‘Intrinsic Values and 12.7% under ‘Visitor Experiences’. These results differ from Figure 30 in that ‘Environmental Characteristics’ are at a much higher percentage of the total responses coded, by nearly 25% of the total.
Figure 32) Thematic Code Totals for Gateway Arch National Park

Figure 32 is similar to Figure 31 and uses a combined total from both the Yelp reviews and Qualtrics survey responses but was done for the Gateway Arch National Park and not Yellowstone National Park. Results show that ‘Intrinsic Values’ is in the lead at 49.1% of cases codes, with ‘Environmental Characteristics’ behind it at 27.1% and ‘Visitor Experiences’ in last at 23.8%. This differs from Figure 30 and Figure 31 in that the GANP does not have ‘Environmental Characteristics’ as the leading categorical theme of coding analysis totals. This does align with the results shown in Figure 20 and Figure 21, in that ‘Environmental Characteristics’ is the leading thematic category for values, characteristics, and the Yellowstone National Park, while ‘Intrinsic Values’ has been the consistent leading theme for the Gateway Arch National Park.
Chapter 5: Discussion and Conclusion

The results presented in Chapter 4 point to some key takeaways that directly address the central research question of this study. As displayed by the theoretical framework (Figure 5) in Chapter 3, the intention of this study was to extract themes created from the coding analysis of the Qualtrics survey responses and Yelp reviews to gauge the overall perceptions that people have of ‘National Parks’ in general and the Gateway Arch in particular. The fourteen analytical codes are representative of the range of responses provided, and the three thematic categories serve well as an umbrella for these analytical codes. Some codes such as ‘Aesthetics’, ‘Biodiversity’, and ‘Geodiversity’ stand out as the most common type of response given by study subjects. This does change when looking at the Gateway Arch itself, as ‘Aesthetics’, ‘Historical’, and ‘Educational’ become the most common type of responses. This speaks to the results of the three thematic categories as well, as ‘National Parks’ have a different proportion of the three themes compared to the YNP and GANP.

Figures 30, 31, and 32 show that the significant majority of survey respondents and Yelp reviewers strongly associate Yellowstone National Park (YNP) with ‘Environmental Characteristics’, while it was the theme of ‘Intrinsic Values’ for the Gateway Arch National Park (GANP). However, the collective total of both values and characteristics seemed to lie between the two individual ‘National Parks’. Although ‘Environmental Characteristics’ is the leading thematic category for coding totals of the values and characteristics combined, just like YNP, the difference is exaggerated for YNP as the total of 47.7% of ‘Environmental Characteristics’ for values and characteristics combined is in-between the 72.1% for YNP and the 21.7% for GANP.
This suggests that although YNP was used as a functional comparison to the GANP in this study, the combined values and characteristics totals indeed serve as a true control for all ‘National Parks’. It is true that the GANP does not match the thematic categories of the combined values and characteristics as representative of ‘National Parks’, and although YNP more closely does, it is not a perfect alignment.

The results indicate that people tend to perceive ‘National Parks’ more broadly as encompassing the variety and range of all U.S. National Parks than just the foundation and standard that Yellowstone set when it was set aside for protection in 1872. Codes such as ‘Educational’ and ‘Historical’, which were very common for responses with the GANP, are more common with ‘National Parks’ than with just YNP. It would be fascinating to have the ability to go back in time and see if the recent redesignations of ‘National Parks’ has already influenced the perceptions, or the sense of place, that people have with the ‘National Park’ designation.

However, the main conclusion is that the values and characteristics most people associate with ‘National Parks’ do not match that of the GANP. This is not black and white, as all areas protected under the NPS, regardless of designation, still share basal levels of values and characteristics that come with protected areas in the United States. This is represented in the results as well since the thematic category of ‘Visitor Experience’ is in third place behind ‘Environmental Characteristics’ and ‘Intrinsic Values’ for each comparison. This does not take away from the importance of visitor experiences, but instead speaks to this consistent attribute that all these protected areas do share together for all visitors.
What Makes a ‘National Park’

If one takes a moment to dissociate these results from this specific case study of the Gateway Arch National Park (GANP) itself, there is great opportunity for discussion on sense of place with ‘National Parks’, or what makes a ‘National Park’ itself. The results shown in Figure 30 that the combined totals have the three thematic categories in the order of ‘Environmental Characteristics’, ‘Intrinsic Values’, and ‘Visitor Experience’. Although there are Qualtrics survey responses and Yelp reviews coded with all fourteen analytical codes, some codes were assigned much more often than others. As shown in Figures 20 and 21, codes such as ‘Aesthetics’, ‘Biodiversity’, and ‘Geodiversity’ may show up the most, all under the ‘Environmental Characteristics’ theme. Yet the codes of ‘Emotional’, ‘Experience’, ‘Protection’, and ‘Accessibility’ pop up often as well.

People seem to truly value that these great places are protected and want them to be accessible so that all people can get out there and experience them in all their glory. People of all backgrounds provided emotional responses when considering the values and characteristics of ‘National Parks’, ranging from nostalgia, religious or spiritual thoughts, patriotism, or even inner peace and calming of the mind. These are protected areas that do an above and beyond job of making a significant impact on the people who experience them, as they are truly unique and above-average with characteristics such as ‘Aesthetics’, ‘Biodiversity’, and ‘Geodiversity’.

I believe that this is central to the sense of place of ‘National Parks’. It takes context, experience, or even just a name to turn a point in space into a place. The label of ‘National Park’ seems to be effective in communicating to people the feelings that these experiences in the natural world can provide on just reputation alone. These feelings paint
the context that the experience of going to a ‘National Park’ can provide. It is this phenomenon that showcases the power of sense of place with ‘National Parks’. It may not matter what the name of the protected area itself is, as all it may take is the naming designation to communicate to someone who has never heard of or been to a place before to know what their experience may be like. These naming designations serve as powerful tools in providing a sense of place that extends beyond the place itself, beyond the values and characteristics that describe the place. It is to this end that thoughtful consideration of which places are deemed worthy of carrying that ‘National Park’ title is worthwhile, especially with a case study of a place like the Gateway Arch.

**Status of the Gateway Arch**

As of the spring of 2022, the Gateway Arch has been a ‘National Park’ for just over four years. Although the redesignation has sent shockwaves and ripples throughout the widespread communities that cherish our ‘National Parks’, the sky has not fallen, and the world has kept turning. This is not to diminish or support any side in the continual debate over the redesignation of the Gateway Arch, yet to remind ourselves that although this is worthwhile debate, it is not something that has tangible repercussions for the Gateway Arch or the NPS system in the United States. This is all about the naming designations the NPS uses, and the designation currently assigned to the Gateway Arch.

The results of this exploratory case-study show us that the values and characteristics associated with ‘National Parks’ in general, as well Yellowstone National Park (YNP), do not match the values and characteristics of the Gateway Arch National Park (GANP). In other words, the GANP does not align with the values and characteristics that are perceived or expected with ‘National Parks’ at large. This is
especially true for the theme of ‘Environmental Characteristics’, which was shown to be the majority of associations for ‘National Parks’ by Qualtrics survey respondents and Yelp reviewers and the minority of associations for the GANP itself. The GANP is much more representative of ‘Intrinsic Values’ and ‘Visitor Experience’ over ‘Environmental Characteristics’.

Just as a picture can speak a thousand words, direct quotes may paint a different picture than the results of this study can on its own. The following quotes were collected from some of the survey Q9 responses and some of the Yelp reviews for the GANP. These thoughts on the naming designation of the GANP were provided freely and without solicitation, as the Qualtrics survey question design was intentional in not referencing naming designations or asking about the naming designations of these protected areas. One survey respondent said: “A national park label is a stretch, for sure...” Another wrote “As a National Park Geek, struggle with the designation here.” As I continued my coding analysis, they kept popping up. One reads: “It confuses me that it’s a National Park more than a National Monument.” Another one appears reading: “Shouldn’t be a national park, doesn’t define what a national park should be.” And they kept showing up, with quotes like: “Why this is a national park and not a national monument baffles me.” and the final nail in the coffin here: “Congress made a mistake designating Gateway National Park.”

These quotes above speak to the intensity to which these people believe in their version of what a ‘National Park’ is, or the sense of place they expect a ‘National Park’ to impart for visitors. It is key to note though that none of these study subjects directly attacked or criticized the Gateway Arch itself. For them, the issue is the naming
redesignation itself, in that it does not align with their expectations for a ‘National Park’ and that it should not have been ever redesignated as a ‘National Park’. The Gateway Arch is a fantastic protected area and offers a great experience for all its visitors. It is okay to disagree with the naming redesignation and still appreciate the Gateway Arch.

Many do believe that all NPS units should be just referred to as “parks”, as it may seem elitist to hold the ‘National Park’ designation to a different standard or higher value than the other eighteen designations. However, the reality is that the naming designations in the NPS do exist and have different definitions, even if vague and subjective in interpretation. Until that changes, these naming designations matter. Place names matter and play a role in shaping sense of place. The results and conclusions of this study show that the redesignation of the Gateway Arch from the ‘Jefferson National Expansion Memorial” to the “Gateway Arch National Park” has affected the sense of place that people have with the Gateway Arch, and that the manifestation of sense of place into the values and characteristics that people perceive with ‘National Parks’ does not match with the GANP. All it would take is another name redesignation to correct this dissonance and settle the debate.

Going forward, the Gateway Arch has a bright future as a cherished protected area managed by the NPS and accessible to all people who wish to enjoy the sense of place the experience offers. If you have not been to the GANP in St. Louis, it is well worth the experience and memories that the place provides. Regardless of whether it remains a ‘National Park’ or is one day redesignated to more accurately be a ‘National Memorial’ or ‘National Monument’, it will continue to offer a window into the westward expansion of the U.S. in the past and an opportunity to reflect on the present and future of the people
of the United States. The Gateway Arch will continue to inspire and offer recreation for people in perpetuity. But, while we’re at it, we may as well redesignate it properly, right?

**Limitations**

Although this case study has provided reliable and conclusive results, there were significant limitations within this research study. First, not all Qualtrics survey questions originally included in the survey instrument were utilized for coding analysis. I opted to stick to manual coding for accuracy with my results, which reduced the speed at which coding analysis could be done compared to using a NVivo software feature like ‘Autocoding’. Manual coding is an intensive and time-consuming process, and time limitations made it difficult to include all of the raw data from the survey questions. The time limitations encouraged me to keep a focused approach for this exploratory case study and reduced the overall scope and scale of what coding analysis of the other survey questions may have provided, although the focused study made for efficient discussion and conclusions.

Second, the Qualtrics survey responses show evidence of survey fatigue as the questions continue from beginning to end. Survey responses for Q1 on values were more descriptive and longer in Word count, suggesting more time and effort was spent per response. Survey responses for Q7 and Q9 on YNP and GANP tended to be very brief and limited, not offering drawn-out descriptions as often as was found with responses for Q1 and Q3. Figure 18 in the Results section shows that the total number of coding assignments by me in NVivo software drops from 1,441 codes assigned in Q1 to just 496 codes assigned to Q9 for the GANP. Shorter and less-descriptive responses provide less content on which to perform coding analysis. Q1 had an average of 2.65 codes assigned
per survey response, while Q9 had an average of 0.91 codes assigned per survey response. This number being less than 1 is possible because many survey responses were not of a quality to be assigned any codes. Responses like “This place sucks” or “I have not been here, so N/A” do not provide any substance to provide insight as to their perceptions of the GANP.

It is also worth noting that Q9’s survey responses were not coded last, as I coded the survey questions in a random order. It is plausible that the last survey questions responses to be coded may be subject to coding fatigue by the researcher, but I was very intentional in my effort to be consistent with all coding assignments. However, Q3’s responses on characteristics were coded last due to the random order I chose to assign codes, and the coding totals for Q3 at 1,394 codes assigned are just under that of Q1 at 1,442 codes assigned. This leads me to conclude that survey fatigue for the Qualtrics survey respondents is the main culprit in this case. For this reason, it is entirely plausible that this survey was ambitiously designed with too many questions to maintain full effort from survey respondents. Evidence for this is also provided by the number of survey respondents who started answering questions but did not complete the whole survey, which was 81 out of the 625 total survey response submissions. Perhaps a more focused and condensed survey would have been more effective in reaching the same conclusions that this study has provided.

Third, this study had no verification process to ensure that all survey respondents from the National Park Service (Fan Page) on Facebook were all real people. Although measures were in place to prevent spam, repeat submissions, and more, it is possible that the Facebook accounts on this Facebook page may not be tied to a human being. A
phenomenon known as “troll farming” has presented a plague to social media sites such as Facebook, where cyber criminals may create an army of “bot accounts” to wreak havoc on social media pages (Owen, et. al. 2017). Although it is unlikely that any bot account produced a complete submission of the Qualtrics survey, there is the risk that we do not know if the individuals who did fill out complete submissions are who they portray themselves as.

Fourth, the demographics of the Qualtrics survey respondents show that there is a heavy skew towards middle-aged white women. Perhaps the National Park Service (Fan Page) on Facebook is not representative of the demographics of the United States at large, or maybe middle-aged white women are more likely to have given their time and energy to filling out the online survey (Blasius, Brandt 2010). This study exhibits self-selection bias, in that individuals from various backgrounds choose if they would like to complete the survey or not. This study could be strengthened with an intentionally stratified sample population to ensure full representation of men and non-white minority groups. Additionally, no demographic information was able to be collected from the Yelp reviews, which means we are unable to assess how an individual’s background may be related to the values and characteristics indirectly provided by Yelp reviewers.

Fifth, there seems to have been some confusion for survey respondents regarding what and where the “Gateway Arch” is. It was intentional to not include any naming designations with the protected areas mentioned in the Qualtrics survey, and this includes Yellowstone and the Gateway Arch. This was to try to prevent survey respondents from allowing the naming designation to directly influence the values and characteristics they associate with the individual protected area. Some seemed to think that the Gateway Arch
was a particular arch in Arches National Park, while some others thought it was directly referring to the Arches National Park in Utah. This became obvious when a small handful of survey responses included phrases like “Beautiful red rocks” or “hiking through the canyon to see the arches” in their responses to which I did not code. As discussed in Chapter 2, the name of a place is critical in helping to shape one’s perceptions and expectations of it, also known as sense of place. A name is what gives identity to space and makes it place, and it seems here that the name of “Gateway Arch” without the designation is not currently effective in distinguishing this place from other protected areas.

**Future Research**

There are many other examples within the National Park Service (NPS) system of ‘National Parks’ that have sparked controversy for not being up to par to the ‘National Park’ designation, such as Hot Springs National Park in Arkansas or Cuyahoga Valley National Park in Ohio. A case study for other individual protected areas would be a natural extension of this study, especially in the case of the three other “new” ‘National Parks’ designated during the Trump Administration, which includes the Indiana Dunes in Indiana, White Sands in New Mexico, and the New River George in West Virginia, which used to be a ‘National Lakeshore’, ‘National Monument’, and ‘National Recreation Area’ respectively.

Future research could also take a look at the entry of a protected area into the NPS itself. Many protected areas in the United States are managed at the local, county, or state levels, and not just by the federal government. There are also other federal agencies beyond the NPS, such as the U.S. Forest Service (USFS), Bureau of Land Management
(BLM), and the Fish and Wildlife Service (FWS). These other federal agencies seem to be more discreet, in that the protected areas managed by these agencies are not as well-known by the general American public. Of these, iconic protected areas such as Mt. St. Helens may surprise visitors that it is a ‘National Monument’ managed under the USFS, and not associated with the NPS whatsoever. It may also be common for travelers to think of the ‘National Forests’ they have been through or recreated at, only to later find out that these places are also not managed by the NPS.

When conversations on online fora about what protected areas could become the next “new” ‘National Parks’, it is common for people to mention a slew of great protected areas, ranging from ‘State Parks’ to ‘National Refuges’. Current examples of NPS sites being pushed for a ‘National Park’ redesignation include Ocmulgee Mounds National Historical Park in Georgia (Ray 2021) and the Delaware Water Gap National Recreation Area in Delaware (Vermillion 2021). People seem to share comments like these without understanding the differences in management styles and purposes between the various federal agencies or why a protected area is managed at a smaller-scale level than that of the federal government. Future research could look at how these naming designations, which are dependent on which governmental organization manages them, affect the sense of place for people and visitors alike. The differing values and management styles could also influence the sense of place held by visitors of a protected area, which would make for excellent research opportunities in the realm of tourism and recreational land management.

Another opportunity I am strongly interested in pursuing for future research would be to look at the various criteria for each naming designation in the NPS and
compare them to the more clearly and objectified criteria utilized by the International Union for the Conservation of Nature (IUCN). It may be well-worthwhile to try to create a new set of objective and descriptive criteria that uses legacy terminology from the NPS but is aligned with the standards set by the IUCN’s criteria that are used around the world for protected areas. This could allow for an experiment in reclassifying all 423 NPS units with the newly developed criteria, and then diving into analysis on the NPS sites that were reclassified under different designations. To take this to further levels of ambition, this could be done in collaboration with the Department of Interior and NPS officials to begin advocacy work with lobbyists in getting Congress to pass a law that would make these new criteria set the new official standard.
References


Bryant, C. 2018. New signage is up reflecting the official new name of the arch grounds as “Gateway Arch National Park.” *Twitter*. https://twitter.com/CourtneyDBryant/status/1022952543385780224 (last accessed 23 March 2022).


Gateway_Arch_National_Park-Saint_Louis_Missouri.html (last accessed 23 March 2022).


Flick, U. 2018. An Introduction to Qualitative Research. SAGE Publications.


Manza, J., and M. Sauder. 2009. Inequality and Society: Social Science Perspectives on Social Stratification.


National Park Service (Fan Page) | Facebook.
National Park System (U.S. National Park Service).


NPS. 2022. Gateway Arch NP Gallery. https://www.nps.gov/media/photo/gallery-item.htm?pg=3026700&id=5b1e80f5-8576-4b3b-a6a1-2db34a794f89&gid=68b91f4a-155d-4519-3ef693ec657d9f13 (last accessed 23 March 2022).


Quick History of the National Park Service (U.S. National Park Service).


Zhu, Y. 2020. Interests driven or socially mobilized? Place attachment, social capital, and neighborhood participation in urban China. *Journal of Urban Affairs* 0 (0):1–18.
Vita

Seth T. Kannarr was born on September 22nd, 1997, in Rockford, IL. He grew up in Machesney Park, IL and spent much of his youth outdoors as a member of the Boy Scouts of America. Seth is an Eagle Scout, Vigil Honor member, and Founder’s Award recipient in the Order of the Arrow, Scouting’s Honor Society. He started to serve on the Canyon Camp Staff in 2012 and has since worked in positions such as Nature Director, Program Director, and now Camp Director after celebrating ten summers of service.

Seth graduated from Harlem High School in 2016 and received the Meridian Scholarship to attend Southern Illinois University Edwardsville (SIUE) on a full ride. He has been an active member of the American Association of Geographers, presenting his research work at national and regional conferences. Beyond his volunteer commitments with Canyon Camp and the Boy Scouts of America, Seth’s leadership was exercised with serving as the President of Alpha Phi Omega, Gamma Theta Upsilon, and the Honors Student Association during his tenure at SIUE. He is the only consecutive scholarship winner in the history of Gamma Theta Upsilon, receiving the Richason Scholarship in 2019 and the Buzzard Undergraduate Scholarship in 2020.

Seth graduated from SIUE with a Bachelor of Science with Honors in Geography in 2020 and has been enrolled at the University of Missouri in Columbia as a Teaching Assistant seeking a Master of Arts in Geography. In his free time, he likes to travel to ‘National Parks’ and spend time with friends and family. Seth intends to pursue a PhD in Geography at the University of Tennessee in Knoxville starting in Fall 2022 to continue his education and training as a protected areas geographer to one day serve as a professor.